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# everyday economics

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## Microwave Oven Liberation

Household appliances, not Gloria Steinem, ushered women into the workplace.

By [Steven E. Landsburg](#)

Posted Wednesday, Jan. 3, 2001, at 4:00 p.m. PT

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Millenniums and centuries come and go, but some things remain distressingly unchanged. Nearly a thousand years ago, William the Conqueror evicted "every inhabitant from huge stretches of the countryside to provide new forests" (I quote historian David Howarth). It was the millennium's first act of environmental extremism, but by no means the last. And just over a hundred years ago,

*Scientific American* reported that economic progress in Manhattan was near an end because the island could support only a limited number of horses. That narrowness of vision, fueled by a fundamental misunderstanding of how economies grow, continues to plague our national discourse.

In the long run, economic growth comes not from cramming more horses onto your island, or more factories into your rust belt, or even more information onto your servers, but from technological breakthroughs—not from more of the same but from the new and previously unthinkable.

By the middle of the last century, *Scientific American's* false vision of the future had been displaced by a new vision, expressed in the March 1949 issue of *Popular Mechanics*: "Where a calculator on the Eniac is equipped with 18,000 vacuum tubes and weighs 30 tons, computers in the future may have only 1,000 vacuum tubes and perhaps weigh 1-1/2 tons "



...

Wrong again, but then so was everybody. We never got any of the stuff we were promised by *The Jetsons* (and I have waited my whole life for the personal rocket pack), but the stuff we did get—Prozac, microwave ovens, and the Internet—turned out to be equally fabulous.

Along with new technology, the century brought new social norms. In 1900, fewer than 5 percent of women worked outside the home. The rest spent an average of 58 hours a week on housework. By 1975, that was down to 18 hours, and it's probably lower today. As housework got easier, women's social and economic status grew. That's no coincidence, according to three economists who I will refer to collectively as GSY: Jeremy Greenwood at the University of Rochester, Ananth Seshadri at the University of Wisconsin, and Mehmet Yorukoglu at the University of Chicago. GSY contend that women's liberation is a direct consequence of the "housework revolution" that brought about the advent of central heating, dryers, electric irons, frozen foods, refrigerators, washing machines, vacuum cleaners, and running water.

Here's GSY's account of a typical housewife's laundry day in 1900: First, our heroine ports water to the stove and heats it by burning wood or coal. Then she cleans the clothes by hand, rinses them, wrings them out (either by hand or with a mechanical wringer), then hangs them to dry and moves on to the oppressive task of ironing, using heavy flatirons that are heated continuously on the stove. By 1945, things had changed: About 60 percent of households had washing machines (though essentially none had dryers). How dramatically did that change affect women's lives? In 1945, government researchers undertook to find out. The researchers observed a farm wife named Mrs. Verett while she did a 38-pound load of laundry. Without electric appliances, Mrs. Verett spent 4 hours washing and 4 1/2 hours ironing, and she walked 6,303 feet along the way. After she got a washing machine and an electric iron, she spent 41 minutes washing and 1 3/4 hours ironing, walking only 665 feet along the way.

It wasn't just laundry: At the beginning of the century, most households had no running water, and none had central heating. So, routine housework included lugging 7 tons of coal and 9,000 gallons of water around the house every year.

It's been argued that women's liberation—and more specifically the entry of women into the labor force—was driven by charismatic leaders from Elizabeth Cady Stanton through Betty Friedan and Gloria Steinem, or by the social upheavals associated with World War II. But the GSY team

argues that women's labor force participation is a natural consequence of appliances that freed them from the drudgery of housework. Over the course of the century, those appliances have gotten cheaper; as they've gotten cheaper, they've spread to more households. As they've spread to more households, more women have entered the marketplace.

International comparisons tell the same story: By and large, the countries where durable goods are cheapest are the countries where more women work for wages. The same was true across the United States in the middle years of the century.

I'd like to see GSY apply their methods to study the *men's* liberation that happened earlier in the millennium, when large numbers of men left farms to go to work in the marketplace. Was that revolution also driven by technological innovations? My guess is yes, but as far as I know, nobody's done the kind of careful data analysis for men that GSY have done for women.

My prediction for this century is that technological innovation will continue to transform and enrich our lives in ways that none of us can now imagine. Of all the predictions one could have made a century ago, that was the only one that proved true.

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In a recent "[Book Club](#)," Katha Pollitt discusses, and provides links to, "the women's movement's demystification of domestic labor." Eliza Truitt debunks laundry myths and gives you the "dirt on detergent" [here](#). You can read Rob Walker's take on the problem with today's supply-driven technological innovation [here](#).

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[Here's](#) a list of the top technological breakthroughs and great inventors of the last century. You can read GSY's paper on how household technologies liberated women from the home [here](#) ([Adobe Acrobat](#) required). Some equipment experts [say](#) that appliances don't liberate anybody. Historian Ruth Schwartz Cowan, in her book *More Work for Mother*, [argued](#) that they ironically had the opposite effect. Click [here](#) for a similar take.

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It is far from clear that the domestic world of the typical middle-class housewife epitomizes working life for women in the past. We often speak of women entering the workforce in the postwar years, but they were always there: picking cotton in the fields, toiling in factories and textile mills, cleaning other people's houses, and working as prostitutes. They also served as secretaries, telephone operators, teachers, nurses, salesgirls and waitresses. During the war itself, they built bombers and battleships.

The real changes of the postwar period, then, amounted to new developments in what kinds of work women did and which kinds of women were working. Middle-class housewives, facilitated by the technological changes described by GSY, but probably driven by other factors, joined the working classes in earning a living. Why exactly they did this is a topic for another day.

--**Josh Pollack**

(To reply, click [here](#).)

This is no surprise. Over the past century, culture has been divided largely into two groups: the yammerers and the doers. (This is not quite the same as C.P. Snow's two cultures, but it's close). The yammerers have talked endlessly about revolutionizing human affairs. Mostly they have failed--and given their "successes" like Marxism and National Socialism, we should be glad of that.

The true revolution, meanwhile, has come through technology. The only problem is that technologists are feeling forced to deal with things they'd rather not have to worry about--like social morality with regard to their work--because those who are supposed to worry about such things have so thoroughly dropped the ball. This is discouraging: Marvin Minsky is a smart guy, but evaluating what society should do about artificial intelligence should be the concern of non-technologists. Then again, if the choice is between Minsky and, say, Stanley Fish, I'll take Minsky every time.

Doers, after all, are constantly constrained by reality. Yammerers are constrained only by the credulity of their audience, which is clearly an insufficient constraint.

--**A.G.Android**

(To reply, click [here](#).)

I would have thought it unarguable that women's liberation was driven by technological change rather than by the influence of particular women. I remember once reading an essay by Pearl S. Buck, from the 1930s, about how the afternoon matinees

attract hordes of women who, thanks to new household appliances, now have more free time than they know what to do with. Ms. Buck thought that something had to give sooner or later.

Even watching *I Love Lucy* from the 50's, it is clear that women had no reason to stay at home all day, rather than go down to The Tropicana, so it was only a matter of time.

--D.Baren

(To reply, click [here.](#))

Look at the writings of women before household appliances like the dishwasher and the microwave were ever around: there is no way that you could read Charlotte Perkins Gilman's *The Yellow Wallpaper* and tell me that the root of inequality lies in a good washing machine. You are belittling a movement that still has a long way to go and has some important achievements to make, not as much in the house and at work, but in the images presented to us of women, in movies, in art, in literature. It is a movement that reaches beyond the span of any chore and into the minds of people with real thoughts, real intentions, real dreams, real expectations, who deserve to be seen as something more. Look at the way great appliances like TV portray women. What has television done for the feminist movement? Just take a look at some of MTV's new music videos and let me know. Appliances may have helped in the way that any new machine helps its user, but they didn't instigate the changes that happened. They are, after all, only inanimate objects. How far can they have propelled a movement that is rooted in ideas and difference, in comparison to the literature that has brought it so far?

--Danielle Fleming

(To reply, click [here.](#))

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