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Review Essay

WOMEN, TECHNOLOGY, AND RURAL LIFE: SOME RECENT LITERATURE

PAMELA RINEY-KEHRBERG

Historical study of American farm women has had a relatively short life, reaching back approximately twenty years.¹ Rural women rarely existed in earlier scholarship that reserved the categories of farmer and farming for males. Agricultural history thus manifested itself as a story of men and their tools, stretching back historiographically into the early days of the 20th century. Although in 1953 Jared van Wagenen described in careful detail many of the physical processes of farming in *The Golden Age of Homespun*, the women's work from which he derived his title occupied less than twenty pages at the end of his book.² Women's work and women's tools fed, clothed, and provided income for farming families, but they were rarely cause for historical comment.

The social concerns of the 1960s spawned new areas of historical research, and the old agricultural history became the new rural history, with a greater emphasis on farming families and communities. Women's historians, however, were slow to acknowledge the role that rural women played in this nation's history. In the first genera-

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¹Books reviewed in this essay: Jane Adams, *The Transformation of Rural Life: Southern Illinois, 1890–1990* (Chapel Hill: University of North Carolina Press, 1994); Katherine Jellison, *Entitled to Power: Farm Women and Technology, 1913–1963* (Chapel Hill: University of North Carolina Press, 1993); Sally McMurry, *Transforming Rural Life: Dairying Families and Agricultural Change, 1820–1885* (Baltimore: Johns Hopkins University Press, 1995); Mary Neth, *Preserving the Family Farm: Women, Community, and the Foundations of Agribusiness in the Midwest, 1900–1940* (Baltimore: Johns Hopkins University Press, 1995).

²Jared van Wagenen Jr., *The Golden Age of Homespun*, rev. ed. (New York: Hill and Wang, 1963), pp. 249–68.

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tion of women's history, most of the research focused on urban women and their concerns. Not surprisingly, many of the earliest studies of farm women thus adopted models first developed in the study of urban women. In the late 1970s and early 1980s, scholars committed to the possibility of combining women's history and agricultural history developed the new field of rural women's history. In part they took their cue from scholars in other social sciences who had already begun to study women's agricultural labor in developing countries.³ By pursuing this research, they acknowledged that the vast majority of American women prior to the second half of the 20th century had been engaged, along with their families, in agriculture. As scholars sought to "reconsider the relative contributions of our foremothers and forefathers to the entire process of nation-building,"⁴ the efforts of rural women emerged as central to that process.

The study of farm women and technology was not far behind. It was almost impossible to study women in agriculture without giving serious attention to the technology that so thoroughly shaped their working lives. By the mid-1980s, historical works had begun to appear that examined the many meanings of technology in farm women's lives. In *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*, Ruth Schwartz Cowan devoted a chapter to the challenges of preindustrial housework, which well illustrated why so many women welcomed the coming of factory-made cloth, soap, candles, and other household goods.⁵ Cowan found that the passage of time and the adoption of new household appliances did not lighten the burdens of homemakers. Standards of cleanliness and good housekeeping rose as new technologies became available, with the result that housework remained a heavy burden for rural as well as urban women. In historiographic terms, then, one of the earliest works to reflect this new interest in the history of farm women was also a seminal work in the history of technology.

In 1985 historian Joan Jensen, a key figure in the development of rural women's history, called for a more careful consideration of women's work on the family farm. She pinpointed a number of areas

³Lorraine Garkovich and Janet Bokemeier, "Agricultural Mechanization and American Farm Women's Economic Roles," in *Women and Farming: Changing Roles, Changing Structures*, ed. Wava G. Haney and Jane B. Knowles (Boulder: Westview Press, 1988), p. 211.

⁴Haney and Knowles, pp. 1–2.

⁵Ruth Schwartz Cowan, *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave* (New York: Basic Books, 1983).

needing greater attention, specifically noting the need to study “women on tractors and plows,” and women’s relationship to “large and growing amounts of all types of farm and household equipment.”⁶ In 1986 she published *Loosening the Bonds: Mid-Atlantic Farm Women, 1750–1850*, which approached the question of farm women and technology by examining the tools of buttermaking.⁷ As dairying changed, the tools with which women worked also changed, she argued. With varying success, inventors attempted to replace “woman power” with mechanical power.⁸ Although women were rarely involved in patenting butter churns, they may have provided the inspiration and experimentation needed to develop these inventions. Jensen’s goal in presenting this information was to describe a “rich material culture” that had its place in many a museum’s collection but was rarely explained in any great detail.⁹

Anthropologist Deborah Fink also focused on women and technology in her 1986 study *Open Country, Iowa: Rural Women, Tradition and Change*. Fink’s farm women enjoyed few of the privileges of modern urban life; “compared with urban homes of the period [pre-World War II], facilities in most farm homes were primitive.”¹⁰ Living without running water, indoor bathrooms, and electricity dramatically increased farm women’s hours of labor. They bore heavy burdens both inside the home and outside as they cared for their families and produced goods for exchange and sale. Fink argues that World War II dramatically changed Iowa farm women’s lives, making their traditional poultry work unprofitable. Developments in the technology of chicken raising made it impossible for Iowa farm women to compete with large “egg factories.”¹¹ New technology for the home also reduced women’s subsistence production and hours of labor. Many turned to wage labor in surrounding communities but often were able to find only low-paying, low-skill jobs. Fink found that changes in technology and the organization of work had devalued women’s labor, and that “most rural women have not fared well with the uneven benefits conferred by rural development in the

⁶Joan Jensen, “The Role of Farm Women in American History: Areas for Additional Research,” *Agriculture and Human Values* 2 (winter 1985): 13–17.

⁷Joan Jensen, *Loosening the Bonds: Mid-Atlantic Farm Women, 1750–1850* (New Haven: Yale University Press, 1986).

⁸*Ibid.*, p. 106.

⁹*Ibid.*, p. 92.

¹⁰Deborah Fink, *Open Country, Iowa: Rural Women, Tradition, and Change* (Albany: State University of New York Press, 1986), p. 47.

¹¹*Ibid.*, p. 152.

United States.”¹² Her conclusions have set the stage for much of the current generation of scholarship in rural women’s history.

The following year (1987) Corlann Gee Bush broke new ground in an essay entitled “‘He Isn’t Half So Cranky as He Used to Be’: Agricultural Mechanization, Comparable Worth, and the Changing Farm Family.”¹³ She documented what the adoption of tractors and other modern farm technologies by men meant to farming women. Bush argued that men’s adoption of tractors meant that women’s work became less crucial on the farm since there were no longer as many hired laborers and harvest hands to look after. Women agreed to the purchase of tractors before they got washing machines, Bush explained, because “any invention that promised relief was welcome” and because “when a woman is under the ‘simple’ control of her husband, any activity or purchase or machine that makes him less ‘cranky’ has a direct and positive effect on her well being.”¹⁴

Scholarship since the mid-1980s has continued to examine the issues of power that Bush raised in her article. Researchers are grappling with the questions of who chose new technology, when they chose it, and on what terms. Because changes in technology redefined working patterns and relationships, they had the potential to alter dramatically the balance of economic power within households, as well as the balance of political and economic power between urban and rural areas. This literature attempts to tease out multiple dimensions to the tangled history of farm women and the machines that dramatically affected their lives. Indeed, the relationship between farm women and technology can be followed in several different directions: women and the technology of the farm home, women and the technology of the agricultural enterprise, and women and the impact of technological change beyond the family farmstead. Earlier scholarship was responsible for introducing these ideas, but often focused on a limited number of issues. The current generation of work, however, tends to follow all of these strands of analysis at some point in the text.

Recent books by Jane Adams, Sally McMurry, and Mary Neth discuss the impact of changing technology as part of a larger discussion of transformations of agricultural societies over time. Sally

¹²Ibid., p. 241.

¹³Corlann Gee Bush, “‘He Isn’t Half So Cranky as He Used to Be’: Agricultural Mechanization, Comparable Worth, and the Changing Farm Family,” in *To Toil the Livelong Day: American Women at Work, 1780–1980*, ed. Carol Groneman and Mary Beth Norton (Ithaca, N.Y.: Cornell University Press, 1987), pp. 213–29.

¹⁴Ibid., pp. 228–29.

McMurry's *Transforming Rural Life: Dairying Families and Agricultural Change, 1820–1885* covers the earliest period. She traces the movement of cheesemaking in central New York from a home-based, female-centered industry to a factory-based, male-dominated enterprise. McMurry examines the major changes in cheesemaking technology that occurred in the 19th century. New equipment such as cheese vats made the process easier, but did not usurp women's roles; their skill was still paramount. In McMurry's words, the new technology "simply facilitated the work while preserving women's key role in production" (p. 85). Improved equipment decreased the dangers of cheesemaking, which she describes in gruesome detail with the help of a bit of verse. These machines also made production proceed more smoothly and facilitated bulk production. Unlike the farm implement revolution of the 20th century that the other authors describe, this one did not rob women of their productive work. With their specialized knowledge, women remained on the farm, making cheese, while young men left home, looking for nonagricultural employment.

When cheesemaking moved to the factory in the late 19th century, women hurried the process forward. McMurry argues that cheesemaking was terribly hard work, which fell heavily upon dairying women. She maintains that they "hoped to exchange hard, disproportionate labor for greater latitude in the conduct of their everyday lives" (p. 146). It was improved sanitation and refrigeration, urbanization, and improved rail transportation in the mid- to late 19th century that made possible this rearrangement of women's working lives, bringing greater freedom and less onerous duties. Like Bush, McMurry claims that women were active, approving participants in this transformation. Afterward, they redirected their efforts to greater domesticity as well as to increased production of poultry for the market. Many in the late 20th century might see this as a step down the slippery slope toward the end of the small, family farming enterprise. From the perspective of 19th century participants, however, it brought a great improvement in the quality of life.

Yet scholars studying farm women and technological change in the 20th century generally believe that these processes damaged the interests of farming women and their families. This view is shaped by disdain for corporate farming and by fears about the demise of the family farm, both of which seem very real to anyone working on the history of farming communities in the mid- to late 20th century. Anthropologist Jane Adams takes a long view of the agricultural past in *The Transformation of Rural Life: Southern Illinois, 1890–1990*, which portrays the story of southern Illinois as *not* one of continuous tech-

nological “progress.” Because of factors unique to the area, farming families were slow to adopt new machines and slow to move into what was, for the rest of the Midwest, the 20th century. In the years prior to World War II, Adams tells us, agriculture in southern Illinois was more labor intensive than it was elsewhere because of the small size of farms, the crop mix, and the area’s rugged terrain. Over time, and because of economic pressures, the area moved from a system emphasizing work with neighbors and kin to one that was, by the end of the war, highly mechanized and individualized. This transformation had serious implications for farm women, who saw their role in maintaining the family labor force and producing commodities diminish significantly over time. Adams argues that government policies promoting the replacement of hand labor by machines and the application of chemicals seriously eroded farm families and farm communities in this area, as they did in much of the rest of the country as well.

Adams’s women, unlike those in McMurry’s study, had decidedly mixed feelings about industrial and mechanical “progress.” To be sure, electricity, which came to them courtesy of the Rural Electrification Administration, was greeted with unreserved enthusiasm. Houses that had been “woman killers” now became easier to maintain. But women did not always get what they wanted, when they wanted it. Many men resisted household improvements, such as indoor flush toilets, and refused to buy them. Even so, the farm homes of the forties and fifties were significantly more livable than those of the previous generation. This was the positive side of technological change.

The problematic issues involved women’s productive work on the farm. The tide of change that brought electricity into their homes also brought less welcome changes. “Women’s branches of agriculture, poultry and dairy, were among the first to be industrialized” (p. 249), Adams notes. New techniques adopted in egg production and dairying during World War II, for example, deprived women of one of their chief forms of income, just when they and their families were most wanting an improved standard of living. Their response was often to leave the farm, at least part time, in search of cash wages. The advances of the 20th century meant that their traditional work was lost for good.

Historian Mary Neth’s contribution to this literature, *Preserving the Family Farm: Women, Community, and the Foundations of Agribusiness in the Midwest, 1900–1940*, reaches conclusions very similar to Adams’s, but, unlike Adams, Neth finds that decisions to adopt technology were made cooperatively by farming couples. Her study follows the

fortunes of family-based agriculture in the Midwest during the first four decades of this century, focusing on Wisconsin, Illinois, Missouri, Iowa, Minnesota, Kansas, Nebraska, and the Dakotas. The region's farming families faced the new century with a good deal of unease because of the continuing destruction of their ability to "make do." Farmers had survived for generations because of their reliance upon networks of family and community. Shared work with kin and neighbors, as well as women's productive activities, had allowed them to survive, although sometimes just barely. The problems of the 20th century, however, tended to undermine traditional strategies. Depression, drought, and government policies encouraging greater market activity, Neth argues, damaged farmers' support networks and made an already challenging life that much harder for farming families.

Neth pays close attention to the role that technological change played in this transformation. Among the first "modern" technologies that farm families adopted were those that improved their ability to communicate with the world beyond the farm—telephones, automobiles, and especially radios, which brought the world to them. When advertisers marketed these items to rural consumers, they portrayed them as practical solutions to problems peculiar to rural populations, such as the great distances between farms and towns. But acquisition of these inventions, although they often made life on the farm easier, also introduced young people to opportunities available beyond the farm community and encouraged the outward migration of young men and women.

Neth's midwestern families were slower to adopt electricity and running water than telephones, autos, and radios, although electricity caught on more quickly in dairying areas. These choices represented a cautious allocation of scarce resources, she suggests. "Running water was a low priority in farm homes not only because it was relatively expensive but also because it was the least tied to production and the most tied to women's household labor, the most devalued part of farm work" (p. 200). Neth argues, however, that women understood and accepted this distribution of resources: "farm men and women shared a culture that valued hard work" (p. 195). New technology might lessen the hard labor involved in a woman's chores, but it might not do the job any better, and it might also threaten the value of her work skills. This resistance to new values of consumption also tended to be generational; older women tended to retain their older ways, while younger women often accepted new products more easily.

Farm people in these states also perceived the adoption of other

types of technology, particularly combines, as a threat. The earlier threshing machines could be adapted to community work patterns, for families would purchase the machines together and work cooperatively to thresh the year's crop. Threshing was an important part of women's culture as well, giving them both the opportunity to share in the labor by feeding threshing crews and the chance to visit with and work with neighbor women. The combine, which allowed harvesting and threshing in a single machine, made farmers much more independent of each other, and, Neth observes, this came at the cost of community ties and mutuality. She, like Adams, claims that the government policies that promoted technological innovation also promoted the demise of the family farm and rural communities.

More so than the other works, Katherine Jellison's *Entitled to Power: Farm Women and Technology, 1913–1963*, puts technology squarely at the center of the story. It constitutes her focus, rather than a small, albeit integral, part of the larger picture. The period about which Jellison writes was a time of enormous technological change in and around American farms in the Midwest and on the Great Plains. It was also a time when agricultural extension agents and other reformers placed great emphasis on “improving” the lives of American farm women. They hoped to make American farms a more appealing place to live by giving farm women more and better tools. By doing so, they hoped that farm women would be better able “to live as the city sisters” (p. 67) and be more satisfied with their lot. Farm women, however, resisted these efforts. While they appreciated and sincerely desired new technology that would lighten their burdens, Jellison notes, they wanted that technology on their own terms. They wanted it not because it would allow them to live like urbanites but because it would allow them to be better producers. Time saved on hauling water and washing clothes could be applied to other pursuits, such as dairying or poultry, that might generate income for the farm operation. Farm women actively resisted reformers' attempts to make them into housewives; instead, they sought to continue their efforts as active participants in the farming enterprise.

Like Neth and Adams, Jellison finds that larger changes in agriculture also threatened women's productive place on the family farm. As the demands created by World War II forced butter and egg production out of the purview of the farm wife and into that of the factory farm, women lost the enterprises that had provided them with an extra income and their farms with an important hedge against disaster. As the size of farm machinery increased, their role in caring for harvest and year-round hands decreased correspond-

ingly. Larger hydraulic equipment made it easier for women to work in the fields, but they were more likely to remake their jobs around another type of technology, the automobile. Autos allowed them to become their farms' chauffeurs and "gofers" and to travel into nearby communities to take jobs off the farm.¹⁵ By the 1960s, the role of the farm wife had been radically transformed.

Jellison's study of technology also illustrates conflicts over power within farm homes. Surveys of farm women in the early years of the 20th century suggested that many were bitter about the lack of consideration men gave to their needs. Women lacked control over the allocation of funds and the setting of priorities on the farm; consequently their legitimate requests often remained unmet. "Technology . . . served as a tangible, countable symbol of women's secondary status on the family farm," Jellison writes (pp. 183–84). Overall she argues for a more dissatisfied female farm population than Neth. According to Jellison, men and women might have been a part of a shared farming enterprise, but women knew they were subordinate and often resented their lack of power. But farm women were not trapped by their secondary status in the patriarchal order. Even as their traditional work was eroded by changes in technology, they maintained for themselves a role quite different from that of the urban housewife, for they remained essential figures in the family farming operation.

Each of these books, uniformly well written and well researched, deals admirably with the complications that new technology created for women in agriculture. Scholars interested in the impact of technology on women in agriculture will find them useful to varying degrees. Jellison's work, with its primary focus on technology, should be of the greatest interest. Those concerned with how work was accomplished on the farm in times past will probably find less to interest them. While McMurry's study does spend some time on the art of cheesemaking, process is notably absent from the other three books. Some may find this a weakness, and it may indeed be time to record for posterity the ways in which housework and other chores were accomplished in the early years of the 20th century. Those who cannot remember how wringer washers work may not be suitably impressed by more recent improvements in the process of doing a family's washing. It is also time to capture for future generations the awe and wonder with which women greeted innovations such as electrification. While the emotional reaction to new technology receives

¹⁵ Cowan also finds this phenomenon in the lives of urban and suburban women. Cowan (n. 5 above), pp. 83–85.

some mention, particularly in Adams's work, this is a facet of history that should be preserved, particularly for a younger generation which generally takes modern technology for granted.¹⁶

These books also raise a number of intriguing questions for further research. Women's attitudes toward technological change remain a knotty problem. McMurry's subjects embraced change and welcomed their partial retreat into the domestic world of "women's work." They were happy to give up their pivotal role in the production of family income. Bush has also argued, rather persuasively, that despite their attendant loss in status, women might have had good reason to welcome new technology because it eased family tensions. Was there a portion of the population of farming women, perhaps defined by region, type of farm, or income level, who welcomed the opportunity to give up the chickens and go to town to work at cleaner occupations? This question of divisions among farm women merits further consideration.

Attitudes toward the adoption of technology can also be explored more thoroughly as a generational issue. Jellison found that women's acceptance of the automobile varied by age. Women who came of age in the early years of the automobile tended to treat it as a "male" technology, while younger women took to it with vigor. Likewise, Neth found that older women resisted laborsaving appliances in favor of hard work and economizing. Their daughters spent money and adopted new appliances more quickly. Why did the younger generation of women abandon traditional practices so readily? Different societal views about the value of labor and new definitions for women's work may have changed their attitudes, but differing levels of prosperity surely played an important role as well.

Women's interactions with technological change in other regions of the United States also deserve more attention. Jellison's work, which is the most detailed, focuses on the Midwest with forays into the Great Plains. Given regional differences in crop specializations, in time lines for the adoption of new technology, and in settlement histories, scholars could profitably pursue the same type of study in the Northeast, the South, the mountain West, and along the Pacific coast. Industry also replaced women's traditional, farm-based occupations at different times in different regions as well. The regional differences within agriculture were enormous, and differences in

¹⁶For oral histories that capture some of the emotional reaction to new technology, see two volumes edited by Eleanor Arnold: *Memories of Hoosier Homemakers* (Bloomington: Indiana University Press, 1993) and *Voices of American Homemakers* (Bloomington: Indiana University Press, 1985).

women's experiences with technology in the home and around the farm may or may not have been correspondingly large.

Another question raised earlier by social scientists, but as yet unanswered, might also prove fruitful for scholars: "What can explain the persistence of inequality in men's and women's spheres of work on the farm given the tremendous changes in the technology of farm work and the changes in the sociocultural milieu?"¹⁷ As the technology of farming has changed, in other words, making strength less of a consideration, and as attitudes about women's roles have changed, allowing them greater latitude in choosing nontraditional occupations, why have women not chosen to engage in fieldwork in larger numbers? Even as technology has changed, the long-established gender division of labor in agriculture has largely remained. Rachel Rosenfeld's 1985 study, *Farm Women: Work, Farm, and Family in the United States*, showed that the majority of farm women still do not do significant amounts of fieldwork. Only 11 percent, for example, regularly plow, disc, cultivate, or plant, and only 17 percent ever apply fertilizers, herbicides, or insecticides.¹⁸ There is no evidence from the last decade that these patterns have changed. Perhaps the biggest impact that technological developments have had on the gender division of labor is that the automobile has allowed close to 50 percent of farm women to supplement the family income by taking jobs off the farm.¹⁹

This growing emphasis on the impact of technology in the lives of rural women makes sense. Farm women were working women, and the tools they used shaped their labors. From the early days of the study of rural women's history, scholars have sought to include technology in their analysis, although sometimes on a limited basis. Considerations of the impact of technology on farm women have become quite broad, with the current generation of writers attempting to develop a comprehensive understanding of technology's meanings. It is not enough to consider women and their tools in the home, although changes in the technology of the home have had a dramatic effect on women's working lives. Because technology adopted by men has had an impact on women's working lives, their work must be considered as well. And because changes in the larger agricultural economy affected the marketability of the traditional products of women's labor (such as butter and eggs), scholars must

¹⁷Garkovich and Bokemeier (n. 3 above), p. 224.

¹⁸Rachel Rosenfeld, *Farm Women: Work, Farm, and Family, in the United States* (Chapel Hill: University of North Carolina Press, 1985), pp. 56–57.

¹⁹*Ibid.*, p. 147.

also consider changes in technology beyond the farm. What has developed is an attempt to see technology in farm women's lives in its multiple contexts, from the home to the farm economy.

What has also evolved is a yet-to-be-resolved historiographic battle over the impact of that technology on agrarian women. Scholars are unable to agree about the degree to which women wanted and accepted new technology, or about the impact technology had on their place within the farm family. Looming equally large are disagreements about the amount of cooperation that existed between husbands and wives over the allocation of family resources. Perhaps the strongest and most obvious point of agreement is that technological change could not help but dramatically reshape the work lives and family relationships of farming women, whether in the 19th or the 20th century. What constituted "women's work" on the farm was radically transformed by machines. The lives of farm families have always been inextricably linked to the development of technology, and greater attention to those complex linkages can only strengthen the study of women's history, rural and agricultural history, and the history of technology.