

The Iowa story is typical of the midwestern development of traffic control and criminal law enforcement. Scott Fisher traces the story of the Iowa State Patrol, originally designated the Iowa Highway Safety Patrol, from its beginnings in 1935 through the modern, high-tech patrol of the 1990s. The first effort to patrol Iowa roads began in the 1930s with Iowa Highway Commission "highway inspectors," but the increase in road travel, crime in the late 1930s, and the need for a trained unit led to the creation of a formal highway patrol. Its history is intertwined with the history of Iowa's road development, the growth of vehicular traffic, gangsters, politics, and the government's role in state law enforcement. Fisher's account includes statistics, details of the patrol organization, reports of troopers killed in the line of duty, descriptions of the development of technology, and stories of some of the patrol's more "famous" cases as well as the mundane. One of the more interesting facets of this history is the story of Iowa's first Secretary of State, Ola Babcock Miller, who was the founder of the Iowa State Patrol and its leading proponent with her campaign against the "Four Horsemen of the Highway" (12). There is one major oversight. The author does not discuss the jurisdiction of the patrol and its relationship with the Iowa Bureau of Criminal Investigation. He does allude to early problems with county sheriffs concerning the need for the patrol, but it is critical to anyone interested in law enforcement to know the exact jurisdictional level of the Iowa State Patrol.

Overall, this is an easily read study that brings not only an interesting period of Iowa history to print, but also a much needed history of the Iowa State Patrol to the public. This history is a needed addition to any public library bookshelf, and is of major interest to the student of Iowa history. As Fisher states so adequately, the history of the Iowa State Patrol "is a modern history of the state of Iowa" from "major crimes to natural disasters . . . from crowd control to educating school kids" (xi).

Cancer from Beef: DES, Federal Food Regulation, and Consumer Confidence, by Alan I. Marcus. Baltimore: The Johns Hopkins University Press, 1994. x, 235 pp. Notes, bibliographical essay, index. \$38.50 cloth.

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In 1996 Americans will mark the silver anniversary of the so-called War on Cancer, which began with the passage of the National Cancer Act in 1971. But it won't be much of a jubilee. The overall death rate for cancer is seven percent higher today than it was in 1971. According

to the American Cancer Society, 547,000 Americans will die of cancer in 1995, including 6,500 in Iowa, a toll that exceeds the number of Americans killed in World War II. Measured in lives lost and fortune spent, all wars pale compared to the struggle against cancer.

Alan Marcus's book is about a skirmish of that war—happily, one in which nobody was killed, at least as far as anyone has determined. In 1954 Iowa State College animal nutritionist Wise Burroughs discovered that a synthetic estrogen, when added to cattle feed, had a remarkable growth-stimulating effect. Indeed, diethylstilbestrol (DES) could accelerate weight gain by ten percent or more, readying stock for market a month sooner than normal on much less feed. This, along with antibiotics, rationalized cattle feeding in confined lots rather than on open ranges. With quick FDA approval and a patent that assigned royalties to the college, DES swept through the beef industry perhaps faster than any other technological change in American agricultural history.

Even before Burroughs's work began, however, DES was known to be carcinogenic when laboratory animals ingested relatively large doses over extended periods of time. Yet researchers found no correlation with cancer at low levels, as occurred naturally in clover and other hay plants, or at high concentrations for short durations. Thus, the FDA approved the drug for use as a feed additive in a regime of 11 mg in the daily ration of a steer that went to market in twelve to eighteen months (about one-twentieth of its natural life expectancy), with the added proviso that the drug not be administered for at least 48 hours prior to slaughter. This judgment on presumed safety flew in the face of a "consumer" sentiment that any level of carcinogen added to the food supply presented a health hazard that should be avoided if possible. Eventually, this view took legislative form in the renowned "Delaney Cancer Clause" (actually, a plank in the 1958 Food Additive Amendment to the 1938 Food, Drug, and Cosmetics Act, named for New York Representative James Delaney, because of "his deep and abiding interest in this subject"). DES did not fall immediately because the new law contained a limited grandfather stipulation on additives in use before 1958, and because the Secretary of Health, Education, and Welfare could exempt substances that raised no undue human health risk. Still, the lines were drawn for a twenty-one-year fight between agricultural and medical scientists, cattlemen and consumer activists, and lawyers for the pharmaceutical manufacturers and the Natural Resources Defense Council. On June 29, 1979, FDA Commissioner Donald Kennedy finally issued the decision that banned DES as a cattle growth promoter.

This is the story Marcus tells in an extremely well-documented and admirably written book. A dual theme spirals throughout: first, the declining faith in so-called objective scientific expertise; and second, a waning of "progressive" idealism as participatory politics became more democratic. It is a compelling social constructionist interpretation, though one that seems to undervalue the enormously difficult biological etiology of cancer. It is not one disease, but more than one hundred. Most researchers now hold the view that cancer is a genetic disorder, though its inception may involve many genes, complex metabolic pathways, and any number of environmental factors, coinciding at once in any one of the one hundred trillion cells that make up a human being. Cancer also can demonstrate an extended latency between exposure to carcinogens and the onset of clinical symptoms. In that regard, the fact that DES in beef has never been shown to cause cancer in humans still could be revised, should this source of estrogen, a generation ago, be implicated in the now rising level of prostate cancer. The DES story may, as Marcus argues, reflect the political morality of an America in doubt, but cancer is a medusa that seems to laugh at any social construction meant to explain, contain, or defeat it.

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