The Feminization of Agriculture

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Women's work sustains men's power. In this dramatic phrase, the Program of Action adopted in 1975 at the second United Nations Conference on Women and Development highlighted the problematic structural and interpersonal relations associated with the *feminization of poverty.* There has been over the intervening twenty years a parallel recognition of the *feminization of agriculture.* It is a phenomenon easier to describe than it is to explain. The difficulties of explanation lie in the fact that gender relations within farming households and within society as they relate to technology change in agriculture are complex and embedded in specific contexts. The details of context matter, yet they do not readily lend themselves to the kinds of aggregation, statistical generalization and modelling on which operational and policy decisions typically are based. On the other hand, mere recognition of the trend toward increasing female participation in agriculture in itself has not served to significantly change agricultural development practice, which by and large continues as if the complexities of gender roles in agriculture are merely constraints to the technical advances and efficiency gains deemed necessary to feed the world through increased aggregate food output. In general, there is an unwillingness to see practice-in-context as causally or systemically linked to gender-biased outcomes. Similarly, while the questions of *who has the right and the power to determine what constitutes the public interest, whose priorities count in agricultural research funding,* and *who defines agricultural reality* have been raised in the context of methodological innovations such as farming systems research or participatory research management, experience has shown that when applied within male-dominated agricultural professions, farmer-oriented methodological technique and principle does not in itself lead to greater gender sensitivity or less gender-biased outcomes so long as researchers continue to work mainly or exclusively with male farmers.

The challenge to the traditional public role of men in defining *who is a farmer, what farming is about,* and *what progress and modernization within the agricultural sector might mean* did not spring initially from feminist ideology so much as from careful field research conducted largely in the context of agricultural research and development studies. A mid-1980s survey carried out by Jiggins on behalf of the World Bank drew on the accumulated evidence to demonstrate that neglect of gender issues in agricultural research and technology development holds output and welfare below potential, and that major structural changes in agriculture throughout the world were modifying patterns of household formation, income-earning, resource allocation, and the division of responsibilities between men and women.[1]

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Today, it is broadly accepted by bilateral and mutilateral development agencies, on the basis of over two decades of rigorous empirical study, that farming in general has become a female occupation. It is not, however, to state exactly what this consensus might mean in reality. According to a trend analysis of data from 1950 to 1990 carried out by the Food and Agricultural Organization (FAO) for the 1996 World Food Summit, women now exceed men as a proportion of the economically active population in agriculture in Africa and Asia, and, by a small margin, in the world as a whole, while their participation in Latin America and the Caribbean also is increasing rapidly. Country-level and local area studies sharpen the focus. For example, surveying a range of different kinds of data from India, Vandana Shiva demonstrates that "most farmers in India are women."[2] Data for 1993–94 indicate that some 86 percent of women workers were in agriculture, compared to 74 percent of men.

Statistical data further shows the intensity of women's dependence upon agriculture increases with the level of poverty, which is in turn associated with the proportion of households headed by women. The higher the overall level of rural poverty, the more likely that poor female-headed rural households are wholly or mainly dependent upon access to agricultural labor, common property, small stock, and natural resources for their survival. In India's case, 35 percent of households below the poverty line in Maharashtra State are now headed by women, and as Shiva writes, "[t]he facts challenge the image of the modal poor rural households as male headed and of farming as a predominantly male occupation."[3]

That there have been significant advances over the last two decades is undeniable. Success in assembling data bases and contextual information which document women's roles in agriculture and food security, the sensitivity of governments and agricultural agencies to gender issues, and the creation of powerful coalitions at all levels which are seeking to ensure that gender policy promises made are promises kept, was amply demonstrated in the background documents to the 1996 World Food Summit, the Rome Declaration on World Food Security, and the Plan of Action negotiated at the Summit. The Declaration, for example, affirmed:"We acknowledge the fundamental contribution to food security by women, particularly in rural areas of developing countries, and the need to ensure quality between men and women."[4]

Yet much less seems to have changed in terms of implementation, in terms of designing macro level economic policies informed by an understanding of men's and women's roles in farming, or in terms of directing powerful commercial interests toward another form of global economic development which might sustain a more gender-balanced agriculture. The pertinent question is, why? In part, one might look for an answer in the lack of interpretive common ground. Is the feminization of agriculture to be seen as an indicator of an unacceptable and gender-biased immiseration of the vulnerable in the face of "sticky" social norms and structures; as an unfortunate but transient effect of market-oriented economic development, perhaps a consequence of blatant male bias in public policy and unrelenting patriarchal power; as a technical constraint on efforts to raise the efficiency and productivity of agriculture; or even as an opportunity for strengthening women's autonomy and their contribution to household welfare and societal development? Questions such as these rather suggest that the phrase *feminization of agriculture* conceals as much as it elucidates.

What is the Feminization of Agriculture and What Causes and Sustains the Trend?

The *feminization of agriculture* can be conceptualized and measured under at least five heads: labor force participation, agricultural activity, allocational priorities, adjustment in the structure of economies in competition with world markets, and poverty profiles. Each gives only partial insight into the causes and effects of the phenomenon, and none provides an unambiguous interpretation sufficient to guide policy without contestation. The nub of the matter is that the feminization of agriculture is a policy area in which values count. While good data, conceptual clarity, and thorough analysis are necessary and useful in promoting convergent understanding, they feed into prior positions on the importance of equity between men and women, social justice, and a fair sharing of the world's resources, and into prior judgments about how these might best be promoted. In short, it is not a phenomenon on which closure can be expected.

Labor Force Participation

The general picture regarding trends in women's participation in the agricultural labor force is clear, despite continuing serious problems of enumeration and valuation. Women's participation is increasing, it is increasing at rates that outstrip male participation rates, and when women's compensated labor and unwaged household production labor are aggregated, women's labor contribution to agriculture is greater than that of men. But the general picture is complicated by associated trends in poverty, resource access, and the schooling of children, particularly girls.

The apparent increase in female agricultural labor participation rates is in part a simple indicator of the increasing poverty of some 1.3 billion of the world's people. Poverty exerts pressure on women and girls, even in environments such as Bangladesh where this is not the cultural norm, to carry out additional agricultural tasks in the wage economy and within households as men seek wage work away from the home. The rise in the number and proportion of rural households headed by women is one measure of this trend. Data are not available for all countries, but the percentage of rural female-headed households has reached, for example, over 70 percent in Lesotho, some 40 percent in Malawi, over 21 percent in Malaysia, over 17 percent in Indonesia, 34 percent in Jamaica, 22 percent in Honduras, and 15 percent in Morocco.

However, not all households headed by women are poor; studies in Morocco, Indonesia, Zimbabwe, and Vietnam found no significant differences in household consumption and expenditure between female-headed and male-headed households, for instance. The exact nature of the hardship faced by female-headed households typically is strongly colored by whether the women are single and never married, separated, divorced, or widowed because of the differences in the ways societies allocate resources to these different categories, and between men and women in the same category. Women's hardship is fashioned and perpetuated also by the structural barriers poor women face, within families and within societies, which make it harder for women than for men to lift themselves out of poverty.

Another measure is related to agricultural intensification. Here, the picture is just as equivocal. Esther Boserup in the early 1970s was one of the first to note that women's labor participation tended to decrease as agriculture moved from hoe-based production systems to more intensive, plough-based farming, a transition which, she argued, was in turn related to population increase. More recent studies, such as that reported by Michael Burton and Douglas White in 1984, found no or weak association with population dynamics but a strong relationship with increasing capitalization of farming (for which intensification might be seen as a surrogate indicator).[5] The intensification hypothesis subsequently was tested by reference to increases in women's farming in the southeastern United

States. Data from a sample of fifty farm women in two North Florida counties in 1980–81 indicated that women on family farms had increased their participation compared to the early 1930s. Both men and women worked part-time off-farm, and had adopted management-flexible, labor-extensive commodity production which increased women's on-farm labor contribution.[6] Gladwin argued convincingly that as modern farming demands increasing capitalization, family farms experiencing increasing costs, falling commodity prices, and declining margins eventually face a choice: to become a bigger, more intensive full-time farm (which decreases female participation as men substitute female labor by machinery), to mix extensive production and off-farm work (which increases female participation on-farm as they take over men's work), or to get out of farming altogether. Her analysis is in line with the evidence from other industrial and developing countries on the effects of the technology-driven cost-price squeeze on small-scale farmers in an era in which the real value of the main agricultural commodities has fallen more or less steadily over more than two decades.

Intensification and capitalization are concomitant with technology-driven change in agriculture and, as Cochrane demonstrated as long ago as 1958, in the end they force increasing numbers out of primary production.[7] Agricultural modernization of this kind raises clear policy trade-offs, which should be explicitly made but which rarely are, perhaps because women's interests are not well-represented in agricultural policy circles. While investment in production-increasing, cost-reducing technology in developing agriculture can be seen as necessary to meet the needs of increasing numbers of consumers, it also contributes to the displacement or marginalization of women in full-time farming and the emergence of extensified farm systems and proportionately greater part-time participation by women. Where gendered obligations for women to feed their families and contribute to household welfare are relatively inflexible, as in many African countries, and/or there are no alternative subsistence strategies for women to follow short of prostitution and/or urban migration, the result tends to be an increasing pressure on marginal land and natural resources as women seek to continue to meet their obligations, an increase in marital instability and the social costs of single-sex migration, and increasing numbers of women seeking agricultural wage work.

These trends have been exacerbated by changes in women's legal and effective access to land and water and their rights to use natural resources. The World Bank has been a forceful but by no means lone advocate of individualized property rights in land and water, secured under legal title, and (most often) assigned to men, who are recognized by law and social custom as family heads. The justification advanced is that such rights are essential for sustainable resource management on farm, the modernization of farming, and economic efficiency. The evidence that privatized individual title is the only or the best way to secure these three policy goals is remarkably weak and, given the largely negative consequences for women's livelihoods, the environment, food security, and gender equity, its advocacy is hard to understand except in terms of a narrow and biased economic frame of reference or the political dimensions of land privatization.[8]

A more balanced position would recognize the complexity of gendered resource claims and nested livelihood entitlements, as proposed by Meinzne Dick and her colleagues.[9] For example, men might be considered to control the cutting of trees on farm but women to have the right to harvest and sell the fruits and use the dead wood for fuel and the green leaves for goat fodder; or, as in parts of Nigeria and Cameroon, a man might have the right to use land for planting coffee trees, but his wife the right to use the land between the trees for growing a dual-purpose crop such as tomatoes. By collapsing such rights, management responsibilities, and uses into a unitary right of ownership and the presumption of a single manager able to dispose of family labor (the farm as analagous to an enterprise), the advocates leave aside as unimportant the social structures and gender relations in which existing resource use is embedded, and choose to ignore the implications for social and family welfare and women's survival. A pluralistic approach to establishing and securing rights to land and water would seem to offer better prospects of achieving a win-win outcome.[10]

Last under the head of labor force participation, the effects must be noted of withdrawing children's labor, especially girls' labor, from farming through expansion of educational opportunity. There is no longer any doubt that social investments in females, such as education, can lead to reduced family size, higher family income, better family nutrition and improved quality of life. As Lawrence Summers, a former Chief Economist at the World Bank wrote in an article in *Scientific American*, educating females is "the most influential investment" that any country or development agency could make.[11] But, like many other development investments, the effects are not unambiguously positive. Farm surveys conducted from the 1960s onwards document the significance of child labor on farm, in fetching fuel and water, and in the household. In some farm systems, the aggregated labor hours of children exceeds that of adults. The allocation of tasks, the type or mix of cropping and livestock, the timing of farm operations, the quality of management, the frequency of cooking and washing, and the seasonal adequacy of household diets may all be compromised as children gain access to schooling. Because the division of labor and obligation in farm households is not gender neutral, the effects are not gender neutral. As children are sent off to school, women more than men have prolonged the number of hours they work and/or pulled girls out of school to help with household chores and female agricultural tasks at times of peak demand on their own labor. Men, in contrast, have tended to hire-in labor (including in some cases their wives) or, through their control of capital or access to credit, to mechanize their tasks.

Changes in Agricultural Activity and Farming Systems

The simplest measure available of these effects is data on changes in hours worked on farm. The unequivocal picture across all samples is that women in full time farming households are working longer hours (until such time as the farm is sufficiently prosperous to relieve women of some of the worst drudgery). There are various ways in which this effect is generated. As farmers have been encouraged to devote more of their land to cash crops, women have had to work longer hours in the effort to meet obligations to work with their husbands on the cash crop, perhaps also on his own individual plots, while maintaining home gardens for daily needs and producing the food crops, poultry, and livestock essential for home subsistence. As male farmers have gained access to credit (by virtue of being household heads, the legal or presumed owners of land, and/or the person in contact with the male extension workers who handle the credit documentation), they have upgraded their equipment or bought animals or machines to increase the productivity of their own labor. Only slowly and unevenly has there been any effort to support the labor efficiency and productivity—or simply remove the drudgery—of women's work. On the contrary, the differential productivity increase in men's work more typically has led to additional labor demands being placed upon women, either in pre-harvest operations such as additional weeding, or in post-harvest processing as the volume of the output increases. Or huge investments have been made in irrigation, increasing the waged and household labor demand for both men and women, but no provision made for improved drinking and washing water facilities (fetching water for home use typically being a women's job).

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The problem of long hours and relatively low returns due to differential labor productivity has been compounded by women's weak access to the cash economy. Women in the majority of developing countries are less literate than men (and hence have greater difficulties with paper-based regulations), have little or no collateral acceptable to formal finance institutions, may have in law and custom an impaired legal status that prevents them from signing contracts or taking loans in their own name, have poor access to the agricultural credit administered through male extension agents, and often have poor access to formal markets and marketing organizations. Together, these factors mean women farmers typically are concentrated in the low-input, low-return end of the production spectrum and essentially not regarded by public sector agencies as farmers at all. Yet it is women's work which sustains smallholder production and family well-being.

Changes in Allocational Priorities

Within farm households, these changes may also be contributing to the feminization of agriculture. It has been known for some time that there are substantial gender differences in time use and income expenditure, with women devoting a greater proportion of their time and income to everyday subsistence, nutrition, and welfare and men to personal spending and various public roles. This is the basis for arguing that the greater social good would be secured by increasing the marginal income controlled by women, and forms one of the justifications for targeting agricultural investments also toward women farmers and women in farm households. It also forms one of the basic justifications for investments in human and social capital which privilege women, such as water and sanitation facilities, health clinics, nutrition clubs, home garden groups, and child care services.

However, as small-scale agriculture comes under increasing pressure, and part-time farming and non-farm work increases, allocational priorities change. The initial response typically is for women to reduce their sleeping and leisure time, to the detriment both of their own health and that of other family members as household care becomes squeezed into the time left over from increased participation in production and market work. The initial male response, in contrast, often is to increase time and income expenditures in the public domain as they seek to mobilize and influence social networks that might secure them wage work, or incur the transport and other costs associated with seeking work at greater and greater distances from home. The net effect is to increase women's participation in agriculture and dependency on the exploitation of natural resources and common land.

In both industrialized and developing countries, policymakers are still struggling to find for poor female-headed households an adequate substitute, via welfare-to-work schemes, food-for-work or direct income transfers, for the synergy gained through the gender division of labor, time, and income within intact households. It has been further demonstrated how gendered allocational priorities effect fertility decisionmaking and individual returns-to-investment calculations within households in different income classes. It is clear that pressures on women's time and energy can affect agricultural and population outcomes significantly, via both negative and positive feedbacks, as they struggle to balance gendered demands against a flexible but not infinitely extendable capacity. Case studies sponsored by the International Food Policy Research Institute, in Nepal, for example, document how agricultural productivity is held below its potential as women's time is taken up increasingly by fetching fuelwood from more distant sources, an effect that is especially noticeable among the poorer small farm households in more densely populated areas. One of the least understood—or perhaps most contested—issues is why gender roles in such situations, in many though not all societies, remain relatively rigid when theoretical models suggest strongly that households would benefit if gender roles were re-negotiated in times of stress.

What is disputed is the degree to which allocational priorities can be read as an unfair exploitation of women subordinated by partriarchal power, as an efficient and mutually supportive balancing of household resources, or merely as the aggregate of individual survival strategies. The dispute is more than academic, for it shapes understanding of the impact of structural adjustment programs on the more vulnerable farm households, particularly how they impact women and children.

Structural Adjustment and Macro Level Policy

After nearly fifteen years of experience in the formulation and implementation of structural adjustment policies and programs, it has become clear that some women have benefited, especially those positioned to take advantage of export-oriented production and processing in the agricultural and agro-industrial sectors. Indeed, the development of specialized, high value added sub-enterprises on farms by women, often in conjunction with private sector investments in, for example, flower growing, is one of the new features of the transition. All women have benefitted to the extent that economies and financial values have stabilized and consumer prices decreased. However, many and perhaps the majority of rural women have been adversely and disproportionately affected by cutbacks in the public services and subsidies that supported the efficient allocation of their time, labor, and income. Women, more than men, have had to take up again the burdens of providing home health care, of processing and preparing foods that they can no longer obtain or afford ready-processed from the market, or of walking to market because subsidies have been removed from bus services. As the balance of income produced by cash crop sales versus food sales changes, women must somehow make up the shortfall in the returns to their own investments or re-negotiate the level and direction of their menfolk's expenditures

Here again we encounter a tension in public policy, this time between "fiscal constraint" and "human capital" arguments. Where better targeting and the provision of welfare or safety nets are seen as the appropriate way to resolve the tension, then gender equity, the feminization of agriculture, and the feminization of poverty are subordinated to macroeconomic policy. Similarly, although both the Agenda 21 formulated by the 1992 UN Conference on Development and Environment, and the Platform of Action adopted by the Beijing Women's Conference in 1995, make strong statements about the structural discrimination and gender bias in macrosocial and macroeconomic policy in relation to women's capacities to deal with environmental problems, neither recognizes the potential to manage environments better by removing structural gender differences and inequalities.

One of the less studied consequences of the increasing temporal, spatial, and affective separation of men's and women's experience of economic, social, and family life under macroeconomic change is the extent to which a reduction in shared perceptions in itself begins to contribute toward the feminization of agriculture, fostering its acceptance as a "normal" way to organize life. One of the earliest commentators drawing attention to this point, Michael Cernea speculated on likely consequences, seeing some positive opportunities for improvements to women's status as they took on new roles.[12] The contributors to *A Home Divided: Women and Income in the Third World* take a less sanguine view based on more recent scholarship, noting how the periodic or permanent absence of men from the household removes them from knowledge of the needs of children and of the coping strategies of their wives.[13] Collaborators in a study prepared for the Fourth World Conference on Women held in Beijing in 1995 documented in six country case studies (Bangladesh, Chile, Jamaica, Mali, Morocco, Uganda) how within what are still male-dominated state institutions, this separation shapes the perpetuation of "gendered institutions" and the state's policy response to the family and to gender polarization in agriculture, civil society, and the economy.[14]

Finally, the feminization of agriculture can be seen as simply a sub-theme *within the feminization of poverty.* Whether income is used as a proxy of poverty, or the United Nations Development Program's richer measure of poverty on a multi-dimensional "human poverty index," analysis reveals that severe gender disparities prevail in all but a handful of countries, and that these inequalities are everywhere strongly associated with human poverty (though not always associated with income poverty). However, analysis also shows that greater gender equality can be achieved at different income levels, in both industrial and developing countries, but it cannot be demonstrated rigorously that there is a necessary connection between greater gender equality and stronger economic growth. Further, while it can be demonstrated that strong improvements in the performance of small-scale agriculture lie at the core of most, but not all, successful periods of poverty reduction in widely differing countries, it cannot be demonstrated that these improvements narrowed gender disparaties—indeed, in some cases, they seem to have worsened them for some categories of women within the small farm sector.

In other words, there would seem to be important asymmetries in the nexus of deprivation, gender relations, and income which are both structural and attitudinal, a point to which the final section returns.

So What Can Be Done about the Feminization of Agriculture?

This article has presented a tiny part of the by now enormous body of scholarship, documented experience, and policy efforts concerning the feminization of agriculture. Enough has been shared perhaps to make a policymaker throw in the towel and place the issue in the "too hard to understand, too hard to deal with" category. Many men in the agriculture sector simply assume "this is not my business, women must sort it out themselves," that is, it is a welfare issue, and one that does not concern mainstream decisions in agriculture.

Esther Boserup states bluntly in relation to technological change in agriculture that "any of the handicaps from which women in developing (and developed) countries suffer are due to the survival of irrational and counterproductive beliefs and attitudes."[15] The degree of exasperation that this comment expresses is certainly not out of place, and returns us to the opening quotation of this article. In an equally strong tone, the 1997 *Human Development Report* asserts: "If development is not engendered, it is endangered. And if poverty reduction strategies fail to empower women, they will fail to empower society."[16]

Fine words, indeed! A study by Shahra Razavi and Carol Miller of efforts by the UNDP, the World Bank, and the ILO to institutionalize a gender-sensitive response identifies "internal policy advocates and entrepreneurs" as important factors, together with their external allies in other donor organizations, national governments, and non-governmental organizations.[17] Advocacy, specialized knowledge, and bargaining skills which can foster both the political process and the technical substance in policymaking are among the key skills required. While they and other researchers document the increasing institutional accountability to the commitments made over the last three decades, the list of impediments to effective implementation remains long. It might be that, outside of the more overtly feminist literature and activism, there is a reluctance to confront the power implications of "empowerment" directly, but that is what it is going to take if the negative aspects of the feminization of poverty are ever to be countered.

Notes

1. Janice Jiggins, *Gender-related Impacts and the Work of the International Agricultural Research Centers*, Washington D.C.: 1986.
2. Vandana Shiva, FAO, New Delhi, 1991, 4.
3. Ibid 8.
4. FAO, Rome, 13 November 1996
5. Michael Burton and Douglas White, "Sexual Division of Labor in Agriculture," *American Anthropologist* 86, no. 3 (1984): 563 - 83.
6. C. Gladwin, "Changes in Women's Roles on the Farm: a response to the intensification or capitalization of agriculture" in R.S. Gallin and A. Spring., Eds., *Women Creating Wealth: Transforming Economic Development* (Washington D.C., Association for Women in Development, 1985): 139 -142.
7. See especially chapter 5: The Agricultural Treadmill, in W.W. Cochrane, *Farm prices, Myth and Reality* (Minneapolis: University of Minnesota Press).

8. For a counter view, see, for example, the analysis by Netherlands Development Assistance, *Rights of Women to the natural resources land and water* (The Hague: Ministry of Foreign Affairs, 1997).

9. Dick Meizne, et al., "Gender, Property Rights, and Natural Resources," FCND Discussion paper No.29 (Washington D.C.: International Food Policy Research Institute, May 1997).

10. See for example, B. Agarwal, "Editorial: Re-sounding the alert: Gender, Resources, and Community Action," *World Development* 25, no. 9 (1997): 1373–80.

11. Lawrence Summers, *Scientific American* (August 1992): 132.

12. Michael Cernea, "Macrosocial Change, the Feminizationn of Agriculture and Peasant Women's Threefold Economic Role," *Sociologia Ruralis*, 18:2/3: 107-24.

13. D. Dwyer and J. Bruce, eds, *A Home Divided: Women and Income in the Third World* (Standford: Standford University Press, 1988).

14. A.M. Gotz, "The Politics of Integrating Gender to State Development Processes," OP 2, Geneva, United Nations Research Institute for Social Development, May 1995.

15. T. Paul Schultz, ed., *Investments in Women's Human Capital* (Chicago: University of Chicago Press, 1995): 51.

16. *Human Development* Report, Washington, D.C. UNDP, 1997.

17. Shahra Razavi and Carol Miller, OP 4, Geneva, UNRISD, August 1995.