

October 12, 2003

THE WAY WE LIVE NOW

The (Agri)Cultural Contradictions of Obesity

By MICHAEL POLLAN

Sometimes even complicated social problems turn out to be simpler than they look. Take America's "obesity epidemic," arguably the most serious public-health problem facing the country. Three of every five Americans are now overweight, and some researchers predict that today's children will be the first generation of Americans whose life expectancy will actually be shorter than that of their parents. The culprit, they say, is the health problems associated with obesity.

You hear several explanations. Big food companies are pushing supersize portions of unhealthful foods on us and our children. We have devolved into a torpid nation of couch potatoes. The family dinner has succumbed to the fast-food outlet. All these explanations are true, as far as they go. But it pays to go a little further, to look for the cause behind the causes. Which, very simply, is this: when food is abundant and cheap, people will eat more of it and get fat. Since 1977, an American's average daily intake of calories has jumped by more than 10 percent. Those 200 or so extra calories have to go somewhere. But the interesting question is, Where, exactly, did all those extra calories come from in the first place? And the answer takes us back to the source of all calories: the farm.

It turns out that we have been here before, sort of, though the last great American binge involved not food, but alcohol. It came during the first decades of the 19th century, when Americans suddenly began drinking more than they ever had before or have since, going on a collective bender that confronted the young republic with its first major public-health crisis -- the obesity epidemic of its day. Corn whiskey, suddenly superabundant and cheap, was the drink of choice, and in the 1820's the typical American man was putting away half a pint of the stuff every day. That works out to more than five gallons of spirits a year for every American. The figure today is less than a gallon.

As W.J. Rorabaugh tells the story in "The Alcoholic Republic," we drank the hard stuff at breakfast, lunch and dinner, before work and after and very often during. Employers were expected to supply spirits over the course of the workday; in fact, the modern coffee break began as a late-morning whiskey break called "the elevenses." (Just to pronounce it makes you sound tipsy.) Except for a brief respite Sunday mornings in church, Americans simply did not gather -- whether for a barn raising or quilting bee, corn husking or political campaign -- without passing the jug. Visitors from Europe -- hardly models of sobriety themselves -- marveled at the free flow of American spirits. "Come on

then, if you love toting," the journalist William Cobbett wrote his fellow Englishmen in a dispatch from America. "For here you may drink yourself blind at the price of sixpence."

The results of all this toting were entirely predictable: a rising tide of public drunkenness, violence and family abandonment and a spike in alcohol-related diseases. Several of the founding fathers -- including George Washington, Thomas Jefferson and John Adams -- denounced the excesses of the "alcoholic republic," inaugurating the American quarrel over drinking that would culminate a century later in Prohibition.

But the outcome of our national drinking binge is not nearly as relevant to our present predicament as its underlying cause. Which, put simply, was this: American farmers were producing way too much corn, especially in the newly settled areas west of the Appalachians, where fertile soil yielded one bumper crop after another. Much as it has today, the astounding productivity of American farmers proved to be their own worst enemy, as well as a threat to the public health. For when yields rise, the market is flooded with grain, and its price collapses. As a result, there is a surfeit of cheap calories that clever marketers sooner or later will figure out a way to induce us to consume.

In those days, the easiest thing to do with all that grain was to distill it. The Appalachian range made it difficult and expensive to transport surplus corn from the lightly settled Ohio River Valley to the more populous markets of the East, so farmers turned their corn into whiskey -- a more compact and portable "value-added commodity." In time, the price of whiskey plummeted, to the point that people could afford to drink it by the pint, which is precisely what they did.

Nowadays, for somewhat different reasons, corn (along with most other agricultural commodities) is again abundant and cheap, and once again the easiest thing to do with the surplus is to turn it into more compact and portable value-added commodities: corn sweeteners, cornfed meat and chicken and highly processed foods of every description. The Alcoholic Republic has given way to the Republic of Fat, but in both cases, before the clever marketing, before the change in lifestyle, stands a veritable mountain of cheap grain. Until we somehow deal with this surfeit of calories coming off the farm, it is unlikely that even the most well-intentioned food companies or public-health campaigns will have much success changing the way we eat.

The underlying problem is agricultural overproduction, and that problem (while it understandably never receives quite as much attention as underproduction) is almost as old as agriculture itself. Even in the Old Testament, there's talk about how to deal not only with the lean times but also with the fat: the Bible advises creation of a grain reserve to smooth out the swings of the market in food. The nature of farming has always made it difficult to synchronize supply and demand. For one thing, there are the vagaries of nature: farmers may decide how many acres they will plant, but precisely how much food they produce in any year is beyond their control.

The rules of classical economics just don't seem to operate very well on the farm. When prices fall, for example, it would make sense for farmers to cut back on production,

shrinking the supply of food to drive up its price. But in reality, farmers do precisely the opposite, planting and harvesting more food to keep their total income from falling, a practice that of course depresses prices even further. What's rational for the individual farmer is disastrous for farmers as a group. Add to this logic the constant stream of improvements in agricultural technology (mechanization, hybrid seed, agrochemicals and now genetically modified crops -- innovations all eagerly seized on by farmers hoping to stay one step ahead of falling prices by boosting yield), and you have a sure-fire recipe for overproduction -- another word for way too much food.

All this would be bad enough if the government weren't doing its best to make matters even worse, by recklessly encouraging farmers to produce even more unneeded food. Absurdly, while one hand of the federal government is campaigning against the epidemic of obesity, the other hand is actually subsidizing it, by writing farmers a check for every bushel of corn they can grow. We have been hearing a lot lately about how our agricultural policy is undermining our foreign-policy goals, forcing third-world farmers to compete against a flood tide of cheap American grain. Well, those same policies are also undermining our public-health goals by loosing a tide of cheap calories at home.

While it is true that our farm policies are making a bad situation worse, adding mightily to the great mountain of grain, this hasn't always been the case with government support of farmers, and needn't be the case even now. For not all support programs are created equal, a fact that has been conveniently overlooked in the new free-market campaign to eliminate them.

In fact, farm programs in America were originally created as a way to shrink the great mountain of grain, and for many years they helped to do just that. The Roosevelt administration established the nation's first program of farm support during the Depression, though not, as many people seem to think, to feed a hungry nation. Then, as now, the problem was too much food, not too little; New Deal farm policy was designed to help farmers reeling from a farm depression caused by what usually causes a farm depression: collapsing prices due to overproduction. In Churdan, Iowa, recently, a corn farmer named George Naylor told me about the winter day in 1933 his father brought a load of corn to the grain elevator, where "the price had been 10 cents a bushel the day before," and was told that suddenly, "the elevator wasn't buying at any price." The price of corn had fallen to zero.

New Deal farm policy, quite unlike our own, set out to solve the problem of overproduction. It established a system of price supports, backed by a grain reserve, that worked to keep surplus grain off the market, thereby breaking the vicious cycle in which farmers have to produce more every year to stay even.

It is worth recalling how this system worked, since it suggests one possible path out of the current subsidy morass. Basically, the federal government set and supported a target price (based on the actual cost of production) for storable commodities like corn. When the market price dropped below the target, a farmer was given an option: rather than sell his harvest at the low price, he could take out what was called a "nonrecourse loan," using

his corn as collateral, for the full value of his crop. The farmer then stored his corn until the market improved, at which point he sold it and used the proceeds to repay the loan. If the market failed to improve that year, the farmer could discharge his debt simply by handing his corn over to the government, which would add it to something called, rather quaintly, the "ever-normal granary." This was a grain reserve managed by the U.S.D.A., which would sell from it whenever prices spiked (during a bad harvest, say), thereby smoothing out the vicissitudes of the market and keeping the cost of food more or less steady -- or "ever normal."

This wasn't a perfect system by any means, but it did keep cheap grain from flooding the market and by doing so supported the prices farmers received. And it did this at a remarkably small cost to the government, since most of the loans were repaid. Even when they weren't, and the government was left holding the bag (i.e., all those bushels of collateral grain), the U.S.D.A. was eventually able to unload it, and often did so at a profit. The program actually made money in good years. Compare that with the current subsidy regime, which costs American taxpayers about \$19 billion a year and does virtually nothing to control production.

So why did we ever abandon this comparatively sane sort of farm policy? Politics, in a word. The shift from an agricultural-support system designed to discourage overproduction to one that encourages it dates to the early 1970's -- to the last time food prices in America climbed high enough to generate significant political heat. That happened after news of Nixon's 1972 grain deal with the Soviet Union broke, a disclosure that coincided with a spell of bad weather in the farm belt. Commodity prices soared, and before long so did supermarket prices for meat, milk, bread and other staple foods tied to the cost of grain. Angry consumers took to the streets to protest food prices and staged a nationwide meat boycott to protest the high cost of hamburger, that American birthright. Recognizing the political peril, Nixon ordered his secretary of agriculture, Earl (Rusty) Butz, to do whatever was necessary to drive down the price of food.

Butz implored America's farmers to plant their fields "fence row to fence row" and set about dismantling 40 years of farm policy designed to prevent overproduction. He shuttered the ever-normal granary, dropped the target price for grain and inaugurated a new subsidy system, which eventually replaced nonrecourse loans with direct payments to farmers. The distinction may sound technical, but in effect it was revolutionary. For instead of lending farmers money so they could keep their grain off the market, the government offered to simply cut them a check, freeing them to dump their harvests on the market no matter what the price.

The new system achieved exactly what it was intended to: the price of food hasn't been a political problem for the government since the Nixon era. Commodity prices have steadily declined, and in the perverse logic of agricultural economics, production has increased, as farmers struggle to stay solvent. As you can imagine, the shift from supporting agricultural prices to subsidizing much lower prices has been a boon to agribusiness companies because it slashes the cost of their raw materials. That's why Big Food, working with the farm-state Congressional delegations it lavishly supports,

consistently lobbies to maintain a farm policy geared to high production and cheap grain. (It doesn't hurt that those lightly populated farm states exert a disproportionate influence in Washington, since it takes far fewer votes to elect a senator in Kansas than in California. That means agribusiness can presumably "buy" a senator from one of these underpopulated states for a fraction of what a big-state senator costs.)

But as we're beginning to recognize, our cheap-food farm policy comes at a high price: first there's the \$19 billion a year the government pays to keep the whole system afloat; then there's the economic misery that the dumping of cheap American grain inflicts on farmers in the developing world; and finally there's the obesity epidemic at home -- which most researchers date to the mid-70's, just when we switched to a farm policy consecrated to the overproduction of grain. Since that time, farmers in the United States have managed to produce 500 additional calories per person every day; each of us is, heroically, managing to pack away about 200 of those extra calories per day. Presumably the other 300 -- most of them in the form of surplus corn -- get dumped on overseas markets or turned into ethanol.

Cheap corn, the dubious legacy of Earl Butz, is truly the building block of the "fast-food nation." Cheap corn, transformed into high-fructose corn syrup, is what allowed Coca-Cola to move from the svelte 8-ounce bottle of soda ubiquitous in the 70's to the chubby 20-ounce bottle of today. Cheap corn, transformed into cheap beef, is what allowed McDonald's to supersize its burgers and still sell many of them for no more than a dollar. Cheap corn gave us a whole raft of new highly processed foods, including the world-beating chicken nugget, which, if you study its ingredients, you discover is really a most ingenious transubstantiation of corn, from the cornfed chicken it contains to the bulking and binding agents that hold it together.

You would have thought that lower commodity prices would represent a boon to consumers, but it doesn't work out that way, not unless you believe a 32-ounce Big Gulp is a great deal. When the raw materials for food become so abundant and cheap, the clever strategy for a food company is not necessarily to lower prices -- to do that would only lower its revenues. It makes much more sense to compete for the consumer's dollar by increasing portion sizes -- and as Greg Critser points out in his recent book "Fat Land," the bigger the portion, the more food people will eat. So McDonald's tempts us by taking a 600-calorie meal and jacking it up to 1,550 calories. Compared with that of the marketing, packaging and labor, the cost of the added ingredients is trivial.

Such cheap raw materials also argue for devising more and more highly processed food, because the real money will never be in selling cheap corn (or soybeans or rice) but in "adding value" to that commodity. Which is one reason that in the years since the nation moved to a cheap-food farm policy, the number and variety of new snack foods in the supermarket have ballooned. The game is in figuring out how to transform a penny's worth of corn and additives into a \$3 bag of ginkgo biloba-fortified brain-function-enhancing puffs, or a dime's worth of milk and sweeteners into Swerve, a sugary new "milk based" soft drink to be sold in schools. It's no coincidence that Big Food has suddenly "discovered" how to turn milk into junk food: the government recently made

deep cuts in the dairy-farm program, and as a result milk is nearly as cheap a raw material as water.

As public concern over obesity mounts, the focus of political pressure has settled on the food industry and its marketing strategies -- supersizing portions, selling junk food to children, lacing products with trans fats and sugars. Certainly Big Food bears some measure of responsibility for our national eating disorder -- a reality that a growing number of food companies have publicly accepted. In recent months, Kraft, McDonald's and Coca-Cola have vowed to change marketing strategies and even recipes in an effort to help combat obesity and, no doubt, ward off the coming tide of litigation.

There is an understandable reluctance to let Big Food off the hook. Yet by devising ever more ingenious ways to induce us to consume the surplus calories our farmers are producing, the food industry is only playing by a set of rules written by our government. (And maintained, it is true, with the industry's political muscle.) The political challenge now is to rewrite those rules, to develop a new set of agricultural policies that don't subsidize overproduction -- and overeating. For unless we somehow deal with the mountain of cheap grain that makes the Happy Meal and the Double Stuf Oreo such "bargains," the calories are guaranteed to keep coming.

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