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Invisible Hooves: Markets and the Environment in the History of American and
Transnational Cattle Ranching, 1867-2017

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in History

by

Timothy Amund Paulson

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September 2017

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September 2017

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ABSTRACT

Invisible Hooves: Markets and the Environment in the History of American and
Transnational Cattle Ranching, 1867-Present

by

Timothy Amund Paulson

This dissertation examines the making and breaking of landscape-based economic markets over time. It provides a historical narrative of the formation and failure of various market situations in the United States beef economy from 1867 to 2017—including the open range, grazing privileges on public lands, corporate structure of meatpacking, consumer beef prices, live cattle futures contracts, international trade markets, and carbon markets—based on archival research and historical datasets. The narrative emphasizes the role of ideas, laws (and other types of exchange-rules), and organizations in changing the nature of capitalist markets and their relationship with the natural environment. The dissertation argues that actors from across the beef economy purposefully altered capitalist markets based on differing notions of how free markets and landscapes ought to interact. All efforts were united by an enduring faith that markets (if corrected) could serve ecological and social goals. The dissertation concludes that different market constructions are possible within capitalism and yield different social and environmental outcomes, but it also finds that, in general, capitalist markets tend towards instability making them poor mechanisms for managing human-environment relationships.

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Introduction: American Bovine Capitalism

Global Cattlescapes

Cows, especially beef cattle, leave an immense social and ecological hoofprint on the world. There are approximately one billion cows on Earth.¹ In terms of total body mass, cows dwarf every other vertebrate species on the planet including humans.² Rangeland ecosystems cover more than one third of the earth's surface area, and a majority of them are—or have been—grazed by cows. Cows also live in, or adjacent to, most urban spaces in the world for at least part of their lives and most of their afterlives as food and durable goods. Grasslands, deserts, forests, cities, and semi-industrial suburbs have all co-evolved with cows. Cattle are so consequential for many social and environmental landscapes that we could characterize much of the world as a system of *cattlescapes*. According to more radical scientific claims, agriculture is and has been responsible for about half of all human-induced climate change from the first domestication of crops and livestock to the present. Of all agricultural pursuits, beef production has the greatest climate impact. If one accounts for all the trees that do not exist and accounts for all the years they have not existed for because they were cut to make space for cows, then you might conclude that cows—not cars or coal—caused global warming.³ Indeed, we may be living in a *cattle climate*.

¹ “Number of Cattle Worldwide from 2012 to 2016 (in million head),” *Statista*, 2017, <https://www.statista.com/statistics/263979/global-cattle-population-since-1990/>.; Rob Cook, “World Cattle Inventory: Ranking of Countries,” *Beef 2 Live*, 2017, <http://beef2live.com/story-world-cattle-inventory-ranking-countries-0-106905>.; Matt Blitz, “Do Cow Farts Really Significantly Contribute to Global Warming?,” *Today I Found Out*, 11 April 2014, <http://www.todayifoundout.com/index.php/2014/04/cow-farts-really-significantly-contribute-global-warming/>.

² Vaclav Smil, “Planet of the Cows [Numbers Don’t Lie],” *IEEE Spectrum* 54, no. 4 (April 2017), 24.; Please note: The most massive organisms on earth are individually microscopic, and they matter a lot, too, but are not the focus of the present study.

³ R. A. Houghton, “Carbon Flux to the Atmosphere from Land-Use Changes: 1850-2005,” in Carbon Dioxide Information Analysis Center, *TRENDS: A Compendium of Data on Global Change* (Oak Ridge, TN: Oak Ridge National Laboratory, 2008 and 2010), at cdiac.ornl.gov/trends/trends.htm.; Lester R. Brown, *Full Planet, Empty Plates: The New Geopolitics of Food Scarcity* (New York: W.W. Norton & Company, 2012).

Fewer than ten percent of the world's cows live in the United States, but American beef cattle have been historically the most important and influential cows in the world.⁴ Humans occupied the North American continent about twenty to forty thousand years ago. Humans domesticated cattle about nine thousand years. But cattle did not make it to the present United States until about five hundred years ago, and they were not significant (compared to pigs, chickens, or even buffalo) until about one hundred and fifty years ago. However, the past century-and-a-half has belonged to the American beef cow. In 1840, there were roughly fifteen million cattle in the United States; in 1890, almost sixty million; in 1950, over 90 million; and in 1975, the cattle population peaked at 132 million head. For comparison, there were 216 million documented humans in the United States in 1975. By the mid-twentieth century, Americans—branded widely as “cowboys”—were synonymous with their cows in the eyes of themselves and people all over the world. The number of beef cattle in the United States has dropped steadily and significantly since 1975 to 94 million animals in 2017. Now there are more beef cattle in Brazil and China than in the US, but in important ways these animals, too, are American cows. The relatively short history of cows in the United States has shaped what it means to be an American and what it means to be a cow almost anywhere in the world.

The impact of beef cattle on America and of American beef cattle on the world is not all obvious to plain sight. McDonald's fast food restaurants serve American-style beef burgers to 70 million people in 118 countries every single day, but the universalization of a diet of mechanically separated cow tissue is only one of the ways that American beef cattle

⁴ Almost a third live in India, but no one else treats cows like they do in India.

changed the world.⁵ What is most important for the American beef cow and for its legacy around the world is the set of practices, beliefs, ideas, structures, and rules that developed historically to define how and why a beef cow is raised, processed, bought, sold, and consumed. American cows are not just animals—they are a consuming economic, social, and environmental system. Cows in America developed from domesticated multi-use livestock into a catalyst, justification, tool, and consequence of a particular version of the capitalist mode of production (which was also a mode of consumption).

The purpose of this study is to investigate and critique the origins, developments, and consequences of American bovine capitalism from the nineteenth century to the present. The major characteristic and consequence of the American beef industry has been the propagation of a particularly insidious form of free-market capitalism with consequences for social and environmental relationships. Many things in modern society operate by free-market capitalism, and cattle did not create the capitalist mode of production, but beef is notable because it extends advanced free-market principles to rural landscapes and peoples as well as consumers, who we rarely think of living at the heart of capitalism (we may rarely think of them as having significant economic lives at all). Further, at certain times and in certain ways, (and, in fact, in every chapter of this dissertation), the American beef cattle industry did not just carry market capitalism to new places and people—it actually shaped and advanced the leviathan itself.⁶

⁵ Please see: James L. Watson, ed., *Golden Arches East: McDonald's in East Asia* (Stanford University Press, 2006).

⁶ There is a growing recognition of the ways agriculture (and livestock agriculture, in particular) leads (or, at least, parallels at the same time) wider developments in advanced global capitalism. See for example: Nathan Sayre, “Land, Labor, Livestock, and (Neo)Liberalism: Understanding the Geographies of Pastoralism and Ranching,” *Geoforum* 40 (2009), 705-706.; I also participated in a panel on this theme at the Labor and Working Class History Association annual conference, Seattle, WA, 24 June 2017. Co-panelists Keith Orejel, “The Dilemma of the Industrial Working Class in Rural America, 1945-1965,” and William D. Goldsmith, “An Equitable New South Without Unions? The Worker Rights Lacuna of the New Economy Policymakers, 1980-

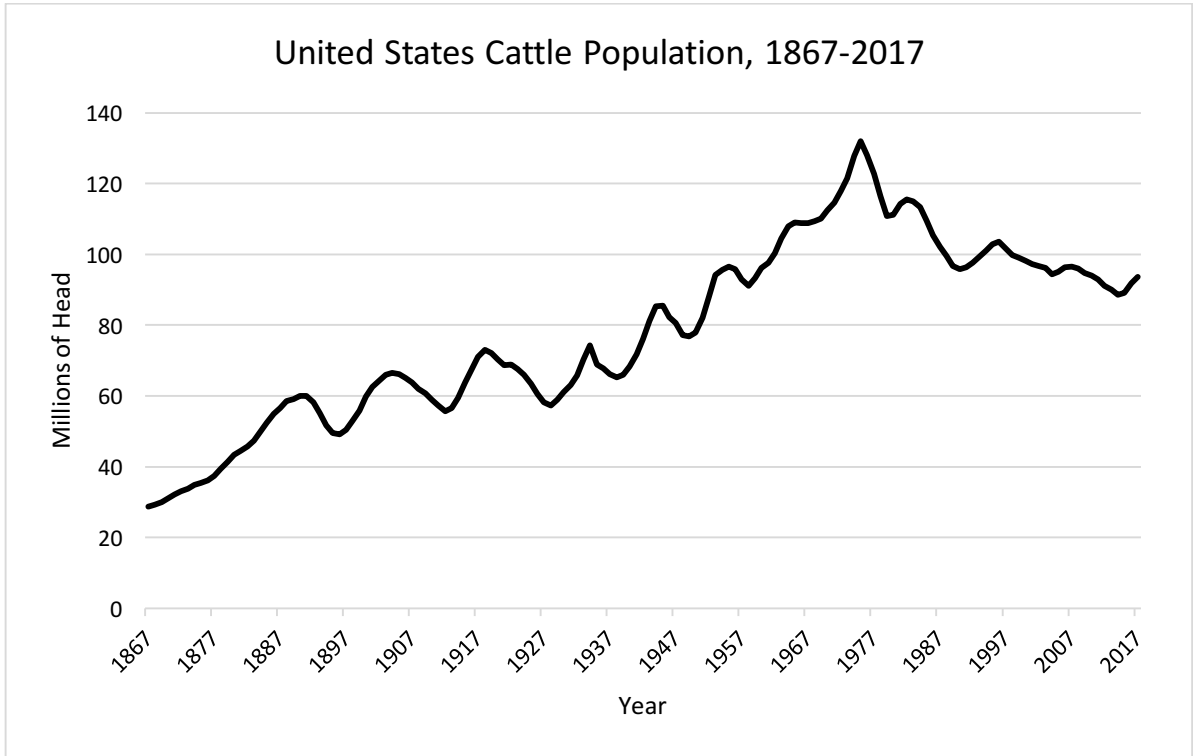


Figure 1. “Cattle, Incl. Calves – Inventory,” US total, 1 Jan’s. 1867-2017, US Survey of Agriculture, USDA NASS Quick Stats. Graph by author.

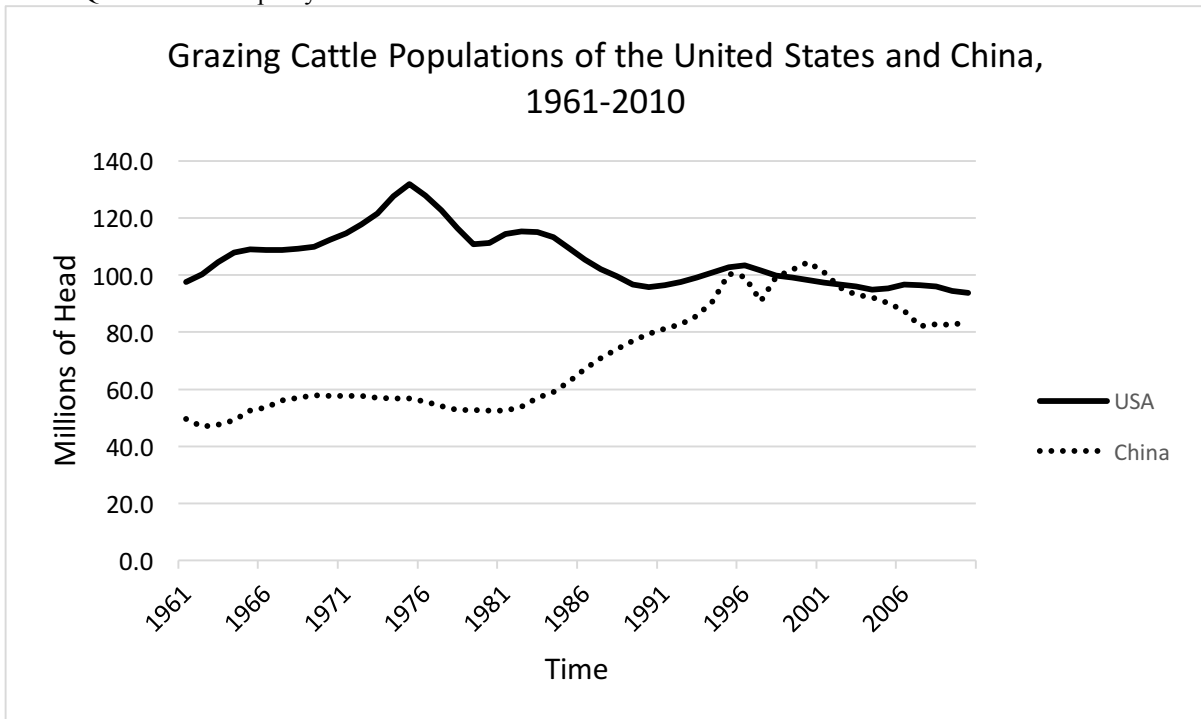


Figure 2. Data compiled by Earth Policy Institute from U.N. Food and Agriculture Organization, FAOSTAT, electronic database, at faostat.fao.org, updated 23 February 2012. Graph by author.

1992,” both argued that rural settings and context drove developments in industrial capitalist production and policy.

American Bovine Capitalism

The graph in figure 1 charts the number of cattle in the United States from 1867 to 2017 as recorded by the United States Annual Survey of Agriculture. This graph helps visualize the important periods and turning points in the history of the American beef industry. From 1867 to the present, the American cattle herd expanded and contracted with almost a dozen clear peaks and valleys in the population. The pendular motion was greatest from 1867 to the 1940s, after which it continued but with less intensity working generally up with each swing towards the largest peak in 1975 followed by the sharpest reverse leading to a generally downward trend. However, the global cattle population has grown steadily since 1975 led mainly by explosive herd expansion within (or elsewhere for sale to) China. Figure 2 charts estimated grazing cattle herd data for the US and China collected by the United Nations Food and Agriculture Organization, and it depicts a transition in the classic American beef bonanza from an American to a global, especially Chinese, phenomenon.

Remarkably, a lot of other variables in the history of the US beef industry, quantitative and qualitative, overlap with these observations about cattle populations. Beef consumption per capita, beef prices, ranching profitability, labour power and worker satisfaction in meatpacking, corporate concentration in meatpacking, and environmental harmony (including ideas about the environment) all follow a rough pattern of chaos in the late nineteenth century, rapid but relatively stable growth in the post-World-War-Two period, crisis and protracted decline starting in the 1970s, and then most recently it all takes off again on a global scale. This pattern corresponds to important shifts within the American way of beef, and it reveals the importance of small changes within the broader economic category of capitalism for both people and their environments. Different varieties of capitalism existed

over time due to changing ideas, actors, and rules within beef markets. Capitalism changed in each instance mainly because of environmental challenges to market stability.⁷

Thus, the history of the American cattle industry reveals the close interrelationship between social-economic stability or transformation and environmental-ecological stability or transformation. Although the changes overlapped and varied significantly at different spatial and temporal scales, I argue that social and environmental harmony or discord drove or reinforced each other in different ways during five distinct periods or phases marked by socio-ecological turning points—the crossing of thresholds between human land use ideas and practices as well as environmental conditions due to pressures coming from both social and ecological instability. These five phases represent the social-economic and environmental history of American bovine capitalism:

1. *Colonial Bovine Resettlement* (1500-Ongoing)
2. *Open Range Capitalism* (1850-1898)
3. *State-and-Industry-Regulated Capitalism* (1946-1973)
4. *State and Industry Breakdown and Decline* (1975-Present)
5. *Globalization* (1500-Ongoing)

Colonial Bovine Resettlement refers to the conquest of lands and peoples for and by domestic livestock, initially for the benefit of European newcomers to the Americas after 1500. Human intervention in the evolution of crops and animals through selection of preferred traits is called domestication, and it began with a process called the Neolithic

⁷ For more on the “varieties of capitalism” concept, see: P. Hall and D. Soskice, eds. *Varieties of Capitalism: The institutional foundations of Competitive Advantage* (Oxford, UK: Oxford University Press, 2001).; B. Amable, (2003) “A Comparative Analysis of Capitalism,” *The Diversity of Capitalism* (Oxford, UK: Oxford University Press, 2003).; D. Acemoglu, James Robinson, and Simon Johnson, “The Colonial Origins of Comparative Development: An empirical investigation” *American Economic Review* 91 (2001), 1369-401.

Revolution that emerged in South Western Asia.⁸ Humans first domesticated cattle there about 10,500 years ago, and cattle production expanded with various imperial and colonial expansions until it became a major part of West Asian, African, and European society and economy, along with other grazing animals like sheep, goats, and horses, but the same was not true for the Americas. The indigenous people of the Americas domesticated few animals, and only two grazing livestock—llamas and alpacas—both in the southern continent. Indigenous North Americans could have domesticated large grazers like the buffalo, but agriculture is not a necessary condition of human progress, and many hunter-gatherer societies had remarkably high-protein diets as it was. Thus, the meeting of Asian-African-European and American peoples was the meeting of people who owned livestock and people who did not.

Environmental historians, as well as earlier historians of American-European contact, have argued that this fundamental difference between agricultural and non-agricultural societies drove the history of contact, conquest, and genocide in the Americas.⁹ Even within the passé narrative of civilization meeting savagery on the American frontier, we see the basic analysis that agricultural people subjugated non-agricultural people and their lands for the ultimate spread of agriculture. Historian Virginia DeJohns Anderson and others have

⁸ Simone Riehl et al., “Emergence of Agriculture in the Foothills of the Zagros Mountains of Iran,” *Science* 341 (2013), 65-67.

⁹ Virginia DeJohns Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford, UK: Oxford UP, 2004).; William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York, NY: Macmillan, 2011).; Deana Dartt-Newton and Jon Erlandson, “Little choice for the Chumash: Colonialism, Cattle, and Coercion in Mission Period California,” *The American Indian Quarterly* 30, no. 3 (2006): 416-430.; For more on ideas about animals in Early American History, see: Diane L. Beers, *For the Prevention of Cruelty: The History and Legacy of Animal Rights Activism in the United States* (Athens, OH: Swallow Press/Ohio UP, 2006).; Rod Preece, *Brute Souls, Happy Beasts, and Evolution* (Vancouver, BC: UBC Press, 2005).; Richard W. Bulliet, *Hunters, Herders, And Hamburgers: The Past And Future Of Human-animal Relationships* (New York, NY: Columbia UP, 2005).; Gerald Carson, *Men, Beasts, and Gods: A History of Cruelty and Kindness to Animals* (New York, NY: Charles Scribner’s Sons, 1972).

argued convincingly that domestic livestock—the animals themselves—played a vital role in penetrating and occupying lands that indigenous peoples had used in different ways. Animal agriculture is a very competitive and often exclusive form of land use, and herds of cattle have a way of making hunting grounds unviable.¹⁰

Colonial bovine resettlement was a necessary pre-condition for the establishment of bovine capitalism on American landscapes. The expansion of cattle herds for distribution to large consumer markets in the pursuit of profit could not and did not occur until the beef-eaters violently expelled native people from potential grazing lands. Despite the Wild West myth, and despite the above analytic points about farmers vs. non-farmers, cowboys did not defeat the Indians—that required the full force of the US Cavalry, battle-hardened by four years of industrial-era combat in the East. Nonetheless, the US wars against the sovereign nations of the American West were fought on behalf of the farmers and ranchers. This was the initial seizure, or *primitive accumulation*, of land, people, and resources into the capitalist system, and it also introduced one of the first essential rules, or *institutions*, of capitalism—private property.¹¹ Although not *commodities* by the strict definition (because capitalist markets were still in the early stages of formation), European immigrants to the Americas

¹⁰ This leads to ongoing conflict and controversy between recreationists and ranchers on public lands in the American West to this day.

¹¹ “Institutions” in this context refer to all the different sorts of rules that can dictate economic or market exchange. This is different from the common usage of the term to refer to established, organized groups often with specific buildings. However, in the theoretical vocabulary used here, those things are “organizations,” and *organizations* make, implement, and use *institutions*. Institutions may include formal laws, customs, norms, taboos, and all sorts of other structures that dictate what people do and why. Throughout the dissertation I use “rules” over “institutions.” Please see: Douglas North, *Institutions, Institutional Change and Economic Performance* (Cambridge, UK: Cambridge University Press, 1990).; Fred Block and Margaret Sommers, “Ideas, Markets and Institutions over 200 Years of Welfare Debate,” *American Sociological Review* 70, no. 2 (2005), 260-287.; Neil Fligstein, “Markets as Politics: A Political-Cultural Approach to Market Institutions,” *American Sociological Review* 61, no. 4 (1996), 656-673.; Gary Hamilton and Woolsey Biggart, “Market, Culture, and Authority: A Comparative Analysis of Management and Organization in the Far East,” *American Journal of Sociology* 94 (1988), S52-S94.; Richard Whitely, *Divergent Capitalisms: The Social Structuring and Change of Business Systems* (Oxford, UK: Oxford University Press, 1999).; [Also “varieties of capitalism” note above].

imported the notion that land, animals, and other resources could be owned by one person creating exclusive rights to use and abuse that property.

Open Range Capitalism refers to the first phase of market capitalism in the American West following the genocidal seizure of landscapes for grazing. It was a period of *laissez-faire*, or relatively unregulated capitalist production. It began at different times in different places, but in general, it emerged in the mid nineteenth century due to a confluence of factors—including expansion of urban populations; establishment of Western borders; increasing immigration to the West; establishment of transcontinental communication and transportation technologies; corporate consolidation of industrial meatpacking; and expanded demand for wool and beef during the American Civil War (1861-63). From this point forward, Americans produced cattle not for the subsistence of a community but for large scale distribution and profit. During Open Range Capitalism, animals-as-property became animals-as-commodities. Commodities are material goods that have become fully exchangeable units of capital—in this sense cows and dollars are just two expressions of the same thing. However, cattle production in the American West did not necessarily respond to market forces well (“efficiently” in economic terms).

This period is known as the Wild West in popular culture, which captures two different ideas about the period: one that it was free, and another that it was chaotic. Open Range Capitalism marked a period of economic, social, and ecological instability. The central problem was that the American state and Western land users set up market conditions—or rules—that encouraged overproduction. The American state cleared out the indigenous inhabitants of the West and with them all existing cooperative land management systems, and it expected free enterprise to replace them, but the American state did not

adequately establish new ownership rules or provide for the enforcement of private property. Thus, western land users “owned” their animals but not their land, and these users had to compete for resources without a legal way to protect them in the present or future. Grazing animals overtaxed rangeland ecosystems across the West, and many users reported rapid degeneration of vegetation, soil, and water resources. This led to huge die-offs of livestock, which *Harper’s* described in 1872: “Grazing grounds at great altitude became graveyards of cows. [...] It was said that in ten years the bones of a million Texan cattle were strewn on roads, on ranges and in shallow streams, a monument of man’s cruelty to beasts.”¹² As cattle populations boomed and collapsed, so too did cattle and beef prices on Eastern markets. All levels of the beef economy—including cattle growing, industrial manufacturing, financing and investment, and beef eating—experienced massive, rapid expansion as well as turmoil.

Some scholars have called the Wild West the closest thing to a capitalist “free market” period in US history.¹³ Others say the Wild West existed because capitalism had not arrived to save the West yet.¹⁴ In fact, open range capitalism was a historically particular variety of landscape-based market capitalism that was created by the American state. The state did not provide for regulation, but it certainly was not a “free market” without regulatory rules. In the absence of indigenous cooperative norms and state-enforced property rights, western land users sought to create and enforce their own market rules, mostly through interpersonal violence and murder. The range wars, and especially the sheep wars discussed in Chapter 1, were not symptoms of the poor economic system but rather a

¹² As quoted in Clara Maud Love, “History of the Cattle Industry in the Southwest,” MA. thesis, University of California, 1914, 114.

¹³ Edward Norris Wentworth, *America's Sheep Trails: History, Personalities* (Iowa State College Press, 1948).

¹⁴ Garrett Hardin, “The Tragedy of the Commons,” *Science* 162 (1968), 1243–1248.; See also: Gary D. Libecap, “Bureaucratic Opposition to the Assignment of Property Rights: Overgrazing on the Western Range,” *Journal of Economic History* 41, no. 1 (Mar. 1981), 151-158.

concerted effort at regulation. Range violence was a form socio-ecological management stemming from the central contradiction of the free-market mode of capitalist production then existing: ecosystems could not handle extreme increases in production caused by unrestricted competition for money.

State-and-Industry-Regulated Capitalism refers to the phase of market capitalism produced by the American federal government and Western land users in response to the chaos of unbridled free enterprise in the nineteenth century. It was marked by cooperative efforts to actively and directly regulate grazing access to public lands as well as other aspects of the beef economy—including corporate organization in meatpacking, retail beef prices, and international beef imports. The instability of Open Range Capitalism provoked a broad consensus around regulation, and the beef industry achieved a modicum of stability. This was an amazing feat involving efforts from all levels of industry, government, and the public to re-shape how the beef market worked. Chapters 2, 3, 4, and 6 all discuss different rules that helped remake cattle and beef markets between the 1890s and 1930s.

Public-private regulatory efforts transformed the fate of the American beef economy for about thirty years. During the later nineteenth and early twentieth centuries, cattle herds and prices swung rapidly creating surpluses and gluts in the food supply and ranchers' incomes. After 1946, Americans ate steadily more beef in each year, and ranchers supplied them. There were still bad years, but there were more and more-evenly-distributed good years. Reasonable corporate competitiveness existed in beef manufacturing, and meatpacking workers organized strong unions to improve workplace conditions. Conservation, or “sustainable,” land use became the norm on western rangelands, and cattle and cowboys became a lot of people's favourite things about America whether they lived in the United

States or not. During this period, economic power over the market became more evenly distributed across the beef supply chain, and actors cooperated through new economic organizations. That meant not only profits, but also high-calorie food at a reasonable price, good wages for a safe job, and security of rural lifestyle for different people. Certainly many individuals could have complained that their right to and pursuit of profit were severely limited, but overall society and all interests in the beef supply chain enjoyed relatively great stability and shared in sustained economic growth.

State and Industry Breakdown and Decline refers to the period following 1975, during which most of the previous positive trends reversed suddenly and then stayed that way. As it turned out, regulated capitalism was sustained, but not necessarily sustainable. Many of the rules were imperfect, and new organizations with new interests put pressure on the relationships creating both economic stability and ideological consensus in the first half of the twentieth century. Ideas about the market and about the environment had a profound effect on actual tangible change in the fates of Western ranchers and many others. In chapters 2 and 3, I argue that public lands ranchers and government agents shared ideas about conservation and sustainable land use based on an understanding that landscape vitality was linked to a stable beef market. Ranchers wanted long-term stability of their businesses, livelihoods, and lifestyles, so they were good stewards of the land. New ideas from environmental groups challenged the compatibility of grazing and landscape health as well as the relationships ranchers had with government regulators. This is not to say environmental ideas were bad, but their impact was to break a political and working consensus around conservation and to produce chaos for many ranchers' lives. But the challenge did not only come in grazing and conservation.

The fate of the American beef industry after 1975 was marked by decreasing cattle numbers, political controversy, market instability, and social-ecological turmoil. New corporations challenged workers, producers, and small businesses' economic power. Consumers also challenged producers' profits, and bankers challenged the very nature of market exchange through the invention of futures trading. Decreased domestic production combined with increasing concentration of cow-calf operations to make ranching a loser's business for many families who traditionally thought of themselves as rugged individualist entrepreneurs and American heroes. Likewise, ranchers declined in the American psyche as Hollywood produced steadily fewer Westerns, and Americans consumed steadily less beef.

One of the major causes for the failure of regulated capitalist growth was ongoing faith in market stability. In fact, there was a sort of collective forgetting of the role of social rules and organizations in sustaining semi-humane capitalism, and many interests began trying to reproduce free market conditions similar to those of nineteenth-century open range capitalism. Free markets can never be real because an economic market cannot logically exist independently from human society, but belief in free markets can be a major driver of how a society sets up its markets. Chapter 5 discusses one such case, when a select group reimagined and then recreated the beef market through futures trading in 1964. Ultimately, capitalist markets again proved poor mechanisms for social and ecological stability. What followed was a sort of second expression of many of the patterns and institutions of the nineteenth century but without the boom-bust pattern. After 1975, on a broad scale, there was only bust.

However, the American beef economy is far from broken, and the future crisis will be on a global scale. *Globalization* is fairly literally how this whole story began in 1500, and a

vibrant Atlantic beef trade developed in the nineteenth century, but it entered a new and vital phase in the Pacific region after the 1970s crises in the United States. American producers increasingly looked for markets abroad; American capital invested in foreign beef industries; American ideas about free markets effected land use patterns in the new competitor nations; people around the Pacific ate more American-grown beef products; and East Asian cultures adopted consumption of American-style beef products. The formation of new market rules in the Pacific is discussed in Chapter 6. Within the last two decades this process of globalization has intensified most in China, and it threatens to be the biggest transformation and catastrophe the global beef economy has yet seen.

Each of the following chapters explores one or more aspects of the periods and transitions in the history of American Bovine Capitalism. They also each explore some of the specific ideas, rules, technologies, individuals, and organizations that shaped, drove, and re-shaped the United States beef economy and its relationship with the natural environment. The chapters also follow beef market landscapes outwards in scale: local grazing lands managed and fought over by cadres of up to hundreds > federally regulated and bureaucratically managed grazing districts of sub-state to super-state size covering tens (and hundreds) of thousands > the national industrial supply chain, vied over by national organizations representing many interests from cattle breeders to beef eaters > the financial market for American beef cattle, created and shaped by relatively few, but which nonetheless broke the bounds of physical space > the Pacific Rim beef trade market produced and fought over at the transnational scale > and finally, in the epilogue, carbon markets for beef, which aim to produce a market-landscape as large as the troposphere!

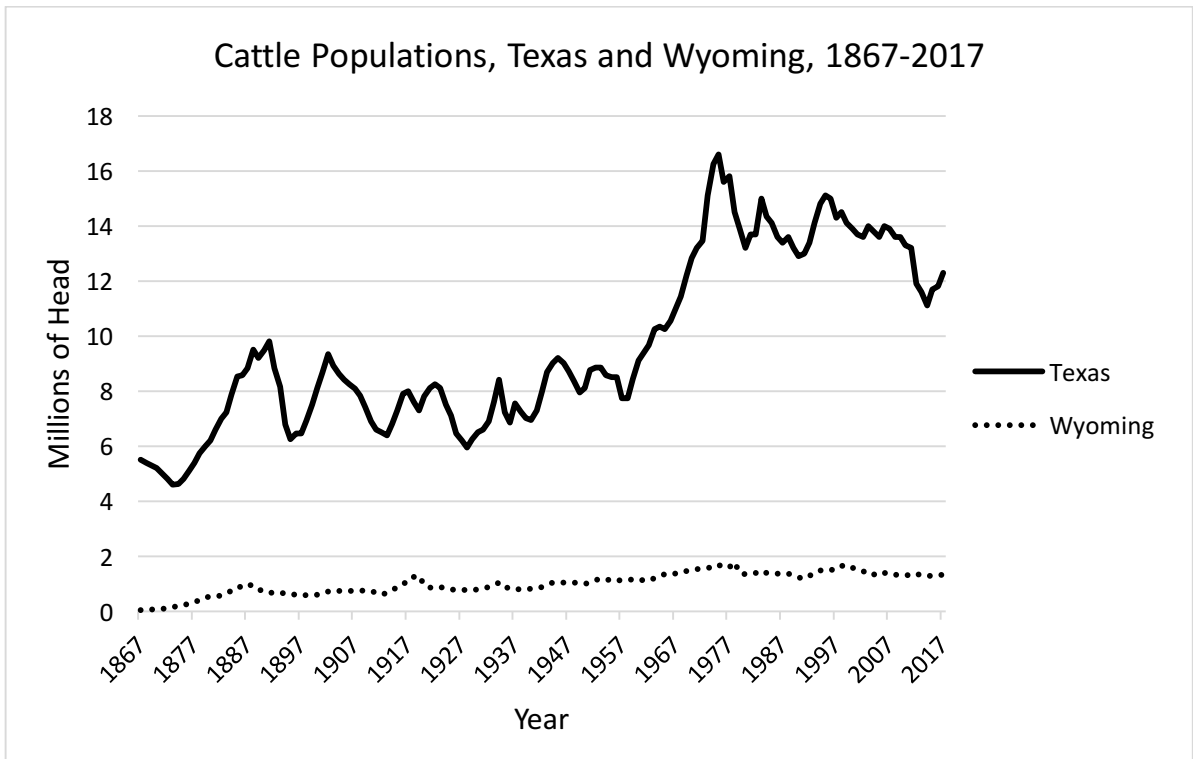


Figure 3. “Cattle, Incl. Calves – Inventory,” state totals, 1 Jan’s. 1867-2017, US Survey of Agriculture, USDA NASS Quick Stats. Graph by author.

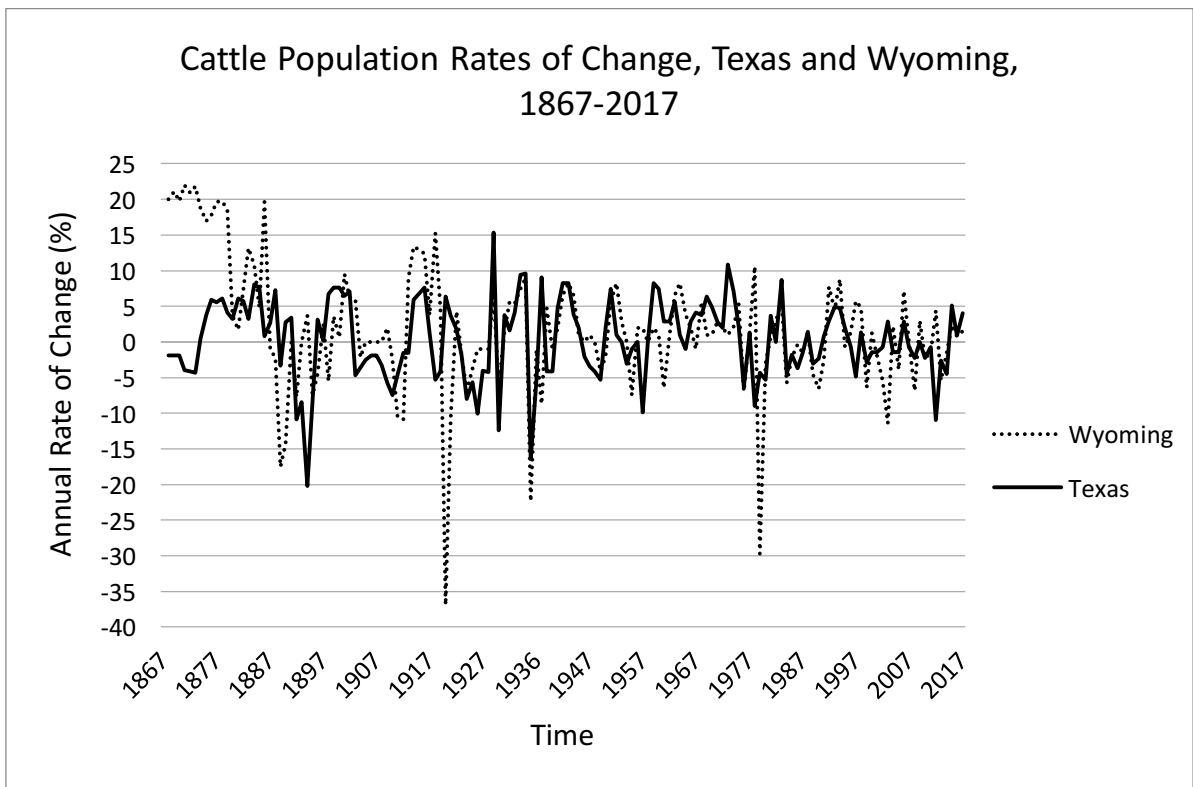


Figure 4. “Cattle, Incl. Calves – Inventory,” state totals, 1 Jan’s. 1867-2017, US Survey of Agriculture, USDA NASS Quick Stats. Calculations and graph by author.

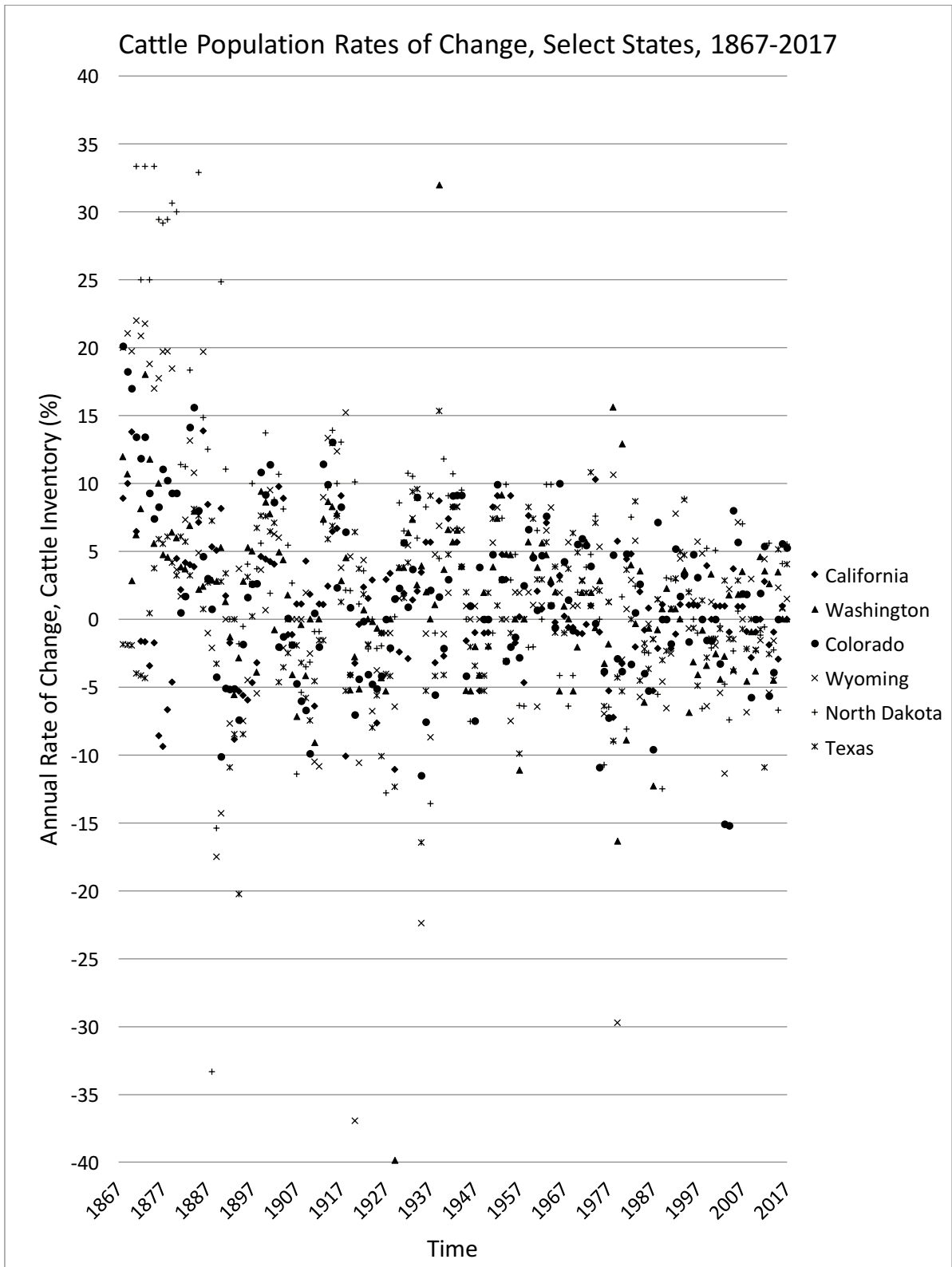


Figure 5. "Cattle, Incl. Calves – Inventory," state totals, 1 Jan's. 1867-2017, US Survey of Agriculture, USDA NASS Quick Stats. Calculations and graph by author.

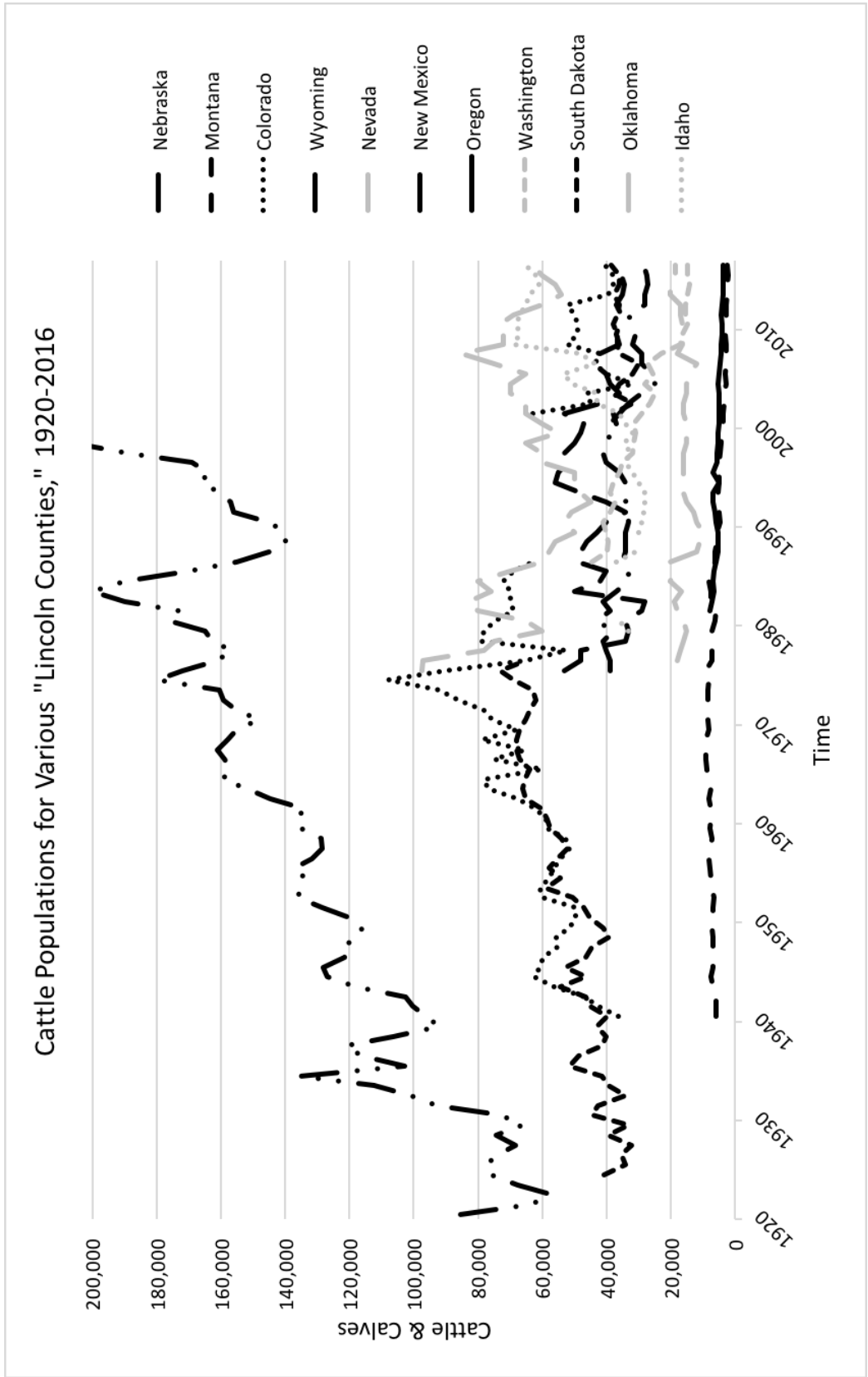


Figure 6. "Cattle, Incl. Calves – Inventory," county totals, 1 Jan's. 1867-2017, US Survey of Agriculture, USDA NASS Quick Stats. Graph by author.

Lincoln Counties

The preceding periodization is a cartoon of a much more complex story. While each of these periods led into the other, they all overlapped in time and proceeded at different paces and in different ways depending on the place or scale of analysis. If we narrow the scale of analysis, the neatly delineated periods evident at a national scale do not all match up. The local experience of change also appears much more chaotic across the whole data set.

When we compare the cattle populations of Texas and Wyoming (see figure 3), for example, it appears that Texas experienced a very similar cattle population trajectory to the national average (see figure 1 again) whilst Wyoming experienced little change. In fact, the Texas cattle population was so large that it drove national trends, and flattened all the change that Wyoming experienced on its own scale. Figure 4 charts the annual rate of change for the Texas and Wyoming cattle populations, which reveals that Wyoming was just as dynamic as Texas and several times experienced much greater contractions in the cattle population. Figure 5 is a scatter plot of annual rates of change for several states, and it bears no resemblance to the neatly delineated historical periods above. There is no identifiable pattern, and you can see how chaotic this becomes when dealing with multiple smaller scales. Dramatic as this is already, the state is already a much larger scale than how most ranchers perceive their social, economic, and environmental space.

Figure 6 depicts cattle population for Lincoln Counties in various Western grazing states. Though they share a name, these places exhibit very different herd trends because different places had different roles within the changing landscape of bovine capitalism. The cattle population of Lincoln County, Colorado, seems to have peaked and declined in line with the national trend, but the herd in Lincoln County, Nebraska, has exploded right off the

scale of the graph. Lincoln County, Nebraska, is one of the state's largest beef cattle counties, and it has grown due to its proximity to corn and major packing plants such as the Dakota City Tyson's plant (formerly IBP) that opened in 1966.¹⁵ Lincoln County, Colorado, is no more typical, though. The county made headlines in 2016 for a real-life serial killer of cows.¹⁶ Lincoln County, New Mexico, gets lost in the graph, but it is actually the best known Lincoln County in the West because it was the site of the "Lincoln County War" involving gunslinger Billy the Kid in the 1870s. The different Lincoln Counties highlight the importance of taking caution when generalizing about the cattle industry.

The Market in the Archives

"Invisible hooves" refers to the hidden impact of American cows and American bovine capitalism on the people, environment, society, and history of the United States and much of the world. It also refers to the American beef industry's greatest flaw—a lie. The idea was, and is, that within a pure capitalist system, the free market produces an invisible, rational equilibrium force that ensures the best of all possible outcomes for the people who raise, kill, and cut up cows; the people who buy and consume cow products; and the landscapes cows live in or pass through during their lifecycles. More simply, capitalism is stable; capitalism works. The idea is familiar, but counterintuitive: how does individual competition for money produce stability? Eighteenth-century philosopher Adam Smith encapsulated the complex of theories supporting free-market capitalism—including supply-and-demand, production efficiency, comparative advantage, liquidity of exchange, ecosystem services, *ad nauseum*, some of which existed and some to come—with the metaphor of an

¹⁵ Thomas L. Holman et al., "Nebraska's Cattle Feeding Industry: Size, Structure and Related Industries," *University of Nebraska – Lincoln Extension*, 2015, <http://extensionpublications.unl.edu/assets/pdf/ec847.pdf>.

¹⁶ Anica Padilla, "\$10,000 Reward Offered for Lincoln County Cattle Killing," *KDVR Denver* 9 August 2016, <http://kdvr.com/2016/08/09/10000-reward-for-shooter-killing-cattle-in-colorado/>.

“invisible hand” guiding the market.¹⁷ Economists of the twentieth century resurrected and popularized Smith’s childish quip because they, and many capitalist elites, were unsatisfied with the incomplete application of and retreat from free-market capitalism since Smith. Human hands, when they interfered with free markets, obstructed the ability of the invisible hand to perfect society. Bad things resulted not from too much capitalism; but from not enough! The problem is: that is not what markets actually are.

Markets do not have laws—they have rules. Markets do not make their own rules; people (often in organized groups) make, break, follow, or change the rules of exchange that make the market exist. A market is simply the sum total of transactions by people in a delineated area of exchange; it has no life beyond human actions. I use the term landscape-based markets in reference to some of the major historical market conditions of the US beef industry because landscapes often delineated the market arena (sometimes this was literal and sometimes it was abstract). Markets do have observable tendencies. For example, we can say that most capitalist market variations used to produce, exchange, and consume beef tended towards instability in the United States from 1867 to 2017, but not all variations tended so as much as others. Likewise, we can say most capitalist market variations tended to degrade landscapes, but landscapes, just like markets, could be re-engineered to cooperate with capitalist production. Considering that people kept changing markets to fit environmental constraints, we might say conversely that most landscapes tended to degrade markets. Rather than trying to determine the internal laws of theoretical markets, we can learn more by asking what actually happened, who was responsible, and how did they do it?

¹⁷ The Theory of Moral Sentiments (1759); The Wealth of Nations (1776).

So what is a “free market” or any market in historical reality? It is a set of rules leading to practices, or exchanges. The free market refers to a capitalist-exchange-arena left entirely to its own internal forces without limiting actions by governments or workers’ organizations. In its simplest expression, the free market is the market of supply-and-demand and nothing else. However, the free market is more proscriptive than descriptive, since markets cannot exist autonomously from human societies. Very often what seems like the absence of a rule (say environmental regulations) is not an absence at all; it is merely a different rule with a different goal. Thus, it is possible to create a set of exchanges that approximates a theoretical free market, but it is still a purposeful human construction. People involved in the American beef economy tried to make free markets on several occasions—when the federal government opened rangelands to unmanaged competition between cattle and sheep; when bankers and others created a mechanism for free exchange in an open marketplace turning cattle into financial objects; when the executive branch of the US government attempted to destroy protective organizations and institutions in Japan; etc.

The free market was a seventeenth-century day dream that has become a twenty-first century wet dream. It is a fantasy, but belief in the fantasy still drives a great deal of social-economic action. The free market is the fundamental assumption of economics, but it takes significant suspension of disbelief to describe. We believe in and talk about the market as if it is a real thing that exists separate from the people, organizations, institutions, and products doing things within it. The market has a logic and force of its own; it is an “invisible hand” whose effects can be seen in the economic successes and failures of individuals, firms, or countries. I argue that it is better to think of the market not as its own thing, but as the product—the sum total—of all economic actors and the things they do. The market,

therefore, is made and re-made constantly with every transaction within it, calculation about it, and even argument about how it should be.¹⁸ Markets are fundamentally human and historical (not superhuman and universal).

This means adapting the way we think about good and bad markets. In mainstream economics, good markets are ones with free and open access for any participants. It is no coincidence that they are also those that best resemble the “free and perfect competition” model that Adam Smith took to represent the thing *in essentia* and that most mainstream economics uses for market analysis and research. In fact, this model often becomes *the* market, and any diversions from this in the real world become constraints *against the* market. I argue, in contrast, that those constraints against perfectly free enterprise are, in fact, *the* market, as it exists at that time. Further, these details are not actually constraints against free enterprise at all—they are exactly what makes a market function in real time.

There are two reasons this heterodox way of thinking about markets is necessary for understanding the history and future of the beef economy: 1. The perfect competition model tends to obscure the most important variables shaping markets, especially in sectors like food where all kinds of cultural, political, and historic forces shape people’s choices. Further, because the perfect competition model assumes that economies consist of free, rational, and atomized actors, it renders invisible the most important actors in the beef trade, who happen to be none of those things.; 2. Hyper-attention to the ideal free market by historic actors in the beef economy (which, to reiterate, did not actually exist) better explains some of their choices than thinking of it as rational analysis of market forces. These people were engaged in re-making the market at the same time they were operating within it. This is important

¹⁸ This claim draws from performativity theory in economic sociology and heterodox economics. See: Callon, Fourcade, Kieran, Garcia-Parpet

because sometimes these ideologically-motivated economic actions were thoroughly and severely *economically irrational*.

So markets are not invisible—they do not even exist apart from visible reality—but how do you see, describe, or understand something (the beef economy, for example) that might include every transaction, decision, and belief of every person engaged in a multi-billion-dollar global productive enterprise without reducing it to market forces or laws? I believe the best way to understand markets is to find out what people actually did to create them and why. The best places to find out about that are in the archives that hold the documents they created and left behind. Archives can be physical places with vaults of boxes full of paper, or they can be online repositories of digitized information, and I have consulted both extensively for this dissertation. Even though mainstream economists and most people today do not think of people as deliberately making and sustaining markets, people in history have not been shy or secret about these efforts. I have chased beef industry market-makers to both sides of the world, and I have found plenty to suggest that organized people—and not markets—drove change in the American and global beef economies for the last one hundred and fifty years. People will be responsible for what happens with these markets in the future, too.

Chapter Content Guide

Ch.	Landscape/ Market Type and Scale	Historical Beef Industry Event(s)	Organizational Actors	Market Institution- Rules	Market Technologies
1	Local, geographically- defined grazing landscapes	Sheep and Cattle Range Wars (1850- 1920)	Local stock growers' protective associations; federal government departments and bureaus; social classes	Violence	Property Rights; Fences
2	Regional grazing districts	Regulation of Grazing on the Public Domain (1934)	National producers' associations; federal government agencies; regional grazing boards	Taylor Grazing Act; other grazing regulations	Leases
3	N/A	Sagebrush Rebellion (1979-81)	National producers' associations	Conservation ideology	
4	National, industrial supply chain	Regulation of corporate meatpacking (1906- 21); Consumer protests (1904-73); Cattle Wreck (1973- 75)	National producers' associations; National manufacturers associations; federal government departments and agencies; Local, regional, and national consumers' organizations	Meat Inspection Acts; Packers and Stockyards Act; Price Controls; Diet	Boycotts
5	Abstract financial exchange arena	Invention of Live Cattle Futures (1964)	National producers' associations; finance sector organizations	Futures exchange	Futures contracts
6	Global international trade regions	Beef and Citrus Trade War (1979- 88).	National producers' associations (multiple countries); semi- governmental industry organizations; federal government trade organizations	Argentine Sanitary Convention; Meat Import Acts; Tariffs and Non- tariff barriers to free trade;	
7	Tropospheric carbon markets	N/A	Non-governmental conservation organizations	Carbon exchange	Cap-and-trade

1. Cattle, Sheep, & Open Range Capitalism

In 1892, the newly created Battlement Mesa Forest Reserve, in western Colorado, became famous not for its stately peaks or forested plateaus, but for bloodshed.¹⁹ The reserve contained prime grazing land coveted by both cattle and sheep owners. Over the course of a few months in 1892 and 1893 hundreds of cattlemen and cowboys staged two masked raids in which they slaughtered more than 2,200 sheep, and cattlemen held the range with threats of more attacks for decades. Battlement Mesa became infamous, but it was not unique. Between 1870 and 1920, a series of clashes—now known as the Sheep Wars—erupted around the American West, from Texas to Oregon to Wyoming, killing something in the order of hundreds of sheep producers and hundreds of thousands of sheep. According to one account, cattle producers in Colorado killed 800,000 sheep on a single occasion, and according to another “the shooting affrays between cattlemen and sheepmen are of almost daily occurrence during the summer months.”²⁰

¹⁹ “Fighting for Pasturage: Cattlemen and Sheepmen War on a Colorado Mesa—Three Reported Killed,” *Omaha Daily Bee*, 17 Aug 1893. [All newspaper sources accessed from *Chronicling America: Historic American Newspapers*, an online database of the Library of Congress].; “Are Racing to the Mesa: Utah Sheep Men Said to be in Colorado,” *The Salt Lake Herald*, 9 April 1894.; “Ready for Battle: Colorado Cattlemen Prepared to Fight Wyoming Sheepmen,” *The Indianapolis Journal*, 9 June 1895.; “Telgraphic Notes,” *The Pioche Weekly Record* (Pioche, NV), 10 May 1894.

²⁰ Clara Maud Love, “History of the Cattle Industry in the Southwest,” MA. thesis, University of California, 1914, 200.; Early Vernon Wilcox, “Grazing Problems in the Western States,” *Out West* 19 (1903), 446.; There is a minor controversy over the extent to which the sheep wars were real or a fabrication of the mythic Wild West. The argument for myth is based on weak logic (exceptions mean it never happened) or the absence of sources to confirm antagonism. Likewise sources on the conflicts tend to overblow the events or neglect their regionally specific contexts. While cattlemen and sheepmen certainly did not feud always and everywhere, in certain contexts (such as western Colorado in the early 1890s, eastern Oregon in the late 1890s and early 1900s, and Wyoming in the 1900s) the violence was severe and commonplace. The worst sheep wars were often in the same regions that became forest reserves because the western sheep industry actively sought summer range in the forested mountains. It is impossible to quantify the violence fully, since the conflicts were notoriously under-documented, but even to the extent that they may have been mythic, the conflicts weighed on the minds of policymakers in the east that much more. For the Sheep Wars as myth see: Robert Howe Woods, “Boscoes, Greasers, and Cowboys?: Deflating the Cattlemen vs. Sheepmen Myth,” *Journal of the West* 16.3 (1977): 35-41. Ethnographic literature on Basques also downplays the conflicts, but most available Basque sources (written and unwritten) postdate the decline of hostilities. See J. Mallea-Olaetxe, *Speaking Through the Aspens: Basque Tree Carvings in California and Nevada* (Reno, NV: University of Nevada Press, 2000), 30, 104-5. For Sheep Wars as real events see: Melany Tupper, *The Sandy Knoll Murder: Legacy of the Sheepshooters* (Christmas

At the time of the Colorado attacks, Battlement Mesa was a new forest reserve and one of the first of its kind in the nation. During its first five years of operation, from 1892 to 1897, the federal government banned cattle. Stockmen flouted the law by illegally occupying portions of the reserve, building crudely marked “deadlines” to warn the area’s sheepherders not to trespass on their claims, and even establishing a secretive vigilante “Stockmen’s Protective Association” to enforce their version of backwoods justice. At the time only a handful of men managed all the reserve lands in Colorado, and they allowed cattlemen to do as they pleased. In 1897, the U.S. government officially allowed cattle into the reserve, at which time federal officials established their own sheep deadlines. Two decades later, forest rangers finally allowed a small number of sheep back into the reserve, although officials still separated them from cattle using their own “unfenced line.”²¹ By this time, however, the Sheep Wars were a distant memory. In the words of Bill Kreutzer, the United States’ first federal forest ranger and the ranger for Battlement Mesa from 1901 to 1905, the government had “solved a problem with its controlled range management which the stockmen would never have solved with their ropes, rifles, and six-shooters.”²²

Scholars have interpreted these events—and in particular the role of the federal government in these events—in three ways. In one version of this story, federal range

Valley: Central Oregon Books, 2010).; Forrest R. Pitts, “A Colorado Sheep Wars Incident, 1894,” *Association of Pacific Coast Geographers Yearbook* 74 (2012): 96-101.; Bill O’Neal, *Cattlemen vs. Sheepherders: Five Decades of Violence in the West, 1880-1920* (Austin, TX: Eakin Press, 1989).; Bill Johnson, “The Central Oregon Range War, 1896-1906,” *Journal of the Shaw Historical Library* 18 (2004): 75-84.; and John Perkins, who argued that in comparison to the co-development of sheep and cattle herding in the same outfits in Australia, any conflict becomes relevant, in “Up the Trail from Dixie: Animosity Towards Sheep in the Culture of the U.S. West,” *Australasian Journal of American Studies* 11.2 (December 1992): 1-18.

²¹ Len Shoemaker, *Saga of a Forest Ranger: A Biography of William R. Kreutzer, Forest ranger No. 1, and a Historical Account of the U.S. Forest Service in Colorado* (Boulder, CO: University of Colorado Press, 1958), 92-99.; See also: George B. Sudworth, *The White River Plateau and Battlement Mesa Forest Reserves* (Washington DC: Government Printing Office, 1900), 180-243.

²² Shoemaker, 98.

managers came west to solve to an ecological crisis caused by overgrazing.²³ In a second version, federal range managers were really the agents of an Anglo-American elite that sought to assert racial and class hegemony over non-white or proletarian land users.²⁴ In a third version, federal range managers were really out to capture western lands and render them suitable for capitalist exploitation.²⁵

Although each of these three versions of the story has its merits, none adequately explains the relationship between federal agents and Western land users because they all emphasize conflict and coercion. This is a story about extreme violence, but I also emphasize that federal agents and cattlemen cooperated to eliminate sheep from Western rangelands. The expulsion of sheep from American rangelands was the first in a series of cooperative efforts between cattle producers and the American state to reign in open range capitalism. In fact, this public-private partnership did not just seek to save the grass for capitalism; rather, it sought to transform capitalism and its relationship to the land.

In light of the antagonisms between cattle ranchers and federal agents that have persisted to the present, it is remarkable how little State force was exerted to seize land

²³ This is the dominant narrative within the forest service and most conservation history, and even scholars who criticize the forest service in the twentieth century tend to characterize the origins of the agency as a successful response to a bona fide ecological problem. See: Harold K. Steen, *The US Forest Service: A History* (Seattle: University of Washington Press, 2004 [1976]); David Beesley, "The Opening of the Sierra Nevada and the Beginnings of Conservation in California 1827-1900," *California History* 75 (1996): 322-337.; Francis Fukuyama, *Foreign Affairs* 93 (2014).; Char Miller, "The Once and Future Forest Service: Land-Management Policies and Politics in Contemporary America," *The Journal of Policy History* 21 (2009): 89-104.

²⁴ See: Karl Jacoby, *Crimes against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation* (Berkeley, CA: University of California Press, 2001).; Jake Kosek, *Understories: The Political Life of Forests in Northern New Mexico* (Durham, NC: Duke UP, 2006).

²⁵ Traditional narratives still often emphasize that the forest service was saving the land from exploitation only for longer-term private exploitation. See: Steen, "Grazing and the Environment: A History of Forest-Service Stock Reduction Policy," *Agricultural History* 49 No. 1 (Jan 1975): 238-242. The corporate liberalism and regulatory "capture" schools also emphasized this, though with more negative implications. See: Christopher McGrory Klyza, "Ideas, Institutions, and Policy Patterns: Hardrock Mining, forestry, and Grazing Policy on United States Public Lands, 1870-1985," *Studies in American Political Development* 8 (Fall 1994): 341-374. For an opposing vision of capture, see: Richard W. Behan, "Degenerate Democracy: The Neoliberal and Corporate Capture of America's Agenda," *Public Land and Resources Law Review* 24 No. 9 (2004): 9-23.

management from individual users (ie. cattlemen) in the first place. The Sheep Wars help explain why cattlemen and forest rangers cooperated, and why sheep—and nomadic pastoralism in general—suffered most from the imposition of federal control. The conservationist mission that federal rangers brought with them to the American West combined science, ethnocentrism, and capitalism in ways that made a greater federal presence palatable even for those who were otherwise disposed to resist it, and enabled a new state regime to take hold far from its source. Science justified the dispossession of lands from targeted groups, ecological concerns masked the encroachment of state-supported capitalism, and federal intervention fed racism and xenophobia. Conservation integrated these approaches, bound them together, and delivered them in a bureaucratic package.

Ultimately, however, federal intervention on the western range was as much about quelling the violence as it was about healing the land. Conservation was an antidote to unrest, and ecology was a tool to stop the killing. The Sheep Wars catalyzed the rise of the US Forest Service and federal management of Western land in general in three ways: 1) The extreme and enduring social violence on Western rangelands made heavy-handed State intervention necessary—or at least justifiable; 2) Cattlemen's and most local elites and townspeople's hatred towards sheepmen gave Western stakeholders an interest in stock reductions (if appropriately aimed at their enemies); and 3) The Sheep Wars popularized an ecological understanding of social violence in the West that was compatible with and communicable to the conservation discourse brought by federal agents. Range science was brand new at the time, and government experts had no certain way to measure ecological degradation over the previous century, but social conflict was a symptom that proved the

disease. The Sheep Wars reveal that ecological and social processes were effectively unified in the history of early grazing management, and they have ultimately remained so.

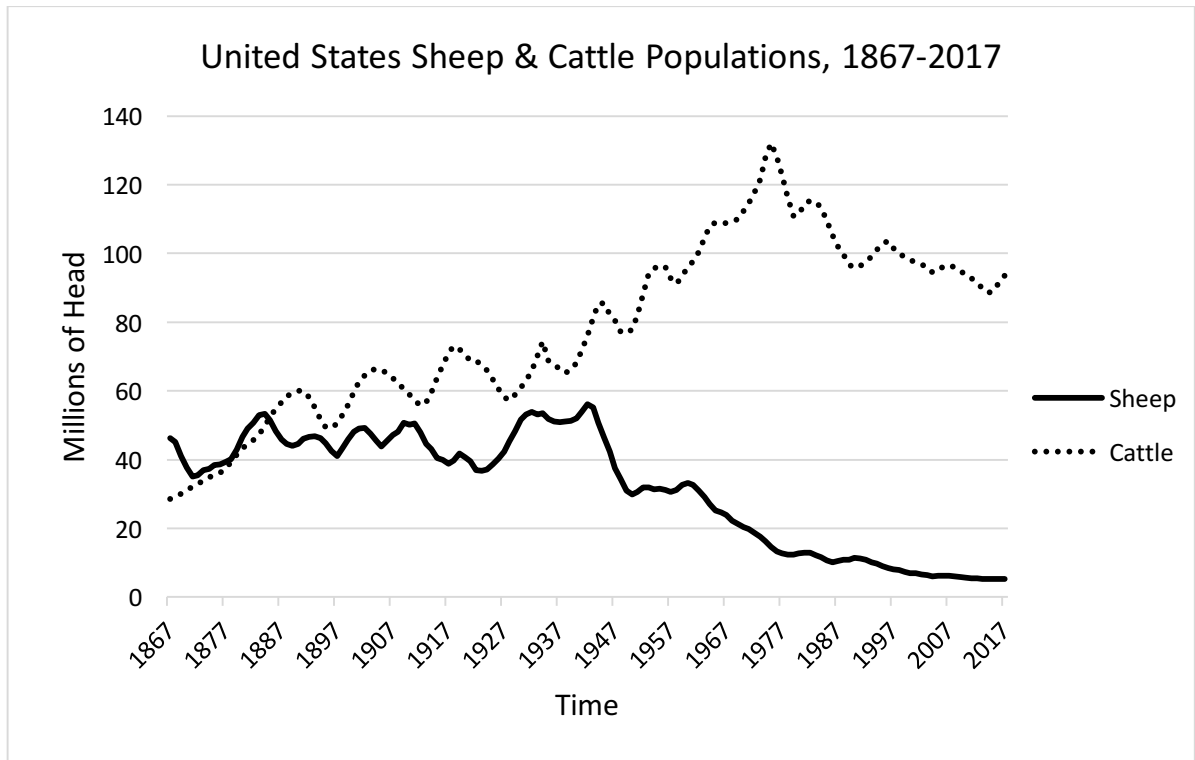


Figure 7. “Sheep, Incl. Lambs – Inventory,” and “Cattle, Incl. Calves – Inventory,” US total, 1 Jan’s. 1867-2017, US Survey of Agriculture, USDA NASS Quick Stats. Graph by author.

Sheep versus Cattle

Ironically, the Sheep Wars and anti-sheep state regulations, which ensured the demise of American sheepherding, were the product of the sheep industry’s remarkable strength in the peculiar setting of the American open range. Until the late nineteenth century, the American state acted more as a realtor than owner of the West, and lands unfit for homesteading effectively had no owner. Sheep thrived in this barren ecological and institutional landscape, but the expansion of the sheep industry provoked resentment first from cattlemen and later from conservationist range managers.

The Sheep Wars exhibited characteristics of both racial and economic conflict, and they established the terms by which regulators made sense of both the social and ecological crisis of the west in the late nineteenth century. The Sheep Wars pit an Anglo-American elite against a motley proletarian crew of Tejanos, Navajos, Mormons, Basques, and several different immigrant groups, as well as younger and poorer Anglo-Americans in the west.²⁶ This was a consequence, in large part, of the structures of the sheep and cattle industries. Cattle were a capital-intensive commodity to produce, since they required heavy costs in buildings and pens, and the lifecycle of a cow made for a long turnover on investment. Sheep, on the other hand, were comparatively cheap, and you could pull the operation off without any fixed capital apart from perhaps a wagon. Also, since sheep in the US were produced for the wool market—and not for meat—shepherders could realize profits much more quickly and regularly. That said, for those who could afford the start up and operating expenses, cattle held potential for far greater gross profits. In 1881, for example, the average price for a cow was \$19.89 compared to \$2.37 for a sheep, and even though there were about half as many cattle in the country as sheep, the cattle herd held five times the total value of the sheep herd.²⁷ And so cattle became the purview of the higher social strata, while sheep became the purview of the lower—or less powerful—strata.

²⁶ The sheep wars have never received the same kind of attention as other types of range violence, but the revisionist “New Western Historians” did fit them into their larger social violence approach to rethinking Fredrick Jackson Turner’s frontier thesis. See especially: Richard White, *“It’s Your Misfortune and None of my Own”*: A New History of the American West (Norman: University of Oklahoma Press, 1991): 344. The racial/ethnic narrative has, nonetheless, been somewhat present probably since the conflicts ended. See for example: Edward Norris Wentworth, “Historical Phases of the Sheep Industry in Wyoming,” (1940), 36, Wyoming Stock Growers’ Association Records, Box 233, Folder 3, American Heritage Center [Hereafter AHC].; Bob Barry, “The Sheep Shearers,” *Journal of the Shaw Historical Library* 18 (October 2004): 43-45.

²⁷ *Report of the Commissioner of Agriculture for the Years 1881 and 1882* [Hereafter *RCAY Year*], H.Exec.Doc. 228, 47th Cong., 1st Sess. (1882): 612.

The nineteenth-century western sheep industry was unique from previous sheep herding regimes because it combined the eastern Anglo-American focus on commodity markets and the open range land use developed in the Spanish empire to the south. Sheep first arrived in the present boundaries of the United States by way of Virginia in 1609, but demand for both wool and mutton did not expand beyond home production until the late eighteenth century. Flocks thus remained small. The market revolution in the first half of the nineteenth century and the demand of growing numbers of urban Americans created opportunities for larger-scale wool producing operations, then the Civil War created a suddenly inflated demand for woolen goods for military consumption at the same time that the North became deprived of Southern cotton.²⁸

Sheep in the east and mid-west competed for space with cattle, hogs, wheat, and people, so eastern Americans could not take full advantage of the overvalued price of wool. Instead, flocks expanded northward from Texas and New Mexico, and especially in the 1870s, sheep expanded east from California and Oregon into the relatively open and mostly free grasslands, deserts, and forest lands of the western United States. The western sheep industry therefore followed Spanish flock husbandry methods as opposed to the English husbandry that developed in the east. English-style husbandry ran smaller flocks in smaller plots of fenced-in land, and it required on-going land-management to sustain feed production. Spanish husbandry as it had developed in the Americas utilized larger open spaces and

²⁸ D.A. Spencer et al., "The Sheep Industry," *Agriculture Yearbook, 1923*, H.Doc. 209, 68th Cong., 1st Sess. (1924): 234-9.; F.R. Marshall, "Suggestions from Australasia to American Sheep Raisers," *Yearbook of the United States Department of Agriculture, 1914*. H.Doc. 1682, 63rd Cong., 3rd Sess. (1915): 320. [Hereafter various USDA Yearbooks as *Yearbook, Year*].; See also: "Neat Cattle," *Statistics of Agriculture, United States Census 1900*, (Washington DC: US Census, 1900), cl-clxv.; "Sheep and Wool," *Statistics of Agriculture, United States Census 1900*, (Washington DC: US Census, 1900), ccii-ccxvi.

available forage to maximize production where labor was scarce and expensive.²⁹ In the west the main competition for space came from cattle, which had just finished expanding from the east.

Cattle were already established on the large swaths of unclaimed government land available for grazing, but sheep were better able to take advantage of the opportunities the landscape afforded. Cattle tended to remain relatively stationary because they are cumbersome to move and because the value of these animals for their flesh decreases as the animals exercise and become leaner. A relatively short period of long-distance cattle trailing from the mid-1860s to the 1880s ended as the cattle business found itself on the defensive due to a depressed beef market and a series of harsh winters climaxing in the “Great Die-Up” of cattle in the winter of 1886-87. Due to cattlemen’s Anglo-American origins and the failures of cattle on the open range, cattlemen began raising their stock partly or fully on enclosed ranches similar to the English pasturing method. Eventually that would mean buying land and erecting fences, but in the initial stage it meant enforcing land claims and drawing boundaries on un-owned territory largely by force. In the late-nineteenth century, the rise of large, efficient packinghouses and stockyards and a growing taste for beef among urban consumer caused the price of beef to increase steadily, and it became even more important for cattle operations to invest heavily in land, labour, and facilities in order to improve breeding stock and the quality of their beef. Cattle operations also became land companies.

²⁹ Edward N. Wentworth, *America’s Sheep Trails: History, Personalities* (Ames: Iowa State College Press, 1948), 396.; Peter S. Alagona et al., “History and Recent Trends,” *Mediterranean Oak Woodland Working Landscapes: Dehesas of Spain and Ranchlands of California*, Pablo Campos et al., eds., (New York: Springer, 2013), 29-34.

By comparison, the nomadic sheepherding model reduced labor and eliminated the need for capital investment in land or buildings. Western sheepmen ran huge flocks (2000 to 5000 head per flock was common), with only one permanent herder tending to each flock. Another man would serve as a tender running for supplies for up to three flocks, and bigger operations would have a foreman managing up to ten flocks and searching out the best grazing lands. Often the owner of the operation would serve as the tender or foreman and would run these huge flocks over distances from several hundred to several thousand miles on an annual cycle between winter ranges in arid valleys and plains and cooler summer ranges often in the mountains. The U.S. department of agriculture (USDA) estimated that western sheep operations in the “pioneer phase” cost about \$200-400 for the camp outfit, \$2 per head for the sheep, and just 50-75¢ per head on labour and supplies. It was especially easy for men without investment capital to get a start in the sheep industry, since they would often collect their unpaid wages in breeding ewes. Some men would even run their own sheep with those of their employer until the flock grew large enough to run on its own.³⁰ In the context of the free-land regime of the mid-to-late-nineteenth century it looked to many, especially cattlemen, that the nomadic sheep industry would eclipse cattle production in the west.³¹

³⁰ Beltran Paris, *Beltran: Basque Sheepman of the American West* (Reno: University of Nevada Press, 1979), 57-67. Willard Leonard, “A Boyhood With Sheep in the Oregon Desert,” *Oregon Historical Quarterly* 76 (1975): 341-2.

³¹ Marshall, 320.; Spencer et al., 251-52.

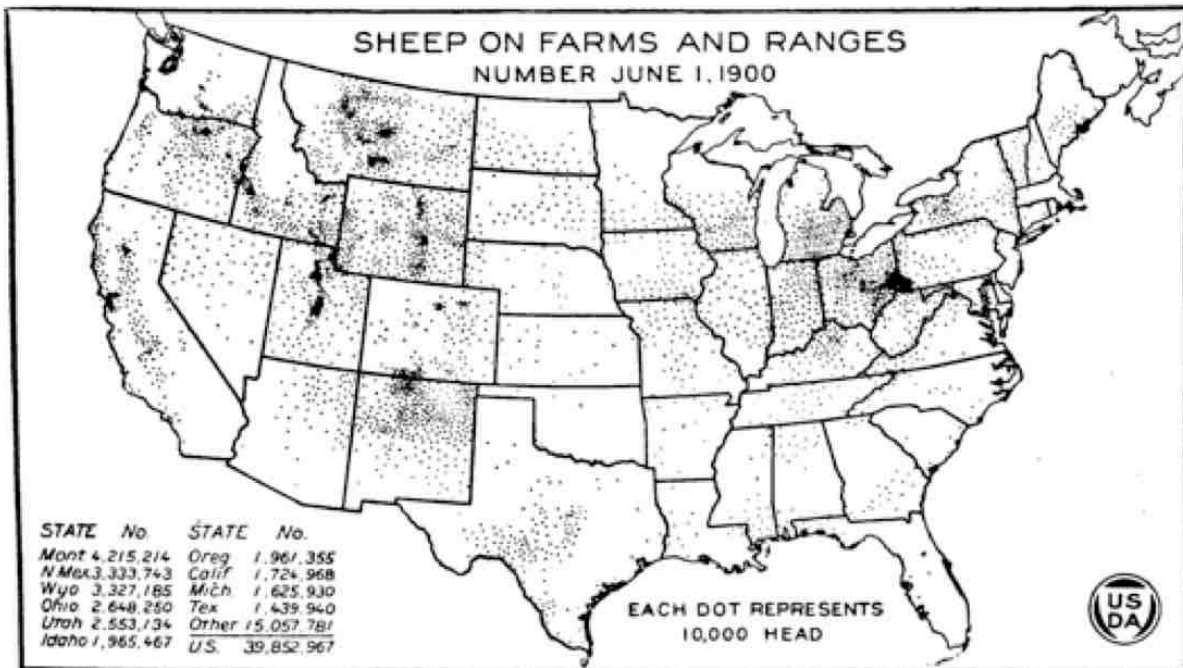
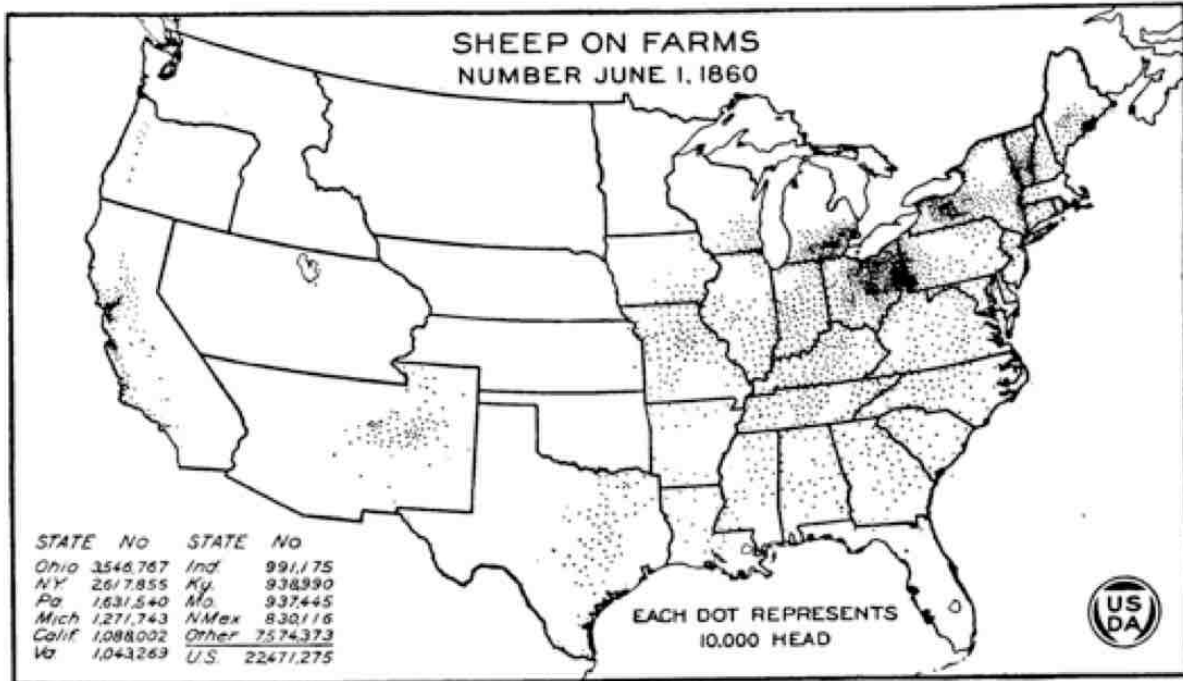


Figure 8: Sheep on Farms and Ranges, 1860 and 1900. From D.A. Spencer et al., "The Sheep Industry," *Agriculture Yearbook*, 1923, H. Doc. 209, 68th Cong., 1st Sess. (1924): 236-7, 240.

Cattlemen fought back against the perceived invasion with a series of attacks historian Bill O'Neal likened to a "guerilla war" in reference to their episodic and spread-out character.³² However, the Sheep Wars were a guerilla war against a marginal caste. The confrontations began in Texas in the 1870s or perhaps earlier as incoming Anglo-Americans with Mexican cattle tried to force out resident Tejano shepherders.³³ The conflicts heated up in the 1880s in Texas, Colorado, and Arizona, and by the 1890s they expanded to Washington, Oregon, Idaho, Montana, and Wyoming. The violence poured over into the twentieth century especially in Wyoming and Oregon until the last recorded killing in 1921. A pattern of racial and class motivated violence carried throughout the conflicts, but especially in the later northern episodes the Sheep Wars were really about material interests. What began as local skirmishes between individuals or small groups became protracted struggles between powerful transnational corporations and whole classes of people that were defined more by land use than by race.

For example, in 1883 Alexander Hamilton Swan with backing from lucrative Scottish investors formed the Swan Land and Cattle Company out of the consolidation of three Wyoming cattle operations near Laramie. Swan's quickly became one of the biggest cattle companies on the northern plains in terms of both land and stock. The company invested in fences and ranch sites, and Thomas Lawson, who worked for the Scottish financiers, claimed, "The improvements are decidedly the most permanent and complete I have seen on any ranch in the West." Nonetheless, most Swan cattle still grazed on open range. At that

³² O'Neal, 1-2.

³³ John Perkins hypothesized that the Texan cultural origins of the western cattle industry explained widespread anti-sheep sentiments, since they imported and dispersed a long-lasting Southern hatred of sheep based on: 1. Wool's antebellum concentration in New England, 2. Wool's competition with the cotton economy, 3. The wool tariff dispute with England, and 4. Southern planter's concern for "soil exhaustion, which they were psychologically unwilling in general to ascribe to the monoculture they practiced." Perkins, 8.

time the prevailing practice was to loose all the cattle onto the range for the winter and round them up in the spring for calf-branding. The method saved on feed and labor costs, but cattlemen were already growing dubious due to heavy losses from rustlers when the severe winter of 1886-87 killed as many as 50% of untended stock in some areas of Wyoming. Swan branded only 8,800 calves in 1887 compared to 16,035 the year before, and the Scots seized the company from its American founder, who went bankrupt. The company now viewed the open range as a threat, and it began protecting its investments through more careful management of its land and breeding stock and by hiring gunmen to close off its lands from rustlers and sheep.³⁴

Sheep had ranged in Wyoming since the 1860s, but there was little conflict with cattle due to an abundance of space until both populations surged in the early 1880s. Sheep outfits fared better through the Die-Up winter than cattle because herders stayed with sheep year-round and managed winter grazing, and afterwards more sheep expanded east from Utah as cattle died and vacated the range. Cattlemen perceived sheep as the primary cause of the increasing ecological hardships on the range. As one cowboy complained, “now this once beautiful country is so badly beaten down with sheep that there is scarcely enough grass to support a sage hen.”³⁵ Cattle barons dug-in and fought against anyone they saw challenging their monopoly on the range.

This pattern drew the Swan Company into one of the more famous conflicts of the Sheep Wars. As Swan’s replacement John Clay recalled, “Sheep trespassers on our plains lands were hard to handle and we had a continual fight on our hands.” In 1894 the company

³⁴ Harmon Ross Mothershead, *The Swan Land and Cattle Company, Ltd.* (Norman: University of Oklahoma Press, 1971), 19, 26, 76-77, 82, 85-6.

³⁵ Envanston, *News Register* (27 January 1894) as quoted in O’Neal, 93.

hired a notorious gunman named Tom Horn to act as a stock detective, and in 1901 it sent Horn to take out Kels Nickell, who had just introduced sheep into the region.³⁶ Nickell ignored the cattlemen's warning to leave with his sheep, and Horn allegedly shot Nickell's son, Willie, twice on 18 July and then shot Nickell three times on 4 August. The second Nickell lived somehow, but four men on horses located Nickell's thousand sheep, chased away the Italian herder, and shot into the flock, killing seventy-five animals. For the Swan Company at that time, reorganizing herds into individually managed ranches, investing in better breeding stock, and killing sheepmen were all part of the same process and logic of protecting and increasing return on capital investment. The Nickells were not itinerant herders having been established in Wyoming since 1881, but by this point cattlemen saw the Sheep Wars less in terms of a hegemonic power struggle against racially-inferior herders than as an economic and ecological struggle against sheep.³⁷

Tom Horn's trial and execution assured that the Nickell raid would become infamous, but other raids in the state featured much greater animal killings. In 1902, cattlemen "rimrocked" two whole bands near Meeteese, which meant driving them off a cliff. In 1903, three raiders clubbed and shot 200 sheep near Black Mountain, and later seven raiders killed 500 sheep near Lusk. In 1904, cattlemen trailed 500 sheep into the mountains near Laramie and poisoned them.³⁸ It became more common for sheepmen to arm themselves and shoot back, but most herders knew better than to resist the powerful cattlemen who more than less

³⁶ Mothershead, 104-05.

³⁷ O'Neal, 101, 104-7.; Dean F. Krakel, *The Saga of Tom Horn: The Story of a Cattlemen's War* (Laramie: Powder River Publishers, 1954), 14-22.

³⁸ O'Neal, 118-121.

dominated territorial governance and policing through the Wyoming Stock Growers Association.³⁹

Cattlemen continued, to club, shoot, dynamite, trample, burn, poison, and drop Wyoming sheep to their deaths, as well as murder and torture sheep owners and herders for another decade, but the dramatic physical violence did not itself deter nomadic sheepmen from crossing the cattlemen's ranches as they traveled towards the mountains and forests for the summer.⁴⁰ As journalist William Macleod Raine explained in 1903, "defeated in nine battles out of ten the sheepmen have yet usually come out the victor in the end" due to their persistence.⁴¹ Eventually, the trial of Herbert Brink, who murdered two prominent sheepmen and two herders in a raid outside Ten Sleep in 1909 finally demonstrated that the state could and would intervene against violence between cattlemen and sheepmen. The case set no remarkable legal precedent, since it simply affirmed that murder and destruction of property were illegal in the state of Wyoming, but it was a cultural turning point since those laws had not applied for sheepmen before.⁴²

³⁹ W. Turrentine Jackson, "The Wyoming Stock Growers' Association, Political Power in Wyoming Territory 1873-1890," *Mississippi Valley Historical Review*, Vol. 33 (March, 1947), 571-94.

⁴⁰ Though episodic, the violence was vicious and widespread. Newspaper reports on sheep and cattle conflicts—such as: "Sheep or Cattle," *Coconino Weekly Sun*, 31 March 1892; "Fighting for Pasturage: Cattlemen and Sheepmen War on a Colorado Mesa—Three Reported Killed," *Omaha Daily Bee* 17 Aug 1893; "Are Racing to the Mesa: Utah Sheep Men Said to be in Colorado," *Salt Lake Herald*, 9 April 1894; and "Ready for Battle: Colorado Cattlemen Prepared to Fight Wyoming Sheepmen," *Indianapolis Journal*, 9 June 1895, for a small example—were regular and often re-printed in papers around the country. The conflicts were simply unavoidable in any discussion of the problems on western rangelands.

⁴¹ William Macleod Raine, "The War for the Range," *Frank Leslie's Popular Monthly*, 56 (Sept 1903): 15.

⁴² The state found Herbert Brink guilty despite immense support from the local community and from powerful cattlemen. Ironically, cowboys like Brink (workers employed by cattlemen) bought into anti-sheep sentiment even though shepherders (workers employed by sheepmen) actually made more wages since their work was not seasonal like cow punching. See: O'Neal, 3-5.; John W. Davis, *Goodbye, Judge Lynch: the End of a Lawless Era in Wyoming's Big Horn Basin* (Norman: University of Oklahoma Press, 2005), 163-88.; NB, There were a few more raids after *State v. Brink*, but they were much smaller and the last occurred in 1921.

At the time of *State of Wyoming v. Brink*, cattlemen looked like the losers in the Sheep Wars, since they had failed to stave off the expansion of the sheep industry and the cattle business was suffering repeated economic depressions brought on by cyclical droughts and price instability. Within fifteen years, however, they would become the clear victors and cattle would dominate agriculture broadly in the arid and semi-arid west for the next hundred years. What happened was that the conflict was no longer just between cattlemen and sheepmen over control of open range. Starting in the 1880s and picking up especially after 1905, the federal government decided that it owned those lands and had the right and duty to manage them for the public good, the meaning of which was up for debate. In fact, just two years after Wyoming took away cattlemen's right to abuse sheepmen, the Supreme Court confirmed federal agents' right to do so in *United States v. Grimaud* (1911). A forest ranger had arrested Pierre Grimaud for trespassing in the Sierra Forest Reserve, and the sheepman sued on the basis that Congress could not delegate legislative powers (ie. area specific regulations) to an administrative officer. Grimaud failed. Cattlemen could not kill all the sheepmen, but grazing regulation could and did make trailing sheep a crime. The pastoralist mode of production, which had had a distinct advantage in open range conditions, suddenly became marginal.

In the mid nineteenth century, both sheep and cattle ran freely on the open lands of the west, but then the cattle business shifted towards semi-enclosed ranching at the same time that the state began encouraging and facilitating more private ownership on the range. The open rangelands began contracting as early as 1862 with the first Homestead Act. Homesteaders forced range stock (both sheep and cattle) onto smaller spaces, and, in particular, off open plains ranges and into forest ranges. The continuous slow retreat of the

free and public west set the overarching context for most range violence. As New Mexico Congressman Harvey B. Fergusson put it in his analysis of the troubles, “The little stockman was afraid of the big stockman, the big stockman was afraid of the dry farmer, and I guess the sheepman was afraid of everybody.”⁴³ The trend culminated with the Stock-Raising Homestead Act of 1916, which partitioned remaining public grazing lands into full section plots (640 acres) as special grazing homesteads. As more and more animals crowded onto smaller and smaller grazing lands, overstocking emerged as a central concern for conservationists and land managers in the growing American bureaucratic state.

The United States government did not manage the public domain in western states and territories until 1897, when the rivetingly-titled Sundry Civil Appropriations Act provided for management of forest reserves by the Department of the Interior (DOI). Even then, the DOI did not actively manage the grazing lands choosing instead to simply prohibit sheep from all forest reservations except in Washington and Oregon.⁴⁴ This impotent combination of indifference and outright prohibition changed dramatically when the USDA seized control of the forest reserves and placed them under the management of the newly created U.S. forest service in 1905.⁴⁵ Chief forester Gifford Pinchot and his officers did not oppose grazing by any means, but they did insist that it had to be regulated and scientifically managed so that the range would sustain stable commodity output well into the future. In

⁴³ “Grazing Homesteads and the Regulation of Grazing on the Public Lands. Part I, Hearing Before the House Committee on Public Lands,” H.Hrg. (HRG-1914-PLH-0001), 63rd Cong., 2nd Sess. (1914): 19.

⁴⁴ Frederick V. Coville, “Forest Growth and Sheep Grazing in the Cascade Mountains of Oregon,” USDA Division of Forestry Bulletin No.15 (Washington DC: Government Printing Office, 1898), 11.; Filibert Roth, “Grazing in the Forest Reserves,” *Yearbook, 1901*, H.Doc. 661, 57th Cong., 1st Sess. (1902): 337.

⁴⁵ James R. Skillen, *The Nation’s Largest landlord: The Bureau of land Management in the American West* (Lawrence: University Press of Kansas, 2009), 42, 213-14.

practice this meant limiting overall grazing, spreading stock out, erecting fencing, and separating cattle and sheep where necessary.⁴⁶

State management of grazing contributed to a larger shift in American capitalism from the hands-off approach and ensuing chaos of unbridled free enterprise to a nebulous alliance of corporate and government management of markets, or in this case nature.

However, this shift also spelled the demise of the western sheep industry, which only really flourished for about fifteen years in the west. Starting as early as 1884 sheep production went into decline. The sheep industry continued growing in some regions like Montana and Wyoming, but not after 1903. In the last regions to be hit, sheep populations declined by sixty percent from 1909 to 1919.⁴⁷ Overall, the American sheep population has fallen from a high of over 57 million head in 1884 to about 5 million head today.⁴⁸ Was the dispossession of sheepherders by the American state an accidental consequence of sound conservation?

The Ecological Case

A number of different factors and forces probably motivated cattlemen—racial and class antagonism, economic uncertainty and anxiety, a culture of vigilantism—but they overwhelmingly pointed to ecological concerns when trying to explain and justify their violent exclusion of sheep from public rangelands.⁴⁹ The race of both cattlemen and sheepmen to resettle the west had in many places overstocked the land putting negative pressure on ecosystems. Cattlemen recognized this ecological crisis even before professional

⁴⁶ Gifford Pinchot, “Notes on Some Forest Problems,” *Yearbook, 1898*, H.Doc. 293, 55th Cong., 3rd Sess. (1899): 187.

⁴⁷ Spencer et al., 239, 252.; Marshall, 319.

⁴⁸ Excepting a spike in the 1940s caused by war demand.

⁴⁹ White, 344.; Randy McFerrin and Douglas Wills, “High Noon on the Western Range: A Property Rights Analysis of the Johnson County War,” *The Journal of Economic History* 66 (March 2007): 69-92.; Davis, (2005).; Daniel Belgrad, “‘Power’s Larger Meaning’: The Johnson County War as Political Violence in an Environmental Context,” *The Western Historical Quarterly* 33 (Summer 2002): 159, 163.

conservationists like Pinchot and influential preservationists like John Muir documented and described it for the American state and public. Cattlemen exploited the declining health of the range to justify their turf war with sheep and in the process bound the ecological crisis to the social crisis. The cattlemen's ecological case was not an especially good one, but it allowed them to communicate with federal agents on issues of conservation. More importantly, its assumption that ecological inefficiency was about cattle versus sheep made sense in large part because the Sheep Wars made those categories inescapable. By the act of killing, cattlemen shaped the analysis of scientifically-minded experts.

In 1898, it was not easy to determine whether the range was degraded at all never mind how, how much, by whom, when, or why! Unfortunately, it is no easier to answer these questions today, although both scientists' and livestock producers' certainty about their answers have cemented if anything. The problem then and now is that we do not have a reliable sense of the baseline conditions (in terms of flora, fauna, soil, and climate) for Western rangelands before the arrival of European livestock (in the past this was the "virgin" or pre-human condition, since experts did not believe indigenous people could impact the land). We are even less capable of determining site-specific conditions, which are essential due to the remarkable ecological and historical diversity of American landscapes. The best and most thorough studies of pre-European American grassland conditions are a century old now, and they reveal the limits early experts faced in understanding ecological decline.⁵⁰

⁵⁰ Joseph Nimmo, Jr. [Chief of the Bureau of Statistics], *Report in Regard to the Range and Ranch Cattle Business of the United States* (Washington, DC: Treasury Department, 1885).; Will C. Barnes [Inspector of grazing, USFS], *Western Grazing Grounds and Forest Ranges: A History of the Livestock Industry as Conducted on the Open Ranges of the Arid West, with particular Reference to the Use Now Being Made of the Ranges in the National Forests* (Chicago, IL: The Breeder's Gazette, 1913).; Clara Maud Love, "History of the Cattle Industry in the Southwest," MA. thesis, University of California, 1914.; James T. Jardine and Mark Anderson, "Range Management on the National Forests," (Washington, DC: USDA, 1919).; Will C. Barnes, *The Story of the Range: An Account of the Occupation of the Public Domain Ranges by the Pioneer Stockmen, the Effect on the Forage and the Land of Unrestricted Grazing, and the Attempts that have Been Made to*

In the nineteenth century, it was not at all common knowledge that cattle could destroy grass over the long term. “Next in importance to the divine profusion of water, light, and air, those three physical facts which render existence possible, may be reckoned the universal beneficence of grass,” John J. Ingalls, US Senator from Kansas, waxed eloquent in 1872, “when the fitful fever is ended, and the foolish wrangle of the market and the forum is closed, grass heals over the scar which our descent into the bosom of the earth has made [...] Grass is the forgiveness of nature—her constant benediction.” Ingalls had no claim to expertise in ecology, but his treatise on grass was quoted at length by Will C. Barnes, Assistant Forester and Chief of Grazing USFS, before Hearings on public lands grazing in 1926, and it was reprinted in its entirety in the USDA’s special grass-themed yearbook of agriculture in 1948. Even as evidence of ecological decline emerged, most people assumed the grass would return if you removed the excess animals (in the 1890s that meant sheep; in the 1970s it meant cattle). For over a century, Ingalls captured the position of the government, the educated elite, and even (or especially) the mass of land users in the United States: “grass is immortal.”

However, Barnes and other early range historians were beginning to understand that the grass had changed. These studies examined an impressive array of primary sources for evidence on grass—including newspapers, Spanish explorer reports, pioneer diaries, and various obscure books—but these sources left an incomplete picture of the land. More than any other source, the authors relied on the expertise of cattle producers who lived out West. In 1885, Joseph Nimmo of the Bureau of Statistics recorded that the capacity of Texas ranges

Regulate Grazing Practice and Perpetuate the Great natural Forage Resources of the Open Ranges [reprinted from Hearings before a Subcommittee of the Committee on Public Lands and Surveys], (Washington DC: Government Printing Office, 1926).

could be greatly increased based on the authority of George B. Loving (One of the most famous Texas cattle barons and the one half namesake of the Loving-Goodnight Trail).⁵¹ Barnes, too, asked “some of the most experienced cowmen of central Texas” about the capacity of the range, but by then they claimed “the overstocking of the ranges has continued year after year [... and] the injury has gone almost past the point where redemption is possible.”⁵² Obviously this contradicts the grass is immortal claim, but that is fairly typical in these documents. The point is that the experts asked and listened to cattle producers. This is not a cynical point—cattle ranchers living in the West for decades with kin going back even further are exactly the kind of people I wish I could ask about changes in the range—but it meant that experts were working with a narrative of ecological change that cattle producers constructed to blame sheep.

By the mid-nineteenth century, cattlemen understood that the abundance of the grasslands was finite, and they attempted to monopolize the land—famously against rustlers and homesteaders—but more consistently and importantly against sheepherders. First, cattlemen argued that sheep unjustly crowded cattle out of rangelands because cattle could not graze in an area with sheep or even after sheep had passed. Most often cattlemen just claimed axiomatically that “sheep and cattle don’t mix,” but those who cared to explain further alleged that sheep had an oil gland in the crevice between their hooves which left a stink so foul that cattle refused to drink or graze anywhere sheep had passed. Second, cattlemen asserted that whatever sheep did not eat (and they ate a lot) they would trample out with their sharp hooves.⁵³ As a USDA expert would later point out, “It is therefore asserted

⁵¹ Nimmo, 19-20.

⁵² Barnes (1926), 14.

⁵³ See for example: Statement of Jerry W. Sullivan [cattleman] in “Grazing Homesteads,” (1914): 302.

that the sheep men thus have a distinct advantage over the cattle men in that the former can drive the cattle off the range by the mere presence of sheep.”⁵⁴

The cattlemen’s ecological argument was not scientifically founded as it turned out, but it appealed to politically active conservationists in the waning years of the nineteenth century. It also ensured that the experts would not ask if sheep were the problem, but rather why sheep were the problem. The eastern elites, who began to study and then intervene in the western range problem, obviously differed from cattlemen, but they shared both ethnic identities and class interests with the rougher men who made up the western elite in the nineteenth century. In comparison, sheepmen had virtually no voice, and ruminations by men like the great John Muir that sheep were “hoofed locusts” were typical.⁵⁵ Muir and other preservationists were convinced that “ignorant, alien” sheepmen started destructive fires, and they demanded the complete removal of sheep from reserve lands as matter of principle.⁵⁶ The more bureaucratic Pinchot and his staff in the forest service (and in the various agencies in the USDA and DOI that preceded its formation in 1905) approached the range problem more soberly and found that fires were a long abandoned practice by the time of Muir’s journeys, but even more than pundits like Muir they relied on cattlemen for local expertise and political legitimacy.⁵⁷ This group of civil servants, drawn from an emerging class of university-educated botanists and foresters, eventually became instrumental in closing off the public domain to sheep and those types of men who ran them.

⁵⁴ E.V. Wilcox, “Sheep Ranching in the Western States,” *19th BAI, 1902*. H.Doc. 474, 57th Cong., 2nd Sess. (1903): 85.

⁵⁵ John Muir, “The Mountain Lakes of California,” *Scribner’s Monthly* 17 (January 1879): 416.; Charles Stedman Newhall, “Sheep and the Forest Reserves,” *Forum* (February 1901): 710.

⁵⁶ Newhall, 714.

⁵⁷ Further, James B. Snyder, former park historian for Yosemite, argues that fires actually constituted sound brush management in “Putting ‘Hoofed Locusts’ out to Pasture,” *Nevada Historical Society Quarterly* 46 (Fall 2003): 155.

Before the mid 1880s, the few government reports on the sheep industry were generally friendly and reported dryly on the various breeds of sheep and how they adapted to different conditions, but in the waning decades of the nineteenth century the influence of cattlemen's bias began to leak into official USDA documents.⁵⁸ H. M. Taylor, an agent of the Bureau of Animal Industry (BAI), reported in 1886, "There has always been more or less trouble out on the range between the cattle growers and sheep men. This grows out of the fact that wherever sheep graze the cattle will not remain. Range cattle dislike the smell of sheep, and will not stay in the same neighborhood with a flock of them. Again, sheep travel as they eat, and bite the grass so close to the ground that cattle could not stay on the range where sheep had been if they wanted to, for the reason that there is absolutely nothing left behind for the other stock to eat."⁵⁹ Taylor was relying on reports by cattlemen, a practice that became increasingly common in these documents.⁶⁰ Far from impartial, having likened sheep to "a swarm of Egyptian locusts," Taylor asserted that the USDA should "require sheep owners to hold their flocks on the range adjacent to their water rights the same as cattle do."⁶¹ Sheep had to stay on ranches.

Despite the experts' inclination to side with local elites, the cattlemen's version of the ecological argument proved problematic. Experience on the ground as well as some experiments, loosely-defined, quickly demonstrated that sheep and cattle could graze

⁵⁸ Notable early reports include: "Condition and Prospects of Sheep Husbandry in the United States," and J.B. Grinnell, "Sheep on the Prairies," *RCAY 1862*, H.Exec.Doc 78, 37th Cong., 3rd Sess. (1863): 242-312.; J.M. Fairfield, "Sheep in Iowa," *RCAY 1864*, H.Exec.Doc. 68, 38th Cong., 2nd Sess. (1865): 167-185.; J.R. Dodge, "Why and Where Mutton Sheep are Profitable," *RCAY 1866*, H.Exec.Doc. 107, 39th Cong., 2nd Sess. (1867): 341-354. There were noticeably fewer reports on sheep in the 1870s and early 1880s.

⁵⁹ H.M. Taylor, "The Sheep Industry," part of "On the Condition of the Range Cattle Industry," 3rd *BAI, 1886*, H.Misc.Doc. 156, 49th Cong., 2nd Sess. (1887): 121-22.

⁶⁰ See also: Wilcox, 719.; A.P. Carr in "Watershed of the Ranier Forest Reserve, Washington," S.Doc. 403, 57th Cong., 1st Sess. (1903): 16.; Ezra A. Carman et al., "Special report on the history and present condition of the sheep industry of the United States," H.Misc.Doc. 105, 52nd Cong., 2nd Sess. (1893): 719-20, 804.

⁶¹ Taylor, 121-22.

together. The forest service dropped the specter of the destructive stench of sheep, and by the 1920s they would be positioning themselves against such superstitions.⁶² Herbert Smith, assistant forester in charge of public relations, recorded a hypothetical argument during which a forest supervisor responded to some cattlemen's protests against sheep by insisting, "It isn't true that sheep on the range spoil it for cattle. That is an exploded idea. Our tests have proven the contrary." For Smith, the forester's invocation of the scientific method was essential to sustain "the esteem in which he is held locally for his fairness, capacity, and leadership."⁶³ Science apparently distinguished the men representing the American state from cattlemen and their petty local squabbles, but their analysis still circled back to the same conclusion due to the fundamental distinction between the categories sheep and cattle.⁶⁴

The experts' analysis sounded more like a scientific version of the cattlemen's. Frederick Coville, a USDA botanist, was one of the first and best at this reframing of the cattlemen's ecological case, and his discussion of forage trampling in a report investigating sheep grazing the Cascade Mountain ranges of Oregon is revealing. "The principle bad effects of overgrazing are to be attributed rather to trampling than to actual close cropping," Coville explained, "There are very few plants which from simply being eaten off will fail to grow again, but where repeatedly trampled, particularly in wet weather, when the plants are soft and the roots are easily pressed out of the ground, almost any plant will suffer." Coville

⁶² See testimony of Albert Potter in *Grazing Facilities on Public Lands, Hearings Before the Committee on Public Lands and Surveys, [...] On S. 2584, 69th Cong., 1st Sess. (1926): 72.*

⁶³ Herbert A. Smith, "How the Public Forests are Handled," *Yearbook, 1920*, H.Doc. 1038, 66th Cong., 3rd Sess, (1921): 315.

⁶⁴ Nathan Sayre's analysis of early grazing experiments reveals the specious science behind such experiments as well as their pre-designed finding bias against nomadic pastoralism. Sayre does not see anti-nomadism as an anti-sheep issue, however, pointing out that experts signified rather between good fenced sheep and bad herded sheep. This is true, but the subtle distinction did not translate to national discourse, policymakers in Congress, or many agents on the ground in forest reserves. See Nathan Sayre, "The Coyote-Proof Pasture Experiment: How Fences Replaced Predators and Labor on US Rangelands," *Progress in Physical Geography* 39.5 (2015): 576-593.

then concluded that the greatest threat from this was not even the immediate loss of forage, but rather potential for long-term soil erosion and “the substitution of other less valuable forage plants.”⁶⁵ Coville harbored no pre-existing antipathy towards sheep, and unlike the cattlemen he distinguished myth from fact and backed it up with plenty of details and caveats, but the conclusion was still essentially the same. In this way, cattlemen’s arguments and experts’ science worked together, and for the men running sheep across American rangelands, who suffered, ‘anti-sheep’ and ‘anti-nomadic pastoralism’ was a meaningless distinction.

Overgrazing was not actually federal conservationists’ primary motivation. Coville described “gullies 20 feet deep” in some of Oregon’s plains, and various others reported erosion, flooding, and other disasters connected to the denuding of ground forage by sheep. But, in spite of all these pressing threats to the longevity of the grasslands, of more immediate concern for the forest service was the accusation that sheep inhibited timber growth. In addition to eating or trampling seedlings, it was alleged that sheep would “nibble” at young pines, which when they grew could “be seen standing crooked and incapable of developing into sound trees of a healthy growth.” But conservationists did not need to ask whether these “gnarled and stunted” still served their ecosystems because they were clearly unfit for timber production, which was their primary value.⁶⁶ Conservationists at the turn of the century may have shared many of the scientific methods of contemporary ecologists and environmental scientists, but they did not necessarily privilege ecological concerns over other economic or political goals.

⁶⁵ Coville, 27.

⁶⁶ Coville, (1889): 27-28.; “Nomadic Sheep Husbandry [extract from 1897 Dept of Interior letter/report recommending establishment of forest reserves],” *Grazing Facilities*, 240.; Chapman in: *Grazing Facilities*, 241, 244.

Early experts like Coville bridged the cattlemen's ecological case to state policy, as Pinchot revealed in an official USDA report from 1898: "A careful study of the whole question has been made on the ground by Mr. Frederick V. Coville, [...] whose conclusions are to be trusted." Pinchot used Coville's analysis of the Cascade range to lay out general concepts that would motivate forest service grazing regulation for decades to come. Pinchot was far more sympathetic to sheep than Muir, but he did conclude from reading Coville and others, "Many forest regions should be entirely protected against sheep."⁶⁷

On the ground, it was even more clear the forest rangers were affecting the work of cattlemen. For example, when ranger Bill Kreutzer reached the Battlement Mesa reserve in Spring 1901 it was already infamous across Colorado for violence between cattlemen and sheepmen, and tensions peaked again just as Kreutzer arrived. Sheep from Utah were overcrowding the low country of Western Colorado and threatening entrance to the reserve. Federal law excluded sheep from forest reserves in Colorado, and for years Kreutzer's job became border patrol against sheep. Decades earlier, cattlemen had designated "deadlines" against sheep with piles of rocks, and federal rangers' "invisible" stocking borders were often metaphorically and literally the same.

Although some rangers "openly cast their lot with the cattlemen," Kreutzer saw himself as an impartial enforcer of rules developed two thousand miles to the East. Nonetheless, when two aggressive sheep owners pushed onto the reserve in 1903, Kreutzer rode out to protect the cattle growers' monopoly. Local cattlemen discouraged him, saying they would "take care of the situation," but Kreutzer did not want another range war on his hands. The sheep owners were surprised that he did not show up with a posse of cowboys,

⁶⁷ Pinchot, 187-88.

and Kreutzer apparently scared them off by threatening to bring down the full force of both civil and criminal prosecution by the United States government. There was no more violence for Kreutzer's time at Battlement Mesa, but after he left in 1905 cattlemen again killed a herder and his sheep. Kreutzer did not specifically hate sheep or favor cattle (though, he did grow up raising cattle and looked upon ranching favorably for the rest of his life), but his work in support of state-sponsored conservation and cattlemen's murderous vigilantism were effectively interchangeable.⁶⁸

In the dominant narrative about the origins of grazing regulation, agencies like the forest service were created to intervene in an ecological crisis, but at the time the ecological crisis was inseparable from the social crisis. The social violence of the Sheep Wars was itself a major motivator for state intervention, and cattlemen effectively connected the contest between elite Anglo-American cattlemen and socially heterogeneous sheepmen to the developing ecological question. Even the scientifically-minded USDA and DOI experts could not isolate overgrazing from the questions of who did or should own the land, and their own class interests motivated their analysis. Some experts took care to emphasize that sheep were not necessarily bad for the west and to clarify rather where, when, and why they posed problems, but this seemingly sensible clarification only justified their overwhelming distaste for the miscellaneous riffraff herding sheep.⁶⁹ It was exactly the way that experts and later rangers veiled their social domination with science that ultimately made the forest service's

⁶⁸ For more on forest rangers vs. shepherders, see: Jeronima Echeverria, "Basque 'Tramp Herders' on Forbidden Ground: Early Grazing Controversies in California's National Reserves," *Locus* 4.1 (Fall 1991): 41-57.; and Stephen R. Mark, "Closing down the Commons: Conflict Between Sheep Grazing and Forestry in Oregon's Cascade Range, 1865-1915," *Journal of the Shaw Historical Library* 18 (2004): 63-74.

⁶⁹ Wilcox, 85.

regulation so much more effective than cattlemen's physical violence at reaching their common goal—enclosure and the eviction of pastoralist sheepmen.⁷⁰

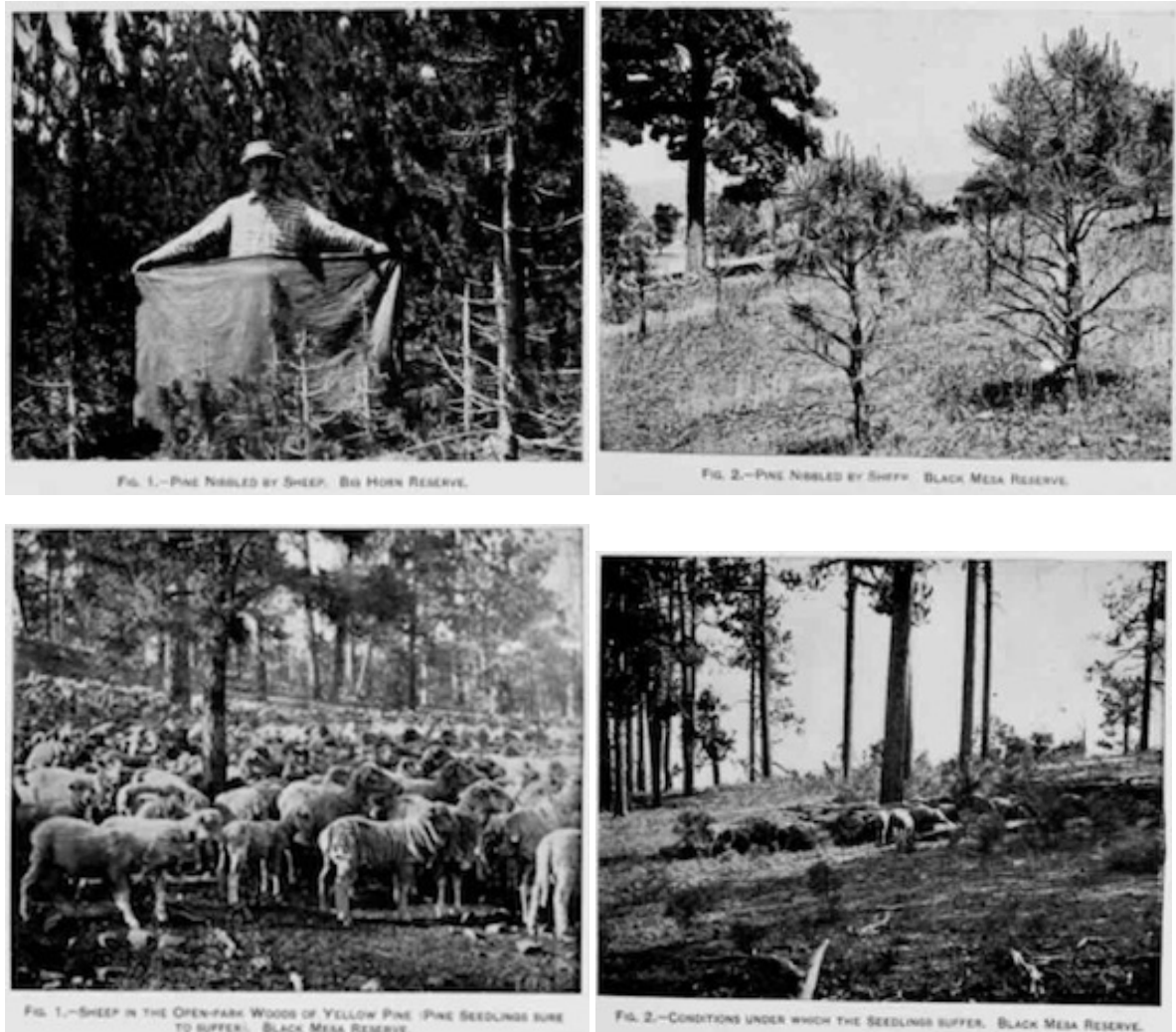


Figure 9: Evidence of overgrazing by sheep, 1901. From Filibert Roth, "Grazing in the Forest Reserves," *Yearbook of the United States Department of Agriculture*, H. Doc. 661, 57th Cong., 1st Sess. (1902): 342-3.

⁷⁰ In many ways, the forest service's actions approached what sociologist Pierre Bourdieu conceptualized as *symbolic violence* exactly because they did not see it as the application of class domination and because the imposition of state force was made to seem so natural.

Tramps and Enclosure

In the hands of the experts recruited to investigate the range question, the case against sheep and sheepmen became an attack against an unfashionable mode of production and way of life. Shepherders were no longer targeted as immigrants or ethnic others directly, but rather those herders who did not adapt to the ranching mode became “tramps,” and the experts determined that so-called “tramp sheep” were the worst culprits of ecological degradation. The experts often observed that most shepherders were foreign, but that was not fundamentally their crime. While clearly linked to older nativist and white supremacist ideologies, the discussion of “tramps” represented these ideologies filtered through newer capitalist ways of understanding the world because the tramp was a character who did not fit into modern market relations and the division between property owners and those who toiled for wages. Tramps were lazy, dirty, and tended towards theft, but their greatest sin was simply refusing to fit into modern capitalist society, which in the context of western rangelands at the turn of the century meant ranching.⁷¹

The “tramp” discourse appeared as experts tasked with preparing reports for Congress or the USDA and DOI interviewed western stockraisers and tried to make sense of their grievances. These experts almost all shared Gifford Pinchot’s “wise use” intention for the public domain of the United States, which meant that they believed strongly in conservation but also in maximizing valuable economic output. They aimed to scientifically interrogate the causes of ecological problems, so as to stabilize the public domain for sustained

⁷¹ On foreignness in reports, see: George W. Stewart, letter to George C. Perkins, January 1902; and Forest Supervisor White, report to GLO, 6 August 1902, as reported in Mondell, “Grazing on Forest Reserves, February 22, 1904” H.Rpt. 1148, 58th Cong., 2nd Sess. (1905): 2.; On tramps, see: Tim Cresswell, *The Tramp in America*, (London: Reaktion Books, 2001).; Frank Tobias Higbie, *Indispensable Outcasts: Hobo Workers and Community in the American Midwest, 1880-1930*, (Urbana: University of Illinois Press, 2003).; Todd DePastino, *Citizen Hobo: How a Century of Homelessness Shaped America*, (Chicago: University of Chicago Press, 2003).

commodity production. In the practical question of the sheep wars this meant they were sympathetic to the most stable producers—ranchers. The experts reframed the sheep and cattle wars into a conflict between sedentary producers and irresponsible, itinerant tramps. As E.V. Wilcox of the BAI summed it up, “Perhaps the chief cause of the unpleasant feelings between cattle men and sheep men, and certainly one of the chief causes of the frequent acts of violence on the summer range, is the presence of tramp sheep.”⁷² If the state could get rid of the tramps, they argued, both the violence and the ecological degradation would end.

Wilcox set out his case by defining the tramp sheepmen and their tramp sheep against good local stockraisers of all kinds. “Throughout the range States hundreds of thousands of sheep are owned and maintained by men who either have no permanent home or at least have no sheep ranch,” explained Wilcox, and further after explaining the “extensive” seasonal migrations of the industry, “It may therefore result that excessive numbers of sheep attempt to find grazing ground in one part of the mountains, and that the grass may be grazed off so short as to be almost destroyed for a number of years and the sheep may even then be unable to secure enough forage to prevent great loss in weight.” This last thought is notable, since Wilcox portrayed the tramp sheep industry not only as ecologically destructive but also as economically inefficient. In addition to undermining their own bottom line, the tramp sheepmen compromised the profitability of land-owning ranchers, especially cattlemen.⁷³

As the experts perceived it, the problem with these so-called tramps was that since they were nomadic and did not own their own land, they had no respect for the future productivity of the land and overstocked it leaving “great and even irreparable damage [...]

⁷² Wilcox, 86.

⁷³ Wilcox, 86-7. For more on tramp sheep see also: Chapman, 279.; “Watershed of the Ranier Forest Reserve,” 8.; Carman et al., (1893): 249, 720.; Vernon Metcalf in: *Grazing Facilities*, 504.

to the grass.” This argument rested on the elusive concept of carrying capacity, which could vary wildly across different conditions.⁷⁴ Wilcox explained that, “In some localities an acre of ground will maintain two sheep during a whole season, while in other localities as much as 2 or 3 acres may be required for a single sheep,” but forest rangers collecting this data could never really isolate on a per sheep basis like this, since sheep passed in and out of the reserves by the thousands. Wilcox implied that capacity could be scientifically determined, but in practice the experts often deferred to local experience. Sound carrying capacity, as Wilcox admitted, “is a matter which is thoroughly appreciated by the sheep men, and where the land is largely controlled by local men, so that tramp sheep can be successfully excluded, permanent injury to the range is being largely avoided.” Carrying capacity as a concept and as a measurement required stability, which meant nomadic pastoralism was necessarily inconsistent with scientific conservation.⁷⁵

Further, cattlemen argued that ranching, especially on privately owned land, was more sustainable and compatible with the conservationists’ goals, and pastoralism threatened to undermine the ranching mode of production where they mixed. Vernon Metcalf, a cattleman and former forester, testified before Congress in 1926 on how he believed tramp sheepmen were undermining the land value of private ranches near forest reserves such that “land ownership is absolutely discouraged.” Metcalf argued that the “original ranchers” put most investment in winter quarters outside the elevated mountain grazing lands of the reserves, but tramp sheepmen “see that the key to the whole thing is the summer range, because there are plenty of the other seasonal ranges.” The tramps, not owning land or

⁷⁴ Nathan F. Sayre, “The Genesis, History, and Limits of Carrying Capacity,” *Annals of the Association of American Geographers* 98 (2008), 120-134.

⁷⁵ Wilcox, 86, 97.

paying taxes could “afford to bid for [a grazing permit] a price that represents per head all it is worth to run his sheep the year around” and thereby outbid the cattle rancher of his summer range.⁷⁶ Metcalf brought the tramp discussion and ecological problem back around to the fundamental problem motivating the violence of the Sheep Wars—the pastoralist and ranching modes of land use clashed. Metcalf made it clear that the only solution was supporting ranchers. This is how cattlemen won the sheep wars—not through killing but through adapting themselves and their words to a new mode of production more in line with both conservation and capitalism.

Cattlemen’s complaints about sheep developed into a sweeping behavioral model in the expert analysis. As Coville reported in 1898, the stockmen (especially sheepmen) of the public range ran by the adage, “Every man for himself and the devil take the hintermost.” Anecdotes to prove the claim abounded. Clara Maude Love, a Master’s student in history at the University of California, described a story of a man who bought a piece of land to raise cattle, but his land was abused by various itinerants and trespassers driving their animals on his land, so the man sold the land. He then used the money to buy more cattle and he just trespassed on the lands of the new owner and his former neighbours.⁷⁷ The forest service discovered what we now understand as the classic *tragedy of the commons* dilemma. With each user trying to suck the most value out of the land before his neighbor-competitors could, ecological degradation was inevitable, and the experts decided that giving stockmen a longer-term stake in the land through a permit would incentivize sound management (or *improvement*). “The evident fact that if the forest grazing privilege is valuable at all,” theorized Coville, “it is most valuable when the amount of forage it furnishes is maintained at

⁷⁶ Metcalf, 504.

⁷⁷ Love, 70-72.; See also Wilcox (1903).

its highest limit of continued production.”⁷⁸ Thus the experts theorized just as ecologist Garrett Hardin would in 1968 that private property was the best, if not only way, to conserve vital natural resources. But the tragedy of the commons conceals as much as it reveals. The forest service, like Hardin, conceived of the open range commons as an institutional vacuum. As economist Elinor Ostrom argued, governance of a commons operates at multiple levels and from different directions.⁷⁹ In the nineteenth-century west, violence between cattlemen and sheepmen was not a tragedy derived from the absence of institutions; rather, the Sheep Wars represented the execution of ethnic and social institutions to govern use of the commons. Property rights were more a translation than a resolution of existing racial and class structures, and removing them from the model made it that much easier to justify dispossession.

The experts did not, however, follow their model to its final end because they came to the conclusion that private-lands ranching was superior at the same time that the American state decided it wanted to keep its land in the west. What would ranching look like on land that the federal government owned and which was increasingly understood as public? The experts suggested simulating the economic and ecological incentives of ranching on land that the state would maintain ownership and control of. Imposing this vision on the western livestock industry required fences and leases, both of which were intended to dis-incentivize overgrazing by limiting competition and establishing semi-permanent status for certain stock growers on the public domain.

⁷⁸ Coville, 51.

⁷⁹ Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (New York: Cambridge UP, 1990).

Fences were necessary to physically delineate the ranch as an enclosed grazing space, and leases ensured that production within that space would improve the range and make it more efficient. The forest service began allowing (and sometimes encouraging) stockmen to build fences on public lands, and Albert Potter, Associate forester of the USDA, estimated before Congress in 1926 that the forest service itself erected about 650 miles of drift fencing. This was nothing compared to the amount of fencing raised by the Civilian Conservation Corps in the 1930s, but it was certainly a sign of the direction management was going. The forest service simultaneously worked to establish sound and uniform grazing privileges and to enforce fee collection. Although cattlemen and foresters would continue to debate the correct value of the grazing privilege, prominent cattlemen fully supported the principle of leasing as a step towards their ultimate goal of fully privatizing the public domain. The forest service believed that if the modern capitalist logics of profit and property rights could be applied to the range, ecological sustainability would necessarily follow economic efficiency, and by this time the cattlemen agreed. It has become somewhat of a myth in recent decades that cattlemen seek free and unrestrained access to use and abuse the public domain; rather, it has been their goal for over a century to control that land through direct ownership.⁸⁰

Fencing and leasing, while sound from the conservationist point of view and popular among cattlemen, spelled disaster for the western sheep industry. The sheep industry of the west was incompatible with private access to limited plots of land specifically because it had developed symbiotically with the existence and philosophy of the open and free public lands. Obviously, sheep can be ranched, as they have been throughout the twentieth century, but the

⁸⁰ Potter, 60-61.; Neil M. Maher, *Nature's New Deal: The Civilian Conservation Corps and the Roots of the American Environmental Movement* (New York: Oxford UP, 2008): 43.; Reviel Netz, *Barbed Wire: An Ecology of Modernity* (Middletown, CT: Wesleyan UP, 2004): 16-18.; Marshall, (1915): 321.; Statement of Charles M. O'Donel in *Grazing Facilities*, 462.

industry could never operate on the scale that it enjoyed before, and, more importantly, the men who ran nomadic flocks across the west would not be able to adapt. Even in 1897, Coville aimed to prescribe a fixed-capital basis for sheep outfits, but admitted “in general it is a prerequisite of success that an owner shall have for winter headquarters a permanent and commodious, properly fenced ranch, provided with a house, one or more hay barns, and several substantial corrals. [...] Such a ranch represents a capital of about \$5,000 or \$6,000.”⁸¹ The new mode required a much higher level of capitalization—in some areas costs rose from \$2 per sheep before enclosure to as high as \$14 per sheep by 1924.⁸² It followed directly from this that the much smaller sheep ranching business that emerged ended up dominated by former cattlemen. In fact, the same Swan Land and Cattle Company that had so violently fought against sheep just years earlier introduced sheep to their ranches in 1905 as a capital diversification strategy, and a decade later they would be the biggest sheep outfit in Wyoming.⁸³ But still, Swan’s success ranching sheep could not have happened with Basque or Mormon shepherders still criss-crossing the range.

Evicting tramp sheep and sheepmen turned out not to be an easy proposition for the new federal agents. According to ranger Bill Kreutzer, sheepmen had openly resisted rangers since the DOI first banned sheep from proposed forest reserves in Colorado and Oregon in 1893. “Some of the rangers had openly cast their lot with the cattlemen,” Kreutzer explained, “Therefore, sheepmen looked on all rangers as part of the force arrayed against them.”⁸⁴ Range sheepmen (not actually being unsophisticated, anti-modern tramps) hid from rangers, spied on rangers, and when caught took full advantage of the tenuous legality of early ranger

⁸¹ Wilcox, 97.; Coville, 12.

⁸² See Spencer et al., 251, 253, 263.; McClure in *Grazing Facilities*, 164

⁸³ Mothershead, 123.

⁸⁴ Tupper, 84.

regulation.⁸⁵ As forest supervisor White reported in 1902, “The owners were all Basque French, and each was in possession of a letter from the Wool Growers’ Association of San Francisco, advising them that under the recent decisions of Judges De Haven and Welborn they had the right to graze their sheep on the reserve.” Sheepmen barely distinguished between attacks from cattlemen or from forest rangers, and in 1905 sheepmen in Wyoming formed the Wyoming Wool Growers Association to address both threats. By 1906, the association offered \$1000 rewards for any convictions of sheep raiders and raised a fund to lobby against the forest service’s grazing regulations.⁸⁶ In stark contrast to the picture painted by Smith in his imaginary portrait of the forest supervisor, earlier rangers found it very difficult to control sheepmen. A ranger might have to travel as far as 75 miles to sign the necessary affidavits to evict a trespasser, and in some cases lacked any meaningful legitimacy and authority. “In these cases the supervisor did his best to remove the trespassers from the reserve, but was cautioned to use no violence, and consequently was unsuccessful in keeping any of them off the reserve, as they were apparently well informed as to all the instructions he received from time to time, made fun of him at various times, and refused to leave when ordered to do so by forest officers.”⁸⁷

After 1905, the new forest service became much more effective at barring nomadic sheepmen from reserve lands. Forest service rangers did not attack sheep camps with guns and clubs under the anonymity of night or bandanas, and they did not throw dynamite into

⁸⁵ Two separate judges in two separate cases from California—*United States v. Blasingame* 116 Fed. 654 (1900), and *United States v. Camou* 184 US 572 (1902)—determined that the regulations created by the 1897 Organic Act were invalid because they unconstitutionally delegated legislative power to an administrative appointee. The precedent from these cases was later overturned by *United States v. Grimaud* 220 US 506 in 1911.

⁸⁶ O’Neal, 126.

⁸⁷ White, report to GLO, 6 Aug 1902; and Wyoming special investigator report [no author cited], 22 October 1903, as reported in Mondell, 2.

flocks or drive sheep off cliffs, but their actions were not necessarily non-violent. Journalist Charles Shinn examined rangers' daily reports and found, "Mostly they began with 'rode patrol' and followed this by a series of 'dittos,' excepting on those noble and joyous occasions when one could say 'ran out Basco sheep'." The rangers' strategy was "making it unprofitable for sheep herders to trespass," and they scared off herders, seized dogs, stole essential equipment, and "mixed, scattered and drove out the bands."⁸⁸ Rangers were also willing to threaten violence, and one forest ranger even proposed—perhaps in jest, but perhaps not—"If you meet a sheep raising so-and-so on the trail with a broken leg, break the other leg and go on."⁸⁹ Nonetheless, most often forest service rangers did not draw their power from violence, but rather from the legitimacy of science and conservation, which was symbolized for Kreutzer by the bronze forest service badge depicting a coniferous tree that replaced his law-enforcement-styled silver DOI "ranger" badge in 1905.⁹⁰ The forest service's on-going efforts to run off nomadic herders did not make the papers the way cattlemen's spectacularly violent sheep raids had, but they were nonetheless devastating.

The forest service effectively regulated the pastoralist mode of production out of existence in favor of ranching. From there on out, sheep herding would no longer be an easy business for less established and financially-secure operators including Navajos, Mexicans, Mormons, immigrants from Canada, France, the Basque region of Spain, China, Portugal, and young and poor Anglo-American men trying to make a go of it in the free west. As dominant as the discourse of the tramp was, one USDA bureaucrat recognized what was happening. In 1890, H.A. Heath of Kansas, while reporting on the western sheep industry,

⁸⁸ Charles H. Shinn, "A Ranger and Some Sheep," *Overland Monthly and Out West Magazine* 73 (1919), 5, 9.

⁸⁹ O'Neal, 1.

⁹⁰ Tupper, 84.

recorded that “cattle began to supplant the sheep, a circumstance which has resulted in more detriment to the masses, and especially the poor, than most of us are willing to admit.”⁹¹

In the late nineteenth century, the American state and western land users deliberately transformed livestock agriculture and the western American landscape. They changed the number and types of animals found there; they changed the types of vegetation; they re-portioned land and gave it values and owners (some for individuals and some for the government itself); they erected infrastructure ranging from railroads to modest barbed fences; and they created institutions and organizations to help manage the landscape going forward (like the forest service and stockgrowers’ associations). Land use and the landscape both became “improved.” What does it take for a society to decide to transform a landscape and its whole orientation towards that landscape?

Improving the land meant different things to different groups of people, and it took science as well as bigotry and outright violence as well as symbolic violence to close the open range once and for all. The Sheep Wars may have started out of local racial, religious, and class antagonism in an unruly west, but they ended in the context of an emerging federal bureaucracy. What began as *cattleman versus sheepman* ended as *forest ranger versus tramp*. Western cattlemen’s violent assaults on sheep outfits did not cause the collapse of the American sheep population, but they created an opportunity for the state to intervene. In researching the causes of the Sheep Wars and other problems facing the public domain, the state’s experts drew on ecological arguments that cattlemen were already making against sheep and sheepmen, and they concluded that the only solution was a managed and

⁹¹ Heath, 307.

incentivized grazing system that fit the cattle industry much better than the sheep industry as the two existed at the time.

There was nothing modest about use permits, grazing fees, or the very notion that the federal government is the owner of public lands when these things emerged in the late nineteenth century. And there was nothing modest about fences, ranches, or the idea of long-term economic incentives for land use either. Barnes and Wilcox both asserted that the US Forest Service ended the range wars through regulation, but it would be better to say that USFS finished the job of the range wars.⁹² The USFS and private cattle producers cooperated to change the market for grazing access on forest reserves. Cattle producers started the process of regulation by trying to kill shepherders, and the USFS concluded it by expelling them under force of law and state violence. Murder and Leases were both just market rules.

⁹² Barnes (1926), 8; Wilcox (1903), *passim*.

2: Regulating Landscape-Based Markets

Grazing regulation was a joint project of the American State and private enterprise. Land users and government regulators agreed that ecological degradation caused economic instability and that unregulated competition necessarily led to ecological decline. Together, government experts, bureaucrats, policymakers, and cattle ranchers remade the rules of the cattle business. They created institutions—like the Taylor Grazing Act—to alter the legal structures of the range; and organizations—like the American National Cattlemen’s Association, Bureau of Land Management, and local grazing boards—to develop, interpret, and administer the new rules. From the 1890s to the 1930s, ranchers and regulators attempted to correct the institutional and organizational deficiencies of open range capitalism, and they achieved relative success leading to three decades of stable growth.

In a study of Utah grazing and regulation, agricultural historian Paul Bonnifield called grazing land and feed resources, “the weakest link in the capitalistic chain.”⁹³ The American cattle industry’s solution to the chaos of free enterprise was conservation. Conservation embodied the idea that stable landscapes made stable capitalism, as well as the tautology that stable capitalist production made stable landscapes. Conservationists needed to manage access to the violent unowned rangelands of the West, but they did not want to curtail the food supply or eliminate private enterprise, the foundation of Jeffersonian yeoman democracy. The American State took control of the open range as an emergency measure due to ecological and social violence thereby creating the public lands, including the forest reserves and public domain lands, but the government still embraced the same ideological conviction expressed in the Homestead Act that Western lands should belong to individual

⁹³ Paul Bonnifield, “It is a Hard Country Along the Green River,” *Journal of the West* 29, no. 4 (1990), 61-67.

agricultural producer families.⁹⁴ Ranchers agreed. The central problem for these two groups of rangeland-market conservationists was how to make public lands into private lands in a way that maximized economic and environmental stability.

The American State and the cattle producers, who used the Western rangelands, constructed a hybrid situation in which public lands belonged the government, but they would be allocated to ranchers to manage them as similarly as possible to privately owned lands. They reached this compromise partly because the government had tried giving away and the land unsuccessfully. The gifts, “Homesteads,” were too small for grazing cattle on the dry lands of the West.⁹⁵ Selling it was an option, but ranchers at the end of several turbulent decades could not afford to buy the land they claimed. Ranchers and regulators initially understood the new grazing structures as a temporary step towards full transfer of lands to individuals and a return to regulation through market means. In reality, they created an entirely new type of market that continues to shape land use and beef production to the present. The market for access to and use of public lands allocated the role of the invisible hand to specific agencies, bureaus, boards, committees, and other organizations across government and industry, who tried to make it operate similarly to their notion of a good stable market. They made the impact of cattle on the land more visible and predictable by proscribing specific numbers compatible with the land’s capacity, and they simulated individual property rights through long-term leases and permits.⁹⁶

⁹⁴ Other public lands, such as military bases and Indian Reserves, had different origins and purpose.

⁹⁵ J.W. Powell, “Report on the Lands of the Arid Region of the United States with a More Detailed Account of the Lands of Utah,” (Washington, DC: USGS, 1879).; Lawrence B. Lee, “American Public Land History: A Review Essay,” *Agricultural History* 55, no. 3 (1981), 284-299.

⁹⁶ Nathan F. Sayre, “The Genesis, History, and Limits of Carrying Capacity,” *Annals of the Association of American Geographers* 98 (2008), 120-134.

The regulated range differed from typical markets of capitalism. Public lands by definition are lands owned in common by all Americans, but, in fact, they are always controlled most by some individual or group (ie. the military, an Indian tribe, a corporation, an individual producer, or a group of rock climbers). They are basically “owned,” but they differ from private lands due to how society designates the owner. Whereas private lands are distributed through market exchanges of money, public lands are distributed by the federal government based on fluid ideas about use. Because of the greater level of control people had over the market, ideas and politics about markets and conservation had a significant impact on the administration of the marketplace in reality. This market also explicitly connected economic and ecological concerns and decision-making because the creators believed markets and landscapes were connected. Ultimately, this market, the regulated market for access to grazing resources on public lands, lost its stability because ideas about cattle and conservation changed.

This chapter examines the specific mechanisms, institutions, and organizations that produced the regulated grazing market and contributed to the Golden Era of American beef. The following chapter examines the ideological and practical consensus around conservation and why it fell apart.

Agencies, Associations, & Acts

On some level, all markets are the product of ideas because supply, demand, and everything else ultimately come down to what all the individuals involved think is going on and thus choose to do. However, it takes a great deal of coordination and ideological consensus to implement a new idea about how a market *ought* to be in reality. Markets are fluid human constructions, but that does not mean they change easily. Replacing open range

capitalism with something else relied on the re-organization of individuals in the beef economy, especially into State bureaucratic organizations and private trade associations.⁹⁷

The two most important government organizations for forming and executing conservation ideas within the market for public lands grazing were the United States Forest Service (USFS) and the Bureau of Land Management (BLM). The USFS formed in 1905 by an act of law from the United States Congress, but it had precursors in both the Department of Agriculture (USDA) and the Department of the Interior (DOI) back to at least 1876. The USFS managed access to grazing lands that fell within the national forest reserves that Congress carved out in 1891 and expanded thereafter. The forest reserves contained significant and highly valuable (especially in the summer season) grass and other forage for livestock, and the USFS directed significant effort to grazing and conservation there, but the great majority of unowned or unclaimed government grazing lands remained unaccounted for. Eventually, they became the public domain lands, and Congress created the BLM in 1946 to administer the conservation and efficient production of those lands, but the BLM did not receive nearly the same legal ability to manage the public domain as the USFS had for the forest reserves until another law of 1976.

⁹⁷ On the sociology of organizations and the economy, see: Max Weber, "Bureaucracy," *Economy and Society: An Outline of Interpretive Sociology* (Berkeley, CA: University of California Press, 1978).; Oliver E. Williamson, "The Economics of Organization: The Transaction Cost Approach," *American Journal of Sociology* 87, no. 3 (1981), 548-577.; Michael T. Hannan and John Freeman "Where Do Organizational Forms Come from?" *Sociological Forum* 1, no. 1 (1986), 50-72.; Michael T. Hannan and John Freeman, "The Ecology of Organizational Founding: American Labor Unions, 1836-1985," *American Journal of Sociology* 92, no. 4 (1987), 910-943.; James L. Perry and Hal G. Rainey, "The Public-Private Distinction in Organization Theory: A Critique and Research Strategy," *The Academy of Management Review* 13, no. 2 (1988), 182-201.; Richard Scott, "Reflections on a Half-Century of Organizational Sociology," *Annual Review of Sociology* 30 (August 2004), 1-21.; P. DiMaggio and W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality," *American Sociological Review* 48 (April 1983), 147-60.

Since the USFS ultimately fell into the USDA and the BLM into the DOI, they were initially and sometimes regarded as rivals—they are not, since they have clear spatial jurisdictional borders, but they are different. According to James R. Skillen, the respective establishment dates of the USFS and BLM in 1905 versus 1946 meant the organizations formed in vastly different political contexts. In 1905, the American state was in a period of rapid growth and spending, but in 1946, the American state was just getting over the growth and spending of the New Deal and Second World War. Also, 1905 fell in a period that American historians call the “Progressive Era,” during which the American state entrusted all manner of governance to professional experts and technicians. By 1946, the American state (paradoxically) had renewed its suspicion of big government and elite technocrats. Thus, according to Skillen, the organizational structure, legal administrative authority, and budget allocations of the USFS were all a great deal better than those of the BLM.⁹⁸ This difference meant that the USFS consulted with private stock raisers, but the BLM relied on them.

The most important private industry organization was the National Cattlemen’s Association (NCA), which initially formed as the American National Live Stock Growers Association in 1898. Livestock producers on Western American Rangelands relied on an economic organizational form distinct from other workers’ and business organizations: the producers’ trade association. Stockmen’s associations, as they were most often called, originated in the Sheep Wars as groups of cattlemen or sheepmen, who shared a collective interest in opposing foreign animals, agreed to work together to kill enemy producers and their animals. A notice published in a central Oregon newspaper in 1901, read, “To whom it may concern: The Crook County Cattlemen’s Protective Association have located for its

⁹⁸ James R. Skillen, *The Nation’s Largest landlord: The Bureau of land Management in the American West* (Lawrence: University Press of Kansas, 2009), 213-14.

exclusive use of the territory bounded on the north [...etc.].”⁹⁹ The environmental context of those conflicts meant the grazing regulation was a central purpose of stock associations, and in the important testimony on public lands grazing given to Congress to help that organization form the best laws, the cattle producers’ interest was almost always delivered by someone with an affiliation to a stock association of some kind.

The NCA was the central voice (to law and policymakers) transmitting cattle producers’ understanding of conservation and efficient production throughout the twentieth century, but the NCA did not have the greatest role in implementing ideas about public lands in practice. The organizational ecology of stock associations was (and is) broader and more complex than just the NCA. The NCA had some rival organizations, like the Independent Stock Growers of America, but these were few and short lived.¹⁰⁰ Other organizations developed for specific supply chain functions, like the National Live Stock Feeders Association or the American Hereford Cattle Breeders Association. At the national level, the NCA subsumed most of these, and it affiliated with those below. The NCA itself was made up of individual cattlemen to a degree, but more importantly it connected affiliate organizations in every grazing state, and many of those had affiliates at county or regional levels. Other producers, maybe also members of some of those previous associations, might make up other stock associations for a national forest, grazing district, or even a specific local landscape they shared.¹⁰¹ The more local associations had the most direct link to

⁹⁹ As quoted in Melany Tupper, *The Sandy Knoll Murder: Legacy of the Sheepshooters* (Christmas Valley: Central Oregon Books, 2010), 59.

¹⁰⁰ Folder 5, Box 275, NCA, AHC.

¹⁰¹ For example: The National Cattlemen’s Association; the Arizona Cattle Growers Association; the Clifton Ranger District Apache-Sitgreaves Allottees Association; the Greenlee County Cattle Growers Association; and the Blue River CowBelles could all conceivably represent a ranch woman in South Eastern Arizona. See: Jack Stauder, *The Blue and the Green: A Cultural Ecological History of an Arizona Ranching Community*. (Reno, NV: University of Nevada Press, 2016).

producers' behaviour within the public lands grazing market. However, members of key positions within the NCA also held important roles in various government-industry collaboration organizations like the Public Lands Council; the NCA sponsored or promoted research that was valuable to public lands cattle grazers; and, to re-iterate, the NCA articulated the whole industry's position to Congress.

Producers' involvement within the regulation of public lands grazing is controversial. Scholars have been skeptical of the regulatory regime set up on public rangelands and in agriculture more broadly because "in effect, the regulators were being supervised by those who were to be regulated."¹⁰² Critics argue that regulatory capture undermined democratic principles, but the range had not been a successfully democratic place before at all, and the architects of this system believed they were actively creating "democracy on the range."¹⁰³ However, the NCA, its affiliates, and other producer organizations served a vital role in how the American state managed grazing on private and public lands. Cattlemen's associations provided the organization necessary for cattle ranchers to play a designed role within the legislative and bureaucratic functions of grazing regulation and management. They were both a countervailing power and a bureaucracy ready to go. Especially for the public domain from 1934 to 1976, the stock associations fulfilled a need for bureaucracy that the DOI legally could not provide. Further, they provided the organizational coordination necessary for stock producers to cooperate and avoid the problems of open range capitalism. Thomas E. Wilson, a major Chicago meatpacker, put it this way 1919 during a plea for greater cooperation and

¹⁰² For more on the capture thesis, please see: Christopher McGrory Klyza, "Ideas, Institutions, and Policy Patterns: Hardrock Mining, forestry, and Grazing Policy on United States Public Lands, 1870-1985," *Studies in American Political Development* 8 (Fall 1994), 367.; Phillip O. Foss, *The Grazing Fee Dilemma* (University, AL: University of Alabama Press, 1960).; Phillip O. Foss, *Politics and Grass* (Seattle, WA: University of Washington Press, 1960).

¹⁰³ Taylor as quoted in Klyza.

market stability across the beef industry: “One of the greatest drawbacks in this industry is the failure on the part of producers to properly organize.”¹⁰⁴

The USFS certainly did take producer input seriously, but the organization mostly implemented the regulation of grazing on forest reserves on its own accord. Producers and policymakers collaborated much more in the regulation of the remaining public domain. Regulation of the majority of Western American rangelands was an early priority of the Conservationist American State but it stalled several times. Grazing was on a laundry list of issues Theodore Roosevelt collected for the State to solve, and it was the only one he left the Whitehouse without providing for in some way. Congress passed the Stock Raising Homestead Act of 1916 to try to get rid of the Public Domain, but they made the ranch units too small. Grazing regulation bills appeared many times, but faded or sometimes their authors just died. It took over three decades to finally construct a new set of market rules for grazing on the public domain.

Finally, the Taylor Grazing Act extended the leasing model to roughly 173 million acres of remaining open rangelands in 1934.¹⁰⁵ The law marked the first meaningful regulation of America’s federally owned grazing lands outside the national forests, and it codified the notion that stability lay somewhere just shy of private property. The Act legislatively transformed the western rangelands into manageable grazing districts that cattle ranchers could lease and use for a fee. Land managers would regulate against overgrazing as needed, and ranchers’ fees would pay for conservation measures. Ranchers in turn would get

¹⁰⁴ Wilson as quoted in Charles E. Ball, et al. *Building the Beef Industry: A Century of Commitment* (Denver, CO: National Cattlemen’s Foundation, 1998), 62. Wilson found out just how organized cattle producers had already become just two year later, when cattlemen helped get the Packers and Stockyards Act passed. See chapter 4.

¹⁰⁵ Initially restricted to 80 million acres, but amended.

secure land tenure on the public domain, which would mitigate social violence, economic competition, and incentivize sound long-term land management. Thus the Act purported to “stop injury to the public grazing lands,” and to “stabilize the livestock industry” in a single move.¹⁰⁶ The Taylor Grazing Act also became an vehicle for organizational collaboration between ranchers and the State.

In debates on the Taylor bill, American ranchers expressed mixed views on the issues of federal management and regulation on the open range. State-level cattle and sheepmen’s associations appeared at Congressional hearings to declare that every stock raiser in the state was against the bill, or they were all for it. Those cattlemen, who did support the Taylor bill, were instrumental in its passing, and after the Act passed, cattlemen built a broad consensus around the double-management of public lands by both government and users that lasted until the 1970s. Despite vocal opposition immediately after the bill passed, cattlemen never really tried to resist regulation, and most stockmen eventually remembered the bill favourably. Many scholars argue that the Taylor Act was flawed due to the contradiction of its separate conservation and production goals; in fact, the law represented the culmination of forty years of public lands management and debate concluding that ecological and economic stability were one and the same. It was not the case that cattlemen submitted to conservation regulation as the price to pay for economic stability. Ultimately, the Act imposed almost as much self-determination for western stockmen as external regulation, and it was a ranchers’ brand of conservation that the regulations aimed for.

¹⁰⁶ The preamble description of the Taylor bill was “An Act to stop injury to the public grazing lands by preventing overgrazing and soil deterioration; to provide for their orderly use, improvement, and development; to stabilize the livestock industry dependent upon the public range; and for other purposes.”

It is hard to assess exactly what proportion or class of stockmen opposed the Taylor bill, but even if it was a significant share, the opposition can be misleading. “Since stockmen may be charged for a privilege they have enjoyed gratis all these years,” economist Virgil Hulburt predicted, “opposition is to be expected.”¹⁰⁷ In this light support is what needs to be explained—not opposition. Will Barnes, who was the first secretary of the American Stock Growers Association, estimated that the “lease-law matter” had “come up at practically every meeting of the National” since 1889, and his notes indicated “the vote generally being about 50-50.”¹⁰⁸ If Barnes was right, that meant that fully half of stockmen actually supported leasing from an early stage, and it is probable that an even greater share of stockmen supported leasing by 1934, since many ranchers were in devastating crisis after drought and depression swept the plains early in the decade. The Dust Bowl accentuated the cyclical ecological-economic-social crises cattlemen had faced since the mid nineteenth century.

Small cattle ranchers seemed most likely to support leasing and federal grazing regulation because they faced the most abuse under the open range system. Frank Bryant and a group of other small ranchers formed the Mesa-Alto Livestock Association in New Mexico specifically “for the purpose of trying to get some legislation that will help us along.” Bryant travelled to Washington in 1933 to stand in front of the Senate public lands committee to declare, “We are for the Taylor bill.”¹⁰⁹ Rush DeNise of Wyoming wrote to Joseph O’Mahoney, who sat on the committee, to back up the claim that small and honest stockmen could not survive without the bill. Ranching “should be the foundation of Wyoming wealth but, as it stands today, the ownership of ranch real estate is a financial burden,” argued

¹⁰⁷ As quoted in Stout, 314.

¹⁰⁸ Will C. Barnes, *American Cattle Producer*, October 1934, as quoted in Ball, 91.

¹⁰⁹ “Statement of Frank R. Bryant,” in “Hearings before the Committee on public Lands and Surveys,” United States Senate, 73rd Cong., 20 April to 2 May, 1934, 185-86.

DeNise, because “It is an indisputable fact that banks in southwestern Wyoming discriminate against livestock and sheep outfits that have a heavy land investment and tax overhead, in favor of the outfits that own little, and in many cases, no land at all, but roam the range, feeding out the less mobile outfits who are tied down by their ranch and land holdings.”¹¹⁰

The literature on ranchers support or opposition of the Taylor Act is mixed. Joe Stout argues that cattlemen strongly opposed the Taylor Act, but could not resist the pressure of the conservation movement, and “resigned themselves to defeat.” Gary Libecap emphasizes the way government agencies resisted assigning property rights to ranchers, and he argues that the Taylor Act was a last ditch compromise between fundamentally opposed groups. Christopher Klyza recognizes that that stockmen strongly opposed fees in the pre-Taylor period but still supported the idea of permits or leasing for stability. Klyza finds “it is unclear whether a majority of livestock ranchers opposed or favored the Taylor bill,” but he argues that producers “captured” the administration of the Act molding it in their favour. Mike Mackey argues oppositely that stockmen supported earlier versions of the Bill, and “it was only *after* the Taylor Act became law that stock associations did an about-face and went on record as opposing government interference,” which only lasted until about 1938. Stephen Dow argues strongly that cattlemen supported the Taylor bill and that previous animosity with the forest service should not be read into this very different mode of management.¹¹¹

¹¹⁰ Rush L. DeNise to Hon. J. C. O’Mahoney, 31 January 1934, in “Hearings [...] Public Lands and Surveys,” 1934, 175.

¹¹¹ Joe A. Stout, Jr., “Cattlemen, Conservationists, and the Taylor Grazing Act,” *New Mexico Historical Review* (Oct. 1970), 311-332.; Gary D. Libecap, “Bureaucratic Opposition to the Assignment of Property Rights: Overgrazing on the Western Range,” *Journal of Economic History* 41, no. 1 (Mar. 1981), 151-158.; Christopher McGrory Klyza, “Ideas, Institutions, and Policy Patterns [...],” (1994), 341-374.; Mike Mackey, “Wyoming Stock Growers and the Taylor Grazing Act,” *Journal of the West* 35, no. 3 (July 1996), 18-25.; Stephen Dow Beckham, “Twilight of the Open Range: the Taylor Grazing Act and the formation of the Bonanza Grazing District,” *Journal of the Shaw Historical Library* 18 (2004): 85-100.

Looking backwards, we might assume that cattle producers would oppose regulation of public lands because they have become the most vocal opponents of the USFS, the BLM, and environmentalism on public lands since 1979. However, in those producers' own context of destructive open range capitalism, regulation was sensible. In contrast to the view that most cattlemen feared the Taylor bill would lead to "financial chaos," it was chaos that the bill promised to stop.¹¹² The bill would "bring order out of chaos," waxed the bill's namesake, Congressman Edward Taylor, because "There is no such thing as stabilizing the stock business under present conditions, when no one knows whether he will have any range next year or not, where one cannot know whether some man will have force or influence enough to take it from him and hold it."¹¹³ Oliver Lee of New Mexico claimed that as many as 80% of livestock raisers in his state supported the bill and that "the endorsement is given generally with the idea that something should be done in regard to the public domain and that something must be done."¹¹⁴

Cattlemen, who supported the Taylor bill, had a genuine financial incentive in regulation. Establishing grazing districts with use permits would enable fencing to separate out summer and winter ranges and control passing livestock and horses. DeNise believed that fences and secure land tenure would actually increase the low calving rates of cows forced out on the range in breeding season, and he thought the funds from fees could help exterminate poisonous plants.¹¹⁵ Henry I. Harriman, who was actually a large-scale New England investor in cattle ranches in Montana and Wyoming owning or claiming about 100,000 acres, "noted with great chagrin the difference in the growth of grass where there

¹¹² Stout.

¹¹³ "Statement of Edward T. Taylor," in "Hearings [...] Public Lands and Surveys," 1934, 24, 28.

¹¹⁴ "Statement of Oliver M. Lee," in "Hearings [...] Public Lands and Surveys," 1934, 149.

¹¹⁵ DeNise, 175-56.

was proper restriction on the number of cattle that could be fed, as compared with the condition of the range where there was no such restriction,” and concluded that even he needed regulation to protect his investment.¹¹⁶ Cattlemen understood the magnitude of the Taylor bill, but as DeNise put it, “it is undoubtedly a good time to revolutionize the range conditions.”¹¹⁷

Stock raisers’ opposition to leasing concentrated among politically weak groups including large-scale ranchers and sheepmen.¹¹⁸ Large stockmen opposed leasing and regulation because they were the sole group benefitting from the open range system. Through a combination of foreign capital investment, illegal fencing, and murder, some livestock operations had actually cornered large shares of the public domain, and they would not have supported even full privatization of the land if it meant equitable distribution. It was exactly these large concerns that drove many smaller stockmen to support leasing. “As you know,” wrote rancher John Elder in 1934, “no one bank, business concern, or monopoly of any kind can or ever have served a community without prejudice; therefore, I think the passage of the Taylor Bill is essential to the best interests of all stockmen.”¹¹⁹ Large stockmen had significant power in western state legislatures, but the federal government was strongly inclined towards small stockmen’s interests due to the ideology of Jefferson, who said “those who labour in the earth are the chosen people of God.”

Sheepmen likewise only propelled the bill forward when they opposed it. For decades, both cattlemen and state regulators had isolated sheep and sheepmen as the primary culprits of overgrazing on open rangelands, and leasing had become the primary

¹¹⁶ “Statement of Henry I. Harriman,” in “Hearings [...] Public Lands and Surveys,” 1934, 18.

¹¹⁷ DeNise, 176.

¹¹⁸ Stout, 321.; Mackey, 19-20.

¹¹⁹ As in Beckham, 90.

conservationist management tool on the forest reserves specifically in order to undermine nomadic sheep herding. The hearings on the Taylor bill rehashed trodden anti-sheep sentiment, and ranchers predicted gleefully that “many nomad bands of sheep would gradually drop out of existence” under a good leasing program.¹²⁰ Sheepmen necessarily opposed the bill, but their views garnered very little respect. Ultimately, Taylor boasted in 1937 that his bill had already enabled the expulsion of over one million sheep from the public domain.¹²¹

More generally speaking, stockmen’s opposition to the Taylor bill was not actually advocating inaction by the American state. Cattlemen wanted secure land tenure, and compared to the violent and illegally fenced open range, the imposition of private property rights would be regulation. The majority of cattlemen most wanted full sale and transfer of the public lands to private land users eventually, but 1934 would have been a bad time to get the necessary capital or credit. Many favoured intermediate transfer to the states, since they would ultimately sell to stockmen.¹²² The Taylor Act did impose secure tenure, and it vaguely defined its term as “pending final disposal” of the public domain, so when the bill passed several formerly opposed cattlemen accepted it as a move in the right direction.¹²³ Secretary of the interior Harold Ickes courted stockmen with this view by pointing out that either way it would take a separate act of Congress to transfer lands to the states, and “there

¹²⁰ DeNise, 175.

¹²¹ Mackey, 19.

¹²² For example, Martin Baskett of Wyoming wrote to O’Mahoney to explain, “A fair and reasonable solution of the whole problem would seem to be to amend the Taylor bill so that those States objecting to its provisions may have their public lands given to them in trust, to be sold to the present users at a nominal fixed price and on the 80-year amortization plan.” Martin T. Baskett to Hon. Joseph C. O’Mahoner, 28 April 1934, in “Hearings [...] Public Lands and Surveys,” 1934, 175.

¹²³ “The Taylor Grazing Act,” *American Forests* 49 (1934): 353, as quoted in Stout, 320.

is nothing in the provisions of this bill which preclude or embarrass such action by Congress if and when it deems it desirable.”¹²⁴

Cattlemen did not have a problem with conservation as such, since they could see in the dust that overgrazing was a severe liability. What they did not want, as Wyoming rancher Sam Hyatt put it, was “some soft collared eastern boy [...] telling the west what to do in the handling of his stock and the range.”¹²⁵ “That our land and water resources should be conserved I think we all agree,” wrote Hyatt, “However, I do not agree with the statement very frequently made that we are allowing our agricultural land to go ‘plumb to hell.’” Hyatt believed most ranchers did try to conserve natural resources, and he responded, “Personally, I am operating the land my father homesteaded before Wyoming became a State; the land my children were born on. Certainly I have tried to conserve this land for my posterity.” Hyatt, like many ranchers who criticized the Taylor Act, recognized that conservation could be implemented in many ways with different consequences for stockmen, so he advocated for management based on the “common sense practices, such as the stockmen use where given a chance.”¹²⁶

Some ranchers actually supported state regulation a lot because they genuinely believed that they were not among the culprits responsible for overgrazing and declining carrying capacities. George Snodgrass, also of Wyoming, was a huge supporter of the Taylor bill. He attended all the meetings on the Taylor Act in his state, and he believed state regulation was the only way to control sheepmen and other “range pirates.”¹²⁷ Henry Gerber,

¹²⁴ “Statement of Harold L. Ickes,” in “Hearings [...] Public Lands and Surveys,” 1934, 7.

¹²⁵ Sam Hyatt, [President of Wyoming Stockgrowers Association], “Annual Address,” before Annual Convention, 2 June 1938, Folder “Misc. Statements, Statements 1938-1949,” Box 668, NCA, AHC.

¹²⁶ Sam Hyatt, “Statement of Sam C. Hyatt, Representing the American National Livestock Association before the House Agricultural Committee on H.R. 6054,” n.d., Folder “Misc. Statements, Statements 1938-1949,” Box 668, NCA, AHC.

¹²⁷ Mackey, 20.

of Oregon, wrote to Ickes in 1933 that his local range had been “over-grazed by itinerant sheep owners from other states,” who “depleted the range to such an extent that the forage thereon is almost wiped out.”¹²⁸ Like Hyatt, Snodgrass and Gerber ultimately concluded that the best solution was state regulation based on significant stockmen’s input.

And that is what they got. In the testimony for the bill before the Senate public lands committee, Harold Ickes promised that the interior department intended to fill all the bill’s loopholes and ambiguities with exactly what stockmen were asking for. “It has been contended that the administration of the bill will not be responsive to nor meet the problems of the livestock industry in local communities,” Ickes explained, but “this is an administrative problem.” Ickes pointed out that the bill stipulated that “the Secretary of the Interior shall cooperate with local stock associations,” and he assured “it is my intention to consult and advise with the stockmen of the various States before rules and regulations are adopted which will govern the use of this public range.”¹²⁹ Rufus Poole, who was the department’s solicitor, reiterated even more flatteringly that the department would “avail itself of the experience of those men who have spent their lifetime in the livestock industry, and to intrust [*sic*] them insofar as possible the local administration of the problems of managing the grazing districts.”¹³⁰ The department was not just politicking; they needed cattlemen to fulfill these roles in order to make the grazing districts work.

Ickes himself was a technocrat and, according to his wife, the “most fanatical conservationist of his generation,” but there was no way to reasonably exclude the

¹²⁸ As quoted in Beckham, 87.

¹²⁹ Ickes, 7, 10-11.

¹³⁰ “Statement of Rufus G. Poole,” in “Hearings [...] Public Lands and Surveys,” 1934, 100.

cattlemen.¹³¹ For one thing, Ickes could not pay anyone else to do it under the budget conditions of the time, and in this sense, the interior department wanted ranchers to help take on part of the bureaucracy.¹³² Second, the whole point of the law was to stabilize the livestock industry and to minimize social conflict, so the department could not get itself in a war with stockmen. Poole put it simply: “I think it would be practically impossible to administer a district if they were all against you.”¹³³

Liberals, like Ickes and Taylor, imagined the bill as specifically benefitting small stockmen, who owned ranches around the public domain. Although the era of the cattle barons had passed for the most part, they still worried that large cattlemen and sheepmen bullied smaller operators, and Ickes promised that locals and small stockmen would be “given such a preference to range privileges as may be necessary.”¹³⁴ Though not strictly redistribution, the architects of grazing regulation did want to limit land monopolies and facilitate the partition of the range into Jeffersonian farm units. The Taylor Act was legally-speaking the final nullification of American homesteading, but Ickes and Taylor saw it as a way to continue homesteading after that policy had failed. Almost twenty years earlier, Taylor had worked for the Stock-Raising Homestead Act (1916) to expand homestead allotments to 640 acres especially for grazing to help settle the arid west, but stock-raising homestead entries declined from a peak of over 25,653 in 1921 to 4,884 in 1933.¹³⁵ Taylor was especially offended to find the law could be abused to stake extralegal grazing claims,

¹³¹ As quoted in Rickey L. Hendricks, “Farrington R. Carpenter: New Deal Cowboy,” *Midwest Review* 5 (1983), 25.

¹³² Skillen, 213-14.

¹³³ Poole, 90.

¹³⁴ Ickes, 6.

¹³⁵ Ickes, 12.

since large stockmen could place homestead claims and then have employees stake the same claim repeatedly without ever settling or improving the land.¹³⁶

The Taylor bill—as the legacy of homesteading and the Jeffersonian ideal—did in the end make a significant move towards entrenching grazing rights for established stockmen. Section three ordered that “preference shall be given occupants and settlers on lands within or near a district, to such renewal privileges as may be needed to permit of the proper use of the lands occupied by them,” and Ickes explained that the department would try to honour any grazing rights “to which they are entitled either under State laws or by customary usage.”¹³⁷ This surprised the chief of the forest service, who warned, “If the language [...] referring to grazing preferences specifically as grazing ‘rights’ rather than as licenses or privileges, is not subject to construction as thereby constituting the grant of an easement in the public domain lands, it at least comes perilously near it.”¹³⁸ In fact, one conservationist publically criticized the act precisely for “hardening past use of the public ranges into permanent property rights.”¹³⁹ Criticism aside, it was not an accident, but rather the point.

In the ensuing decades, cattlemen, who were better-organized and more financially secure, grew to love the Taylor Grazing Act. At later hearings on public lands in the 1960s, top executives for the cattlemen spoke as if nothing could have been better. In 1963, Floyd Lee, representing the public lands council of the ANCA, applauded the act as “one of the greatest conservation measures passed in this or any other century” and a “milestone in federal land administration.”¹⁴⁰ Leonard Horn of the same committee waxed in 1965 that the

¹³⁶ Taylor, 26.

¹³⁷ Ickes, 10-11.

¹³⁸ “Testimony of F. A. Silcox,” in “Hearings [...] Public Lands and Surveys,” 1934, 56.

¹³⁹ Stout, 328.

¹⁴⁰ Floyd W. Lee, “Statement before Public Lands Sub-Committee of Senate Committee on Interior and Insular Affairs,” 16 January 1963, Folder “Misc. Statements, Statements 1963,” Box 668, NCA, AHC.

Taylor Act could be “the greatest revolution in land use in the history of the world.”¹⁴¹ Lee believed that the single most important thing the Act had done was to create secure tenure on the public domain by the “tying together of the permission to graze on federal lands with the base or private property owned by the livestock operator.”¹⁴² Horn agreed, saying “The act is unique in that it does not attach the use of the land to a person, but to other land or water. It is set up to keep faith with the promise of the United States, made to homesteaders, that they could use the lands around them for their livestock.”¹⁴³ Both the favouritism of past use and the attachment of a grazing privilege on the public domain to an adjacent ranch property became institutionalized. By the mid-twentieth century, ranchers capitalized grazing permits into the ranch value when taking out loans and when selling the ranch with the permit attached. Cattlemen effectively owned any improvements they made, and the state would compensate them if their permits were revoked.

Thus from the 1930s to the 1970s, cattlemen generally understood leasing as closer to—rather than farther from—property rights. The debate over the Taylor Act was not really a case of those for and against; but rather, it was a case of the interested parties shaping an institutional product, and that process continued afterwards in the administration of the Act. The Taylor bill, as written, remained vague on both cattle ranchers’ formal roles and the issue of grazing rights, but the final institution (or body of rules) included the norms established by the organizations that oversaw it. Harold Ickes probably exaggerated how

¹⁴¹ Leonard Horn, “Statement by Leonard Horn, Chairman of the American National Cattlemen’s Association Public Lands Committee before the Department of the Interior Hearing,” 25 March 1965, Folder “Misc. Statements, Statements 1964-65,” Box 668, NCA, AHC.

¹⁴² Lee.

¹⁴³ Horn.

much he trusted ranchers with the land, but he made good on his promise by hiring a man to lead the program, who believed thoroughly in rancher conservation.¹⁴⁴

Farrington Carpenter was by 1934 an accomplished Colorado rancher and lawyer, and his personal experience with overgrazing, economic and environmental instability, and the way cattle barons had abused smaller ranchers made him a fierce advocate of federal regulation in aid of small ranchers.¹⁴⁵ Carpenter testified in favour of the Taylor bill arguing that large cattle outfits were responsible for the dust bowl and “the only chance against being completely wiped out of existence as far as the cow industry is concerned is to have it controlled by federal authority.”¹⁴⁶ In just a few months, Carpenter was hired into the position his support had helped create, and he was an instant success with most stock growers.

Carpenter was the person most responsible for the relatively smooth transition from open range to regulated grazing districts, and his great innovation was the assembly of advisory boards including local stock raisers. All over the west, Carpenter and the grazing division at the interior department got more applications for grazing leases than they could allow while still maintaining carrying capacities, so opposition to the Taylor Act flared up most immediately after it came into effect.¹⁴⁷ Carpenter did actually believe that ranchers were conservationists in a utilitarian sense, and he attributed their sometimes-negative reactions to eastern preservationists’ accusatory tone. Carpenter saw himself in a leadership role helping ranchers “to assume their real role as the best informed and most competent

¹⁴⁴ Letter, W. L. Dutton (FS chief, division of range management) to Fred Mollin (NCA secretary), 1 June 1938, Folder 18, Box 638, NCA, AHC.

¹⁴⁵ Hendricks, 22-24.

¹⁴⁶ Stout, 312.; F.R. Carpenter to House as quoted in Stout, 319.; Hendricks, 24.

¹⁴⁷ Mackey, 22.

conservationists of range resources in the United States.”¹⁴⁸ Carpenter went out to western states and held meetings with stockmen, and he came up with a system of boards to enable and encourage cooperation between permittees and the state. Carpenter wanted to delegate grazing management on all the new grazing districts to these advisory boards. Carpenter declared that “nothing but appellate power is expected to be reserved in the Government, thereby delegating to the committees practically the entire administration of the Act.”¹⁴⁹ Ickes never appreciated it much, but Carpenter’s administration successfully minimized conflict during the initial stage of regulatory implementation on the public domain.¹⁵⁰

In the postwar period, ranchers and bureaucrats settled into a cooperative grazing management regime. In the 1940s and early 1950s, the principles of the Taylor Act were tested by still-skeptical ranchers and policymakers, but the framework survived and expanded to cover the forest reserves, too. In the 1940s, ranchers still made anti-statist arguments like, “Do you want America to have a Russian land program? I think not,” but by the 1960s they would be stomping feet in Washington on behalf of greater funding for the forest service and BLM.¹⁵¹ It took almost twenty years for ranchers and the state to come to terms on exactly how to work together, but the result held a lot of promise, if only for a relatively brief window.¹⁵²

¹⁴⁸ As in Hendricks, 26.

¹⁴⁹ As quoted in Hendricks, 30.

¹⁵⁰ The advisory boards subsequently earned a statutory basis in an amendment to the Taylor Act in 1939 (Section 18), which stipulated that they consist of five to twelve local stockmen and at least one wildlife member. The grazing permittees of a district would generally elect representatives to recommend to the secretary of the interior for appointment.

¹⁵¹ Sam Hyatt, “Statement of Sam C. Hyatt, Representing the American national Livestock Association before the House Agricultural Committee on H.R. 6054,” n.d., Folder “Misc. Statements, Statements 1938-1949,” Box 668, NCA, AHC.

¹⁵² NB—The cooperative conservation regime of the Taylor Act almost fell apart in the late 1930s and 1940s. The first attack on cooperative management came from the top of the department of the interior. Cattlemen were very satisfied with Carpenter’s approach, but the secretary of the interior was not. Ickes fired Carpenter late in 1938 for undermining too much of the department’s authority, but Carpenter’s advisory boards remained intact. Mostly the event just embarrassed Ickes. The second, and more serious, attack came from Western anti-statist

Cattle ranchers brought manpower, legitimacy, and—most importantly—expertise to federal grazing management at the local level. According to Harry Lee, of the Public Lands Council (PLC), “The men who comprise the grazing district advisory boards are men of experience, knowledgeable of the economic and range conditions in their areas as well as local history,” and he argued that they were essential to conservation because “They furnish the expert advice required by the district manager if he is to properly perform the task of administering the Taylor Act in his district.” Even if land managers in the forest service and BLM could sometimes be annoyed with ranchers’ power to counter state authority, they would have generally agreed with Lee that ranchers offered “the type of advice which flows only from the knowledge gained through experience” and that it was valuable.¹⁵³

Disinterested experts within the bureaucracy trained in general models and methods for observing analyzing range conditions, but range management was an essentially site-specific

Senators and Congressmen. In response to a proposal to triple grazing fees in 1944, Senator Pat McCarren (D-NV), the head of the Public Lands Committee, held hearings with the purpose, more or less, of embarrassing the grazing service. It worked, and the grazing service dissolved. Three years later, Pat Barrett (WY) unsuccessfully attempted the same for the forest service. Ranchers came off poorly during McCarren and Barrett’s “wild west show.” Ranchers perceived an opportunity to gain even greater land security and perhaps full property rights, and they joined in slandering the agencies and making unfair accusations that the bureaucrats refused to consult with permittees and wanted to eliminate grazing on public lands. It was not true, as we have seen, and this event is sometimes called the first “sagebrush rebellion.” It was, however, more a case of Senators and Congressmen goading stockmen into embarrassing the executive state bureaucracy than a case of stockmen’s own political agitation. These challenges, one from the conservationist end and one from the states-rights end, ultimately served to entrench and expand the principles of cooperative management. Specifically, they encouraged both the forest service and BLM to adopt Carpenter’s administration of the Taylor Act as their own.

¹⁵³ The Public Lands Council organized public lands permittees and worked closely with the NCA. In fact, the cattlemen helped fund the organization, and the NCA and wool growers appeared with the PLC at this specific set of hearings in support. Harry Lee was reacting here to his fear that the Public Land Policy Act of 1971, which followed the Public Land Law Review Commission, would negate the Taylor Act and abolish the statutory base for advisory boards. The Act in question redefined the boards’ role as advising “on all matters relating to the management, retention, and disposition of all public lands,” whereas boards under the Taylor Act advised “upon the issuance of permits for grazing [...] and upon the allocation of the forage resources only within the district.” If Lee’s legal analysis was correct, and I am not sure it was, his fear was still misplaced because both policymakers and civil servants fully supported the advisory boards. More remarkably, Lee was insisting upon keeping the management function of advisory boards under a leasing system instead of taking on the potential role of selling those lands to ranchers. “Public Land Policy Act of 1971,” Hearings before the Subcommittee on the Environment of the Committee on Interior and Insular Affairs, House, 92nd Cong. 1st Sess., 26-30 July 1971, 242-3.

science, and ranchers could provide a sense of change over time that many rangers did not have in the early years.

In the 1950s, stockmen and forest service rangers developed close working relationships to administer grazing regulation. According to Thomas Alexander in a case study of the forest reserves of the intermountain west (District 4), forest rangers found both users and stockmen's associations generally cooperative. Ranchers often reacted gruffly to any announcements of stock reductions, but in most cases they would comply. If a forest service plan called for grazing reductions, the ranger would ride the grazing allotment with members of the local stockmen's association and "point out the problems, listen to their point of view, tell them of the forest's proposal for dealing with the difficulties, and consider any counter proposals."¹⁵⁴ Alexander estimated that as many as 90% of cases of forest service conservation initiatives requiring a reduction in livestock did not need to go to appeal.¹⁵⁵ In Utah, in one case, the local stock association agreed to hold all cattle off a reseeded range for three years so the forage could fully recover, and in another case, the forest service reduced grazing up to 70% without official complaint.¹⁵⁶ On the occasion of the Multiple Use—Sustained Yield (MUSY) Act hearings of 1960, one cattle rancher mused, "It never occurred to me several years ago that I would be working so closely with and devoting so much time to trying to promote the interests of the national forest program."¹⁵⁷

¹⁵⁴ Thomas G. Alexander, *The Rise of Multiple-Use Management in the Intermountain West: A history of Region 4 of the Forest Service*, (USDA FS-399, May 1987): 164.

¹⁵⁵ One glaring exception was in northern Utah, where stockmen fought bitterly against stock reductions. Alexander suggests that these particular ranchers may have been feeling excessive pressure from urbanization. Alexander, 164-68.

¹⁵⁶ Alexander, 163-64.

¹⁵⁷ "National Forests, Multiple Use—Sustained Yield," Hearings before the Subcommittee on Forests, of the Committee on Agriculture," House, 86th Cong. 2nd Sess., 16 and 18 March 1960, 45.

Cattlemen also helped the agencies to practice conservation by sustaining them bureaucratically. If a USDA or DOI agency office faced funding or personnel cuts, local ranchers would use the same political channels they had for lobbying against additional wilderness legislation etc. to lobby for allocations to keep existing agencies and mandates operating. Cattlemen especially supported conservation and research programs that had clear economic benefits. In 1967, for example, C. W. McMillan¹⁵⁸ appeared for the NCA at public hearings to reject a proposal to close the Saylor Creek Experimental Range, which was a joint BLM and forest service project in Southern Idaho studying cheatgrass.¹⁵⁹ McMillan reminded the review committee that research like this into how to improve forage and range conditions was essential for ranchers and the state to fulfill their promise as good land stewards. Programs like Saylor Creek tried to deal with overuse of the range by increasing productivity rather than just reducing grazing, so it was exactly the type of conservation ranchers wanted. McMillan also listed other benefits to both ranchers and rangelands that the Saylor Creek program provided “such as range reseeding, brush spraying and removal, drainage, water development, fencing and cross-fencing, road development, proper distribution of livestock over the range, proper and optimum seasonal use of the range, etc.”¹⁶⁰

Cooperation yielded meaningful results for conservation, and conservation yielded many of the economic benefits its advocates had promised. Stockmen cooperated with rotation strategies, especially when rest periods were also used for improvements like

¹⁵⁸ Future Assistant Secretary of Agriculture.

¹⁵⁹ James Albert Young and Charlie D. Clements, *Cheatgrass: Fire and Forage on the Range* (Reno, NV: University of Nevada Press, 2009): 235-36.

¹⁶⁰ C. W. McMillan, “Statement of the American National Cattlemen’s Association before the Public Hearing on the Proposed Withdrawal of the Saylor Creek Experimental Range,” 23 May 1967, Folder “Misc. Statements, Statements 1967,” Box 668, NCA, AHC.

weeding and reseeded, and they found cattle weights improve as a result. Charles Redd, a Utah rancher, reported in the late 1960s that his cattle weighed 200 to 250 lbs more than they had in the 1910s.¹⁶¹ In direct contrast to the capture thesis argument that advisory boards undermined sound management of the public lands, in comparison to the turmoil on American rangelands in other periods, advisory boards may have been the greatest success of American grazing and conservation policy before the 1970s. Many criticisms of the system were valid, but the regulatory capture thesis ran both ways. Vernon Dalton, a Nevada rancher, also made a good point that “if you are going to have a valid and effective citizens advisory board, then the board should not be selected and controlled by the agencies they are to advise.”¹⁶²

The mechanisms of grazing management on the public domain, which included conservation, became leases and advisory boards, and the philosophy became “multiple use.” The system was designed to apply the principles of markets and private property to public lands without fully relinquishing final control to land users. The American state held on to formal ownership specifically in the interest of long-term conservation, but the state saw its role as smoothing out free enterprise rather than inhibiting it. Ranchers in turn got a significant share of state management and the administration of conservation. The agreement was flawed and tense at times, but within the longer history of destructive land use and social strife it was decidedly better. But it also failed.

Rent

¹⁶¹ Alexander, 208-209.

¹⁶² Dalton in “Public Land Policy Act of 1971,” Hearings before the Subcommittee on the Environment of the Committee on Interior and Insular Affairs, House, 92nd Cong. 1st Sess., 26-30 July 1971, 366.; Klyza, 367.

The United States' first comprehensive conservation and regulation strategy for the public domain was based on leasing. The idea was that stockmen would conserve the land themselves as long as they had the security to do so. On the face of it a lease is not a remarkable thing—it is a kind of rental contract that most people today have encountered as a way to use a car or an apartment for some period of time—but the decision to structure the public domain through leases was transformative. Leases provided a mechanism for making public lands operate like private lands without the risk or cost of true privatization, and cattle ranchers bought into the idea. For most of the nineteenth century, cattle producers had used the grazing lands of the West like they owned them. It was not always clear that they did not own them either, since the federal government seemed intent on transferring all its land to productive individuals when it was not ignoring those lands altogether. Cattlemen believed they deserved all the Western rangelands because they had gotten there first, and no one else—ignoring the exception of sheep herders—seemed to want them anyways, but in the early twentieth century some cattle ranchers began to support leasing. It would be one thing if the ranchers had just accepted regulation without fighting, but this was more than a begrudging compromise. Cattlemen were divided on leasing at first, but some lent significant support, and many more bought-in to the programs thereafter. Why did ranchers suddenly accept something short of owning the land that came with external regulation attached?

Cattle ranchers needed regulation more than they needed ownership. In fact, private property rights are a type of economic and social regulation by the State, and cattle ranchers initially saw leasing as a step in the direction towards ownership because what they had was nothing. In the nineteenth century, cattlemen staked informal claims on the open range and used violence to try to maintain some semblance of order. Violence was not good at

maintaining order. Cattlemen fought sheepmen; big cattlemen fought little cattlemen; and all of them fought homesteaders. Livestock grazing in the West resembled the chaotic markets of the East, which tended repeatedly towards crisis and depression at the time. But unlike in the East, where robber barons took advantage and grew fabulously wealthy at their competitors' and workers' expense, the great cattle barons of the popular press failed to live up to the name. Livestock grazing was too unstable to be profitable over the long term.

When cattle ranchers, land managers, and policymakers agreed on leasing as the solution to the public lands problem they acknowledged the limits of free market capitalism while paradoxically re-asserting its possibilities. Leases enabled public rangelands to function like private property in some ways without leading to the inevitable social and ecological strife of unbridled free enterprise. Leasing was like private property without the capitalists being allowed to do everything they wanted with it. It was the profit incentive without competition. Leasing fit with the larger industrial trends in the late nineteenth and early twentieth centuries towards corporatization and regulation to mitigate competition, but it was a very different type of solution for a different context.¹⁶³

Leasing as a concept and practice had a mixed past in the United States. Before the turn of the twentieth century, western land policy was to get as many people extracting as much as possible from the land by giving it to them for anywhere from cheap to free. The state only managed the lands of the West in so far as to send armies to eject their native residents. Leasing was pretty much nonsense in this context. The American state briefly

¹⁶³ On the history of corporate capitalism, please see: Alfred D. Chandler, Jr., *Scale and Scope: The Dynamics of Industrial Capitalism*, (Cambridge, MA: Harvard UP, 1990).; R.H. Coase, *The Firm, the Market, and the Law*, (Chicago, IL: University of Chicago Press, 1988).; Naomi R. Lamoreaux, *The Great Merger Movement in American Business, 1895-1904*, (Cambridge: Cambridge UP, 1985).; Martin Sklar, *The Corporate Reconstruction of American Capitalism, 1890-1916* (New York, NY: Cambridge UP, 1988).

attempted leasing on the public domain in the 1820s and 1830s for mining purposes, but the policy was a flop and remembered as such thereafter.¹⁶⁴ The notion did not reappear until after Sheep Wars when western land users and bureaucratic experts began trying to figure out a management regime around the time of the Sundry Civil Appropriations Act (Organic Act) of 1897. The Organic Act in itself did not do much immediately, but once it survived the requisite Supreme Court case over constitutionality, the Organic Act enabled the creation of reserves and agencies to manage them in the interest of conservation and sustainability. This was a relatively sudden assertion of federal ownership and intent to manage.¹⁶⁵

The Organic Act did not automatically suggest that privatization was off the table, but it became a step removed. The Forest Transfer Act of 1905 removed it a step even further. The Organic Act had placed the reserves under the jurisdiction of the department of the interior (DOI), and the department created the general land office (GLO) to manage them. The leaders and staffers of the GLO, like Filibert Roth, wanted to stop the violence and ecological destruction on the range and especially in forests, but the agency proved ineffectual. They issued some permits, charged some fees, and even removed some grazers, but overall the GLO's policies lacked ideological or practical coherence. Gifford Pinchot, of the USDA division of forestry, accused the DOI and its secretary of gross mismanagement and effectively staged a bureaucratic coup.¹⁶⁶ The Transfer Act re-placed the reserves under

¹⁶⁴ C.R. Koppes, "Public Water, Private Land: Origins of the Acreage Limitation Controversy, 1933-1953," *Pacific Historical Review* 47, no. 4 (1978), 607-636.

¹⁶⁵ Frederick V. Coville, "Forest Growth and Sheep Grazing in the Cascade Mountains of Oregon," USDA Division of Forestry Bulletin No.15 (Government Printing Office: Washington DC, 1898): 11.; Filibert Roth, "Grazing in the Forest Reserves," *Yearbook, 1901*, H.Doc. 661, 57th Cong., 1st Sess. (1902): 337.

¹⁶⁶ Gifford Pinchot would later famously attack the GLO for bureaucratic inertia and anti-conservationist politics during the Pinchot-Ballinger controversy of 1912. It is also noteworthy that management decisions concerning the non-forest rangelands, which remained under the control of the Interior after 1905, continued to be dominated by cattlemen's interests well into the tenure of the Bureau of Land Management. See: Skillen, 42, 213-14.

the jurisdiction of the USDA, which put them under the management of the newly renamed US forest service. Pinchot's forest service was fiercely committed to technocratic management and conservation as a means towards economic efficiency.¹⁶⁷ The forest service continued issuing permits and fees, but initially they lacked a purpose beyond funding the administration of the program. Strictly speaking, leases are different from permits and use fees because leases are staked to a property value and are intended to respond to property markets. Practically, they operated similarly, but ideologically, the distinction was vital.

The USDA and the forest service learned about leasing in part by observing the sheep industries of Australia and New Zealand. On the American forest reserves, most experts and bureaucrats believed the single biggest problem was sheep. Most sheep in the west migrated into the forests for cooler high-altitude conditions every summer, and they would travel in huge herds of thousands of head. Western cattlemen did a good job of convincing eastern elites that sheep and sheep producers deserved all the blame for the social violence and ecological destruction that followed. By 1914, forest rangers had already been chasing sheep out of the reserves for over a decade, which caused a decline of almost 14 million sheep in the US since 1900. The forest service did this on purpose for conservation and social stability, but the USDA still worried about the consequences for the price of wool, so it sent F.R. Marshall, a senior expert for the bureau of animal industry, across the Pacific Ocean to find out why “in New Zealand and Australia sheep raising is considered to be a safe and profitable business, and except for seasonal conditions the number of sheep is kept steadily increasing.”¹⁶⁸

¹⁶⁷ Hays.

¹⁶⁸ F.R. Marshall, “Suggestions from Australasia to American Sheep Raisers,” *Yearbook of the United States Department of Agriculture, 1914*. H.Doc. 1682, 63rd Cong., 3rd Sess. (1915), 319.

Marshall discovered that people down under—even cattlemen—did not hate sheep the way they did in the United States. Everywhere Marshall looked, sheep and cattle were safely enclosed in fenced paddocks, and, in fact, Australia ranged nearly twice as many sheep as the US without serious social or ecological conflict. “The settled land policy of the Australian States has given their pastoralists an advantage not yet known in the United States,” explained Marshall, and “it may be said for that country as a whole that there is no open land and no conflict in the use of public grazing lands.” The advantage was long-term leasing, which “gives a degree of permanency to pastoral operations, the lack of which is largely responsible for continuing many western American flocks upon a ‘fly-by-night’ basis.” Leasing also enabled all sorts of capital incentives including investment in fences, wells, and breeding, which meant sheep were better adapted to specific land conditions. Finally, Marshall explained that leases were “subject to periodic revaluations for readjustment of rents” by the government, and if it needed to terminate a lease for conservation or to settle more homesteads, the lessee would “receive compensation for improvements left upon the land relinquished,” thereby completing the property feedback loop.¹⁶⁹ Leasing promised all the good—efficiency, sustainability, productivity—without the bad—competition, ecological degradation, monopolization. It was capital harmonized.

However, the leasing systems of Australia and New Zealand did not originate in capitalist values the way they would ultimately be applied in the United States. Leasing actually came from the British state’s long tradition of jealous land control and management since enclosure. If the American state’s power came from its abundance of available land, then the British state’s power came from strictly controlling its own lack thereof. Unlike in

¹⁶⁹ Marshall, 321.

the United States, where free land became the basis of the nation's most enduring political tradition, the British state found unrestricted access to crown land intolerable. When British subjects began re-settling the Australasian continent in the early nineteenth century, the state ordered colonial officials to restrict access to open lands and to uphold a British system of land tenure.¹⁷⁰ Australian settlers like Americans still tried to occupy and claim lands illegally, but the state never neglected the issue as in the US. Leasing was the legacy not of careful, rational consideration of free enterprise, as Marshall portrayed it, but rather the result of a very un-American form of state centrism.

Leasing could be seen either way: as an application of market principles or as state intervention and centralization. The forest service embodied the paradox as a highly statist and technocratic agency motivated by efficiency and productivity, and the Organic Act gave it the flexibility and authority to erect a leasing system, so the agency imposed leasing on the forest reserves readily and relatively easily. The bigger question would be whether leasing would apply to the vast majority of public grazing lands outside the forest reserves. This would take an act of Congress, and, as it turned out, a lot more input from American cattle ranchers.

“We endorse the principle that the United States should receive payment for the use of any or all of its public lands,”¹⁷¹ proclaimed Harry Lee on behalf of American ranchers, but neither Lee nor his predecessors could ever seem to agree with the state on what the payment should be. The majority of disputes between ranchers and public lands agencies since the Taylor Act were not actually about conservation itself—fundamentally both groups

¹⁷⁰ Kathrine Bell, *Cattle Australia: The Story, the Icons, the Drives, the Big Runs* (Belrose West, NSW: Murray David Publishing, 2009).

¹⁷¹ Lee, “Public Land Policy Act of 1971,” 1971, 243.

agreed on the philosophy of market-based sustainability—but rather about how to implement conservation. Specifically, what price would optimize the stability, incentives, and project funding in the interest of conservation? Too high, and ranchers would not have the ability to re-invest in improvements; too low, and the range managers would have no money for their improvements. How could they find the optimal market price, when the public lands had no free market?

Practically speaking, the goal of making the public lands operate like private lands without privatization was impossible. As a consequence, grazing fees remained too low on both the forest reserves and the public domain. Or rather, economists and bureaucrats all seemed to agree that the fees were too low, but they did not actually know by how much. The fees were low mostly because the USDA and DOI set them that way without much consideration in the 1930s. By the 1960s, it became clear that the forest service and BLM had really messed up the fee structure, and they tried to reform it. Cattle ranchers resisted.

The forest service tried to stake its fees to the market value of the land, but found it harder done than said. In 1958, the forest service charged 58 cents per animal unit month (AUM) for cattle grazing in the forest reserves. The forest service determined that number with this formula:

$$\frac{14.5¢}{\$6.62} = \frac{X_t}{P_{t-1}} \text{ OR } X_t = 0.0219P_{t-1}$$

X_t = The fee per AUM (or cow month) in year t in cents.

P_{t-1} = The previous year's farm price for beef cattle in the west as compiled and published by the USDA.

14.5¢ = The forest service's baseline fee per cow month from 1927.

\$6.62 = The average farm price for beef from 1921-1930.¹⁷²

¹⁷² B. D. Gardner, "The Pricing of Livestock Forage on Federal Range Lands," in "Economics of Range and Multiple Land Use, Conference Proceedings, Committee on Economics of Range Use and Development of the Western Agricultural Economics Research Council, Pullman, Washington, August 11 and 12, 1958, Logan, Utah, July 13 and 14, 1959," 106.

Reasonable people could call this needlessly complex or unjustifiably simple, but what matters is that the only independent variable is the price of beef. What this means is that the forest service locked-in a fee formula that tied the cost of grazing land to the value of the cattle grazing it. The price of land was only tied to the value of the land itself in an indirect way. It sort of makes sense to assess the value of grazing land by its economic output in cattle, but beef markets and land markets do not actually move together. Further, the fee would be forever tagged to a number picked in 1927 before the cost of conservation included concerns about wildlife or wetlands, etc.

The fees the BLM charged did not even begin to fulfill the promise of running the public lands like private property because the agency did not have any sort of market-based formula for assessing fees. Rather, the agency estimated its minimum administrative requirements for the year and divvied up the costs among users. In 1958, the cost of funding the BLM was a bargain at just nineteen cents per cow month. Within the ideology of market-based conservation, the BLM fees were absurd both for how exceedingly low they were and for how completely arbitrary they were. The BLM fee system actually harkened back to the debates on the Taylor Act, during which Ickes tried to curry favour with stock growers by promising only to charge enough to cover bureaucratic costs, which ended up being even lower than he could have expected then due to Carpenter's use of advisory boards.

In 1961, the BLM adopted a similar formula to the USFS, and in a letter to permittees explaining the change, the agency emphasized the ease, flexibility, and fairness of linking fees to beef rather than land values.¹⁷³ Despite the obvious disconnect between the ideology

¹⁷³ Gardner, "The Pricing of Livestock Forage [...]," 106.; Richard S. Rodgers to C. L. Peterson, "To All Grazing Permittees," 20 January 1961, Folder 12 "Forest and Public Lands Committee," Box 463, NCA, AHC.

of market-based conservation and the specific mechanism of these fee formulas, the alternative would be exceedingly difficult to implement. There were at least three major obstacles to a fee staked directly to land value: first, collecting the data; second, correcting the data; and third, accounting for the already-established legacies of low fees.

The Forest Service's formula had a lot to do with the relative availability of data on cattle prices versus land prices. Cattle were a commodity, so it was easy to determine the average price. In fact, the USDA already did exactly that and published the data regularly. Land values necessarily varied depending on a property's land quality, physical plant, and proximity to other places and things. Even if the state could compile an average market value for grazing land from the privately-owned ranches of the west, the agency would have to correct it for application to public lands allotments because they did not have all the stuff (like houses, corrals, watering facilities, etc.) that contributed to private land values. And even if the agencies could figure that much out, they would still have to assess the possible values from uses other than grazing like recreation and wildlife, which would send them right back to making numbers up. "I believe many of the uses are substitutes, i.e., an increase in one use at the same time precludes an increase in a competing use," explained Delworth Gardner, an economist who was critical of what he called the "misallocation" of resources on the public lands. Gardner argued that determining how to pick the optimal use was "difficult in an economic sense, because in many uses we are out of the area of the market," and since these uses did not have established dollar metrics, achieving "economic 'efficiency' in the use of the land becomes an unmeasurable magnitude."¹⁷⁴ This is what the public lands

¹⁷⁴ Gardner, "The Pricing of Livestock Forage [...]," 103.

agencies faced when they decided to try to restructure grazing fees around land values instead of cattle prices or administrative costs.

The third obstacle came from the fact that grazing permits were already attached to private land values unintentionally. In the application of the Organic Act and Taylor Act on the public domain and forest reserves, the BLM and USFS inadvertently gave public lands a market value that was completely separate from the mechanism (fees) that was supposed to do that. Basically, for ease and political legitimacy, both agencies began to favour issuing grazing permits to ranchers who had a historical claim to grazing in the region and who owned a ranch adjacent to the reserved government land. Gardner argued in 1959 that these practices were institutionalized, and he called them “commensurability” and “priority of use.” The consequence of *commensurability* (the tying of a permit to a private ranch) was that the value of the permit became included in the value of the private ranch unit when it was bought or sold, and *priority of use* (or the de facto permanent ownership of a permit) meant that ranchers could use their permits when assessing property values to take out bank loans.¹⁷⁵

In other words, public lands did actually have a market value, but the money was flowing between ranchers and banks (as happens with markets) and not to the state for conservation. Further, this value relied on fees remaining low, and it led to serious resistance by ranchers against raising grazing fees.¹⁷⁶

¹⁷⁵ Gardner, “The Pricing of Livestock Forage [...]” 106-12.; Peter E. Marble, “Statement of the American National Cattlemen’s Association before the Public Land Law Review Commission,” 11-12 January 1968, Folder “Misc. Statements, Statements 1968,” Box 668, NCA, AHC.; See also Gardner, “Rates of Return to Improvement Practices on Private and Public Ranges,” *Land Economics* 38, no.1 (February 1962).; Gardner, “Transfer Restrictions and Mis-Allocation in Grazing Public Range,” *Journal of Farm Economics* 44, no.1 (February 1962).; “A Proposal to Reduce Misallocation of Livestock Grazing Permits,” *Journal of Farm Economics* 45.1 (February 1963). [Copies in NCA, AHC].

¹⁷⁶ See also: Richard Lowitt, “Oklahoma’s Mike Synar Confronts the Western Grazing Question, 1987-2000,” *Nevada Historical Society Quarterly* 47, no. 2 (2004), 77-111.

The forest service and later the BLM worked to establish a new “fair market value” (FMV) fee structure based on a comparison with real rents for privately-owned grazing lands. Cattle ranchers and their associations resisted and ultimately delayed FMV until the late 1970s, but by then environmentalists had come to oppose FMV, and ranchers switched opinion and fought for the FMV formula. NCA executive Bill Swan, in particular, helped establish FMV in law with his work on the Public Rangelands Improvement Act in 1978.¹⁷⁷ The land management agencies and stock associations’ relationships were fluid. The next chapter discusses the ideological breakdown of market conservation for American rangelands.

¹⁷⁷ Paul D. Andre, “25 Who Made a Difference,” *Beef* 11 August 1989, AHC, NCA Records, Box 655, Folder 11 (“Publications - Subject Files, National Cattlemen, Industry News - October 1989”)

3: Original Environmentalists

“There is only so much room on spaceship earth,” warned a 1976 memorandum to the members of the American National Cattlemen’s Association (NCA), “so, as population doubles over the next 50 years, optimum use of all available resources will become critical.” The NCA lamented overgrazing and other land abuses by American ranchers in the past, but the memo assured members that “this type of problem was corrected with the advent of Forest Service administration and the passage of the Taylor Grazing Act,” and “it is now common knowledge that proper livestock grazing is compatible with and complementary to other uses of the land resources.”¹⁷⁸ This optimistic memo went out just three years before the Sagebrush Rebellion—a widespread revolt against the principles and practices of environmentalism and federal land management by a wide array of public lands users in the West including cattle ranchers.

Why did American ranchers believe they would be incorporated into modern environmentalism, and why did they think sustainable conservation of the public domain would still include livestock grazing? The passage of the Taylor Grazing Act in 1934 and the Sagebrush Rebellion forty-five years later were both tipping points in the history of grazing land use in the United States that marked the beginning and end of a half-century of market cooperation between land users, federal land managers, policymakers, and the public on both public and private lands conservation. In the period before, American rangelands degenerated under ecological and social chaos. In the period following, political division over environmentalism and the new environmentalists plunged the West again into turmoil. But in

¹⁷⁸ “Background Information on Public Lands Grazing,” September 1976, Folder 22 “Grazing - Public Lands,” Box 443, National Cattlemen’s Association (U.S.) Records [Hereafter NCA], American Heritage Center [Hereafter AHC].

1976, even the leaders of the NCA did not predict that ranchers would abandon their environmental strategy and turn against organizations like the Bureau of Land Management (BLM) or United States Forest Service (USFS) so suddenly.

Rancher conservation motivated meaningful advances of sustainable land use in the mid-twentieth century, and before the Sagebrush Rebellion it held the potential to dominate cattlemen's thinking on the subject. The basic focus on securing tenure, incentivizing conservation, and collaborating on implementation was not fundamentally different from the best conservation theories and programs today, and it worked well until the mid-1970s.¹⁷⁹ The ideological consensus around conservation and the stability of the market for grazing on public lands because new ideas and organizations challenged the rules. The 1897 Organic Act and 1934 Taylor Grazing Act were loose institutions that relied on norms and customs worked out on the ground. This is exactly what made them functional and satisfying to both ranchers and regulators, but it also made them subject to unforeseen pressure from environmental groups.

Environmentalism destroyed the conservation consensus and caused chaos in the market for grazing privileges on public lands. This is not to say environmentalism was bad or even that it was wrong—cattle have certainly caused ecological decline in many places across the United States during certain historical periods—but it is possible that environmentalists and grasslands ecologists of the time did not have a sound scientific case against public lands grazing, writ large.¹⁸⁰ In any case, ranchers, who came to oppose

¹⁷⁹ This is not to say rancher conservation stopped dead in 1979, but it was no longer the majority norm. Many ranchers continued to work with federal government land managers to protect rangelands resources, and there has been a notable resurgence of the idea (now called “cooperative conservation”) in recent decades.

¹⁸⁰ The two major problems with range science's analysis of overgrazing and ecological decline in the mid 20th century were: 1. Overgeneralization—Range science used findings from site-specific case studies to understand processes across a vast and diverse region. For example, cattle might cause stream erosion in one landscape, but stream erosion was not necessarily due to the presence of cattle in a different landscape.; 2. Ahistorical

environmentalism and federal conservation regulation, focused on a few particularly bad cases of their application. Environmentalists, including many within the federal government bureaucracy, have viewed ranchers' opposition to wilderness and stock reductions as behaviour motivated by greed and poor scientific understanding or ecological values. But ranchers were justified in questioning why land that had been grazed for a century and thoroughly transformed from its former state should be re-labeled "wilderness" or why cattle populations that had already been tremendously reduced from nineteenth-century levels should be smaller still. The political and social disharmony that arose between environmentalists, ranchers, and the State ensured that these questions would not be answered properly.

Swan's Song

Regulated, rancher-led, market-incentivized conservation proved a huge success in the 1950s and 1960s. Government land managers and private cattle producers coordinated efforts at fencing; mechanical brush removal; aerial grass reseeding; pesticide and herbicide application; stock rotation; and a host of other practices understood as "improving" the range.¹⁸¹ One such practice was "chaining," which entailed using tractors to pull a huge steel chain with a massive ball at one end as a weight. The chain would rip invasive and

analysis—range science used arbitrary baselines in time to identify "original conditions" of vegetation and soil. Further, range science rarely recognized that ecological damage could have occurred from different cows, producers, and stocking methods in the distant past rather than those present at the time of study. See: Nathan F. Sayre, "Climax and 'Original Capacity': The Science and Aesthetics of Ecological Restoration in the Southwestern USA," *Ecological Restoration* 28, no. 1 (2010), 23-31.; Jack Stauder, *The Blue and the Green: A Cultural Ecological History of an Arizona Ranching Community*. (Reno, NV: University of Nevada Press, 2016.; See also: Review of Stauder (2016) by Tim Paulson, *The Public Historian* 39, no. 3 (2017), 137-139.

¹⁸¹ "Trial Program of Public Land Range Appraisal: A Study Prepared at the Request of the Committee on Appropriations, United States Senate, by the Bureau of Land Management, U.S. Department of the Interior, and the Forest Service, U.S. Department of Agriculture," 87th Cong., 2nd Sess. (1962).; John William Adams, "Cost of Reclaiming Pinyon-Juniper Rangeland and its Effect of Cattle Ranch Income," MSc. thesis, Utah State University, 1964.

undesirable woody shrubs from the dirt, which could be reseeded with grass, thus reversing the effects of a century of overgrazing. The balls were actually military surplus from the Second World War originally used as floats by the US Navy. Herculean efforts like this were only possible, many believed, with a strong incentive for ranchers to participate in the long-term future of the land as well as the expertise and materiel of the US federal government.

As leases, advisory boards, and multiple use provided the ideology and mechanisms for market-based conservation of the public lands, the American state sometimes extended the same principles to land management programs directed at private lands. The most significant program, the Great Plains Conservation Program (GPCP), offered USDA technical assistance and cost assistance for long-term conservation plans. Cattlemen responded enthusiastically by supporting the program publically and by enrolling in significant numbers. The GPCP, like public lands leasing, aimed to incentivize conservation as a mechanism for economic stability. Another program enabled the state to buy over-worked private croplands and convert them into grazing range for leasing. These formerly private lands became the “National Grasslands,” which the forest service administered under multiple use. Ironically then, for much of the first half of the twentieth century the state and ranchers tried to make public lands operate like private property, and in the second half of the century they tried to make private lands operate like the public domain.

The National Grasslands originated in the environmental and economic crisis of the 1930s. In the throes of the Dust Bowl and depression, Congress passed the Bankhead-Jones Act of 1935 to enable the federal government to buy degraded farmlands with the dual purpose of providing for their recovery and removing land from production to help raise farm prices. The USDA created the soil conservation service (SCS) to administer the lands, and

the SCS converted the over-worked croplands into rangelands by planting new grasses or allowing natural succession, and it set up land utilization projects (LUPs) as models of sustainable land management on the plains. In 1954, the USDA named the rangelands the national grasslands and transferred them to the forest service for management under multiple use.¹⁸²

Another major drought and market crash in 1953 provoked the creation of the GPCP in 1956. The program aimed specifically to improve conservationist land management as a means to stabilize agriculture. The program offered USDA cost sharing of 50-80% on any projects deemed to improve and sustain soil quality. The most desirable projects for ranchers included reseeding damaged rangelands; planting dependable forage species; drilling wells and laying water pipe to help spread out livestock; fencing for rotation grazing; and brush control such as using heavy machinery to remove cactus. Ranchers who enrolled would sign a three to ten year long contract with the USDA and agree to a management plan for the whole ranch which often involved planting windbreaks (rows of trees to prevent dust), erosion controls, and “Permitting grazing animals to take no more than half the forage produced in a growing season.”¹⁸³

The GPCP and national grasslands were hugely popular with cattle ranchers in the plains states, which produced between a third and a half of American beef cattle from the

¹⁸² W.A. Laycock, “History of Grassland Plowing and Grass Planting on the Great Plains,” in USFS USDA, “Impacts of the Conservation Reserve Program in the Great Plains: Symposium Proceedings, September 16-18, 1987,” (Fort Collins, CO: FS USDA, 1987).

¹⁸³ USDA, “The Great Plains Conservation Program: A Progress Report,” November 1965, Revised September 1969.; Pamphlet, Soil Conservation Service, USDA, “Great Plains Conservation Program: Questions and Answers,” (Bozeman, MT: SCS USDA, January 1989).; Pamphlet, SCS, USDA, “The Great Plains Conservation Program,” July 1982, Reprinted August 1988.; Everett E. Peterson, “Facts About the Great Plains Conservation Program,” 1957, *Historical Materials from the University of Nebraska Extension*.

1950s to 1970s.¹⁸⁴ In 1979, during the second extension of the GPCP, James A. Dickinson of the NCA's private lands and water usage committee told Congress that the "NCA believes that the GPC Program is a model for sound conservation of land and water resources in this Nation." Dickinson cited both the many successes of the program (farmers and ranchers had signed nearly 60,000 conservation contracts) as well the serious number of projects still to do (as many as 5,000 contracts pending to cover 15 million acres) as evidence of the overwhelming need to extend the duration of the program. Dickinson further argued "Expansion of the program coupled with the innovative incentive techniques such as are employed in programs used on the National Grasslands" to areas outside the Great Plains ought to merit Congress' "serious consideration."¹⁸⁵ In a public speech the same year, Dickinson also took some credit on behalf of ranchers for making the GPCP a "significant contribution to humanity" through "constant and diligent stewardship," which was true because their voluntary involvement made the program a success.¹⁸⁶

Both the national grasslands and the GPCP allegedly responded to the special case of the Great Plains. USDA literature highlighted the unique environmental hazards of the region formerly called the "great American desert," which were "dramatized by the Dust Bowl days" and the "filthy fifties."¹⁸⁷ Dickinson agreed: "Not too many folks are aware that the

¹⁸⁴ The GPCP covered 519 counties in Montana, North Dakota, South Dakota, Wyoming, Nebraska, Colorado, Kansas, New Mexico, Oklahoma, and Texas. All but three of the National Grasslands are adjacent the Great Plains (the exceptions are in Oregon, Idaho, and California).

¹⁸⁵ James A. Dickinson (Vice-Chairman Private Lands and Water Usage Committee of the NCA), "Statement of the National Cattlemen's Association before the Subcommittee on Conservation and Credit of the House Agriculture Committee on legislation to extend the Great Plains Conservation Program and other conservation legislation (HR 3789, HR 4314, HR 3693)," 11 Sept 1979, Folder 5 "Miscellaneous - Reports, Reports, March-August 1980," Box 666, NCA, AHC.

¹⁸⁶ James A. Dickinson, "Cattlemen, Conservation and Concern, ... before the Great Plains Conservation Program Workshop, Lincoln, Nebraska," 10-11 October 1979, Folder 5 "Miscellaneous - Reports, Reports, March-August 1980," Box 666, NCA, AHC.

¹⁸⁷ Pamphlet, SCS USDA, "The Great Plains Conservation Program," July 1982, Reprinted August 1988.; Douglas Helms, "NRCS Historical Articles—Great Plains Conservation Program, 1956-1981: A Short Administrative and Legal History," Reprinted from *Great Plains Conservation Program: 25 Years of*

Great Plains is an area of unstable climate characterized by bitter cold, searing heat, drought and erosive winds.”¹⁸⁸ In this analysis it is obvious why ranchers on the plains would seek help from the SCS.

But ranchers also had much to lose from programs like the GPCP and national grasslands. Under the GPCP cattlemen gave up a lot of flexibility to manage their property. In addition to direct government intervention on land use decisions, ranchers could not sell a property under contract unless the buyer agreed to take on the GPCP plan or they paid the USDA back for all the improvements. More importantly, both programs aimed to improve soil quality by converting degraded croplands into grasslands, and both programs eventually allowed for grazing on converted rangelands. In the hearings on the creation of the GPCP, a Congressman from Utah asked the assistant secretary of agriculture if there were any “assurances we can give our cattle people that this will not just be a measure to produce more cattle and further depress the price of livestock.” There were not, even though the USDA billed the whole program as a way to stabilize agriculture. Ultimately, cattle ranchers got behind the GPCP because the gains in material assistance outweighed the cons of losing full property rights.¹⁸⁹ Overall, the blurring of private and public property lines on all grazing lands of the United States was remarkable.

Bill Swan in his career was a rancher, chairman of the Public Lands Council (representing 27,000 public lands users), president of the NCA, a member of the USDA National Forest System Advisory Committee, and advisor to four secretaries of agriculture.

Accomplishment, SCS national Bulletin No. 300-2-7, 24 November 1981, Accessed from *USDA Natural Resources Conservation Service website*.

¹⁸⁸ Dickinson, “Statement [...]” 1979, Folder 5, Box 666, NCA, AHC.

¹⁸⁹ “Great Plains Conservation Program, Hearing before the Committee on Agriculture [...]” 84th Cong. 2nd Sess. (28 June 1956), 22.

Swan was a passionate and careful advocate of ranchers' interests within multiple use and the economic model of conservation, and he worked very closely with Congress to pass the Public Rangelands Improvement Act of 1978.¹⁹⁰ Swan, like most ranchers, disliked environmentalists and the environmental movement, but his distaste came not only from the usual disgust with yappy eastern tenderfoots, but also from his conviction that so-called environmentalists were weaker and less rational conservationists than ranchers. That said, Swan's conservation philosophy was not isolated from modern environmentalism. His analysis fell squarely within the multiple use framework, but he still seriously considered the new categories that environmentalists brought to the discussion, like energy, wetlands, and landscape. Swan demonstrates that rancher conservation came from genuine faith that cattlemen and free capitalism valued and cared for the land.

Swan's understanding of the environment and land use straddled the middle of the spectrum representing ranchers' conservationist appeals. On one end of the spectrum was the rare and paradoxical rancher, who was also an un-qualified preservationist. One example was Douglas T. Simpson of Utah, who wrote in to the hearings on the Multiple Use – Sustained Yield Act (MUSY) in 1960 to emphasize his support of multiple use as a way to have grazing and wilderness, too. Simpson had a permit to run his cattle in the Uinta forests, but he also liked going into the forest's "primitive area" without his stock to camp, hunt, and fish. Simpson was both President of the Utah Farmers Union and the Kamas Wildlife

¹⁹⁰ Paul D. Andre, "25 Who Made a Difference," *Beef* 11 August 1989, AHC, NCA Records, Box 655, Folder 11 ("Publications - Subject Files, National Cattlemen, Industry News - October 1989")

Association, and he categorically opposed privatization of public lands or transfer to the states.¹⁹¹

On the other end of the spectrum were ranchers who twisted conservationist values to defend ranchers' interests without any real conservation content. In a statement on proposed wilderness legislation from 1957, Radford Hall, secretary of the ANCA, used multiple use as a benchmark to ridicule the philosophy of wilderness protection. Hall reiterated a common complaint that wilderness legislation represented a move towards single use or, as he put it, an "effort on the part of a selfish few to [...] forever lock up all the other resources in order that the visionary values placed by some people on 'unspoiled nature' shall be available to them and them only." For Hall, "use" meant "commodity production," so he could write conservation out entirely. Appealing to an alternate vision of wilderness, Hall also tried to describe a land without ranchers on the lookout as a biblical wasteland. Hall cited anecdotes about accidents that ranchers had stopped to cast "the wilderness" without them as a place of dying damsels and exploding grass (because un-grazed grass gets too big, and then it gets struck by lightning and blows up!). Hall's case was creative and well-argued within the terms of the debate, but it was in the end a farce.¹⁹²

Bill Swan held the more realistic and defensible position of a bona fide rancher, who did prefer cows to birds, but who also genuinely valued conservation and believed ranchers and federal land managers could do it. By the late 1970s, Swan's beliefs were on the verge of dominating the cattlemen's ideas at the national level—in fact, Swan would be named

¹⁹¹ Douglas T. Simpson to Hon. George M. Grant, 14 March 1960, in "National Forests, Multiple Use—Sustained Yield, Hearings before the Subcommittee on Forests, of the Committee on Agriculture," House, 86th Cong. 2nd Sess., 16 and 18 March 1960, pg. 113.

¹⁹² Radford Hall, "Statement of Radford Hall, Executive Secretary, ... With Respect to HR 1960 and related bills, House Subcommittee on Public Lands," 20-21 June 1957, Folder "Misc. Statements, Statements 1956-1959," Box 668, NCA, AHC.

President of the NCA in 1981—and they represented the highest promise of rancher conservation before the Sagebrush Rebellion. Swan claimed to be an environmentalist, and, like Simpson, he really meant it, but whereas Simpson was an environmentalist and a rancher, Swan was an environmentalist because he was a rancher.

Swan declared his priorities in 1978: “I am a cattle rancher, but *first I am an environmentalist*, because I make my living from the environment. If I don’t manage it well and use it wisely, it will not be available for me tomorrow. *Secondly, I am an ecologist*. If I don’t understand the ecological needs of the plants that make up my range, I cannot manage the land wisely.” In this way Swan built on the fundamental and long-standing argument that ranchers had a clear and necessary incentive in conservation of resources, and he continued: “*Thirdly, I am a conservationist*. In this day of energy crisis when we finally are realizing that we live on a finite planet and that our resources are limited, we will have to rely more and more on our renewable (and I stress the word renewable) natural resources for the production of food. [...] *Fourth, I am a cattle rancher*, and with my cattle I convert grass into a source of protein that is necessary for human life.” In this second half of the case, Swan articulated an argument that public lands ranching was in and of itself conservationist in the big picture. He pointed out that whatever the immediate problems of overgrazing, grain feeding required heavy combustion of fossil fuels, and cattle on rangelands were there to convert the solar energy stored in grass into protein “to feed a hungry world” in the cleanest way possible.¹⁹³

¹⁹³ J.W. Swan, “Statement of National Cattlemen’s Association before the Subcommittee on Indian Affairs and Public Lands of the House Committee on Interior and Insular Affairs, on H.R. 10587, Public Grazing Lands Improvement Act, H.R. 10589, Amending Section 402(d) of FLPMA,” 30 March 1978, Folder “Misc. Statements, Statements January-April 1978,” Box 668, NCA, AHC [emphasis added].

Swan believed that the American food system had made tremendous gains, but at the expense of excessive pressure on fossil fuels and commercial fertilizers. In a statement that sounds eerily contemporary, he suggested trying to make meat with even less grain (up to then almost all insiders and observers pushed greater grain feeding) by “using native rangelands more wisely” and maximizing “its most plentiful renewable resource—grass.” Swan cited USDA reports that implied a comprehensive management system could increase forage and livestock production alongside even greater protection of water and (some) wildlife. “Livestock grazing and strategic manipulation of vegetation on watersheds have been shown to increase forage production, soil protection, and yield of high quality water,” Swan explained, “Grazing systems that improve cover enhance food supply and provide habitat requirements for successful breeding benefiting many wildlife species.” Swan put it succinctly, “I believe that if we manage range for maximum livestock production under sound scientific principles, we automatically enhance the other values.”¹⁹⁴ These arguments were not exactly new, since ranchers regularly appealed to conservation, but Swan put a new favourable emphasis on non-rancher science as a way to help.

In fact, what Swan disliked most about environmentalists was their disrespect not only of ranchers but of federal land managers and conservation range science generally, as he saw it. In an essay for *Rangelands* magazine, Swan complained that “too many people, especially from the environmental community, criticize the BLM and the Forest Service for their management of the public rangelands.” Swan believed these “self-appointed critics” ignored the agencies’ important funding limitations and had no sense of “how bad conditions actually were” before forest rangers and BLM agents began dedicating their lives to the

¹⁹⁴ Swan, “Statement [...]” 1978.

problem. Swan worried that “the scientist has given way to the lawyer, the judge, and the environmentalist,” and as a result conservation and “proper use” were becoming synonymous with blanket principles (like rest-rotation) instead of tailored analysis of site-specific conditions. Swan liked rest-rotation a lot and used it on his own lands, but it was not necessary on every ranch. This was the case for many important methods including select use of herbicides, controlled burning, reseeding, and riparian zone (streambanks) conservation, all of which could and should be used when beneficial. Swan made a strong case that to accomplish this, cattlemen needed to “insist on increased budgets for research” on all fronts, and that the state had to encourage ranchers to spend even more “private money to implement range improvements.” Swan declared the threat of creating a vested property right legally dead, so there was no reason not to create a good investment “climate.”¹⁹⁵ In other words, you fund the research, and we will fund its application.

In the end, Swan even tried to broker a limited peace with environmentalists and ranchers’ other “urban neighbors.” Swan announced that despite environmentalists’ opposition to rancher-led conservation plans like the Public Rangelands Improvement bill in the past, he believed “we cattlemen are willing to let bygones be bygones.” Apparently Swan even told the DOI that the cattlemen wanted to present “a united front” with environmental groups to help get more funding allocations for conservation. Swan first presented his *Rangelands* article as a public talk, and he got a question from the director of the California department of conservation about why the public should prioritize funding for conservation of grazing lands any more than they had in the past. Swan’s answer spoke to the history of grazing regulation. He claimed that the Taylor Act provided only for interim conservation

¹⁹⁵ J. W. Swan, “Some Grassroots Talk from a Rancher,” *Rangelands* 1.3 (June 1979), 94-95.

under the expectation that the public lands would be transferred to users eventually. Therefore, conservation had largely been ranchers' responsibility under the Taylor regime. The BLM Organic Act of 1976 announced the intention to continue federal ownership and control indefinitely, so Swan argued it was now time for the public to start helping ranchers with conservation. "You've decided you are going to be our 'landlords'; now assume your responsibilities as 'landlords'."¹⁹⁶ Swan's case was a far cry from the tenants' revolt (or Sagebrush Rebellion) that began that same year.

Multiple Wisdoms

Rancher conservation fell apart and grazing access to public lands became chaotic and contested because new ideas put pressure on the rules established by the Taylor Grazing Act and the other regulatory institutions that proceeded and flowed from it. Ranchers and government bureaucrats designed the regulated market for grazing on public lands to respond to the ideas of interest groups. They wanted it that way, and it worked, because the only interested parties were ranchers. This arrangement enabled decades of cooperation and consensus on the meaning of conservation, but it also produced a flaw in the system that let new ideas and groups in. Debates over the concept of "multiple use" capture well the way uses became legitimated and delegitimized over time.

The multiple use concept posited that there existed many legitimate ways to use the public domain and forest reserves, and the goal on any given piece of public land was to identify the use or complimentary uses that would maximize value output (within the confines of long-term sustainability, of course).¹⁹⁷ On the one hand, it became very easy to

¹⁹⁶ Swan, "Some Grassroots [...]," (1979), 96.

¹⁹⁷ Mary A. Yeager, "Multiple Use and Abuse: The U.S. Forest Service and the Problems of Government," *Reviews in American History* 5, no. 4 (1977), 485-495.; Donald J. Pisani, "A Conservation Myth: The Troubled Childhood of the Multiple-Use Idea," *Agricultural History* 76, no. 2 (2002), 154-171.

argue that grazing was necessarily the best use of rangelands, but on the other hand, multiple use legitimated recreation and wilderness preservation in the bureaucracy (as opposed to just in the environmental movement). Multiple use was never especially well-defined, and it has been much maligned by environmentalists due to its favouritism for cattle, but it is also exactly what allowed them into the debate in the first place.

Multiple use was both an adaptation of and a rejoinder to *wise use*—the land philosophy coined and applied by the forest service in earlier land management projects and policies.¹⁹⁸ Proponents of wise use in the early twentieth century argued that land use, especially on public lands, required external regulation and management by strong autonomous state organizations to ensure the long-term health of the range both economically and ecologically. Wise use relied on experts—often university-educated, always elite—to study land and resource use and make informed recommendations about how to improve on a broad, general scale, which state-empowered officials (called rangers) could implement and enforce in each case. In practice, the distinctions between experts and rangers and between scientific and local knowledge blurred, but the theory itself was boldly elitist and technocratic. Though its proponents and adherents often held a Jeffersonian vision for the west, wise use itself was the exact negation of the Jeffersonian ideal.

At face value, multiple use was a reaction to and rejection of the technocratic ideal embedded in early land management policies. It was, but it also built on the core values of wise use. Stockmen disliked the implication that they were un-wise and that they were what needed to be regulated, but wise use in practice was not fundamentally hostile to grazing. Multiple use codified the value for resource extraction that already motivated wise use

¹⁹⁸ Samuel P. Hays, *Conservation and the Gospel of Efficiency: The Progressive Conservation Movement, 1890–1920*. (Pittsburgh, PN: University of Pittsburgh Press, 1999).

implicitly. Multiple use idealized a working partnership between land users and state managers that already existed for pragmatic reasons. Critics argue that it gave too much authority in shaping regulation to the regulated themselves, and at times that certainly resulted, but there is also a sense in which it would have been absurd not to. The vast majority of Americans who cared at all about what happened on western public lands were ranchers, and most of them cared about land conservation on some level. Some cared a lot, in fact. And multiple use, despite what its critics said, was explicitly conservationist. Whether this was a compromise or not was irrelevant—it still affirmed conservation as a fundamental value.

The most important innovation of the multiple use concept was in how it reframed the regulatory relationship. Wise use clearly meant that the state should regulate ranchers. Multiple use suggested that the state, ranchers, and other land users—including recreationists—should work together to regulate land use more broadly. Rhetorically it may indeed have diluted conservationism by adding things like food production, income creation, and cultural longevity to the list of core values, but it also changed the meaning of conservation to something broader. Under wise use, conservation meant sustaining land for the purpose of maximum resource productivity over the longest duration (preservationism was strictly excluded). Conservation was not hostile to capitalist principles—it was merely the perfection of them. Under multiple use, conservation became itself one of the uses of the land distinct from productive extraction. It was under this philosophy that the USDA and DOI expanded game reserves, wildlife protection, recreation facilities, etc. Conservation became more than a means to an end alone. Multiple use eventually became problematic not

because it excluded environmentalism, but rather because it did create space for environmentalists in a way that wise use would not have.

American cattle ranchers actually had little role in shaping the multiple use philosophy because they already took it as a given. Multiple use emerged in a vague sense early at the beginning of the twentieth century in forest and water management ideas and policies, and it first became significant as a fundamental management principle in the mid-1950s in debates about timber production and conservation on the forest reserves. The philosophy spread immediately to grazing lands and became hugely popular with both land users and the wider public in the 1950s and 1960s. Well before it gained any legal weight, multiple use became a benchmark for evaluating public lands policy. In addition, the concept held no threat for ranchers as it did for foresters because, at the time, recreationists—including hunters, campers, wildlife viewers, etc.—wanted access to America’s forests, not its open grassy plains. One could be forgiven after reading materials on the subject for coming to the conclusion that people in the 1950s did not know wildlife could live on grasslands.

Although the principles behind multiple use developed naturally out of administrative practices in the DOI, technically the forest service was the key architect of multiple use as an official policy. The forest service supported codifying the concept in law, since it would map onto existing administrative practices easily, and they saw the agency’s role in it as a middleman or “public interest negotiator,” which would deflect mounting criticism from all angles.¹⁹⁹ It represented a significant step back from the forest service’s favoured role as technocratic leader in Pinchot’s term. The original “multiple-use” bills of 1954 and 1955

¹⁹⁹ Paul W. Hirt, *A Conspiracy of Optimism: Management of the National Forests since World War Two* (Lincoln, NB: University of Nebraska Press, 1994), 178

came from conservationists, who wanted to break the timber industry's privileged access. The timber industry did not oppose it outright, but rather tried to get a hierarchy of uses with timber on top built back in. The forest service played the middle accusing timber of advocating "overuse" and the conservationists of really wanting "single use" for recreation.²⁰⁰

The final bill that became the Multiple Use – Sustained Yield (MUSY) Act of 1960 garnered massive hearings with testimony from a large group of interests, but it was not controversial, especially not with stock raisers.²⁰¹ It was an "odd situation," as historian Paul Hirt explains, "in which no one could afford to really oppose a bill providing for multiple use."²⁰² Multiple Use basically just meant that timber, range, watersheds, wildlife, and recreation all had to be considered and allowed for in management policies. Multiple use fed off the power of any argument for equality in American politics, but the lack of outrage also meant a lack of enthusiasm. Between the success of the Granger-Thye Act and the failure of the Uniform Grazing bill, stock raisers saw nothing to gain or lose from the legislation.²⁰³

²⁰⁰ Hirt, 171-173.; See also: Thomas G. Alexander, *The Rise of Multiple-Use Management in the Intermountain West: A history of Region 4 of the Forest Service* (Washington DC: USDA USFS, 1987), 187.

²⁰¹ The MUSY Act of 1960 applied to the forest reserves. The management principles embodied in the Taylor Act originated in the forest service, but the agency administered them through its flexible mandate—not by law. This meant that even though the forest service chose to cooperate extensively with stockmen, the agency still had all legal authority. Throughout their legal dealings and lobbying efforts, American ranchers revealed a strong preference for laws over general policies (at hearings cattlemen often expressed concern that less-sympathetic bureaucrats could ruin all their good cooperative work in the future and stressed the need for exact definitions and numbers), and it annoyed them that they still had no legal rights in the forest reserves.

²⁰² Hirt 182.; "National Forests, Multiple Use—Sustained Yield," Hearings before the Subcommittee on Forests, of the Committee on Agriculture, House, 86th Cong., 2nd Sess. (16 and 18 March 1960), 51-2.

²⁰³ The forest service pre-empted further controversy after the McCarran and Barrett hearings by drafting a bill to codify its cooperative management policies. The agency passed the bill along to allies in Congress, and it passed as the Granger-Thye Act in 1950. The Act mandated use of grazing fees for range improvements, extended permits to ten-year terms, and set up advisory boards for the forest reserves as the Taylor Act had done for the public domain. According to Thomas Alexander, stockmen still were not fully satisfied, since they wanted more legal recourse if permittees and the forest service disagreed, and they continued to agitate for stronger tenure. The Uniform Federal Grazing bill of 1952 was supposed to solidify past grazing privileges, and it would have given ranchers the kind of power to manage grazing in the forest reserves that they had on the public domain. The bill was nonetheless expressly conservationist, and its advocates continued the argument that secure tenure would incentivize sound management. The bill's main provisions were to end "transfer cuts,"

Ranchers, to the extent that they participated, lent support to the bill. The Paseyton Cattlemen's Association and Pine Creek Cattle Association, both from Washington, wrote letters to the MUSY hearings urging the bill's passage, which they saw as doing the forest service a favour.²⁰⁴ The cattlemen's official representative at the hearings praised multiple use saying, "We feel that multiple use has furthered true conservation," but his only suggestion for the law was that "range" be replaced with "grazing."²⁰⁵ The small critique came from a plausible fear that rangelands could be used for things other than grazing, but the stockmen were correct that range is a type of land or resource—not a "use." In fact, watersheds and wildlife are not uses either. Range stayed, so the only actual uses mentioned were timber production and recreation. The irony of cattlemen's lukewarm support of the MUSY Act was that it did not come from discomfort with the concept, but rather from the recognition that multiple use concepts already dictated management across the public lands.²⁰⁶

The Sagebrush Rebellion marked the end of rancher conservation. The Sagebrush Rebellion was a broad political revolt against conservation and federal land management on public lands in the American West. A critical view recorded: "The Sagebrush Rebels are the most recent in a series of covetous groups bent on 'regaining' what was never theirs."²⁰⁷ It was dramatic, and received the overt support of Ronald Reagan, but its extent and effects are neither uniform nor clear. Some ranchers played a leading role in the movement, but it was

which was a forest service practice of cutting permit sizes when an individual terminated his or her permit (ie. died), and to expand the permit size if the permittee successfully increased forage productivity. The bill failed, but the forest service wrote both these goals into its own policies in the early 1950s.

²⁰⁴ National Forests, Multiple Use—Sustained Yield, Hearings before the Subcommittee on Forests, of the Committee on Agriculture," House, 86th Cong. 2nd Sess., 16 and 18 March 1960, 16.

²⁰⁵ Hirt, 182-84.

²⁰⁶ The BLM codified multiple use in the Organic Act of 1976.

²⁰⁷ Dyan Zaslowsky, "Does the West Have a Death Wish," *American Heritage Magazine* 33, no. 4 (1982).

probably more significant and representative of the interests in forestry and mining.²⁰⁸ The event was, however, part of an ideological shift among ranchers. In the lead up to the actual “rebellion” in 1979-80, ranchers focused on a widening list of conservation projects that hurt cattle producers. Some of the “environmental” projects that ranchers brought up most often were especially ungrounded in any scientific, ecological understanding, and they highlight why ranchers never accepted the moral or intellectual superiority of the environmental movement. The Conservation Reserve Program (CRP) and the Wild and Free Roaming Horse and Burro Act (WFRHB) were two examples of bad rules that helped undermine ranchers’ faith in conservation.

The Conservation Reserve Program (CRP) was introduced in the early 1960s and earned the intense chagrin of Western cattle producers. The CRP was a USDA project that paid farmers to take overworked cropland out of rotation. The program promised to rectify ecological problems like soil erosion as well as mitigate chronic overproduction in corn. In 1963, the program covered about twenty-five million acres, and policymakers wanted to encourage its expansion by allowing farmers to start running cattle on grain-conservation lands.²⁰⁹ In some ways, this was ranchers’ insistence on the sustainability of grazing coming back to bite them. Ranchers were mortified by the proposal, since it meant all these cattle would enter market at a heavily subsidized price, which could drive the market down. Further these grain farmers would already be collecting an income from corn and a subsidy for conservation, so they would have no incentive to plan against beef prices. All the farmers’

²⁰⁸ Jean Akens, “‘FLPMA’ & the Sagebrush Rebellion,” *Canyon Legacy* 17 (1993), 20-25.

²⁰⁹ Bob Dole, Press Release, 1 July 1963, *Robert J. Dole Archive and Special Collections*.

cattle would be bonus cash, and they would have little incentive against dumping stock at low prices.²¹⁰

The Wild and Free-Roaming Horse and Burro Act (WFRHB) is a case of a cultural myth driving land use policy. Horses are not native to the American West, but they have been common since domesticated animals escaped from the Spanish in the 1500s. Although technically feral, wild Spanish horses or “mustangs” became an icon of the American West. The population of wild horses peaked in the early nineteenth century at around 2 to 7 million free-ranging animals. The population generally declined due to competition with cattle and crops, fencing off of habitat, and pest control by ranchers and farmers. The herd was also reduced to supply horses to the US military in the Spanish-American, Boer, and First World Wars. The herd was also often re-supplied. During the 1920s and 1930s, the first wave of mechanization of farm labor with tractors and then the farm crisis of the Great Depression led many farmers to simply release their horses out onto the range. During WW1, the military also released well-bred stallions to help improve the quality of the wild horses for possible later capture and use. The wild horse herd is therefore quite different from what is implied by “mustang.”

The Taylor Grazing Act of 1934 authorized the federal government to manage all ungulate grazing on public rangelands, and ultimately saddled the BLM with controlling the wild horse population. Large scale reductions occurred in the late 1940s and 1950s, driven partly by conservation ideas, partly by a market demand for horse flesh for pet food, and

²¹⁰ “The beef and sheep men pay,” April 1964, *Farm Journal*, AHC, NCA, Box 67, Folder 11.; Letter, C. W. McMillan to Robert B. Duncan, 9 July 1963, AHC, NCA, Box 176, Folder 7.; Cushman S. Radebaugh, ANCA President, “Statement before the Senate Committee on Agriculture and Forestry Concerning S. 2786,” 26 February 1962, AHC, NCA Records, Box 668, Folder X (“Misc. Statements, Statements 1960-1962”). [NB more sources in photo record BOX 177, FOLDER 14]

mostly to remove a pest and competitor for cattle ranchers. The ranchers benefitted a lot from the mythic Wild West heritage, that they used to make claim to wide swaths of public lands on the grounds of historic use. But in this case, the mythic Wild West turned against them.

Starting in the 1950s, people began to protest the inhumane treatment of the majestic American mustang by callous cattle barons and bureaucrats. Velma Johnson of Reno, Nevada, who was called “Wild Horse Annie,” led the driving force to protect wild horses in the West, and her intense dedication and broad support from other ex-urban, middle class Westerners led to the Passage of the WFRHB Act of 1971. It is interesting that burros made it in, too, since there were not many wild donkeys in the American West until late in the 19th century when mining declined. The Act declared wild horses and burros to be “living symbols of the historic and pioneer spirit of the West” and therefore could not be killed, captured, or harassed on the public domain. Ranchers were livid, and it was really hard for the BLM to do. The BLM was allowed to sell the horses under certain conditions, but the herd still became unwieldy for them.

The WFRHB is a clear case of bad conservation. It was motivated by preservation, not sound ecosystem management. In 1971, there was very little biology research on wild horses, and the bill failed to account for the rate at which the animals increase. In 1971, there were 17,300 feral horses on public lands. In 1975, there were 50,000 feral horses and 5,000 burros on public lands. In 2016, the BLM recorded 67,000 horses and burros. They exhibit annual population growth rates of up to 20%. Historically the herd has doubled every four years. The BLM had to use helicopters to round them up, and they sold them really cheap. It is estimated that subsidized adoption costs tens of millions of dollars to US taxpayers. Further, the BLM was not getting enough adoptions to prevent the herd from swelling, and

the ecological toll is intolerable, so they estimate that necessary off-range care will cost over a billion dollars in coming decades. Another problem is the BLM is not able to uphold the spirit of the law with its adoption program. It is estimated that 90% of rounded up horses eventually make it to slaughter. Wild Horse Annie's organizations still fight for wild horses and burros. They oppose the BLM's round-ups and they dispute the science saying the population is overgrazing.

These are very select examples, and most conservation practices are good for the land and for the long-term health of cattle producing communities, but cases like these are important for understanding why cattle ranchers have become the enemies of environmentalists. Anti-conservation ranchers have grown more violent in recent years, and it is in the interest of all Americans to oppose this movement.²¹¹ Another movement advocates a return to "cooperative conservation" between ranchers and other land managers. The movement includes many scientists and other formerly opposed to grazing, who have reassessed their understanding of cattle and ranchers' roles in "working landscapes."²¹² This is a significant and welcome departure from the incendiary anti-cattle rhetoric of 1970s and 1980s environmentalists.²¹³ However, this new movement must be cautious not to repeat the failures of past rancher conservation efforts that relied on market production for stability.

²¹¹ Book Review by Tim Paulson: Scott Laderman, *Empire in Waves: A Political History of Surfing* (Oakland, CA: University of California Press, 2014), *Make Literary Magazine*, 2016, <http://makemag.com/review-empire-in-waves/>; Christopher Ketcham, "The Great Republic Land Heist: Cliven Bundy and the Politicians Who are Plundering the West," *Harpers* (February 2015), 23-31.

²¹² Thad Box, "When Cowboys Wear White Hats," *Rangelands* 37, no. 2 (2015), 90-91.; Peter S. Alagona, "Homes on the Range: Cooperative Conservation and Environmental Change on California's Privately Owned Hardwood Rangelands," *Environmental History* 13 (April 2008), 325-49.; Susan Charnley, Thomas E. Sheridan, and Gary P. Nabhan, eds., *Stitching the West Back Together: Conservation of Working Landscapes* (Chicago, IL: University of Chicago Press, 2014).

²¹³ Edward Abbey, "Even the Bad Guys Wear White Hats," *Harper's* (January 1986).

The failure of rangelands conservation in the twentieth century was a failure of markets and ideology more than a failure of politics or bureaucracy. Conservation was one half of the stated goal of almost all public lands regulation and management (the other half was industrial stability, which many believed was basically the same thing), and the privatizing force on the forest reserves and public domain was ideologically and politically conservationist. Bureaucratically, advisory boards provided an intentional and rational role for land users within the state so that both could effectively determine and execute management goals. If you accepted that ranchers did not actually want to abuse and ultimately destroy rangelands, and American policymakers and bureaucratic experts did, then the system made sense. In fact, it is a testament to the strength of that part of the system that it actually sometimes even worked. Given the tendency of market forces towards instability and crisis and the broken application of market forces in the fee structure, what was most surprising about conservation values and grazing management on both public and private lands in the twentieth century was that they provided enough stability for some sustainable land use from the 1930s to the present.

American cattle ranchers on both private and public lands made a good faith effort at an untenable vision of conservation. Although cattlemen had long-pushed for privatization of federally-owned lands, ranchers from the 1930s to the 1970s generally understood leasing under the Taylor Act as closer to—rather than farther from—property rights. Ranchers came to terms with central management and forged a place within it. The Sagebrush Rebellion marked a significant shift, when ranchers began calling again for privatization after thirty plus years of consensus around leasing.

Faith in cooperative conservation between ranchers and government land managers broke because the terms of conservation changed. Cattlemen could not believe that a new brand of environmentalists was once again accusing them of mismanaging the public domain, and they responded that the Taylor Act had incentivized sound management just like it was supposed to. Ranchers reduced stock numbers, controlled invasive weeds, and developed water resources. The NCA claimed that “before 1970, the livestock industry financed 75% of all range improvements on public lands.”²¹⁴ In other words, cattlemen were conservationists as conservation was defined in the Taylor Act. It is not so much that the regulation failed, but rather that conservation changed to include non-marketable natural resources like wildlife and landscape. Even on the cusp of the Sagebrush Rebellion and the rise of anti-environmentalism in cattlemen’s associations in the 1980s, ranchers thought they could come to terms with environmentalists by appealing to their own commitment to its principles.

Ranchers repeatedly responded to pressure from new environmentalists that American ranchers were the “original environmentalists.”²¹⁵ By the 1980s, no one took that claim very seriously, but there was still truth in it. Ranchers learned to be environmentalists and anti-environmentalists in the twentieth century. Rancher conservation held meaningful promise in terms of its advocacy of sustainable land use, its recognition of the need for economic and social stability, and its focus on shared responsibility between ranchers and government land managers. Nevertheless, rancher conservation, and conservation generally, was flawed. No one involved fundamentally questioned the ability of capitalist ideals and

²¹⁴ “Background Information [...],” 1976, Folder 22, Box 443, NCA, AHC.

²¹⁵ “Summary of the National Cattlemen’s Association Task Force Report on the Draft 1980 RCA Appraisal and Program,” 5 March 1980, Folder 5 “Miscellaneous - Reports, Reports, March-August 1980,” Box 666, NCA, AHC.

social relations to yield positive results—including sustainable land use. Free enterprise has rarely turned out well for the land, and this market-based conservation regime did what markets do: it failed.

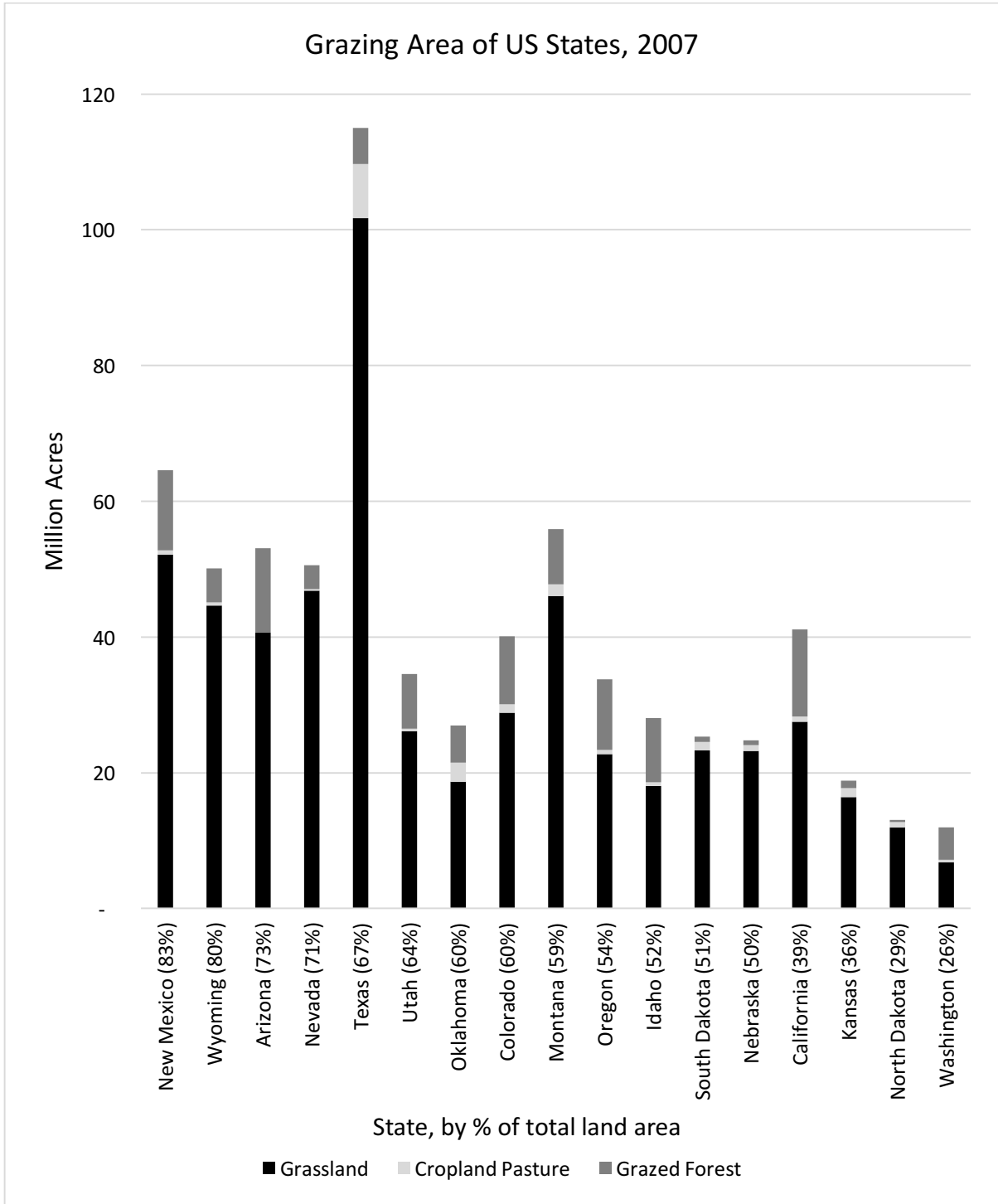


Figure 10. "Summary Table 4--Total grazing land, by region and States, United States, 2007," USDA ERS Major Land Uses Data Online. Graph by author.

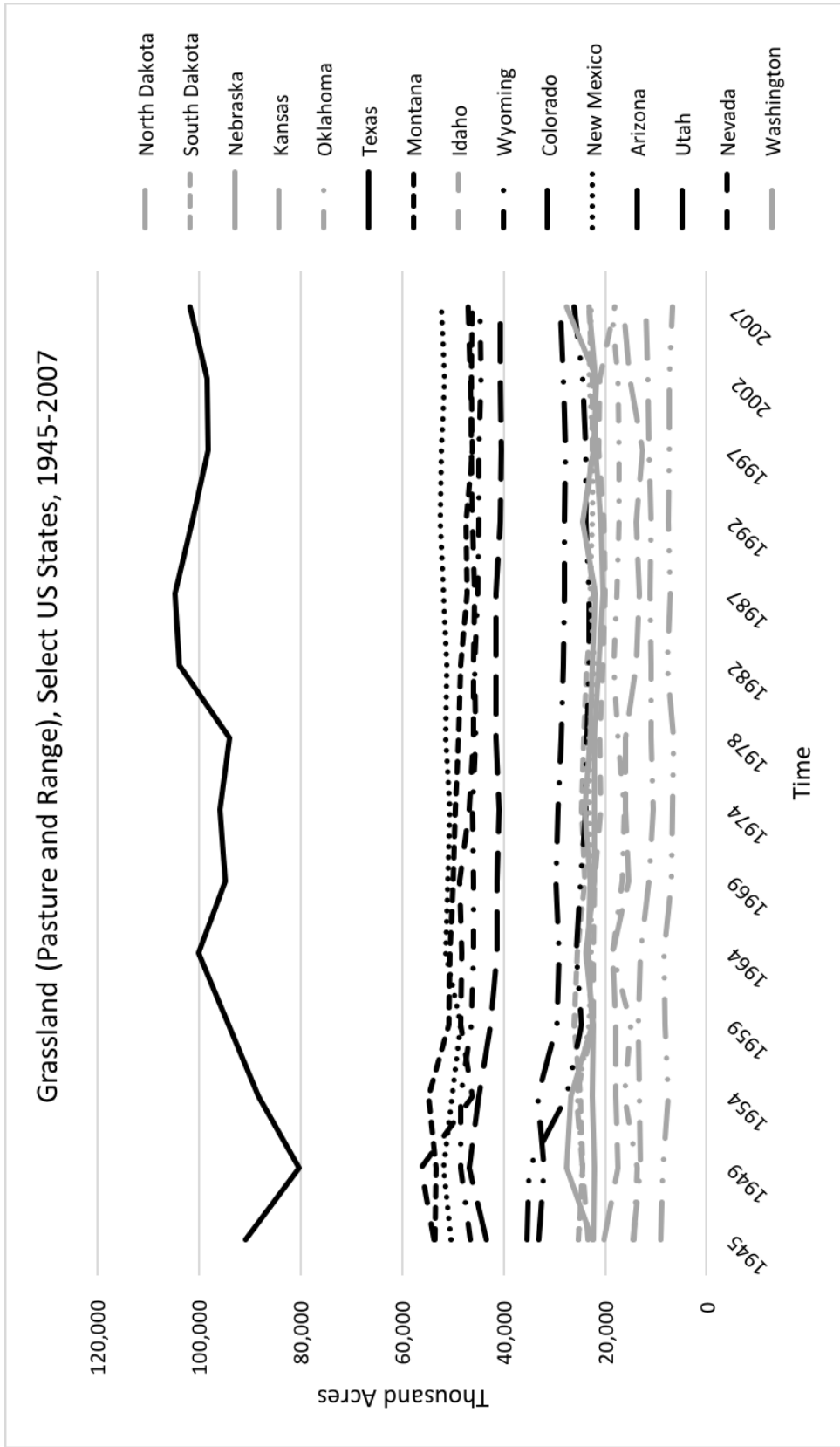


Figure 11. “Grassland pasture and range (noncropland and nonforest), by region and States, United States, 1945-2007,” USDA ERS Major Land Uses Data Online. Graph by author.

4. SUPPLY CHAIN FIGHTS

In 1973, American ranchers experienced something they were not used to and were not prepared for—the vitriol of the American public. In the first half of the twentieth century, the cult of the Western cowboy swelled in the national psyche as cowboys rode steadily onto books, films, television sets, storefronts, and cigarette packs. Western American ranchers and even concentrated feedlot operators styled themselves as the heirs to America’s imagined cowboy past, and they benefited materially from the adoration of the public and especially the public’s representatives in Congress. But then, suddenly, women across the United States began hurling accusations that cattle producers were not good, white-hat, cowboys at all.²¹⁶ Rather, they were collusive, Cadillac-driving, corporate fat cats, who cared nothing for the nation’s women or children.²¹⁷ In short, they were the kind of men that heroic movie cowboys dispensed with in the name of freedom, equality, and the American dream. The clash came over the price of beef, and it marked a fundamental turning point in the history of the American beef industry. Since then, there have been fewer Westerns on film and television, less beef on American plates, and fewer cattle on American rangelands. American cattlemen have never since had it so good as they thought they did in 1972.

Beef prices in the United States are political, and at many times beef-price politics have become controversial and adversarial. But the ignition of passions, the reasons for revolt, the targets of attack, and the goals of political action have all changed over time depending on how the American beef supply chain worked, how people thought it worked, and how people thought it ought to work. Broadly speaking, the history of price conflict over

²¹⁶ Thad Box, “When Cowboys Wear White Hats,” *Rangelands* 37, no. 2 (2015), 90-91.

²¹⁷ Charles E. Ball, et al., *Building the beef industry: A Century of Commitment* (Denver, CO: National Cattlemen’s Foundation, 1998).

beef developed from *ranchers and consumers versus meatpackers to consumers versus retailers to consumers versus ranchers* ending where it began with a return to meatpacker dominance of the supply chain and pricing at all levels. According to historians of consumer politics, the period from the 1930s to the 1970s was a golden age of consumer citizenship and an important moment in the history of women's political engagement, but this was also a politics that failed to produce a sustained consumer movement or a healthier food supply.²¹⁸ The 1973 boycott that helped break the beef industry was the highest point of consumer power in the beef economy, but it was also the last coordinated consumer action to make a real impact in the United States. The movement succeeded in producing and entrenching low-price food supply, but at the expense of continued consumer power. Cheap beef, the original goal of consumer activism, has become a Frankenstein's monster for the social and physical well-being of a majority of the nation's population and a growing number of people around the world.

This chapter examines the United States beef supply chain, and how it changed over time due to pressure from different organizations. A supply chain is another way to observe markets by focusing on the flow of commodities from initial production to consumption and observing who participates and who controls transactions. In other words, who determines the price? The invisible-hand concept of supply and demand overlooks the importance of politics in many pricing situations, and politics were very important in the beef economy.

²¹⁸ Christopher Deutsch, "Democratization of Beef: The Federal Government and the Making of the American Diet, 1946 to 1974 [Tentative title]," PhD. dissertation, University of Missouri, Forthcoming.; Lizbeth Cohen, *Making a New Deal: Industrial Workers in Chicago, 1919-1939* (New York: Cambridge UP, 1990).; Meg Jacobs, *Pocketbook Politics: Economic Citizenship in Twentieth-Century America* (Princeton: Princeton UP, 2005).; Tracey Deutsch, *Building a Housewife's Paradise: Gender, Politics, and American Grocery Stores in the Twentieth Century* (Chapel Hill, NC: UNC Press, 2010).; Lawrence B. Glickman, *Buying Power: A History of Consumer Activism in America* (Chicago: University of Chicago Press, 2008).; William Leach, *Land of Desire: Merchants, Power, and the Rise of a New American Culture* (New York, NY: Vintage, 2011).

The formation of organizations by ranchers and consumers drove change in the structure of the beef industry during two important moments in the 1910s and 1970s, and women's organizations became especially important in the later moment. However, the turning of ranchers and consumers against each other proved disastrous for the beef industry and ultimately both groups' interests. In the periods before the 1910s and after the 1970s, the formation of large meatpacking corporations, another type of economic organization, enabled a relatively small group of men to capture the majority of profits and execute power across the supply chain.

Figure 12. United States Beef Supply Chain, 1800-2000

Producer → Processor/Manufacturer → Retailer → Consumer

Figure 12.a: **The general supply chain model.** Arrows represent the flow of commodities. The model only depicts groups engaged directly in transactions of money for commodities.

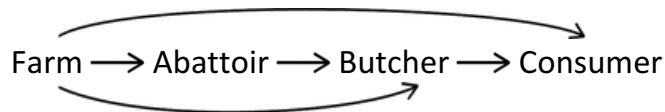


Figure 12.b: **The United States beef supply chain in 1800 (Simplified).** Americans grew most of their beef on farms, many of which practiced mixed animal and crop husbandry. Cattle were non-specialized, meaning they could be for milk, meat, or labour. Abattoirs, or slaughterhouses, were generally small single-story operations that supplied butchers, but both farmers and butchers also slaughtered animals. The consumer in this case might even be the same farmer, who produced the beef. The model is highly simplified and mostly applies to the Anglo-American states of the East, and not to the Spanish colonies of the South and West.

Rancher → Meatpacker → Butcher/Meat Market → Consumer

Figure 12.c: **The United States beef supply chain in 1900 (Simplified).** By 1900, most American beef came from ranches, specialized beef operations, in the West and Midwest. Multi-story meatpacking factories replaced abattoirs and many butchers, and they performed an increasing number of butchering tasks and produced an increasing number of commodities from cattle carcasses. Butchers and larger "Meat Markets" became primarily meat retailers. The model depicts the general nomenclature of the time to speak of industrial sectors and groups as individuals.

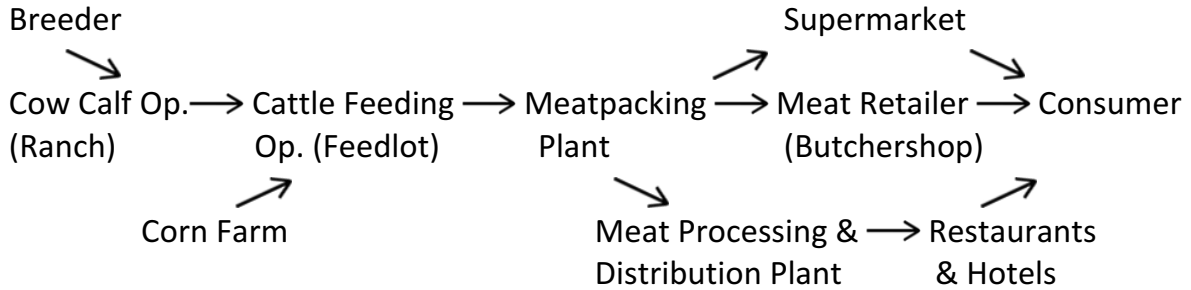


Figure 12.d: **The United States beef supply chain in 1950 (Simplified)**. From 1900 to 1950, meatpacking plants became less concentrated and lost market power. Specialized cattle-feeding operations and smaller, non-slaughter processing plants became increasingly significant in the supply chain, and Americans purchased final beef products from a wider variety of sources, especially supermarkets and casual restaurants. No single sector of the supply chain dominated the market, and reasonable (historically greatest) competitiveness existed across the industry.

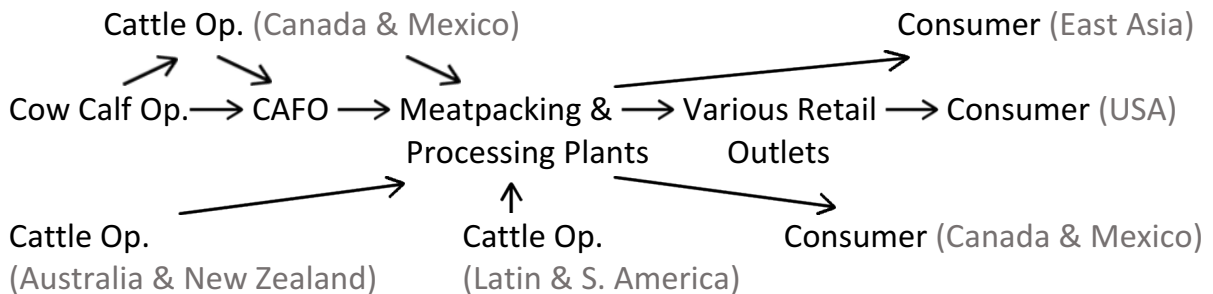


Figure 12.e: **The United States beef supply chain in 2000 (Simplified)**. In the late 20th century, international cattle operations and consumers became essential in the US beef supply chain. Americans traded breeding and feeder stock back-and-forth with Canada and Mexico; imported grass-fed and low-quality dressed beef for processing from Oceania and Latin and South America; and exported grain-fed and high-quality beef and offal to Canada, Mexico, and, especially, East Asian countries. Concentrated Animal Feeding Operations, known colloquially as “factory farms,” and a new group of larger-still single-story meatpacking plants re-established high market concentration, now on a global scale. Major beef retail outlets also broadened with the former department store, Wal-Mart, becoming the biggest beef retailer in the United States.

Figure 13. Population Ecology of Beef Processing Firms in the United States, 1800-2017

Figure 13.a: Population of Beef Processing Firms, 1800 (Simplified). A loose network of abattoirs (A) and butchers (B) slaughter and process most beef in the United States.

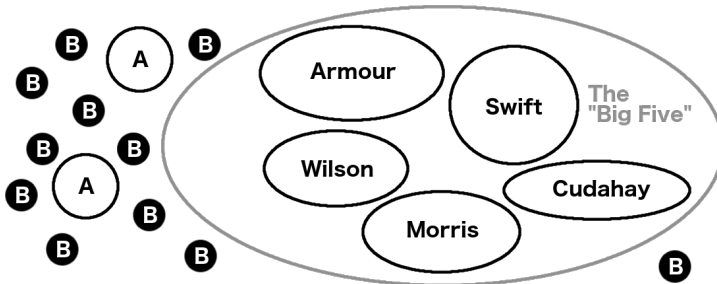
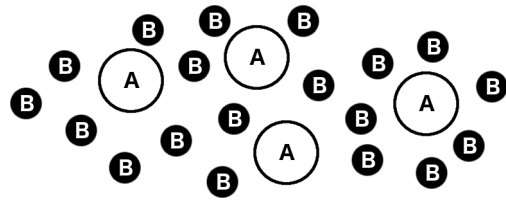


Figure 13.b: Population of Beef Processing Firms, 1900 (Simplified). By 1900, five meatpacking firms concentrated production in Chicago and captured between 45 and 66% of market share. These packers

cooperated through an informal network known publically as the “big five” or the “beef trust,” and from 1902-1912 three of them merged into a single mega-firm called the National Packing Company. Despite the transformation, many butchers and smaller regional slaughter facilities remained.

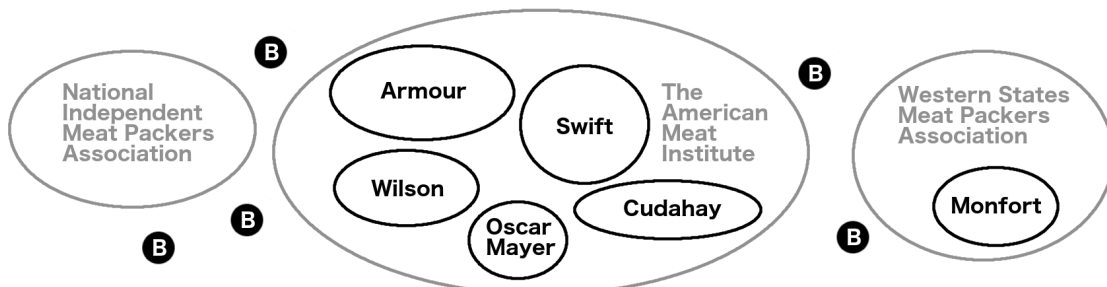


Figure 13.c: Population of Beef Processing Firms, 1950 (Simplified). Regulation decreased the vertical integration and market concentration of major meatpacking firms in the mid-20th century. A greater number of large and mid-sized processing facilities, including non-slaughter and specialized processors, rose to prominence on a national scale. In Colorado, Monfort became the first major cattle producer to integrate backwards into meatpacking. Major meatpacking firms cooperated legally through their trade association and lobby group, the American Meat Institute, but competing organizations in New York and San Francisco served smaller firms and regional interests. Mechanization and modernization across meatpacking further eliminated traditional abattoirs and butchershops.

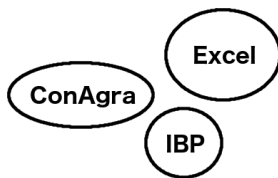
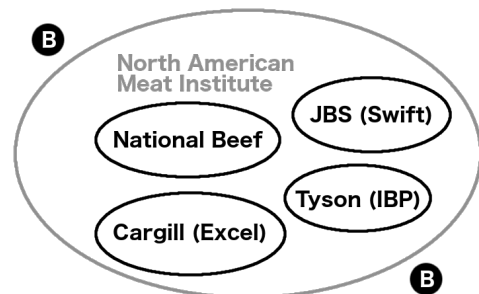


Figure D: Population of Beef Processing Firms, 1990 (Simplified). Starting in the 1960s, a new breed of meatpackers started opening large single-story plants near major cattle sources in Western States. Their technical innovation and anti-union policies enabled them to eclipse the older Chicago-based firms and functionally eliminate the need for butchering in the United States. By 1990, a new “big three” had captured over 80% of the beef market.

Figure 13.e: Population of Beef Processing Firms, 2017 (Simplified). High market concentration continues in the meatpacking industry with the top four producers controlling over 80% of beef production. The largest producer is an Arkansas-based chicken company that subsumed IBP. Cooperation has also been consolidated into a single trade association. There has also been a notable uptick of designer, full-service butcher shops operating concomitantly with the newly minted “big four.”



The Meat Trust

From the arrival of European settlers and European cows, first in the Southwest and later on the Eastern seaboard, until the mid-nineteenth century, the American beef economy was barely even an identifiable thing. Cattle served primarily subsistence and imperialist goals to feed settlers and secure land from their original native inhabitants, and wider market forces rarely touched the lives of American cattle.²¹⁹ Cattle lived inside or close to the communities that ate them, and they were slaughtered and processed on a local scale by a disconnected network of abattoirs and butcher shops. There was no such thing as a price for beef.

Prices emerged in the nineteenth century, but remained relatively unmanaged and relatively unimportant as an economic driver in the meat economy. Pioneer cattle producers in the West responded to hostile natives on the land they were stealing, competition from sheep growers and other cattle producers, theft by rustlers, sabotage by fence cutters, unpredictable weather and climate, variable ecological conditions, and inexact breeding patterns. The goal, then, was always to produce as many cattle as possible under the conditions; they did not respond to prices. Consumers did not adapt to prices much either. Over the whole course of the nineteenth century, urbanization and industrialization drove demand for meat steadily up, and developing urban tastes increasingly demanded beef over America's previous favourite—pork.²²⁰ Supply therefore trailed demand. This was the closest

²¹⁹ Virginia DeJohns Anderson, *Creatures of Empire: How Domestic Animals Transformed Early America* (Oxford, UK: Oxford UP, 2004).; William Cronon, *Changes in the Land: Indians, Colonists, and the Ecology of New England* (New York, NY: Macmillan, 2011).; Deana Dartt-Newton and Jon Erlandson, "Little choice for the Chumash: Colonialism, Cattle, and Coercion in Mission Period California," *The American Indian Quarterly* 30, no. 3 (2006): 416-430. There were, of course, notable exceptions in which market events had profound impacts on cattle populations before 1850. One good example was a rise in Spanish leather prices that encouraged a major liquidation of Spanish-owned cattle in California.

²²⁰ Roger Horowitz, *Putting meat on the American table: Taste, Technology, Transformation* (Baltimore, MD: Johns Hopkins UP, 2006).

the livestock and meat industries ever came to free enterprise and truly open markets, but it was chaotic and inadequate as a food distribution system.

This changed with a corporate revolution in meatpacking in the late nineteenth century, which concentrated and centralized much of the butchering of American livestock through new technologies, new labour process strategies, and especially economies of scale.²²¹ Following the lead of Gustavus Swift, a small cadre of American industrialists constructed a large-scale meat-packing hub in Chicago to slaughter, process, and deliver meat (especially beef) to growing urban markets in the east. They built factories of unprecedented size and reorganized the slaughtering process into discrete parts performed by different workers on what they called the “disassembly line.”²²² The Chicago packinghouses became a template for other industrialists even as they became notorious for horrible labour conditions. In an infamous exposé of labour conditions in the packinghouses, journalist Upton Sinclair observed: “It was all so very businesslike that one watched it fascinated. It was pork-making by machinery, pork-making by applied mathematics ... [B]ut this slaughtering machine ran on.”²²³

The Chicago meatpackers, called the “big four” or the “meat trust,” transitioned from horizontal integration and the destruction of small, local abattoirs and skilled butchers, to vertical integration across the entire beef supply chain. The meatpackers sought control of retail shops, advertising outlets, railroads, cold storage (refrigeration buildings), stockyards

²²¹ Tim Paulson, “From ‘Knife Men’ to ‘Streamlining with Curves’: Structure, Skill, and Gender in British Columbia’s Meat-Packing Industry,” *BC Studies* 193 (Spring 2017), 115-145.

²²² Alfred D. Chandler, Jr., *Scale and Scope: The Dynamics of Industrial Capitalism*, (Cambridge, MA: Harvard UP, 1990).; R.H. Coase, *The Firm, the Market, and the Law*, (Chicago, IL: University of Chicago Press, 1988).; Naomi R. Lamoreaux, *The Great Merger Movement in American Business, 1895-1904*, (Cambridge: Cambridge UP, 1985). Lewis Corey, *Meat and Man: A Study of Monopoly, Unionism, and Food Policy* (New York: Viking, 1950), 243-74; Horowitz, *Putting Meat* (2006), 19, 153; William Cronon, *Nature’s Metropolis: Chicago and the Great West* (New York: W.W. Norton, 1991), 229-230.

²²³ Upton Sinclair, *The Jungle* (New York: Signet Classics, 1980), 39-40.

(the sale points for live cattle), and sometimes beef cattle production. The first pricing mechanism in the United States for livestock and meat became the oligopoly and oligopsony of the big Chicago packers. An oligopoly is a concentration of a few sellers, and an oligopsony is a concentration of a few buyers, in an arena of market exchange. The Chicago meatpackers formed both, since they dominated the beef supply chain from the centre, dictating cattle prices at one end and carcass prices at the other.²²⁴

The meatpackers dramatically increased the volume of the meat supply, but in so doing they also seized power over pricing from producers, retailers, and consumers. The meatpackers used refrigerator technology to extend the lifespan of dead cow flesh, which transformed the commodity into something more fungible and manageable. Cold storage enabled the meatpackers to time and limit the flow of beef onto retail markets. More importantly, the meatpackers applied new work process technologies—including simple mechanization and labour management science—within their multi-story factories to greatly reduce the labour cost in each cut of beef. This drove retail prices down, but it has long been alleged that the large packers conspired not to compete with each other on prices and to keep them only low enough to destroy firms outside the club. Which they did. As the corporate concentration of meatpacking advanced, a few men in Chicago could effectively dictate the price of a steer to a rancher in Wyoming and the price of a beef roast to a consumer in New York. Neither was impressed.

Ranchers & Consumers

²²⁴ Mary Yeager, *Competition and Regulation: The Development of Oligopoly in the Meat Packing Industry*, (Greenwich, CT: Jai Press, 1981), xxiv, 235.; Margaret Walsh, *The Rise of the Midwestern Meat Packing Industry* (Lexington, KY: UP of Kentucky, 1982), 92, 145 n.1.; Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History, 1900-1916*, (London: Free Press of Glencoe, 1963), 51-2, 81. Please note: Kolko argues that while the packers clearly cooperated and tried to fix prices, they were not actually able to control the market in any meaningful way.

The meat trust drove both ranchers and consumers to organize creating countervailing power against corporations. These groups created economic organizations that were quite different from corporations or corporate oligopolies because they did not themselves engage in market transactions. That is, they formed organizations that included people directly involved in selling and buying beef, but that did not engage in buying and selling themselves. The success that ranchers and consumers had in altering the beef supply chain demonstrates the importance of these kinds of non-transaction organizations, as well as the importance of ideas and political advocacy, in re-shaping markets.

By the 1880s, most American cattle producers believed that depressed cattle prices were being manufactured by the Chicago meat trust. It is likely that the meat trust did contribute to lower cattle prices, but overstocking and violent competition also contributed the woes of Western cattle producers. An obvious option available to the larger cattle enterprises, known in Western lore as “cattle barons,” was to copy the industrial manufacturers’ model of cooperation to capture power over market pricing. Thus in 1887, a group of Western cattle interests formed the American Cattle Trust, which the *New York Times* called “an interesting example of a new class of commercial organizations, or conspiracies,” modeled after the Standard Oil and Cotton Seed Oil Trusts.²²⁵ The stated philosophy behind the American Cattle Trust was to fight monopoly with monopoly, which was a novel idea since no previous trusts had succeeded where trusts already existed.²²⁶

²²⁵ “The New ‘Trust,’” *New York Times* (New York, NY) [Hereafter: *NYT*], 14 May 1887, 4.

²²⁶ “American Cattle Trust Being Formed to Compete with Armour,” *Girard Press* (Girard, Kansas), 7 May 1887, 4.; “The American Cattle ‘Trust,’” *Chicago Tribune* (Chicago, IL) [Hereafter: *CT*], 10 May 1887, 4.; “Another Plan,” *Arizona Champion* (Peach Springs, AZ) [Hereafter: *AC*], 16 July 1887, 2.; C. E. Ball, “Historical Overview of Beef Production and Beef Organizations in the United States,” *Journal of Animal Science* 79 (2000), 3-4.

The American Cattle Trust succeeded in so far as it formed a massive land and cattle company unseen before in the American West. The trustees of the company included R. G. Head, president of the International Range Association; John T. Lyttle, executive of the Texas Live Stock Association; John L. Routt, President of the Colorado Stock Association; Thomas Stugis, president of the Union Cattle Company of Wyoming; and Nelse Morris, owner of one of the “big five” meatpacking companies!²²⁷ According to reports at the time of its dissolution, the American Cattle Trust acquired “over 300,000 acres of deeded land in Texas, Colorado, Wyoming and New Mexico; also 300,000 acres of leased state and school land [... and] upwards of 150,000 head of cattle.”²²⁸ The Western range men recruited Morris to secure stockyards and a major, modern Chicago packinghouse as well as all Morris’ retail contracts for the trust’s beef. The trust also secured sales contracts in Europe and financial backing worth \$12 million from banks in Chicago, New York, London, and Paris, including those of the famous Rothschilds.²²⁹

The American Cattle Trust did not necessarily serve the interests of all Western cattle producers. The trust recruited small producers by offering “any cattle owner to put his property in exchange for Trust certificates at \$25. It is believed by the organizers that the certificates will be worth par within eight months.”²³⁰ But one writer for the Chicago Tribune pointed out, “The obvious purpose for the American Cattle Trust is [...] to put the price of cattle not included in the trust down to the lowest feasible notch,” because that is what monopolies do.²³¹ The trust was a nearly immediate financial failure, and the Arizona

²²⁷ “Cattlemen Combine,” *The Humboldt Union* (Humboldt, Kansas), 14 May 1887, 2.; “American Cattle Trust Being Formed to Compete with Armour,” *Girard Press* (Girard, Kansas) [Hereafter: *GP*], 7 May 1887, 4.

²²⁸ “A \$15,000,000 Company,” *Fort Worth Daily Gazette*, 9 June 1890, 1.

²²⁹ “American Cattle Trust [...],” *GP*, 7 May 1887, 4.

²³⁰ “American Cattle Trust [...],” *GP*, 7 May 1887, 4.

²³¹ “The American Cattle “Trust,”” *CT*, 10 May 1887, 4.

Champion wondered if “the poor cattlemen might have found in the end that the monster they helped create was a worse foe than that they wished to suppress.”²³² The Live Stock and Produce Review accused the trustees of attempting to “unload upon other shoulders their unprofitable holdings” and called it “one of the most stupendous frauds that was ever attempted.”²³³ Despite the scathing obituaries that came three months after it formed, the American Cattle Trust continued on as a land and cattle company disabused of its radical rhetoric until it dissolved and recombined with an even greater number of land holdings as the Western Union Beef Company in 1890.²³⁴

The American Cattle Trust failed in part because small producers across the West were not willing to give up their land and economic autonomy, but producers still desired cooperation and organization. According to G. F. Patrick, a cattle producer from Pueblo, CO:

Turn in whatever direction you may, and large interests are protected associated effort... the insurance men... the national banks... the stockyard corporations... each speak to us with a single voice, hold us in the iron grip of a single strong hand... The single [cattleman], in his effort for terms and conditions, is fighting an individual battle against a thousand combined in one, against hundreds of thousands of dollars controlled by a single mind, the will of the organization. It is an unequal battle... Alone, the [cattleman] is nothing; in combination, everything.²³⁵

The next attempt at cooperative organization did not challenge producers’ status as individual competitors in the cattle market.

Western American cattle ranchers formed one of the first, one of the most successful, and one of the most enduring national livestock producers’ associations, which is now a particular economic organization found from Canada to Kenya.²³⁶ The violence and land management problems of late-nineteenth century rangelands produced many disconnected

²³² “Another Plan,” *AC*, 16 July 1887, 2.

²³³ *St Johns Herald* (St Johns, AZ), 7 July 1887, Page 1.

²³⁴ “A \$15,000,000 Company,” *Fort Worth Daily Gazette*, 9 June 1890, 1.

²³⁵ G.F. Patrick, “The Benefits to be Derived from Interstate Organization,” n.d., as quoted in “Association History,” *Beef USA: National Cattlemen’s Beef Association*, 2017, <http://www.beefusa.org/associationhistory.aspx>.

²³⁶ See, for example: *Kenya Livestock Producers Association*, 2017, <http://www.klpakenya.org>.

regional cattlemen’s organizations. Then in late January, 1898, Charles F. Martin and John W. Springer organized “The National Stock Growers Convention” in Denver, Colorado, and they enticed participants with “reduced rates on all railroads” as well as “probably the last barbeque that will ever be given in which buffalo will be a feature of the menu.”²³⁷ The convention drew over 1000 participants from 21 states and territories, and Springer estimated that they represented “a thousand million dollars of capital.”²³⁸ The assembled ranchers formed the “National Live Stock Association of the United States,” which changed name over time as it evicted sheep producers, welcomed cattle feeders and dairy producers, lost members, and subsumed competitors. In fact, the early association even included some railroad and meatpacking owners, but it was always controlled by the cattle producers, who renamed it the American National Cattlemen’s Association (NCA) in 1951. The NCA has, at times, been one of the most influential organizations in the beef economy.²³⁹

²³⁷ See the original poster advert from c.1897-8: “Association History,” *Beef USA: National Cattlemen’s Beef Association*, 2017, <http://www.beefusa.org/associationhistory.aspx>; The BBQ nearly eclipsed the business of the convention. The meal offered a plethora of rare game meats, and the crowds (estimated between 20 and 35 thousand) stampeded when it seemed the six tons of meat and 400 kegs of beer might not satiate all. See for example: “All Kinds of Game,” *Arkansas Democrat* (Little Rock, Arkansas), 27 January 1898, page 1.; “A Hungry Crowd,” *Daily News-Democrat* (Huntington, Indiana) 28 January 1898, page 1.; “A Grand Barbeque,” *Kansas City Journal* (Kansas City, Missouri) 19 January 1898, 1.; Charles A. Burmeister, “Six Decades of Rugged Individualism: The American National Cattlemen’s Association, 1898-1955,” *Agricultural History* 30, no. 4 (1956), 143-150.

²³⁸ “Stock Growers Meet in Denver,” *Angola Herald* (Angola, Indiana), 2 February 1898, Page 2.; “Stockmen Convene,” *Pittsburg Headlight* (Pittsburg, Kansas) 27 January 1898, page 5.

²³⁹ Producer trade associations are relatively undertheorized compared to other economic organizations like firms, unions, and government agencies. For more on business associations as an organizational form, please see: A. Gladstone, “Employers Associations in Comparative Perspective: Function and Activities.” *Employers Associations and Industrial Relation: A Comparative Study*, J.P. Windmuller and A. Gladstone, eds. (Oxford: Clarendon Press, 1984), 24-43.; W. Streeck, “Interest Heterogeneity and Organizational Capacity: Two Class Logics of Collective Action?” *Political Choice: Institutions, Rules, and the Limits of Rationality* R.M. Czada and A. Windhoff-Heritier, eds. (Westview Press, 1991).; F. Traxler, 2006. “Economic Internationalization and the Organizational Dilemma of Employer Associations: A Comparison of 20 OECD Countries,” *Governing Interests: Business Associations Facing Internationalization*, W. Streeck et al., eds. (London, UK: Routledge, 2006), 93-114.; A. Vatta, “Employers’ Organizations and Concertation: Internal Dynamics and Institutional Influence,” *European Journal of Industrial Relations* 5, no 3 (1999), 245–64.; P. Sheldon and L. Thornthwaite, “Members or Clients? Employer Associations, the Decentralization of Bargaining, and the Reorientation of Service Provision: Evidence from Europe and Australia,” *Business and Economic History On-Line* 3 (2005), 1–21.; M. Barry and A. Wilkinson, “Reconceptualising Employer Associations under Evolving Employment Relations: Countervailing Power Revisited,” *Work, Employment & Society* 25, no. 1, (2011), 149–262.; Stephen

Consumers also organized, but they never formed a sustained national organization of beef-eaters. During the cattle trust episode, the *New York Times* opined, “Unfortunately, the consumers are unable to create a Trust for their own protection.” Consumers did, however, organize and increase their political and economic influence over the beef supply chain in an episodic fashion from the 1880s to the present. In contrast to producers or industrial workers, who had perennial problems with the meatpackers and formed strong, sustained movements, consumers’ influence waxed and waned with episodes of heightened concern over health and safety or price. They were, nonetheless, significant. Consumers launched important campaigns to exert change in the beef supply in 1904, 1946, 1948, 1951, 1966, and 1973, with the first and last episodes being the greatest.²⁴⁰ Consumer activism tended to conflate the slightly contradictory dictums that beef should be healthful and that it should be cheap, which underwrites the American public’s Janus-faced relationship with the industrial food supply to this day.

Starting in 1882, so called “beef famines” became a regular feature of life in Eastern American cities. The 1882 beef famine drove the price of cattle up by five to six dollars per head, and though it did not last, the very knowledgeable General James S. Brisbin of Fort Keogh, Montana Territory, wrote to the *New York Herald* that it “has excited great interest in the West.” Brisbin’s letter was reprinted in papers all over the country, and he sounded the

Bell, “Rethinking the Role of the State: Explaining Business Collective Action at the Business Council of Australia,” *Polity* 40, no. 4 (2008), 464-487.; Alan Neustadtl and Dan Clawson, “Corporate Political Groupings: Does Ideology Unify Business Political Behavior?,” *American Sociological Review* 53, no. 2 (1988), 172-190.; Val Burrell, “Interlocking Directorates and Political Cohesion among Corporate Elites,” *American Journal of Sociology* 111, no. 1 (2005), 249-83.; John R. Bowman, “Achieving Capitalist Solidarity: Collective Action Among Norwegian Employers,” *Politics and Society* 26, no. 3 (1998), 303-336.; Koln Von Philipp Siebelt and Brachbach Julia Naskrent, “Opportunismus und begrenzte Rationalität in Verbundgruppen [Opportunism and Bounded Rationality in Trade Associations],” *ZfKE* 60, no. 3 (2012), 199-215. See also: R. Taylor Dennen, “Cattlemen’s associations and property rights in land in the American West,” *Explorations in Economic History* 13, no. 4 (1976), 423-436.

²⁴⁰ Based on newspaper surveys as well as the forthcoming work of Christopher Deutsch.

alarm for much greater problems to come. “It is my opinion that we have been in a beef famine for the past ten years,” he explained due to declining production relative to urban growth, “and the only wonder is that beef is as cheap as it is.”²⁴¹ Brisbin believed the capacity of the range and the profitability of cattle raising could be expanded to solve the problem, but, in fact, the rangeland cattle industry was in for rough years caused by droughts, harsh winters, and unstable prices. Beef famines were further exacerbated by labour disputes, which disrupted the supply coming (ever more exclusively) from the big Chicago packers. Major “beef famines” occurred or were threatened in 1887, 1902, 1904, 1913, 1943, and 1951.²⁴²

According to historian Maureen Ogle, who examined the 1902 beef famine in New York City, what this actually meant was that there was a shortage of prime cuts, like tenderloin—tenderloin is what filet mignon and porterhouse steaks come from—and the price rose as a consequence.²⁴³ The blowback from the packers’ leaps in efficient production and marketing was that by the turn of the century, American consumers absolutely insisted on high quality cuts of beef at ill-defined “reasonable” prices. Consumers were furious and they blamed the big packing corporations because they thought the capitalists engaged in shady dealings to hold beef off the market and set unfair prices.

Beef famines drove producers and consumers together, since they both blamed the meat trust for abusing markets and the food supply. In 1887, the *Oakland Tribune* reported that a beef famine appeared imminent due to heavy winter losses and disastrously low

²⁴¹ General James S. Brisbin, “The Cattle Situation,” *Courier-Journal* (Louisville, Kentucky), 5 August 1882, 7.

²⁴² Please note: “beef famine” also appeared in print at least a few times in every year from 1882-1951 except for for five. This is based on a nation-wide search of newspapers held in the *Newspapers.com* database.

²⁴³ Maureen Ogle, *In Meat We Trust: An Unexpected History of Carnivore America* (New York, NY: Houghton Mifflin Harcourt, 2013).

calving rates that spring. In the meantime, though, “cattle producers have been rushing their stock on the market at an unparalleled rate” only to incur losses. “The market price has been lower on account of the glut,” the writer explained, “for in Chicago alone over 300,000 head of cattle have been thrust on the market in the last thirty days.” Consumers in for shortages to come should have, at least, enjoyed lower prices and copious supply in the meantime, but it turned out, “The consumer [...] gets beef no cheaper because the producer sells it for so little.” The writer placed the blame squarely on the meat packers, who refused to share their profits in glut or dearth with anyone else on the supply chain.²⁴⁴

Beef famines proved unacceptable to the American public, who demanded and won important structural changes in the beef industry. The biggest moment came during the beef famine of 1904, which coincided with a Teamster’s strike and general labour unrest against the Chicago packers, which the famous muckraking journalist Upton Sinclair observed and wrote about in 1905. Sinclair’s semi-factual novel, *The Jungle*, garnered nearly total credit for the legislative changes that followed, but American consumers were already in revolt, when he published the expose in serial form. *The Jungle* served mainly to add disgust over poor sanitation to the concerns over prices and supply already levelled at the meatpackers. The tide on anti-packer sentiment drove President Theodore Roosevelt to press for the passage of the Meat Inspection Act of 1906 and the Federal Meat Inspection Act of 1907 that stipulated mandatory inspection of livestock and carcasses by the USDA for meat traded across state lines.

The meat trust was perhaps a more enduring thorn for the ranchers, since the large meatpackers owned the stockyards where cattle were bought and sold meaning they literally

²⁴⁴ “A prospective beef famine,” *Oakland Tribune*, 26 August 1887, 3.

owned the market on cattle. Ranchers continued to apply pressure on Congress after 1905 to address the structural problems of the industry. In the early twentieth century, ranchers found themselves in a new position of political power due to their influence with key western legislators and general cultural cachet. Ranchers convinced the justice department to conduct formal investigations into the big packers, which led to some of the most severe and important structural regulation of a major American manufacturing industry.

In 1904, the House of Representatives passed a resolution asking the Bureau of Corporations to investigate beef prices and profits directly in response to pressure from cattlemen,²⁴⁵ but the report did not go the way cattlemen wanted, since it concluded that the meatpacking industry was sufficiently competitive and benign. A decade later the cattlemen agitated for a second report, this time by the Federal Trade Commission, in 1917 (completed in 1919), which ultimately charged the packers with attempting to “defraud both producers and food consumers.”²⁴⁶ The FTC report accused the large packers of having controlling shares in over 500 smaller companies, dominating rail freight rates and cold storage space, and manipulating livestock markets.

Fearing criminal prosecution for violation of existing anti-trust laws, the meatpackers approached the Justice Department and proposed the Consent Decree, which solved the problem for all concerned parties except the cattlemen. The Consent Decree made packers legally responsible for voluntarily selling off their interests in public stockyards, railroads and terminals, marketing (newspapers), and public cold storage warehouses.²⁴⁷ The packers also promised to disassociate with retail butchers and wholesale grocers. The Consent Decree

²⁴⁵ Kolko, 75.

²⁴⁶ Ball (1998), 59, 64.

²⁴⁷ Ball (1998), 64.

failed to live up to cattlemen's expectations, however. The packers did not have to admit any guilt, the Consent Decree did not explicitly prohibit packers from influencing the livestock market, and the Consent Decree had no explicit provision for its enforcement.

The meatpackers formed their own non-transactional association in response to regulation, the American Meat Packers Association later the American Meat Institute, in 1906, which enabled legal coordination after the oligopoly.²⁴⁸ Thomas E. Wilson, owner of one of the largest meatpacking firms and President of the packers' association, tried to dissuade cattlemen from continuing any further with their push in Congress against the packer. Wilson argued, "We do not need legislation. What we need is cooperation between the producer, the packer and the government," but W.W. Turney of Texas captured the cattlemen's skepticism explaining, "There is going around the country today the slogan: 'Let us joins hands with the packers.' That is not the place to join hands. God knows the packers don't need your help."²⁴⁹ Ultimately, the cattlemen resolved to continue with their push for real legal regulation of the packing industry.

John B. Kendrick was President of the cattlemen's association and a U.S. Senator when he authored and introduced a bill to prevent vertical integration by meatpacking companies in 1919. Unsurprisingly, opponents of the bill argued that it was a conflict of interest for the cattlemen's president to write legislation regulation the meatpacking industry, but a similar House bill ultimately passed and became the Packers and Stockyards Act (P&SA) in 1921. The P&SA basically entrenched the Consent Decree in law, but it also placed industry regulation under the control of the Secretary of Agriculture (who incidentally

²⁴⁸ The reach of the AMI became quite wide. In the 1970s, AMI materials were in use in British Columbia. See: File 51, Box 12, Home Economics Branch Records GR1030, BC Archives.

²⁴⁹ Wilson quote from a speech to the Kansas Livestock Association (1919), as quoted in Ball (1998), 62.; Turney quoted in Ball (1998), 64-5.

was Henry C. Wallace, a Progressive grain farmer and another former cattlemen's association executive).²⁵⁰ The P&SA barred packers from engaging in "any unfair, unjustly discriminatory, or deceptive practice" or making any deals that had "the tendency or effect of restraining commerce or of creating a monopoly." It also prevented packers from owning major stockyards and forced them to pay producers for all stock received within twenty-four hours.²⁵¹ The P&SA enabled producers, through their representatives, to regulate the vertical integration of industrial meatpacking, and the NCA carefully watched and intervened in the activities of the USDA Packers and Stockyards Administration.²⁵² In fact, in 1957, the cattlemen fought a proposal to move the P&SA from the USDA to the FTC.²⁵³ The cattlemen had designed the P&SA to fall under their sphere of influence in the Department of Agriculture, and they made sure to keep it that way.

The regulation of meatpacking created institutional barriers to meatpackers dominating the cattle and beef market. This was a good thing, but it put pricing up for grabs. After 1921, the American state, consumers, ranchers, and new corporate organizations all vied over beef prices and the power to interpret what the free market wanted. New technologies for reading and reporting market data ultimately replaced the word sent down from the meatpackers, but the market still never became autonomous from the power struggles of its users. Further, the structural limits put on the meatpacking industry effectively dissolved the problem that joined consumers and producers. With meatpackers unable to appropriate cattle production, ranchers gained a new interest in high market prices.

²⁵⁰ Ball (1998), 66-7.

²⁵¹ USDA GIPSA PSP, "Packers and Stockyards Act, 1921," Online: https://www.gipsa.usda.gov/laws/law/PS_act.pdf.

²⁵² There are over ten full boxes of P&SA files and correspondence in the National Cattlemen's Association's archival collections making it one of the largest areas of concern for the organization.

²⁵³ Folder 5, Box 195, National Cattlemen's Association (U.S.) Records [Hereafter: NCA], American Heritage Center [Hereafter: AHC].

As early as 1930, the producers supported a modification of the Consent Decree to allow “packers to go into other lines” to give them “an even break with the chain stores [supermarkets],” which reveals how little they cared about monopolistic integration of the retailing end of the beef supply chain.²⁵⁴

Government Beef

After busting the meat trust, the American state became increasingly involved in managing live cattle and beef prices. This coincided with sweeping state management of the economy during depression and war years, but it was also a particular case. The federal government adopted a role on ensuring that the public would have access to—and ensuring that they would eat—steadily more and more meat. This aligned with the interests of ranchers in so far as they also wanted increased demand, but again it made pricing subject to conflict (largely because it became so manageable). The New Deal State aimed to raise cattle receipts, lower consumer beef prices, and smooth-out cyclical supply crises all by transferring economic management from the free market to professional human regulators. The chaos of free enterprise leading to corporate trust behaviour was exactly what motivated this action, but faith that the free market could do it better was also the biggest critique launched by ranchers and consumers.

In the 1930s, the New Deal Agricultural Adjustment Administration (AAA) sought to solve the problem of depressed cattle prices by reducing the cattle supply. AAA agents traveled to Western ranches, offered cash for farmers’ livestock, and then shot them and left. “Buy-and-slaughter,” which ranchers called “kill-for-cash,” probably saved producers faced with drought and plummeting beef prices, but it never garnered much support from cattlemen

²⁵⁴ “Executive Committee Minutes 1930,” Folder 2, Box 61, NCA, AHC.; Folder 10, Box 63, NCA, AHC.

who later waxed eloquent about the trauma of watching government agents shooting cattle and leaving them to rot.²⁵⁵ Apparently, cattlemen could handle sending animals to slaughter, but buy-and-slaughter mocked the value of their way of life. It is likely that kill for cash did not greatly distress ranchers at the time, but they remembered it as a great insult as ranchers increasingly opposed state intervention into beef pricing. This happened because the federal government switched rapidly from trying to raise beef prices to trying to hold them down.

During the Second World War (1941-1945), beef prices threatened to rise too high, and the state allied itself with consumers to stabilize the market. The Office of Price Administration (OPA) imposed strict price ceilings on beef, and women monitored prices at retail points on behalf of the agency. Still, consumers saw meatpackers and retailers as the culprits for high beef prices, but cattle producers saw the OPA and the emergent consumers' movement as a threat.²⁵⁶ The OPA was not actually a huge problem for producers in and of itself (the price of cattle actually returned to pre-depression levels by the end of the war anyway), but it did precipitate a problem by regulating prices at the end of the supply chain without adequately regulating supply. The OPA set the price of beef so artificially low that packers began holding back their stock partially in protest and partially in anticipation of the end of price controls. The government caved due to rampant black-market dealings in beef and the price of beef skyrocketed after 1946, which ultimately led to the "beefsteak election" of 1946 and the "Cattle Bust" of 1953, which will be discussed in detail shortly.

²⁵⁵ Ball (1998), 86, 90.; Ball (2000), 5.; See also: C. Roger Lambert, "The Drought Cattle Purchase, 1934-1935: Problems and Complaints," *Agricultural History* 45, no. 2 (April 1971), 85-93.; Theodore Salutos, "The New Deal and Farm Policy in the Great Plains," *Agricultural History* 43, no. 3 (July 1969), 345-356.

²⁵⁶ Meg Jacobs, "'How About Some Meat?': The Office of Price Administration, Consumption Politics, and State Building from the Bottom Up, 1941-1946," *Journal of American History* 84, no. 3 (1997), 910-941.

In the process, cattlemen and meatpackers became new allies. After the 1905 regulations, American Meat Packers organized as the American Meat Packers' Institute (later the American Meat Institute, AMI), and after the 1921 regulations they began seeking common ground with producers. This led to the creation of the Meat Board in 1933, which was a joint organization of producers, packers, and retailers with the purpose of increasing beef consumption, mostly through publicity and advertising.²⁵⁷ Droughts in 1934 and 1936 led to shortages, which led to high beef prices, which led to consumer resistance against beef. Per capita beef consumption dropped from 146 lbs in 1910 to 120 lbs in 1937, which Thomas Wilson, a meatpacker and chairman of the Meat Board, likened to 5,600,000 fewer head of cattle. Wilson spoke before the national cattlemen's convention in 1938 making the case for cooperation: "The packer is the merchant of the producer's commodity, and it is obvious they can both do a better job—not by throwing rocks at each other—but by working together in the solution of their problems."²⁵⁸

Wilson argued convincingly that regulation was not the way to manage prices: "These frequent and violent changes in prices have been one of the most difficult problems in our industry in recent years, and I doubt if any of us know the proper solution to it. Fluctuating markets are, after all, a part of our system of free and open competition. For example, the near-record prices for fancy cattle this summer were due to the keen competitive bidding of the eastern hotel and restaurant trade for the very limited supply of prime beef that was available. The live prices merely reflected the competition for the meat. Practically all of the

²⁵⁷ The Meat Board records are also held at the American Heritage Center, but they are not yet fully processed. I was able to view some of the materials to gain a basic understanding of the organization.

²⁵⁸ Thomas E. Wilson, "The Livestock and Meat Industry From a Packer's Viewpoint," Address before the annual convention of the NCA, Cheyenne, WY, 14 June 1938, Folder 8 "Miscellaneous - Reports, Reports, 1928-1958," Box 665, NCA, AHC.

improvements in this industry have been the direct result of keen competition. As desirable as it is to eliminate fluctuations, it should not be attempted in a way that would impair free and open competitive markets.” The solution was to get consumers to eat more beef. He explained that the Meat Board was spending 200,000 dollars a year on advertising, but he wanted to get it up to half a million. As long as supply and demand both just kept increasing forever, there would be no need for conflict in the beef supply chain.²⁵⁹

At the end of the war, it was not immediately clear whether the federal government would back off on meat prices. The political opposition to continued price ceilings by both cattlemen and meatpackers made a post-war OPA untenable in the simplest sense, but the rationale behind their opposition was ideologically interesting. The beef interests argued that the OPA and price controls had utterly failed because they could not reign in the real market. During the war, a vibrant black market in beef developed and undermined the goals of centralized economic control. It is impossible to say how much beef was traded on the black market in the 1940s, but observers in government and industry seemed to think it was a huge proportion. It is also difficult to say exactly what the black market was. There certainly would have been back-alley cash dealings (meatpacking workers are known to sell beef out of their cars at bars even today), but the black market also included mainstream retailers selling beef over the price ceiling through various holes in the system.²⁶⁰ The OPA system relied heavily on self-reporting and consumer-activist fact checking. Ranchers and livestock brokers could easily misreport sales or fudge their cattle grades to obscure prices, and consumer policing seemed to break down further west in cattle country. OPA reports

²⁵⁹ Wilson, 1938, Folder 8, Box 665, NCA, AHC.

²⁶⁰ Letter to William Wright, 1951, Folder 16 “Subject Files, Price Controls, Correspondence, 1951,” Box 358, NCA, AHC.

estimated that 80 to 100% of beef retailed in the Midwest sold over the price ceiling. The OPA rules also made exceptions for “custom kill” operations, which meant ranchers could slaughter their own cattle and sell directly to hotels, restaurants, and nightclubs to sidestep the visible market entirely.²⁶¹

The creation of a black market undermined the OPA’s goals on their own terms, since it meant the real consumer price of beef still rose, but beef interests argued further that it made free and legal enterprise impossible. William Clithero, Vice President of Armour, testified in 1946 in opposition to continued price controls, saying, “During the war these controls served the American public well, and the job done was a creditable one, but if the processing and distribution ends of the meat industry are to survive the controls must be relaxed so that the law-abiding elements can compete freely with those who disregard and violate the regulations.” Clithero claimed that legitimate packers were floundering because they couldn’t compete for cattle with those willing to buy over the ceiling, and every black market transaction forced others to join in and the “black market spreads and grows upon itself.” Clithero also highlighted how the black market undermined the health and safety goals of the industry: “Today the product of this industry is being booted around, killed in garages, shanties, and barns, without refrigeration, and the American housewife is being bilked to the extent of hundreds of millions of dollars annually. The black market is breaking down the morale and honesty of a great industry, and finally the producer will have to foot the bill.”²⁶²

²⁶¹ William S. Clithero [Vice President, Armour and Company], “Some Phases of the Black Market in Beef,” 28 March 1946, Folder 8 “Subject Files, Price Controls, Testimony, 1946,” Box 359, NCA, AHC.

²⁶² Clithero, 1946, Folder 8, Box 359, NCA, AHC.

The existence of the black market, even if it was overblown in these arguments, demonstrated that the beef economy could not be contained by government. It had a life of its own and regulation was futile. So Truman ended the price ceilings, for which he learned that failing to regulate was suicide.

The United States midterm elections of 1946 got the nickname, “the beefsteak election,” because President Truman and the Democrats squandered decades of Democrat control of Congress over the price of beef. Under pressure from cattle producers and meatpackers, Truman decided to end OPA price ceilings in June 1946. The retail price of beef rose 30%. Women consumers turned on the Democrats and granted Republicans control of the Senate and the House of Representatives. Truman was stunned, but June Shaw, a 32-year-old housewife from Illinois, was not. She entered and won a Chicago Sun contest to predict the election results for Illinois. When asked how she got a near perfect score, she replied: “Simple ... I just listened to what the ladies said while I was standing in the meat line.”²⁶³ Truman, ever the charmer, wrote in a speech (but never publicly delivered): “You've deserted your president for a mess of pottage, a piece of beef, a side of bacon. You've gone over to the powers of selfishness and greed.” While male legislators and policymakers did not learn to respect women’s consumer politics right away, they did learn to fear them. One commentator concluded, “a housewife who cannot get hamburger is more dangerous than Medea wronged.”²⁶⁴

It took just five years before the State would have to intervene in beef prices again. On 26 January 1951, under the auspices of the Korean emergency, the Truman government

²⁶³ “The Election: Issues & Men,” *Time*, 18 November 1946, <http://content.time.com/time/magazine/article/0,9171,777272,00.html>.

²⁶⁴ As quoted in William E. Leuchtenburg, “New Faces of 1946,” *Smithsonian Magazine*, November 2006, <http://www.smithsonianmag.com/history/new-faces-of-1946-135190660/#vVuSRV0AwmTb2kUT.99>.

again imposed a price ceiling on beef. The price of beef had risen steadily with the end of controls in 1946, and cattle producers felt they had a right to prosper after years of hardship. Consumers, on the other hand, boycotted beef to protest three prices three times between 1946 and 1951. After setting the ceiling, the government wanted to rollback the price further, and the issue became a “battleground between the Administration and the cattlemen.” The cattlemen drafted a report for Congress titled “A Common Sense Meat Program” that argued “Price controls are a clumsy approach in the war against inflation. They may cover inflation for a time, but they cause serious difficulty later on in form of scarcity and black market.” They accused Truman of trying to “scare the people into supporting a stronger price control program” with lies about the beef supply. Meanwhile DiSalle (head of the program) testified that cattlemen were the only ones not trying to help stop inflation branding “the livestock and meat industry as a bunch of crooks with the stated purpose to destroy meat price controls.” The government never instituted price rollbacks, and the ceiling was lifted on 6 February 1953.²⁶⁵

The unexpected consequence was actually a reduction in herds, which led to a 50% increase in the price of beef. Herds then swelled to record numbers in reaction, which in turn led to an even greater drop in the price of beef.²⁶⁶ On the heels of the price roller coaster came the worst drought in the West since the Dust Bowl of the 1930s. One cattle producer looked back: “We would prefer not to give the Government all the credit for breaking the cattle market. A nation-wide drought had a share in one of the biggest price breaks in the history of the industry.”²⁶⁷ It was enough to lead some cattlemen to suicide and to lead the

²⁶⁵ J. Edgar Dick [California Cattlemen’s Assoc.], “Will We have Price Wage Controls,” 22 Aug 1966, Folder 17 “Subject Files, Price Controls, Correspondence, 1966,” Box 358, NCA, AHC.

²⁶⁶ Ball (1998), 122.

²⁶⁷ Dick, 1966, Folder 17, Box 358, NCA, AHC.

federal government to offer the industry a bundle of relief measures including subsidized feed and rail freight rates.²⁶⁸

Some cattle ranchers sought direct subsidies, which became a contentious and divisive issue within the industry. In a 1972 speech, former Cattlemen's Association President Jay Taylor recalled that the post-Korea price collapse and subsequent drought divided cattlemen over whether or not to accept subsidy payments from the federal government. Taylor argued that most cattlemen still agreed that "free markets make free men" and that only an emergency of that magnitude could challenge cattlemen's commitment to avoiding government subsidies.²⁶⁹ In fact, subsidies led to a schism within the Cattlemen's Association and the forming of an independent organization of cattlemen accepting subsidies. However, the majority of cattlemen supported the anti-subsidy faction, and the independent organization floundered and passed away.

Cattlemen came out of the bust convinced that government regulation of beef markets led to instability and emboldened by their own success at fighting it. Price controls were once again suggested during the Vietnam-era inflation crisis of 1966, and an internal long-form memorandum on the lessons of 1951 stated "The livestock and meat industry came out of the battle of controls with a fairly good batting average, considering the tremendous pressure put on by the Administration to control the industry stock, lock, and barrel." "If there is a lesson to learn from the two years of controls on the cattle industry, it would be that cattlemen can win the big battles by becoming militant and not giving into those who would take away their

²⁶⁸ Ball (1998), 123.

²⁶⁹ Taylor quoted in Lyle Liggett, *"There is a Time and a Place ...": The History of the American National Cattlemen's Association* (New York: Newcomen Society in North America, 1972), 23-25.

freedom.”²⁷⁰ Ranchers successfully opposed price controls in 1966, but consumers also increased their activism against high “free-market” prices thereafter.

Boycott!

In addition to direct political pressure, and perhaps also to back up that political threat, consumer groups organized activism against the market itself through boycotts. Boycotting is the act of refusing to purchase a particular commodity or refusing to frequent a particular business for political reasons. Beef boycotts were an equal-and-opposite protest to ranchers’ and packers’ withholding of supply during low-price periods, and they provided evidence of consumers’ commitment to their vision of the beef market (as expressed through price). High prices, in theory, resulted from limited supply to meet demand. Boycotts threatened to break that pattern by eliminating demand entirely and causing financial losses all the way back up the supply chain. Boycotts were powerful economic actions, and they infuriated beef producers and their spokespeople in government.

From 1951 to 1965, beef prices remained stable. Perhaps a bit low for cattlemen’s tastes, but not severely so, and a steadily growing number of American consumers could afford beef. Beef became America’s favourite food, and individual Americans increased the proportion of beef in their diets as purchasing power doubled from 1938 to 1965.²⁷¹ Beef eating marked the ascent of the American middle class, but it posed renewed risk of price crises as beef became a staple. By 1973, American’s would be spending 16.6% of their total food dollar on beef making them very sensitive to price changes.²⁷²

²⁷⁰ Dick, 1966, Folder 17, Box 358, NCA, AHC.

²⁷¹ Lee Olson, “What’s Behind Housewives’ Revolt? Grocers, Politicians, Farmers Jarred by Boycott of Stores,” *The Sunday Denver Post* (Denver, CO), 23 Oct 1966, Folder 6 “Subject Files, Boycotts, Clippings, 1966-1967,” Box 212, NCA, AHC.

²⁷² “Statement of the American National Cattlemen’s Association to the House Committee on Agriculture, Subcommittee on Department Operation, on the Subject of Food Prices,” 29 March 1973, Folder “Misc. Statements, Statements March 1973,” Box 668, NCA, AHC.

Beef prices rose steadily through 1965 and 1966 until a boycott broke out in Denver and Phoenix in October and spread to cities across the country. The nation's men in power were not sensitive to the consumer issue. The *Denver Post*, for example, speculated that Orville Freeman's (Sec of Ag.) position sounded something like: "Avoid food questions if possible. If drawn into the debate take the side of the farmers because they're organized and the housewives aren't." But they did get organized. Donna Logan of the *Denver Post* wrote: "It's as though they've found a cause, those housewives. Tired of idle-hour coffees in their neighbor's kitchen, they're making the most of their consumer power."²⁷³ Consumer organizations exploited this assumption that housewives were innocent or apolitical.

The 1966 boycott targeted supermarket chains, which consumers accused of driving up prices through promotional schemes like stamps. The boycotters did not target cattlemen directly, but producers were nonetheless enraged—mainly by President Johnson's suggestion that women try eating other meats and cheaper beef cuts.²⁷⁴ A Colorado cattle feeder complained: "We've been subsidizing consumers at our own expense for 10 years."²⁷⁵ Many cattle producers also targeted supermarkets for using beef as a promotional item. Ranchers believed retailers used beef as a "loss leader" to bring consumers in to spend high on non-food items like fancy shampoos, which left consumers mis-educated about the proper price of beef. The 1966 boycotts ended in November, and the whole issue faded as beef prices fell back to pre 1965 levels.

1966 was not a determinative boycott, but it was big and it foreshadowed the possibilities for a greater consumer revolt. Rose West, one of the major leaders behind the

²⁷³ Donna Logan, "The Housewives: What Now?" Reprinted from *Denver Post*, 31 Jan-3 Feb 1967, as an NCA broadsheet, Folder 7 "Subject Files, Boycotts, Correspondence, 1966-1967," Box 346, NCA, AHC.

²⁷⁴ Ball (1998).

²⁷⁵ Ovid Bay, "Who Won the Food Price War?" *Farm Journal*, Dec 1966.

boycotts in Denver, doubted the boycott had a lasting impact on the beef economy: “The boycott did lower prices, but it’s only a temporary thing. As soon as we turn our backs they (the prices) will go back up.” Nonetheless, West founded Denver Housewives for Lower Food Prices, United National Consumers Association, and National Housewives for Lower Prices to continue agitating on behalf of consumers. West’s political acumen derived from her lifelong interest in the Democratic party and experience as an aid to Estes Kefauver.²⁷⁶ Her rival, Ruth Kane, a Red-haired professional bowler, Republican, and wife of a business pundit, drew on her experience organizing block parties to support her bowling league. Kane accused West’s groups of political capture and accused the boycott of a dangerous anti-business agenda. Kane thought most American women were basically lazy and ignorant. But she, too, saw the boycott as proof that women could organize, and she planned to continue educating housewives on economics and politics.²⁷⁷ Even if the 1966 boycott was not strictly successful, it was educational. And it did succeed in so far as the majority of delegates running in Colorado that month endorsed the boycott providing proof of concept for consumer activism.

As with gas, 1973 was a bad year for food prices. Inflation on groceries reached 20% that year, and beef was one of the worst contributors. The combination of a corn blight out of Florida and a big wheat deal with the Soviet Union served to drive up the price of feed grain for cattle. At the same time severe winter storms in Texas, Colorado, and New Mexico killed thousands of cattle, and—because of snow on the ground—forced ranchers to feed more of

²⁷⁶ Please see: Samir Sonti, “The Price of Prosperity: Inflation and the Limits of the New Deal Order,” PhD. dissertation, University of California, Santa Barbara, 2016.

²⁷⁷ Logan.

their stock with grains.²⁷⁸ The price of beef had risen steadily since the mid 1950s, but early in 1973 it spiked. A sign of the times came in late March, when a burglar broke into a home in Wilmington, DE, and stole forty hamburgers and forty steaks from the freezer taking nothing else.²⁷⁹

This time around, consumers blamed it squarely on the producers. By March, consumers had already organized a nation-wide protest on meat prices demanding a general rollback of food prices. Housewives organizations and student groups pledged meatless Tuesdays and Thursdays, and thousands of women in major cities held demonstrations and picketed supermarkets. One organization named UPD (Until Prices Drop) convinced supermarkets to place boxes at the tills where customers could sign and leave their grocery receipts for a mass mail-in to the President. The issue spawned a flourishing of new organizations—including FIT (Fight Inflation Together), WUA (Women United for Action), STOP (Stop These Outrageous Prices), WASP (Women Against Soaring Prices), SCRIMP (Save Cash Reduce Immediately Meat Prices), and LAMP (Ladies Against Meat Prices)—and after a government report, released on 21 March, revealed that meat prices had risen 5.4% in a month, they all promised and prepared for an all-out boycott on beef.²⁸⁰

The Nixon administration responded by disowning the boycott and announcing a ceiling on meat prices on 29 March. It was a remarkable concession given that just two weeks earlier Nixon still insisted that “You can be very sure that if I thought [...] price

²⁷⁸ Ball (1998).; Ball (2000).; Kyle A. Winter, “The Wreck: The Cattle Market Crash of 1973-1974 in the Texas Panhandle,” MA. thesis, Baylor University, 2005.

²⁷⁹ “Meat Prices/Boycott,” *Evening News*, NBC, 27 March 1973, *Television News Archive*.

²⁸⁰ “Changing Farm Policy to Cut Food Prices,” *Time*, 9 April 1973, 17-25.; Will Lissner, “Consumers Rally for Meat Boycott: Mobilization On—Midwest Farmers Plan to Withhold Cattle in Countermove,” *NYT*, 30 March 1973, 1.

controls on farms would work, I would impose them instantly.”²⁸¹ There was talk in the Whitehouse of the 1946 “beefsteak election” and of British Prime Minister Harold Wilson’s alleged election loss in 1970 over similar issues. Nixon was also worried about organized labour, which had joined in the demands for food price rollbacks as several unions in major industries prepared for important contract negotiations. Nixon acquiesced, “the major weak spot in our fight against inflation is in the area of meat.” The secretary of agriculture, Earl Butz, sympathized with consumers, but he was less submissive when they accused him of not doing enough to help beef prices. “You won’t get me to apologize for high meat prices,” He retorted, “I’m spending money like a drunken sailor” on subsidies.²⁸²

The ceiling did little to calm consumers, who launched a one-week total boycott on Sunday, 1 April. The *New York Times* reported on a scene from Monday: “a woman identified only as Frances furtively put a roast in her cart. ‘But it’s on sale. What can I do?’ she asked plaintively. ‘Gee, maybe I shouldn’t. I feel terrible now.’ Suddenly, a friend, Roslyn Greenberg, descended upon her. ‘How can you do that you miserable thing. You’re a traitor,’ she told Frances.”²⁸³ Newspapers reported similar scenes around the country.²⁸⁴ Consumer groups staged various demonstrations and publicity stunts to draw attention to the boycott. In Washington DC, “an armored truck pulled up at a rally outside the White House and a cut of sirloin steak was carried out under armed guard.” In Connecticut, local Democrats hosted a “Nixonburger-Burn-off” with a contest for the best meatless dishes. In Berkeley, an organization made a ten-pound sausage inscribed with the names of thousands

²⁸¹ Don Irwin, “Nixon Rejects Food Boycott, New Curbs: Declares that Thrifty Buying is the Answer,” *Los Angeles Times* [Hereafter: *LAT*], 16 March 1973, A1.

²⁸² “Changing Farm Policy [...],” *Time*, (1973).; Lissner, *NYT*, 30 March 1973, 1.

²⁸³ “Meat Sales Drop 80% in Places as the Boycott Begins: Middle-Income Sections are Strong Backers, but Pattern Varies,” *NYT*, 3 April 1973, 1.

²⁸⁴ “Sales of Meat Start Dropping as Week-Long Boycott Begins,” *LAT*, 2 April 1973, A1.

of boycotters and sent it to governor Ronald Reagan.²⁸⁵ Sherry Wyler of Drummond Ireland, MI, mailed Nixon four-hundred peanut-butter-and-jelly sandwiches to send the message, you eat meatless!²⁸⁶

The boycott was an organizational triumph. Although clearly a middle-class initiative, the boycott was especially successful among poorer consumers at discount retailers. One clerk remarked that “Even the food-stamp trade seems to be holding back in buying meat.”²⁸⁷ The price of meat made activists out of women who never dreamed of it. One customer reported, “I’ve never protested anything before,” but she could not watch the price of bologna rise 40 cents in under a year and do nothing. One of the most active and successful organizers was a Californian named June Foray Donovan. Donovan was a voice actress for cartoons, and a martini drinker. Unexpectedly, she decided to tackle the meat-price issue, and she became the chair of FIT, which achieved the most widespread organization of consumers during the boycotts. During the month of April, Donovan was on national news, international news (Canada—but it counts), and the front page of several major papers. Nixon flew her to Washington to negotiate.²⁸⁸ “I think it’s the phenomenon of the decade” Donovan gloated, “I think this is the only consumer revolt that has ever hit with this magnitude.”²⁸⁹

The boycott had an immediate impact. Markets in New York reported meat sales down 80-95% from usual and estimated that only 1 out of 47 shopping carts had meat in it. The previous week, the threat of things to come started a panic at the CME (Chicago Mercantile Exchange) that caused trading prices on live cattle and hogs to plunge. NCA

²⁸⁵ Dorothy Townsend, “All Systems ‘Go’ for Boycott: Homespun War on High Cost of Meat Begins 1-Week Blitz,” *LAT*, 1 April 1973, C3.

²⁸⁶ “Meat Prices/Boycott,” *Evening News*, NBC, 16 March 1973, *Television News Archive*.

²⁸⁷ Richard J. H. Johnston, “Cut-Rate Butcher Reports Boycott has Cut Deep,” *NYT*, 5 April 1973, 38.

²⁸⁸ Jean Bennett, “Giving Meat Industry a FIT by Fighting Inflation Together,” *LAT*, 22 March 1973, J1.

²⁸⁹ Dorothy Townsend, “All Systems ‘Go’ for Boycott: Homespun War on High Cost of Meat Begins 1-Week Blitz,” *LAT*, 1 April 1973, C3.

President Gordon Van Vleck later testified that: “The entire beef industry has sustained operating losses of \$5 billion, plus a reduction in inventory value” from the 1973 crash.²⁹⁰ Many state representatives pleaded with consumers to back down, including governor of California, Ronald Reagan, who told consumers, “it isn’t as simple as just walking around with a picket sign.” “If I am right, and I think I am right,” Reagan reasoned, “acts of God had something to do with the present food prices. I’m not in favor of boycotting Him.”²⁹¹

Producers and meatpackers pleaded with consumers to be reasonable. A Texas rancher named R. L. Bliss argued that historically prices had been too low and only now had “your average rancher begun to pull himself up out of the mud.” Bliss claimed that until the recent price rise, “ranchers were working for nothing—or they were losing money. Now, they’re just getting a fair return.” Nevertheless, he sympathized with consumers and apologized, saying “All of a sudden it looks like the meat industry is trying to play catch-up for a 10-year period—all in the time span of about 90 days.” An executive of Missouri Beef Packers explained, “last year—our profit margin was 6/10ths of 1%.” “This isn’t an original thought but it’s true,” he concluded, “We in agriculture can no longer overcome inflation through gains in efficiency. The housewife can no longer balance her budget at the grocery store.”²⁹² In reality, producers reported double the return on investment they normally

²⁹⁰ Van Vleck, testimony before the Senate Agriculture Committee in 1975, as quoted in Ball (2000), 6.

²⁹¹ H.J. Maidenberg, “Prices of Meat Futures Tumble: Threat of Consumer Action and Federal Action Reflected,” *NYT*, 29 March 1973, 69.; “Changing Farm Policy [..],” *Time*, (1973).; Deirdre Carmody, “Consumers Scoff at Ceiling and Step Up Boycott Plans,” *NYT*, 31 March 1973, 17.; Tom Goff, “Reagan Calls Consumer Meat Boycott Pointless: Says Price will be Forced Down by Law of Supply, Demand,” *LAT*, 28 March 1973, A3.

²⁹² Everett Groseclose, “Hoof to hamburger: Following Cattle Herd to market Helps Show Why Meat’s So Costly,” *Wall Street Journal* [Hereafter: *WSJ*], 24 May 1973, 1.

expected for cattle sold in 1972 and early 1973, and packers insulated themselves by laying off over 20,000 butchers.²⁹³

In response to consumer activism, ranch women formed countervailing organizations to subdue urban women's attacks from a position of mutual understanding. When the male officers of the NCA observed the rise of consumer activism against meat prices, they identified hysteric, uninformed women as the root cause. The NCA decided to support a parallel organization of the mothers, wives, and daughters of ranchers so that 'their women' could speak some sense into the urban women causing ranchers such grief. However, the NCA's chauvinist rationale need not detract from the legitimate organizing rural women conducted or from the underlying wisdom of the strategy. The mothers, wives, and daughters of ranchers were, of course and in fact, generally ranchers, too, and they understood the complicated environment and economics of rangeland beef production as well as anyone. According to Hailey Wilmer and Maria E. Fernandez-Gimenez, women often carried knowledge across generations and were responsible for understanding and sharing the culture and management traditions of past generations, which made them acutely aware of changing conditions over time.²⁹⁴ In addition to their range and barn work, women carried the majority burden of managing the family economy which ran just as thin as it did for the urban women facing high beef prices.

Ranch women challenged the strong gendered framing of the beef price dispute. Consumer activists self-identified as "housewives" and reluctant female political actors.

²⁹³ Remarkably, the Amalgamated Meatcutters and Butcher Workmen still fully supported the boycott. "20,000 Butchers Out of Work from Boycott," *CT*, 6 April 1973, 3.

²⁹⁴ Wilmer and Fernandez-Gimenez argue there is relatively little information on ranch women (mostly biographies and memoirs) and almost a total lack of gender analysis in the rangelands management and science literature. However, women and women's work are "key drivers of change in rangeland ecosystems." Hailey Wilmer and Maria E. Fernandez-Gimenez, "Voices of Change: Narratives from Ranching Women of the Southwestern United States," *Rangeland Ecology and Management* 69 (2016), 151, 152-3.

Consumers took advantage of ranchers' machismo and remarkable ignorance about women's lives or the way grocery prices work to cast a narrative of greedy men forcing up food prices without regard to the proper nourishment of the nation's children. Male ranchers could not help but confirm the narrative because they were absolutely offended by the very notion of city-slicking females telling them what they can or cannot do with their dollars on their land. Male ranchers publicly accused the consumers of failing to understand supply and demand; failing to understand the history of (artificially low) beef prices; and, most often, of failing to understand that they could afford beef if they didn't spend all their damn money on their damn hair at the damn beauty parlour. Sadly, the ranchers' narrative was almost equally effective. Either way, ranch women bridged the colossal gulf of gendered distrust and misunderstanding. They could present a sound argument for the importance of beef prices that supported a ranch family's livelihood without slandering the majority of the population of the country. Ranch women explained that rural and urban families both wanted the same thing and faced similar constraints.

Not to be outdone by the urban housewives, the ranch women called their organization, "The CowBelles." The CowBelles received some material support from the NCA, but they became functionally autonomous. The CowBelles made press releases and held publicity events to explain how beef prices affected the lives of women and children in rural America.²⁹⁵

In 1973, they travelled to New York city and Washington DC during the boycotts as a "beef truth squad" and "Eastern Chautauqua" to "reassure Mrs. America about beef

²⁹⁵ Please see: American National Cattlewomen Records, 1951-2016, American Heritage Center.

prices.”²⁹⁶ “The American housewife is being panicked by political opportunists,” charged Marie Tyler, a North Dakota rancher’s wife (who was, in fact, chairman of the Industry Information Council for the NCA). Tyler said boycotts were “not helpful” because “They confuse the issue by creating pressures for simplistic solutions—which can cause even greater economic disruption.” “We’re all concerned, along with the housewife, over high prices,” Tyler said, “And we beef producers are doing our best to hold the line on prices the only realistic way—by increasing supply, with breeder herds now at record levels.” “The ill-conceived pressures of consumer activists who do not choose to understand the supply-demand-price interaction of a free market,” Tyler further explained, “creates very real danger of skyrocketing prices to unimagined levels. Any tampering with the beef producer’s already narrow profit margin—which can run as low as 3% on investment, as compared to a savings bank interest of 5%—can trigger a sharp reduction, not to say the liquidation of herds.” “If current demands for beef from an increasingly affluent population has pushed prices to where they stand today, despite record production, imagine what would happen to prices following that sort of slash in beef output!”

Consumer activists in New York confronted the truth squad cursing them for using beef cuts as props when local women could not even afford them. One woman shouted “Don’t tell me you know about being poor. Have you visited Harlem? Have you ever seen children with cracked lips from eating lead paint?” The CowBelles were equally unsympathetic to New York women: “Look how many of them smoke [...] And I’ll bet they all have television sets. [...] I’m not saying they shouldn’t, but we all have so much these days. I bet if you looked at their shopping carts, you’d see that their food costs include hair

²⁹⁶ “The Eastern Chautauqua: A preliminary report,” by Ellis Associates, in “Scrapbooks,” Folders 1-3, Box 678, NCA, AHC.

spray, deodorants, and paper products.” The chautauqua was a success in so far as the CowBelles got equal if not greater media coverage to the boycotters in many outlets, and many reports portrayed boycotters as an irrational mob.²⁹⁷ The CowBelles could not, however, reverse the trends that Tyler predicted would cause the liquidation of the American cattle herd.

Within a week of the boycott’s end, newspapers began reporting the price of beef’s recovery to the pre-boycott ceiling. Ranchers and government officials explained smugly that a one-week boycott could not disrupt the mighty invisible hand of the market. However, before the year was through, the price of beef would ultimately crash so hard that the price of beef as well as the American cattle population would never recover. Ranchers called it the “cattle wreck,” and it was an unmitigated economic disaster.

Cattle ranchers and feedlot operators were furious with both the boycott and Nixon’s price controls, and they withheld as much stock as possible off market in anticipation of higher prices when the ceiling lifted. Ranchers, in particular, were personally offended because many consumers accused Western cattlemen of growing fat and rich at the expense of hungry middle-class American families. Ranchers were enraged and many of them refused to give in and sell low. On the first business day of the boycott, the stockyards of Sioux City, IA, reported receiving half as many cattle as usual for a Monday.²⁹⁸ Even if producers wanted to sell, with the price ceilings set many buyers just did not show up.²⁹⁹

²⁹⁷ “The Eastern Chautauqua: A preliminary report,” by Ellis Associates, in “Scrapbooks,” Folders 1-3, Box 678, NCA, AHC.

²⁹⁸ “Meat Boycott,” *Evening News*, NBC, 2 April 1973, *Television News Archive*.

²⁹⁹ “Meat Retailers Say Boycott Slashed Sales But Prices Remain Tied to Wholesale Costs,” *WSJ*, 9 April 1973, 4.

On 12 September 1973, Nixon lifted the beef ceiling, and thousands of cattle flooded onto the market. Many of the cattle were overweight, too, since they had been waiting at feedlots. In 1973 the optimum weight for steers was about 1050 pounds, but feeders sold cattle weighing 1300 pounds and more meaning that much more beef on the market. From August to November, the price for choice steers fell 33%, and feeders lost about \$100 to \$200 per head. Bankruptcies and consolidation followed, and the American cattle herd has declined steadily ever since.³⁰⁰

Christopher Deutsche argues that the era of meat activism was a period of “dietary citizenship” for American women, who learned to engage directly in national politics and economics. Deutsche cites Allen Mustow’s 1964 quip that meat prices served as “the housewife’s personal inflation barometer” to capture the way beef prices and boycotts made economic policy visceral for real families.³⁰¹ Beef prices and the gendered character of consumer-price politics also drew ranch women into more active political and economic engagement, and a woman was elected President of the NCA less than ten years later. However, consumer activism on beef prices and consumers’ political impact on the beef supply chain ended abruptly in 1973.

After 1973, consumer resistance was less focused, and has had only limited impacts such as removing “pink slime” from hamburgers at McDonald’s and school lunch programs for some of the nation’s children. “Pink slime” is a low-cost beef additive used to make ground beef cheaper and leaner. It was FDA approved in 1992 and is typical of the declining health and quality standards of the US food supply in the 1990s and 2000s. Several

³⁰⁰ Ball (1998), 181.

³⁰¹ Christopher Deutsche, forthcoming.; Allen Matusow, *Farm Policies and Politics in the Truman Years* (Cambridge, MA: Harvard University Press, 1967), 232.

fast-food restaurants voluntarily dropped the product, and a Change.org petition led the USDA to give school districts the option of refusing it (if they could afford to pay for pure ground beef). In general, heightened consumer concern over meat following the release of important books (like Schlosser's *Fast Food Nation*) or news reports (like the 2012 ABC report on "pink slime" that is now the subject of a 2-billion-dollar lawsuit) have not fundamentally altered the structure of the beef supply.

Consumer concerns rarely drive Americans to the streets any more, and they can often be dispensed with through disingenuous corporate advertising.³⁰² For example, McDonald's in my current home of Vancouver labels their Filet-o-Fish sandwich with, "wild caught [...] sustainably sourced," and their McChicken sandwich with, "not without Canadian chicken farmers." This is typical corporate "green-washing" combined with "farm-washing" for the Michael Pollan era.³⁰³ It is also interesting that these efforts focus especially on non-beef options. Consumer activism, of the kind that was motivated by beef prices, has become toothless in part because beef has become very cheap and because Americans eat other things.

Diet as Market

The cattle wreck of 1970s that broke the beef industry coincided with changes in the marketing, industrial processing, and international trading of beef that will all be discussed in the following chapters, but the most stunning and sudden change was in American beef-eating. Up to 1976, each generation of Americans ate more beef than the last, then all-at-once

³⁰² It is important to state here that this is not true on a global scale, since foreign consumers and consumer activism became more important to the US food supply from the 1980s to the present.

³⁰³ David A. Cleveland, *Balancing on a Planet: The Future of Food and Agriculture* (Berkeley, CA: University of California Press, 2013).

they started eating less.³⁰⁴ In 1954, beef industry experts estimated that domestic per capita beef consumption would be up to two hundred pounds by 2000.³⁰⁵ In reality, beef consumption declined from roughly 90 to 65 pounds per person between 1976 and 2000. Each beef famine and each boycott challenged American consumers' reliance on beef, and over time they learned to eat other things. By 1976, consumers were so fed-up with the beef industry that they reversed a decades long trend of beef consumption fostered by both industry and state policy. The beef market existed in the bellies of the people, and manipulating diet was a way to manipulate the market. Markets are made from rules, and for a time, the rule in America was to eat beef, and then it was not. The history of beef consumption lays bare the absurdity that supply and demand might exist separately from politics, society, or culture.

During the beef boycotts, government experts, packers, and ranchers all argued that high prices were a natural free-market outcome of Americans' natural desire for delicious, nutritious beef. All those groups also worked desperately to increase demand by convincing the population that beef was delicious and nutritious. Boycotts and the resistance against them amounted to another political battle over whose market manipulations represented the true desires of the free market and whose were artificial regulations better suited to Communist totalitarians.

One of the few things that united producers and manufacturers was the desire to make American consumers eat more beef. Advertising was a major expenditure for both the NCA

³⁰⁴ Barbara Young, et al. eds., *AMI, American Meat Institute: Centennial Celebration, 100 years of Industry Service: The National Provisioner's Tribute to the American Meat Institute*, ([Chicago?]: National Provisioner, 2006), 54.; Eliza, Barclay, "A Nation of Meat Eaters: See How it All Adds Up," *NPR*, 27 June 2012, <http://www.npr.org/blogs/thesalt/2012/06/27/155527365/visualizing-a-nation-of-meat-eaters>.

³⁰⁵ Young, 63.

and AMI, and they formed joint-interest organizations like the Meat Board to further advertising goals. The Meat Board distributed full-colour posters of juicy beef to retailers; contracted and disseminated scientific studies on the healthfulness and sustainability of beef protein; published recipe books on how to use all the different beef cuts; and attacked (by counter-advertising or lawsuits) any articles or stories linking beef to disease or obesity that leaked into women's magazines or television news.³⁰⁶ Despite the rhetoric that beef prices were an uncontrollable fact of economic demand, the beef industry continuously demanded that the people demand more. Anything that lowered demand was an artificial, slanderous, anti-American-values abuse of free-market supply and demand principles.

The federal government also wanted people to eat more beef partly due to pressure from the beef industry and partly due to the ideology that free and prosperous societies eat more meat. As the Marxist economist, Werner Sombart, whined in his 1906 *Why is there no Socialism in the United States*, “all the socialist utopias have foundered upon roast beef and apple pie.” In the twentieth century, many Americans believed that what set them apart and above the Soviets was the availability of affordable beef for everyone. In fact, the failure of this aspiration to match reality for all Americans led to a bizarre ongoing stereotype linking Black Americans to chicken-eating as if that were an inherently inferior way of eating. The federal government drove up beef-eating by subsidizing beef production on lands it owned; funding health-and-safety inspection and grading programs; privileging beef in school lunch and food stamps programs; buying beef for the military; making beef a core item of national dietary policy; and, of course, by scolding boycotters and others who dared to challenge the supremacy of US beef.³⁰⁷ For decades, it worked.

³⁰⁶ Meat Board Records (unprocessed), AHC.

³⁰⁷ Ball (1998).; Deutsch, forthcoming.

At the same time it engaged in all sorts of practices to distribute beef outside the open market, the federal government also worked to ensure that the market price of beef remained sufficiently high to keep the beef industry happy. During an exceedingly poorly attended set of Senate hearings on “Agriculture-Environmental and Consumer Protection” in March 1972—many left in the first fifteen minutes because the famous ITT trust hearings were happening at the same time down the hall—the following exchange took place between the chair of the committee and the secretary of agriculture:

Senator McGee: To what do you attribute the present favorable price of beef? What accounts for this?
Very often when other Secretaries have been in here, we have been beating them over the head because the price of beef was down and the market was suffering as a result.

Secretary Butz: Do I infer from that, that if I want to be happy before this committee, I must not let the price of beef go down?

Senator McGee: Yes.

Secretary Butz: Your message comes through, Mr. Chairman.³⁰⁸

In reality, the USDA worked systematically—though overall unsuccessfully—against market forces to stabilize and drive-up the price of beef. It was not really a secret, but they lied about it anyway.

All that work to make Americans eat beef and make them pay top-dollar for it fell apart because beef famines and boycotts revealed an American could survive without beef. Trying not to eat beef was a recurring theme especially in the humour sections of American media during each shortage or boycott. In 1904, John Kendrick Bangs, “The Genial Idiot” column devoted fully have a news page to the beef famine:

“Good morning, Doctor,” said the Idiot cheerfully as he entered the breakfast room, and picked up the morning paper. “Now that the effects of the beef strike are coming home to roast I suppose we’ll have to live on hash for a little while, unless our beloved landlady with her accustomed foresight has

³⁰⁸ “Agriculture-Environmental and Consumer Protection for Fiscal Year 1973,” Hearings before a Subcommittee of the Committee on Appropriations, United States Senate, 92nd Cong., 2nd Sess., (6 march 1972), 65.

provided her larder with a yoke or two of steers on the hoof from whom we may cut a nice fresh steak every morning.”

“It won’t do you any harm to give up meat for a little while,” said the Doctor. “This beef strike that we have been going through has been a blessing in disguise. People eat too much meat nowadays and it is about time there was some kind of a let-up. I’ve been thinking over your case for some time past and it has seemed to me that you wouldn’t be quite so chesty if you beefed less and thought more.”

It is all a gag, but the voice of the doctor reveals the existence of an opinion even in 1904 that the beef industry and government sought to suppress. The idiot goes on to outline his plan to eat alternatives to beef:

“If this beef famine were to come to the worst [...] I’d make a bee line for the Navy Yard and lay stock in a hard tack. That’s the best substitute for meat you can find in the market, and if you cook it right you make it do for lamb, mutton, venison, wild turkey, or porterhouse. It’s all a matter of preparation and sauces.” [...]

“Ordinarily exacting as we are I venture to say that to a man we will stand by you in this emergency nevertheless. Speaking for myself, you need not provide an ounce of beef from this time on. I shall be quite satisfied with simpler things not affected by the strikes, things like Terrapin a la Maryland; Lobster a la Newburg; Imported French Partridge; Scotch Grouse; Brook Trout en gelee or au natural avec butter; Philadelphia Squab; wild Rhode Island Turkey; Canary Birds Tongues and so on.”³⁰⁹

For this to be funny, readers had to understand that protein could be found in many alternatives to beef that were neither inedible military rations nor luxuries imported from France. The joke is that “the Idiot” could not think of any reasonable alternative to beef.³¹⁰

But it was not really a joke for the beef industry, which tried to scare the public with the specter of an America minus beef. In 1913, the *San Francisco Call* reported of a looming beef famine under the headline, “Horse Meat Will Grace Our Tables.” The article quoted Gustav Bischoff Sr., owner of a St. Louis packing company: “If the next few years show a like decrease in our beef cattle supply, the price of steaks will be absolutely prohibitive, so far as the masses of the people are concerned, and porterhouse steak at \$1 a pound will be considered cheap. This will mean that the great working class of the nation must go on a potato and rice diet—like the Chinese and Japanese. Once that era sets in, it will mark the

³⁰⁹ John Kendrick Bangs, “Substitutes for Beef,” *Pittsburgh Weekly Gazette*, 14 August 1904, 37.

³¹⁰ Also quite funny, is the single line article in *Eau Claire Leader* (Eau Claire, Wisconsin), 12 December 1916, 6: “Oh, for a chipped beef famine!”

beginning of the decline of the American people.”³¹¹ Bischoff’s statement stood against alternative claims, like R. B. Ruehling’s, that “It may be that a famine is impending for that old, cannibalistic, flesh-eating tendency of the human race,” but “little by little the consciousness is dawning upon the human mind that [...] the plant world all about us was intended to supply us largely with necessary nutriment.”³¹² Few things scared meatpackers so much as these emboldened vegetable-eaters.

One of the most scathing condemnations of “beef famines” came from the editors of the Bloomington, Illinois, *Pantagraph*, who wrote in 1943: “A ‘beef famine’ is an utterly ridiculous use of words designed to frighten the unwary with an ugly sound. It is all sound. It has no meaning.” The editors opined, “There can be no famine where pork loins are in the butcher shop; or chickens are in the pen, or dried beans are in the warehouses,” and they further claimed that cattle were the least efficient protein source per bushel of feed.³¹³

These views did not turn the public’s appetite for beef all at once, but each shortage and boycott provided an opportunity to learn how to eat other things. This was most true during the 1973 boycott that finally turned the tide. Betty Furness, the former White House consumer advisor and a major supporter of the boycott, explained that the boycott was premised on the understanding that Americans wanted red meat more than anything: “We want to send them [the livestock men] a message—not saying we don’t want meat—of course we want meat—but we will go without to make the point.”³¹⁴ In making the point, a huge portion of the American population was opened up to alternative ways of eating.

³¹¹ “Horse Meat Will Grace Our Tables,” *The San Francisco Call*, 22 September 1913, 14.

³¹² R. B. Ruehling, “Does Beef Famine Impend?: People Gradually Beginning to Realize That Flesh of Animal is Not Entirely Necessary,” *The Daily Signal* (Crowley, Louisiana), 5 November 1913, 7.

³¹³ Editorial, “Food Fights for Freedom: Another Run of Phony Famines?” *The Pantagraph* (Bloomington, Illinois), 1 November 1943, 4.

³¹⁴ “Meat Prices/Boycott,” *Evening News*, NBC, 15 March 1973, *Television News Archive*.

The state wanted to discourage the boycott and argued that a better way to affect supply and demand would be by eating alternative proteins. In the lead-up to the crisis, Nixon told Americans that true patriots ate fish; one of his aids suggested cheese. Even Reagan admitted to having chicken instead of beef one day, though overall his diet changed little.³¹⁵ Nixon's standing consumer advisor, Virginia Knauer, explained during a White House press conference that "livers, kidneys, brains, and heart can be made into gourmet meals with seasoning, imagination, and more cooking time." Knauer urged consumers to plan ahead to avoid the allure of beef at the meat case: "I consider a shopping list to a housewife as a battle plan to a general." This all sounds ridiculous from the perspective of today, when chicken, pork, and vegetarian diets have all become mainstream, but in 1973—thanks to decades of industry and government propaganda—meat was beef.

Consumers rejected policymakers patronizing suggestions, but in preparation for the boycott, they too collected and distributed meatless recipes and information on getting protein from different sources. In reading the newspapers and organizational literature, one gets the strange impression that most Americans really did not know how not to eat red meat. In the early stages, the only meatless meal many women seemed to have off the top of their heads was PB&Js. Donovan even admitted that FIT came up with so few meatless recipes on their own that they had to cobble together their first cookbook with recipes found from 1924. An advice column at the time recommended tuna-fish noodle casserole, creamed chipped beef on toast, creamed hard boiled eggs, barbecued corned-beef, green peppers or tomatoes

³¹⁵ Goff, "Reagan Calls Consumer [...]," *LAT*, 28 March 1973, A3.

stuffed with corned-beef, oyster soufflé, or Chinese food.³¹⁶ Almost nothing was vegetarian, but the decentralization of beef was still a significant shift.

The media made fun of the potential dietary consequences. The *Los Angeles Times* quoted one woman at a supermarket during the boycott remarking that “you can see the meat counter is completely deserted” and then speculating, “they must all be home killing their dogs.”³¹⁷ Cartoons, depicted scenes like boycotters surviving on ice cream, or rich women crying at having to feed their dogs actual dog food. Television news leapt eagerly at the opportunity to report on butcher shops selling horse meat. A butcher in Portland making a killing on horse commented, “To me it’s a piece of meat—it’s no longer a horse or anything—it’s non-existent so far as a relationship to an animal, you know—it’s meat!”³¹⁸ It was supposed to be a joke, but beef consumption has decreased continuously ever since.

Supply and demand never existed separately from the words and actions of different groups on the supply chain. Beef industry and government spokespeople mobilized the myth of supply and demand, as an autonomous market force, to justify their own supply-chain power politics, but in the end consumers proved that demand was simply a collection of individual choices about economic transactions and all they had to do was change their minds. In the case of the beef market, demand was a product of diet, and Americans did not actually need to demand beef. The great transition in American diets spelled disaster for an industry built on the assumption that economic growth was destined in the tastes of the nation. In subsequent decades, ranchers, cattle, and beef all became publically maligned figures, whether for their rent-seeking behaviour, environmental impacts, or fattiness. Since

³¹⁶ “Rising Food Prices, Creative Mind, Jody’s Boycott Soup: Anne’s Reader Exchange,” *Washington Post*, 17 May 1973.

³¹⁷ Jean Bennett, “Giving Meat Industry a FIT by Fighting Inflation Together,” *LAT*, 22 March 1973, J1.

³¹⁸ “Meat Prices/Boycott,” *Evening News*, NBC, 15 March 1973, *Television News Archive*.

the boycott and the cattle wreck, the American cattle herd has depleted; corporate concentration in meatpacking soared to new heights; the industrial food supply has become disgusting on every level; the United States has engaged in increasingly cutthroat and ill-advised beef export campaigns; and American ranchers have lost relative autonomy, wealth, and public status. Many desperate ranchers have turned back to environmentally destructive land practices and intensive grain feeding, growth hormones, and antibiotics to compensate. Consumers' actions were clearly justifiable in 1973, but in the long run, the American insistence on abundant cheap meat has ultimately aided the degradation of the national meat supply. Everyone has been worse off because the American food supply was turned over to a thing called "supply and demand" that did not even exist.

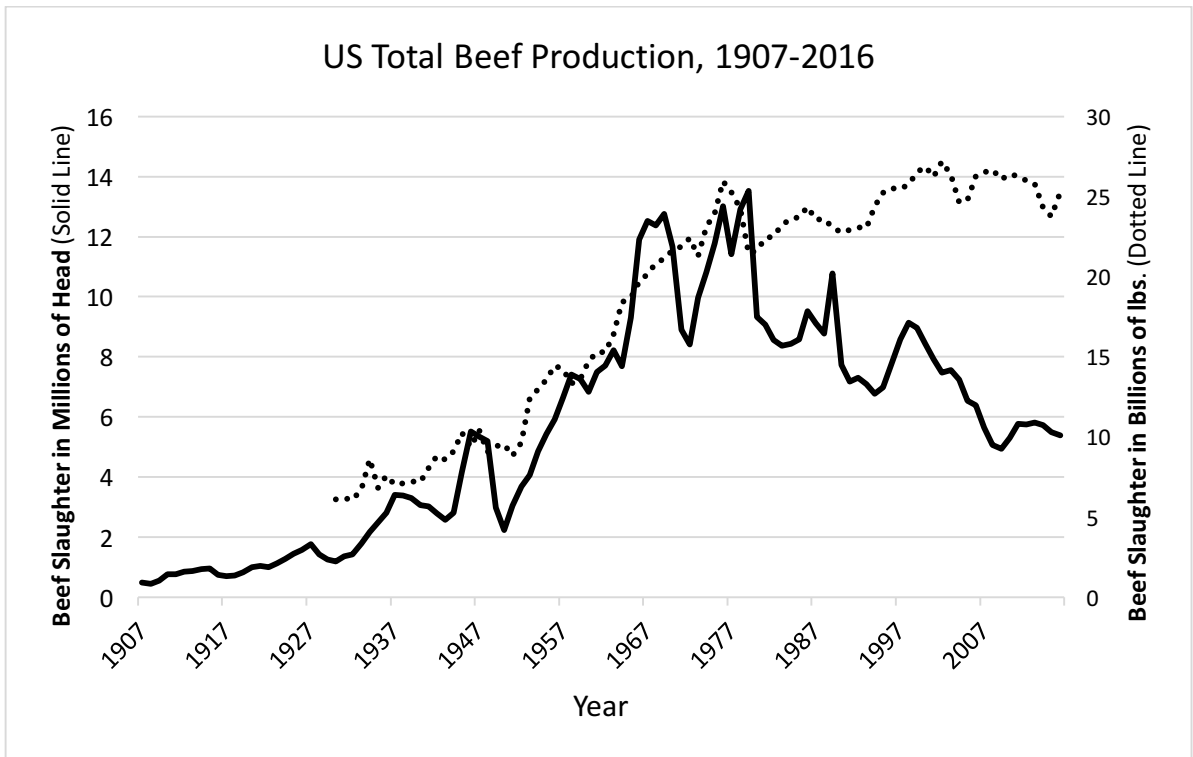


Figure 14. "Cattle, Calves, Slaughter, Commercial – Slaughtered, Measured in Head," and "Beef, Slaughter, Commercial – Production Measured in LB," annual totals, US Survey of Agriculture, USDA NASS Quick Stats. Graph by author.

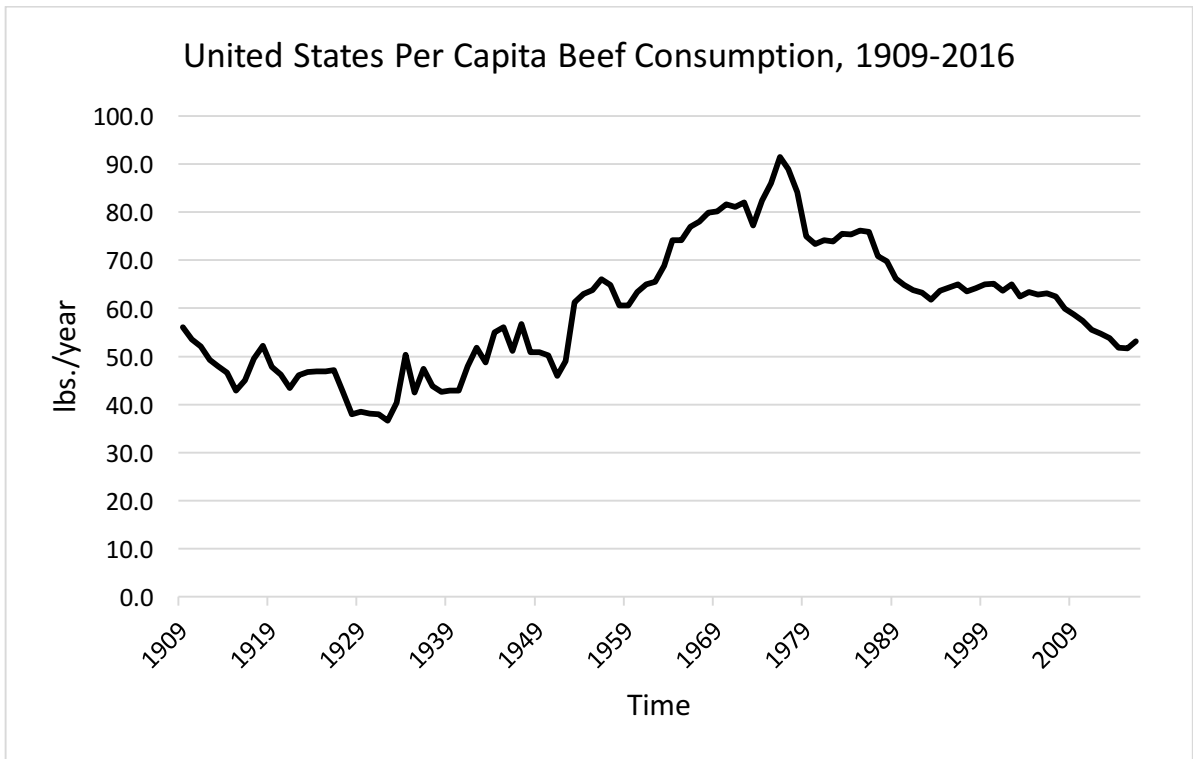


Figure 15. “Meat Consumption Per Person in the United States, 1909-2012,” Earth Policy Institute, Data Center, Food and Agriculture.; “Beef: Supply and disappearance (carcass weight, million pounds) and per capita disappearance (pounds),” 1970-2016, USDA ERS Livestock and Meat Domestic Data Online. Graph by author.

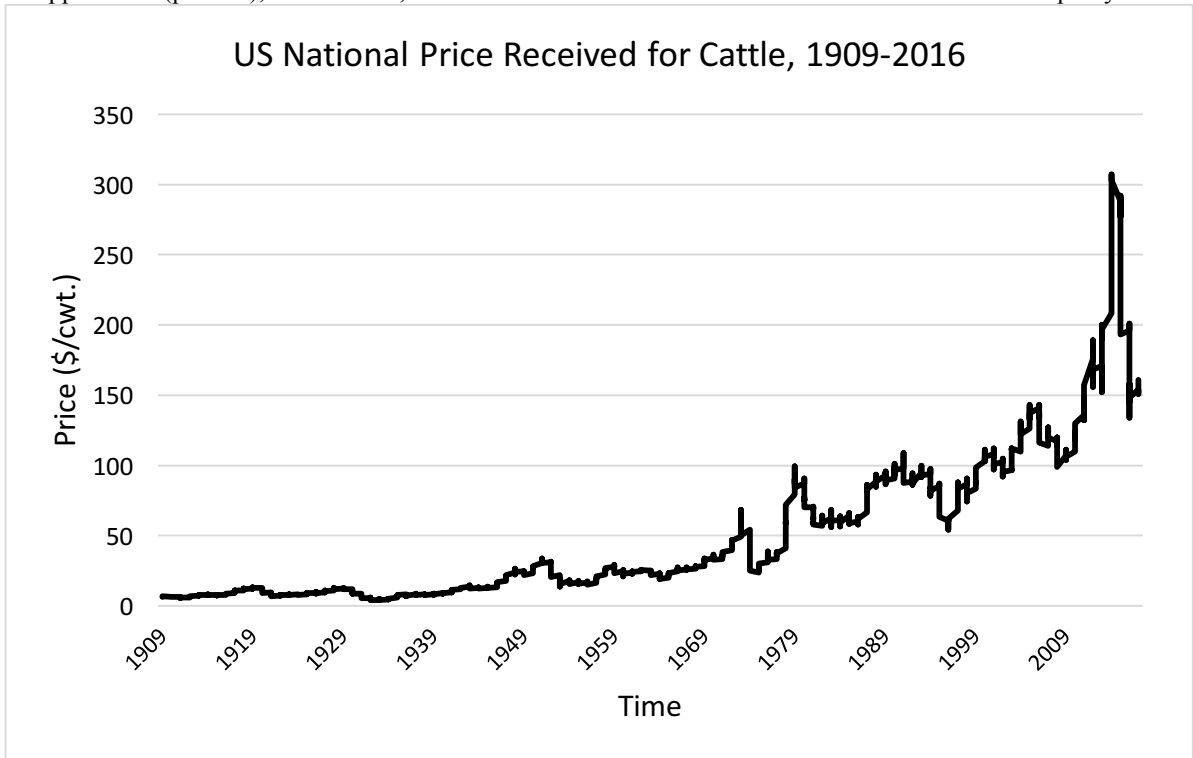


Figure 16. “Cattle, Calves, – Price Received, Measured in \$/CWT,” Monthly, US Survey of Agriculture, USDA NASS Quick Stats. Graph by author.

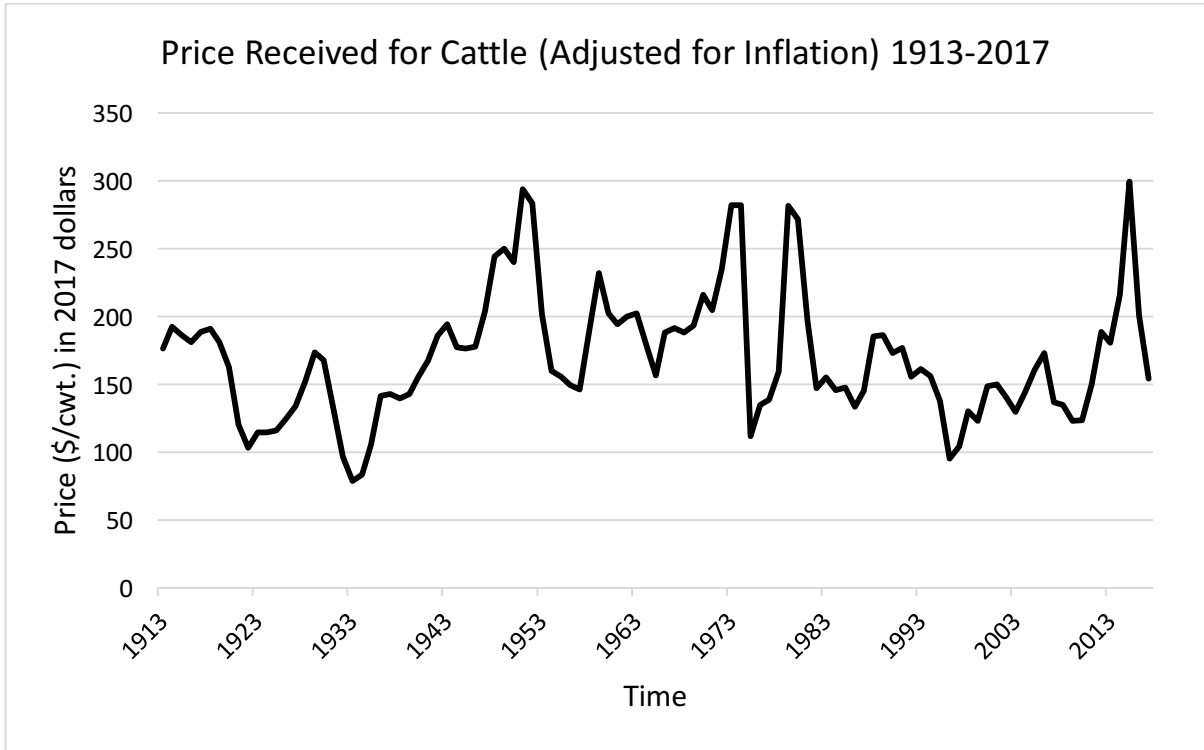


Figure 17. “Cattle, Calves, – Price Received, Measured in \$/CWT,” 1 January only, US Survey of Agriculture, USDA NASS Quick Stats. “Historical Consumer Price Index (CPI-U) Data,” January only, Compiled from US Bureau of Labor Statistics by Tim McMahon, available online: https://inflationdata.com/Inflation/Consumer_Price_Index/HistoricalCPI.aspx?reloaded=true#Table. Calculations ($\$_v/CPI_v * CPI_{2017}$) and graph by author.

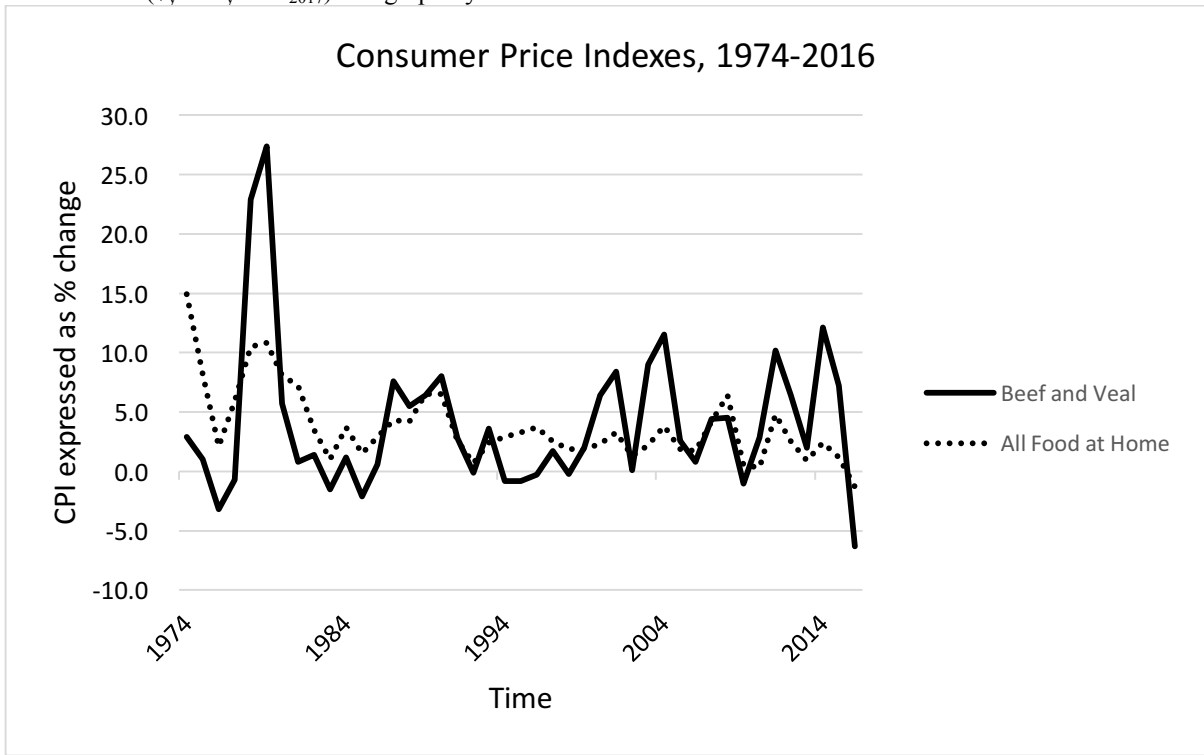


Figure 18. “Consumer price indexes historical data, 1974 through 2016,” USDA ERS Food Price Outlook Data. Graph by author.

5. Paper Steaks

I first encountered futures about ten years ago, when I drove across the North American continent from my home on the West Coast. I remember vividly crossing the Great Plains, and tuning into this continuous rattling of farm goods and prices on the AM radio: “feeders ... lean hogs ... broilers ... soybeans ... wheat ... canola.” The words and numbers were foreign to me, but I recognized that they were prices for agricultural things, and I quickly learned to accept them as fact. These commodity prices and their constant repetition echoing through the cab of my truck seemed natural as I drove through endless yellow swaths of rapeseed—a perennial feature of the rural landscape.

But these farm prices (called futures) and their dissemination have a history, too, and “live cattle” is one of the most important ones. Economist Henry Bakken of the University of Wisconsin claimed that futures should rank equal with “the coinage of money, the abolition of slavery, private property ownership, the negotiable contract, the bill of exchange, and the corporate organization” in the history of “milestones” of modern capitalist development. “It might even be one of greater significance,” he mused.³¹⁹ Bakken wrote that on the occasion of the invention of live cattle futures. Futures have not figured so prominently as a “social innovation” as Bakken hoped. Bakken understood the significance of his moment in a way we have largely failed to heed. I for one, had no intelligent opinion of these things when I first encountered them in the airwaves of Saskatchewan and North Dakota, and neither did the US House of Representatives when it conducted hearings on live cattle futures in 1982.

³¹⁹ Henry H. Bakken, “Adaption of Futures Trading to Live Cattle,” [1966] *Futures Trading in Livestock: Origins and Concepts*, Henry H. Bakken, ed. (Madison, WI: Mimir Publishers, 1970), 57. See also: Raymond M. Leuthold and William G. Tomek, “Developments in the Livestock Futures Literature,” *Proceedings from the First Annual Livestock Futures Research Symposium*, Raymond M. leuthold and Parry Dixon, eds., (Chicago, IL: Chicago Mercantile Exchange [Hereafter: CME], 1979), who say, “the beginning of trading in live-cattle and live-hog futures in the mid-1960s is the benchmark for highly successful futures markets for nonstorables.”

As Berkely Bedell (D-IA) opened the hearings, “This issue is probably the least understood of any issue that we face in the Agriculture Committee. I think there is a real desire for members to try to be as knowledgeable as possible on the issue, but it simply is so complex that it is very difficult for Members of Congress to be as knowledgeable as they should be.”³²⁰ But finance and financial instruments have come to our attention more since the financial crises of 2008, and the historians of capitalism have turned greater attention on the history of finance.³²¹

A future is: an exchangeable financial object that is linked to commodity prices. They are traded similarly to stocks, but whereas a stock is a certificate representing a share of a company, a future is a contract for future delivery of a specific commodity at a set price and time in the future. Futures are a guess of a future commodity price, and they can be profitable, or not, for a speculator because the real cash price might end up different. The owner of a futures contract literally owns the right to that commodity for that price, but they are rarely used as a sales and delivery mechanism for real goods. The buyers and sellers of futures are always supposed to close the contract in cash because what they are really doing is gambling on prices. We often associate stocks with the exchanges of New York, London, Tokyo, etc., but most futures, and this is especially true for live cattle futures, get traded in Chicago. Futures are derivatives, which is the same category of financial instruments as those

³²⁰ “Live Cattle Futures Market,” Hearing before the subcommittee on livestock, dairy, and poultry of the committee on agriculture, House of Reps., 97th Cong, 2nd Sess., (26 Feb 1982), 3.

³²¹ Please see: Jeffrey Sklansky, “Labor, Money, and the Financial Turn in the History of Capitalism,” *Labor* 11, no. 1 (2014), 23-46.; On futures, specifically, see: William Cronon, *Nature’s Metropolis: Chicago and the Great West*. (New York, NY: W.W. Norton, 1992), 120-146.; Jonathan Ira Levy, “Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905,” *American Historical Review* 111, no. 2 (2006), 308 fn. 4.; Jerry W. Markham, *The History of Commodities Futures Trading and Its Regulation* (New York, NY: Praeger, 1987).; Emily Lambert, *The Futures: The Rise of the Speculator and the Origins of the World’s Biggest Markets* (New York, NY: Basic Books, 2010).

that catalyzed the 2008 housing market crash.³²² A future is *literally not* the real commodity listed in its title, and it *should* carry a different price as it represents a separate, autonomous market. Futures markets are socially complex, and historically controversial.

Futures have a long history dating back, in Chicago, to the 1860s, and, for all human society and culture, possibly back to Ancient Mesopotamia. However, the expansion of derivatives trading in the last fifty years was not assured in human society or even within market capitalism by the appearance of similar sorts of things in the distant past. Rather, the introduction of live cattle futures in 1964 was a linchpin moment that enabled the first trading in foreign currencies in 1972, treasury bills (or T-Bills) in 1976, financial indices in 1982, and all the other sorts of derivatives that we now associate with the economic crises of 1987 and 2008.³²³ According to Dennis W. Carlton, of the University of Chicago Law School, “Futures trading has exploded since 1970.” When the Chicago Mercantile Exchange (CME or “the Merc”) invented live cattle futures in 1964, H.J. Maidenberg, writing for the *Denver Post* and *New York Times*, predicted “a revolution in United States Agriculture. If successful, their proposals will affect every consumer in the country and large segments of the banking and other industries.”³²⁴ However, historians and almost everyone else know very little about live cattle futures, and almost no one thinks they started the revolution in financial trading that took off eight years later. Live cattle futures sound like part of the older story of agricultural commodity futures that began, at least, a century earlier, but they

³²² See also: John Cassidy, *How Markets Fail: The Logic of Economic Calamities* (New York, NY: Picador, 2010).

³²³ Dennis W. Carlton, “Futures Markets, Their Purpose, Their History, Their Growth, Their Successes and Failures,” *Journal of Futures Markets* 4, no. 3 (1984), 246, Table 1: “Different Commodities Traded Since 1921 by Group with Year of First Appearance in the *Wall Street Journal*.”

³²⁴ H.J. Maidenberg, “Cattle Futures Market Studied,” *Denver Post-N.Y. Times* (1964).

actually represented the essential precursor to financial derivatives trading bursting out of agriculture and into people's homes.

Trading in live cattle pushed futures across a new threshold of financial abstraction. Before the cattle contract, there were many experiments in futures trading, but with very little success and never in anything other than storable agricultural commodities. After the cattle contract, there was a rapid expansion of futures trading in non-agricultural things and in non-things. The listing of live cattle contracts also demonstrated the ability of the Chicago futures sector to break (or rather, make) the rules of the American and foreign economies. More than any others that came before, live cattle futures proved that *anything* could be made into a financial fiction for profit by people who had nothing to do with it. This is because it was supposed to be economically and metaphysically impossible to offer a futures contract for a living animal. The invention of live cattle futures reveals that markets do not have to follow laws discovered by economists. Markets may exist because enough people choose to act like they do. In 1964, a select group created a new set of rules that turned into a wholly new market.

The invention of live cattle futures came without the consent of cattle producers, the United States government, or a significant portion of the public. Live cattle futures were not opposed either, though, since few expected great things from the contract. The key to ranchers' participation in the doubtful enterprise rest in the promise futures offered to manage cyclical price disturbances caused by the unpredictable climate of the American West. Futures exist because bankers convinced enough cattle ranchers that they could use the world of financial risk to tame the world of environmental risk. The majority of cattle producers later turned against the contract and refused to participate in the market, but the

cattle futures market took on a life without them. The overwhelming majority of real living cattle and real dead beef carcasses in the United States have no relationship to a cattle futures contract, but the live cattle futures trade has remained popular and expanded in the last decade like never before. As of 2014, feeder cattle and live cattle were the second and fourth best performing of all types futures on global Exchanges, and, as of 2015, the CME was biggest derivatives exchange in the world.³²⁵

³²⁵ “Performance of Various Futures in 2014,” *Statista* [Online statistics database] (2016).; “Largest Derivatives Exchanges Worldwide in 2015, by Number of Contracts Traded (in Millions),” *Statista* (2016).

Live Cattle 1 Futures Contract, CME, 1964-2017

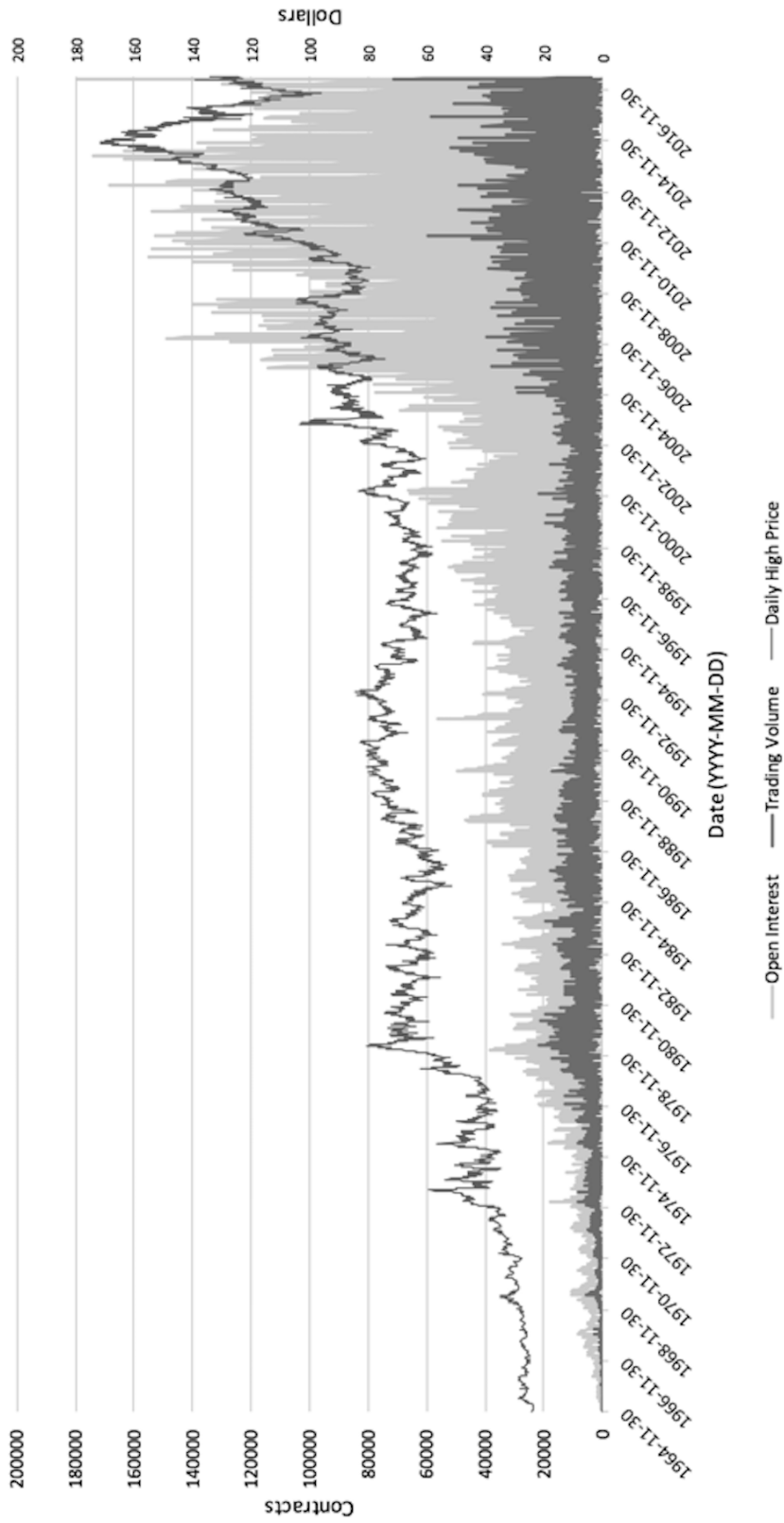


Figure 19. Daily Chicago Mercantile Exchange price and trading data from Quandl. Graph by author.

From Busts to Cycles

American cattle producers helped create the new market in cattle futures, but a significant portion (probably the majority) have regretted it ever since. Cattle producers and some of their representatives in government worked hard to abolish cattle futures in the 1970s and 1980s; other cattle producers, financial industry organizations, and some of their representatives in government worked to keep them. In general, cattle producers' response has been to avoid the futures market, but it is theoretically possible that futures do impact real prices for real cattle even without producers' participation. Many cattle producers believe this is the case, but most economists disagree. It is also possible that cattle futures precipitated a smaller-scale revolution just within cattle marketing because the number of ways to buy and sell cattle proliferated shortly after. This included the return of direct buying by meatpacking corporations through private forward contracts, which American cattle ranchers had previously fought hard to abolish in the 1910s and 1920s. Cattle futures clearly got out of hand, but they began in another attempt by to manage nature.

One of the perennial problems of the American cattle industry was a boom-bust pattern in cattle numbers and prices called *the cattle cycle*. The cattle cycle was a conceptual model that rationalized ecological and economic instability in the form of an economic law. Cattle booms and busts had been infamous in the nineteenth century due to some combination of frontier optimism; the geographic opportunities of genocide; overgrazing; careless open-range management; competition with rustlers, farmers, and sheepherders; and climate events like droughts and severe winters. The transition from open-range pastoralism to enclosed ranching and the later regulation of public lands were supposed to solve this exact problem, but the booms and busts persisted into the twentieth century. In fact, they

increasingly took on a national, and eventually international, character as the total cattle population swelled and contracted opposite to the individual and collective fortunes of cattle producers. As the idea of the cattle cycle developed, these crises became less about individual climate or management events, but rather an overall pattern with internal rules.

American economists and agricultural experts began discussing “the cattle cycle” in the mid-1920s, but the idea had been percolating for long enough for one of the earliest published references I found to claim “the existence of [...] cattle cycles covering fourteen to seventeen years [...] is well established.”³²⁶ The cattle cycle was a statistically and graphically observable pattern of deviation from the average change in cattle numbers and prices “swinging now up, now down, in an undulating or pendular fashion.”³²⁷ In 1926, John Hopkins identified five major cycles and eighteen minor cycles in beef prices since 1866.³²⁸ The dominant explanation for the cattle cycle was that cattle producers as a group were pursuing their rational self-interest based on what they knew of supply and demand (as indicated by prices), but they were being thwarted by the stubborn biology of their product. The long lifecycle of a cow (3-4 years) meant that producers’ responded to high prices slowly, and by the time they realized everyone else had increased their stock, they flooded the market. Once prices fell, they again slowly liquidated the cattle herd causing an overall market glut.³²⁹

³²⁶ Tage U.H. Ellinger, “Trends in Slaughter and Value of Livestock since 1921,” *Journal of Farm Economics* 8, no. 3 (1926), 331.

³²⁷ John A. Hopkins, “A Statistical Study of the Prices and Production of Beef Cattle,” (Ames, IW: Agricultural Experiment Station, Iowa State College of Agriculture and Mechanic Arts, 1926), 349.

³²⁸ Hopkins, 356.

³²⁹ Harold F. Breimer, “Observations on the Cattle Cycle,” *Agricultural Economics Research* 7, no. 1 (1955), 2-3.; Morris A. Copeland, “Economic Theory and the Natural Science Point of View,” *American Economic Review* 21, no. 1 (1931), 75.; J.B. Shepard, “How the Statistics Most needed Could be Secured,” *Journal of Farm Economics* 19, no. 2 (1937), 455.; The biological timing explanation of the cattle cycle is still common, see: Stephen F. Hamilton and Terry L. Kastens, “Does Market Timing Contribute to the Cattle Cycle?,” *American Journal of Agricultural Economics* 82, no. 1 (2000), 82.; For more on recent cattle cycle theories, see

The cattle cycle had great explanatory power, but the concept did little to aid in the prediction or prevention of its own consequences. More thorough inquiries into the pattern, like Hopkins', found "The cattle price cycles [...] are irregular both in length and in amplitude, and for each there seems to be a different reason."³³⁰ Hopkins attributed the various cattle cycles to war, industrial expansion and railroad construction, settlement booms, exports, business depression, advances in crop yield, and general price events, and he concluded, "Thus it is not possible to predict any future cyclical movements [...] at any particular periodicity."³³¹ The worst fluctuations were those associated with the overstocking crisis and harsh winters of the 1880s and the end of the Great War and its price controls. Hopkins, in highlighting the unpredictability of future cattle price events, pointed out, "Neither is it possible to foresee another great war with attendant economic disturbances such as occurred from 1914 to 1921." But that second war did come, and with it came federally-mandated price controls on beef, the Office of Price Administration (OPA), another war, some severe climate events, and ultimately one of the worst cattle busts yet. In fact, it became known as "The Cattle Bust" in rancher parlance thereafter.³³²

However, the more that experts and cattle ranchers discussed the cattle cycle, the more it lost its historical nuance and context. The cattle cycle was just "a biological reality," explained Peter Marble of the Cattlemen's Association, "The demand factors—mostly in terms of current and expected beef prices—triggered cattlemen to expand and contract their

also: John M. Crespi, Tian Xia, and Rodney Jones, "Market Power and the Cattle Cycle," *American Journal of Agricultural Economics* 92, no. 3 (2010), 658-697. Links cattle cycle to consumer buying.; Garry Griffith and Andrew Alford, "The US Cattle Cycle and its Influence on the Australian Beef Industry," *Agribusiness Review* 10 (2002), 39-46. Links cattle cycle to transnational import-export markets.

³³⁰ Hopkins, 351.

³³¹ Hopkins, 349-57.

³³² Charles E. Ball, et al. *Building the beef industry: A Century of Commitment* (Denver, CO: National Cattlemen's Foundation, 1998).

cattle operations. And because of the biological factors of the cow, their expansion and contractors [sic] overshot the mark—causing the cattle cycle.”³³³ Events like the Cattle Bust of the 1950s and the Dustbowl of the 1930s looked like an unbreakable pattern stretching back to the chaos of open range capitalism in the nineteenth century. The “cattle cycle” grew into an obsession for American cattle producers and their expert advocates in government agencies and Western land grant universities.

In 1964, some financial-sector businesspeople in Chicago offered a new solution—what if cattle producers did not have to predict future prices? What if they could guarantee them in the present? According to Everett B. Harris, President of the CME, cattle futures could “ease the peaks and valleys of the so-called cattle cycle.”³³⁴ On a national and multi-annual scale, the postwar decades were a period of sustained growth for the cattle industry and relatively high prices, but individual producers did not experience this the way the total average did as represented on the graph at the beginning of this dissertation. The conflicts between cattlemen and housewives demonstrate that prices are all about perspective, and many ranchers found daily and seasonal prices in the 1950s and 1960s unpredictable. When prices swing up and down frequently, someone is certainly getting a bad deal. In fact, the CME’s research into the cattle industry found that “the profit that a feeder makes is more likely to be determined by the time the animals are for sale and the market level at that point, than the efficiency with which the cattle are fed,” which frustrated cattlemen and made them receptive to any scheme for wrangling in the market from nature.

³³³ Peter Marble and Bill Jones, “Statement of American National Cattlemen’s Association and National Livestock Feeders Association before the United States International Trade Commission,” 19 July 1977, Folder “Misc. Statements, Statements March 1977,” Box 668, National Cattlemen’s Association (U.S.) Records [Hereafter: NCA], American Heritage Center [Hereafter: AHC].

³³⁴ As quoted in Al Oppedal, “Will Beef Futures Be Your ‘Filet’?” *Feedlot* (March 1964), Folder 18 “Subject Files, Futures Trading - Commodity Markets, Clippings, 1964-75,” BOX 260, NCA, AHC.

Cattle producers were supposed to be able to eliminate the price risk posed by cattle cycles. through the mysterious and wonderful mechanism of *hedging*. There are fundamentally two types of people in a futures market—hedgers and speculators—not buyers and sellers. Cattlemen (and theoretically, meatpackers, to the extent they would participate) would be hedgers—never mind the speculators (cattlemen were not supposed to think too hard about them). A hedger was not in the market to make a profit off changing prices, but rather to ensure a profit despite changing prices. It is quite possible that perfect hedging of cattle on futures is impossible in reality, and in all the debate over cattle futures that followed 1964 no cattle producer identified herself as a *true* hedger, but the theory is essential for the social justification and historical success of futures trading.

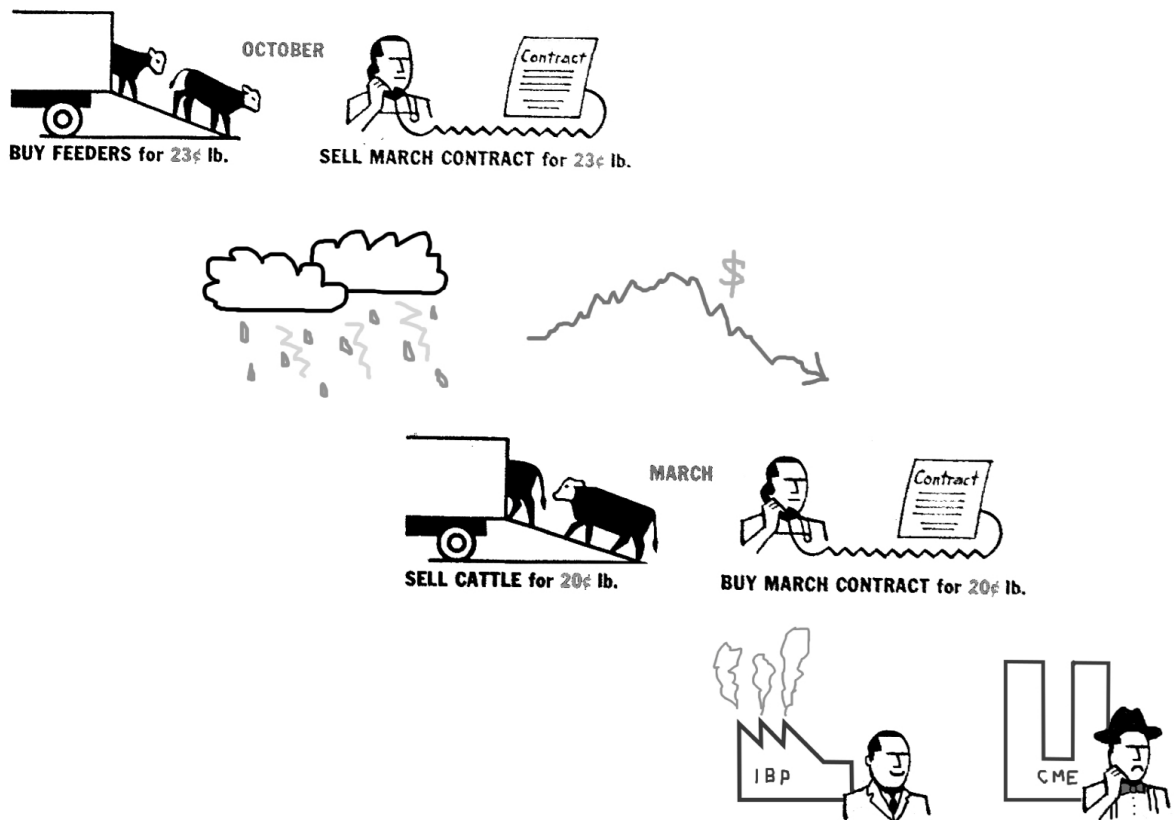


Figure 20. Adapted significantly from an image in Roe C. Black, “Guaranteed Prices for Your Beef?” *Farm Journal*, October 1964, Clipping in Folder 18, Box 260, NCA, AHC. Original Caption: “The 3¢ loss on your feedlot cattle is offset by the 3¢ gain on your “paper” cattle—an example of how “futures” could help in a down market. Your brokerage fees would be the cost of this price insurance “policy.””

For a cattle feeder (the most likely type of operation to use the futures market) hedging worked like this:

A hypothetical cattle feeder located somewhere in the corn belt buys twenty-five feeder calves from a western rangeland calf-cow rancher on 1 October for 23 cents per pound [¢/lb.]. Those calves ought to be big and fat (roughly 1,000 lbs. each) from eating corn, and thus ready to sell to a meatpacker in March. The cattle feeder wants to hedge the risk of cattle prices changing, so he phones a broker at the CME and sells, through the broker, a contract to a Chicago speculator for 25,000 lbs. of Choice grade steers to be delivered on 1 March.

In the intervening period, a severe winter storm in Wyoming kills off a significant number of breeding and feeder cattle. Though not where our cattle feeder lives, he is affected because the shortage precipitates a brief rise in cattle prices, and other cattle producers, who have fat cattle ready for sale, rush to sell their stock and flood the market. By the time our cattle feeder is ready to sell in March, the price has crashed back down. There is nothing the feeder can do about this, and he is forced to sell his 25 steers to a meatpacker for a bargain price of 20 ¢/lb. This was a familiar narrative to many cattle producers.

But our hedging cattle feeder can then buy back his futures contract from the speculator, who does not want the cattle, obviously. The speculator has to sell at the new prevailing price of 20 ¢/lb. , thus the cattle feeder profits in this market exactly equal to his loss in the real cash-for-cows market. If the situation were reversed, and the cash price rose, the feeder would use profits from the physical transaction at the local or regional stockyards to cover his losses, when forced to close out the futures contract for greater than he sold it. If the feeder does this in continuous rotation—selling futures every time he buys calves, and buying futures every time he sells fat cows—he will never make or lose a bunch of money no

matter how volatile prices are. He just gets a steady, livable profit. For hedging to work perfectly, the cattle feeder would always have to make simultaneous trades in both markets on the same day.

The above explanation is based on various documents and rural press clippings collected in files on live cattle futures in the National Cattlemen's Association records at the American Heritage Center. The image is from an article by Roe C. Black called "Guaranteed Prices for Your Beef?" in *Farm Journal*, from October 1964. I added the narrative images of climate, prices, and the meatpacker and speculator for clarity. Actually, the driving message of the original diagram, was: make your trades at the same time. That is how you could be sure the prices you bought and sold for in real cattle and in futures matched up. If a cattle feeder did this, live cattle futures promised to out-smart the cattle cycle. For this they received a flurry of unbridled support from university-based economists, federal agents of the US Department of Agriculture, big bankers eager to move in on rural lending, general free-market boosters, and a small, vocal group of cattle producers, who believed in the inexorable advance of modernity onto American rangelands.

However, in the real futures market that the Chicago Mercantile Exchange launched in 1964, true perfect hedging was only possible four days a year. In fact, the diagram in *Farm Journal* got the story wrong, since the CME chose 1 November, 1 April, 1 June, and 1 August as the closing dates for live cattle futures.³³⁵ Many more differences between the theoretical live cattle futures market presented to American cattle producers and the real live cattle futures market they got emerged after 1964, and many ranchers became opposed to futures on cattle. Only a small fraction of producers in the United States participated in the

³³⁵ There is a copy of the original contract in Folder 27 "Subject Files, Cattle and Beef Futures, Correspondence, 1964-1966," Box 214, NCA, AHC.

futures market, but there were 2,366,110 working cattle operations in the United States in 1965.³³⁶ Thus a small group of cattlemen were enough to ignite the market that ignited a revolution in derivatives trading.

Futures Past

Modern futures trading was born in Chicago in the mid-nineteenth century, but the history of speculation on the price of agricultural goods is much older. Trader lore often claims it originated in Ancient Egypt, when a man named Joseph, who was a prisoner of the Pharaoh and a pioneering Hebrew fashionista, used divinely-inspired insider information to corner the Egyptian grain market.³³⁷ The practice of future contracting may even date to Ancient Mesopotamia, but the earliest organized market for price speculation was established at the Forum in Ancient Rome in the second century BC, where the imperial accumulation of capital and a culture of hedonism combined to create a wealthy class of risk takers, who speculated on a surprising breadth of things including slaves and cattle.³³⁸ The Roman market flourished until the forces of Christian morality and anti-Semitism outlawed making money from money in Europe. Around a thousand years later, the Dutch, enriched by colonialism and emboldened by Calvinist self-righteousness, re-introduced commodity speculation to Europe, the most infamous episode of which was the self-destructive tulip bubble of 1637.³³⁹ Next, the Samurai class in eighteenth-century Osaka, Japan, took to speculating in a sort of

³³⁶ United States Survey of Agriculture, 1965, from USDA NASS Quick Stats database.

³³⁷ See: *Genesis* 41:1-57; Tim Rice and Andrew Lloyd Webber, *Joseph and the Amazing Technicolor Dreamcoat*, Broadway Musical (c.1968-1976).

³³⁸ M. Rostovtzeff, *The Social and Economic History of the Roman Empire* (London, UK: Oxford UP, 1926).; Ernst Juerg Weber, "A Short History of Derivative Security Markets," Paper (Crawley, Western Australia: University of Western Australia, Business School, 2008).; Steve Kummer and Christian Pauletto, "The History of Derivatives: A Few Milestones," Paper (Zurich, Switzerland: EFTA Seminar on Regulation of Derivatives Markets, 2012). Please Note, Weber and Kummer and Pauletto cover the full history of derivatives from Ancient to Modern occurrences.

³³⁹ Neil De Marchi and Paul Harrison, "Trading 'in the Wind' and with Guile: The Troublesome Matter of the Short Selling of Shares in Seventeenth-Century Holland," *History of Political Economy* 26 (1994), 48-65.

rice futures contract. In the context of an economic deflation, the Japanese government encouraged it under the belief that gambling in rice would drive up prices.³⁴⁰ The Dutch and Japanese exchanges both fell into decline as the practice was re-invented on the American frontier.³⁴¹

In the late 1840s, boat operators on the brand new Illinois and Michigan canal in Chicago began a practice that would lead to the first modern futures exchange, the Chicago Board of Trade (CBOT), and the first modern futures contracts for grains in 1865. The boat operators wanted to decrease the risk of price changes while they floated out to the hinterland to collect grain, so they sold advance contracts for a set price to be delivered to Chicago on a future date. As these contracts became standardized in form, some wily operators and grain merchants began purchasing extra contracts in expectation that the price of grain would actually rise, not fall, and that they could re-sell them to people who actually wanted the grain for a profit. The CBOT then built a building and a special room where people so inclined could meet to trade in these forward contracts. This is what a futures contract is—it is a fungible (that is, uniform and freely exchangeable) version of a contractual promise to deliver a set good at a set price on a set date—and it is profitable (or not) because the actual cash price is unstable over time. The establishment of grains futures trading was basically consensual among all parties and represented a natural evolution from the commodification of grain and the early capitalization of agriculture in the American mid-West.

³⁴⁰ Shigeyuki Hamori, Naoko Hamori, and David A. Anderson, “An Empirical Analysis of the Efficiency of the Osaka Rice Market During Japan’s Tokugawa Era,” *Journal of Futures Markets* 21, no. 9 (2001), 861-874.; Mark D. West, “Private Ordering at the World’s First Futures Exchange,” *Michigan Law Review* 98, no. 8 (2000), 2574-2615.; Omri Yadlin, “A Public Choice Approach to Private Ordering: Rent-Seeking at the World’s First Future’s Exchange,” *Michigan Law Review* 98, no. 8 (2000), 2620-2635.; David Moss and Eugene Kintgen, “The Dojima Rice Market and the Origins of Futures Trading,” Paper (Cambridge, MA: Harvard Business School, 2010).

³⁴¹ Futures trading also re-emerged in Europe in the nineteenth century. See: Dimitris P. Sotiropoulos, “Hilferding on Derivatives,” *European Journal of Economic Thought* 22, no. 1 (2015), 77-96.

Different proponents of futures markets cite all the above origin stories of futures to make futures seem old and natural. Everett B. Harris, president of the CME, wrote a history of the CME in which stated with a quote from a *Time* magazine article: “After all, when the seven fat years ended in Egypt and the seven lean years began, wasn’t Joseph the only man with grain stacked in his barns?”³⁴² However, each appearance of a new financial object, including different agricultural futures, occurred in its own specific historical context, and grain futures in the 1860s do not fully explain how you get to live cattle futures or mortgage-backed indices. William Cronon reveals how the key thing making the trade possible was the proliferation of grain elevators to store the commodity.³⁴³ And cows do not fit in elevators.

Futures trading represented a moral, metaphysical, and epistemological conundrum for postbellum Americans, since it was a trade in imaginary concepts. How could you buy and sell wheat that not only did not exist yet, but you never intended to own?! Prompted by farmers’ distrust of urban speculators, Populists increasingly accused Chicagoan futures traders of “fictitious dealings” or “wind trading” that was so abstracted from the realities of farmers’ fields that it was definitely immoral and very likely destructive of yeoman democracy. Farmers’ reaction against futures trading came to a head in the 1890s, when futures trading was very nearly banned altogether. According to historian Jonathon Ira Levy, the legal justification for futures trading under the US Constitution was an abstract concept called “contemplating delivery” that posited: as long as a speculator could imagine herself

³⁴² Everett B. Harris, “History of the Chicago Mercantile Exchange,” [written in 1969] *Proceedings from the First Annual Livestock Futures Research Symposium*, Raymond M. Leuthold and Parry Dixon, eds., (Chicago, IL: CME, 1979), 49.; See also: Rob Richardson, “The Economic Implications of Futures Markets,” 1980, Folder 5N2g, Box 31, Z659 Cattle Council of Australia Deposit [Hereafter CCD], Noel Butlin Archives at Australian National University [Hereafter ANU]. Please note: The Sydney Futures Exchange (SFE) followed the CME lead and listed live cattle in 1975; this trade also exploded unexpectedly in 1978. The SFE then listed a boneless beef contract in 1979 specifically for hedging by import-export operation.

³⁴³ Cronon, 126.

owning the agricultural commodity, she could buy and sell contracts for it at will.³⁴⁴

However, another important justification was “storability.” Economic theorists, policymakers, and CBOT insiders came to a consensus that futures trading in grain was permissible (and worked) because the easy and plentiful storage of grain in Chicago linked the abstract futures market to reality and kept it in check. Even though, traders would mostly avoid making real trades of grain, there was always enough grain to fulfill a futures trade. This was essential to make the prices “real” and the price gambles “fair.” The CBOT followed this market rule—only trade in grain.

New experimentation in agricultural commodity futures waited for a new radical group of speculators, who formed the Chicago Mercantile Exchange (CME) in 1919.³⁴⁵ These traders started trading in eggs and butter, and they had temporary but remarkable success. The trade emerged because new refrigerator technology made eggs and butter storable, and a large centralized market emerged in Chicago with significant volume. The CME had a low reputation in comparison to the CBOT, and it developed a philosophy of experimentation in new commodity markets. The CME could not land a commodity to rival the grains on the CBOT, but it did have notable successes next in potatoes and onions. Its decisions to list contracts in new commodities were opportunistic rather than obvious, and they came without the consent of producers in those commodities. Onion farmers, in particular, got really upset with futures trading at the CME, which they accused of causing price spikes and crashes. Onion farmers agitated for the Onion Futures Act of 1958, which

³⁴⁴ Jonathan Ira Levy, “Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905,” *American Historical Review* 111, no. 2 (2006), 307-335.

³⁴⁵ Harris, 49-54.; Lambert, 55-68.

ended the only successful movement to ban futures trading in the United States.³⁴⁶ But they did not know that in 1958, at the CME lost much of its trading volume. Trading volume is the life blood of a futures exchange because without traders, you cannot make money off anyone. In the 1950s and 1960s, it looked to many within and outside the exchanges, that the CME and futures trading in anything other than grain were both doomed. The CME listed dozens of new contracts (some lasting only months) in a desperate attempt to attract enough trading volume to keep the exchange afloat. Then an unlikely contract stuck—live cattle.

The Chicago Mercantile Exchange first began considering the possibility of listing meat contracts on the commodity futures market in the early 1960s, but these considerations were no more serious than those on a grab-bag of other commodities proposed at the time. The CME's behaviour can best be described at the time as reckless experimentation. They listed frozen pork bellies in 1961 and shrimp in 1964, the former lasted until 2011 and the latter until 1966.³⁴⁷ Pork bellies became synecdoche for the whole concept of futures trading and CME members congratulated themselves on their brilliance, while shrimp futures were forgotten. At the time, cattle futures were listed then, there was little reason for people outside the Exchange to give it much thought. The CME listed live cattle in 1964 without any official authorization from the cattle industry or the United States government and without any published research and analysis to support the decision. The American National Cattleman's Association's official response at the time was no comment and that they would

³⁴⁶ David S. Jacks, "Populists versus Theorists: Futures markets and the Volatility of Prices," *Explorations in Economic History* 44 (2007), 342-362.

³⁴⁷ Nicholas Boston, "Trading the Oceans: The Brave "New" World of Seafood Futures Contracts," *Ocean and Coastal Law Journal* 18, no. 2 (2013), 285-320.; Monica Davey, "Trade in Pork Bellies Comes to an End, but the Lore Lives," *New York Times* (New York, NY), 30 July 2011. Please note: shrimp were re-listed at the Minneapolis Exchange in 1992.

think it over at their next meeting in February.³⁴⁸ Henry Bakken praised the CME on this point, writing with glee “The fact that many knowledgeable people dismissed the idea as doomed to fail did not deter the Exchange from continuing its research.”³⁴⁹

The CME’s internal research did not uncover much to challenge the idea that live cattle did not fit the accepted requirements for futures trading (homogeneity and storability), but it did suggest live cattle might be worth moving forward on anyway. First, there was serious demand from within the industry for hedging. The CME received reports that, “The recent losses in feeding cattle made people very receptive to the possibility of hedging their operation.” It also found “that the banks would loan more money on the feeding operation if they could eliminate a part of the price risk, by hedging the feeding operation,” which would further drive producers into the Exchange.³⁵⁰ Second, the CME learned that cattle production was a “Glamour Industry”:

The act of dealing in livestock, carries a great deal of prestige with it. We cannot overstate the likelihood that there will be a volume of trading that will completely astound even the most optimistic of the proponents of the futures—provided a workable contract is written. It would not be strange at all for people who have little knowledge of the industry, and even no real desire to make a speculative profit, to play the futures on cattle. Many people would be willing to buy a cattle contract and expect to lose a small amount, just to be able to say at the cocktail parties that they have X number of cattle on feed in the Midwest that will be ready for market about—the contract delivery month.³⁵¹

There were practically infinite commodities that already fit the accepted requirements for futures trading, but the CME wanted cattle and they wanted cowboys. Futures trading in cattle would be radically new, which would excite the speculative tendencies of many people in other markets. And perhaps even more importantly, the CME would be selling every

³⁴⁸ Letter, C.W. McMillan to Mr. D. Paul Andre, Editor of Beef, 7 October 1964, Folder 27 “Subject Files, Cattle and Beef Futures, Correspondence, 1964-1966,” Box 214, NCA, AHC.

³⁴⁹ Henry H. Bakken, “Foreword” *Futures Trading in Livestock: Origins and Concepts*, Henry H. Bakken, ed. (Madison, WI: Mimir Publishers, 1970), 57.

³⁵⁰ Anderson-Clifton Company (Wilmette, IL) “Feasibility of Cattle Futures: A Study Conducted for the Chicago Mercantile Exchange,” 9 April 1964., 6-7., Folder 30 “Subject Files, Cattle and Beef Futures, Reports, 1964-65,” BOX 214, NCA, AHC.

³⁵¹ Anderson-Clifton Company, 23.

American the opportunity to be a cowboy. I note this prominently here, since not a single economist or industry expert noted this fact, and it may explain why everyone was caught off guard by the overwhelming early success of the contract.

However, the CME also learned that live cattle futures could be dangerous. Some cattle feeders already attempted hedging in corn (as a proxy for corn-fed cattle), and the CME learned that some of them had so misunderstood the process that they ended up in a double speculative position in both corn futures and real feeder calves. Cattle producers' strong potential to screw up posed a serious risk because, "It should be remembered that this is an agricultural commodity, the producers of which are quite vocal." "The Exchange would have extreme difficulty" it was understood, "if there was any investigation of cattle contracts, similar to the onion and potato investigations." Further, the large trading volume expected meant "that mistakes must not be made as they can become very big problems. The trading will likely be very large, and an investigation showing any evidence of wrong-doing or imperfections in the contract favoring any one group, could lead to disaster."³⁵²

The CME listed live cattle futures the following November. People, including a significant number of cattle producers, chose to participate. Live cattle futures became the most successful futures contract since the cutting of the Illinois and Michigan Canal, and the CME did it with something no one thought could be traded because of the difficulty of delivery. According to economic sociologist Yuval Millo, the non-agricultural financial index derivatives that emerged after 1970 are "strange assets," which means they "do not have straightforward physical characteristics, and therefore cannot be delivered, upon buying and selling, in a similar manner to physical assets." Millo argues that deliverability of the

³⁵² Anderson-Clifton Company.

underlying asset was crucial for the legitimacy of futures, and indeed was embedded in the coded norms of gambling laws. While the concept of deliverability became crucial to futures markets, however, the actual practice in the markets rendered deliverability and indeed the sheer physicality of assets irrelevant.”³⁵³ However, Millo looked directly to the CME’s decision to list foreign currencies in 1972, thus overlooking the role of live cattle futures in breaking the myths of storability and deliverability in financial derivatives trading eight years before. Kieran Healy explains, with reference to contemporary debates over the cash payments to human organ donors, that markets do not subsume old restrictions and moral taboos without a fair degree of pressure and baby steps in that direction.³⁵⁴ The US government explicitly dis-allowed derivatives trading in securities in the 1930s, and the proximate cause of their appearance anyway was a CME riding the unbelievable success of cattle futures. As Chris Muellerleile explains, securities derivatives were not born of finance and New York, but of agriculture and Chicago.³⁵⁵

While cattle futures did not technically break out of the agricultural norm, they pushed futures across a new threshold of financial abstraction. They proved that trading in financial objects does not have to follow any economic rules as long as enough people do it anyway. The immediate success of cattle futures made the whole economic-philosophical conundrum of whether futures trading in living things was possible absolutely moot.

³⁵³ Yuval Millo, “Making Things Deliverable: The Origins of Index-Based Derivatives,” *Sociological Review* 55, no. S2 (2007), 196-214.

³⁵⁴ K. Healy, “Sacred markets and secular ritual in the organ transplant industry,” *The Sociology of the Economy*, ed. F. Dobbin (New York, NY: Russell Sage Foundation, 2004).

³⁵⁵ Chris Muellerleile, “Speculative boundaries: Chicago and the Regulatory History of US Financial Derivatives Markets,” *Environment and Planning A* 47 (2015), 1805, 1811. Please note, Muellerleile’s argument is linked to the complicated regulatory history of futures, especially the jurisdictional conflict between the Securities Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) in the 1970s. See also: B. Peter Pashigian, “The Political Economy of Futures Market Regulation,” *Journal of Business* 59, no.2 (1986), S55-S84.; Millo.

Stanley Waldner sees the Future

On 30 November 1964, the very first ever sale of a futures contract for a living animal was made in Chicago. The sale was made to Larry Ryan of Francis I. Du Pont & Company, the American chemical leviathan, by a broker on behalf of Stanley C. Waldner, owner of The Ayionoros Cattle Company of Leavenworth, Kansas. The groundbreaking sale rested on a series of fictions. It kind of represented some real cows, and it kind of represented a real sale of cows from a feeder to a slaughterer, but not really. The sale assumed that such a transaction would actually happen somewhere, but this was not it. The sale occurred between brokers, neither of whom had nor wanted any cows, and the whole point of futures trading was that in some way the real sale of cows would be different from this transaction (that is how you profit, after all). Though Ryan now owned the right to about twenty-five cows in four months, the buyers and sellers in this market were supposed to behave as if that would never happen. They had to for several reasons, not least of which was that it was really hard to deliver 25 identical cows weighing a total of exactly 25,000 lbs.

Waldner, the man behind the cows, was a successful corn-belt cattle feeder, and he rushed to make the first cattle futures sale both out of confidence in this new strategy and as a chance to study and document the process. “As the seller of this first contract,” Waldner told readers of *Feedlot* magazine, “I felt I had made a tangible demonstration of my faith and confidence in an activity which in my opinion had much to offer the livestock industry.” Waldner watched the reports on trading volume in live cattle closely through the winter, and by late March, he felt all the nay-sayers would be proven wrong when 150 live cattle trades were made in a single day on 400 contracts. In context, this was astounding volume, but it also only represented 10,000 cows at a time when there were about 100 million beef cattle in

the country. Ideally, no real cows would ever change hands through these futures contracts, but they could. Waldner understood as well as anybody that the success of futures would depend on everyone proving “cognizant of the advantages of **not** taking or making delivery” when the contracts closed on 20 April.³⁵⁶

On April 20th, all but 20 live cattle contracts closed out successfully completing the fiction. “From a high of 665 contracts outstanding on Feb. 26, the liquidation had been orderly and mature,” Waldner documented, “The futures market and the live cattle market had closed one in line with the other.” But that still left 500 cattle that had to be delivered to CME pick-up locations. Waldner decided to travel to Chicago to watch the “final test” of the feasibility of live cattle futures in action.

The first two contracts were shipped to the Union Stockyards by Cliff Haden of Rochelle, Illinois, on 25 April, and Waldner was at the stockyards at 6 am the next morning to watch the official “delivery.” Waldner waited until 10 am, when two USDA cattle graders arrived to determine whether these fifty cows met the specifications in the futures contract. It took them just five minutes per pen (1 contract of 25 cows=1 pen). The graders determined that the first pen had 21 Choice and 4 Good steers, and the cattle all passed, though a few were notably overweight. As a result, Haden was allowed to remove one of the Good steers, since the total weight of the remaining 24 exceeded 25,000 lbs. The graders herded the 24 animals into a USDA pen market with the seal of the Chicago Mercantile Exchange then returned to their building to fill out a worksheet and phone the information in to the CME, which had to assess various penalties for the Good and overweight Choice cattle that had deviated from the contract.

³⁵⁶ Stanley C. Waldner, “Can Live Beef Contracts be Realistically Delivered,” *Feedlot*, June 1965, Folder 18 “Subject Files, Futures Trading - Commodity Markets, Clippings, 1964-75,” Box 260, NCA, AHC.

Waldner called it “an unqualified success,” and then he proceeded to qualify that claim. The penalties, which were well outlined in the CME rules, were nonetheless a problem for cattlemen. Upon delivery it became clear that “there were owners of delivered cattle who did not have a clear understanding of the contract criteria under which their cattle were assessed,” and furthermore, while it was relatively easy for cattlemen to provide 25 cattle that on average fell into the contract requirements, “It soon became quite evident that a greater than average effort was required to provide a delivery unit in which 100% of the steers [passed].” And if a delivery unit had more than two animals that fell over or below the acceptable weight range, the entire group would be disqualified, which happened with two contracts. The seller had to come up with two new units of entirely new animals to try to pass again. Futures contracts seemed to work as a way to exchange real cattle, but not in a way that was useful to either cattlemen or meatpackers who would prefer to simply sell each cow for its value rather than perform a hokey-pokey of off-weighted animals. It is not reported as such, but the cattlemen, who chose to deliver these cows were probably ones who had lost on their futures and refused to pay the loss in cash, since they had animals on hand. For this they learned the penalties of not upholding the fiction.

Waldner, though, liked the fictitious opportunities of cattle futures trading for cattlemen a little more than the experts would have approved of. The USDA and the CME (at least when others were listening) instructed cattlemen to hedge their real cattle transactions and not to speculate. Waldner saw it differently. “Prior to the advent of the contract,” Walden explained, only those cattle feeders with capital who could find good feeder calves could benefit from their expectation of rising prices, and cattle feeders that thought the market would fall could do nothing other than choose to stay out to mitigate their losses. Now,

cattlemen who couldn't afford or find cattle could still just sell futures, and cattlemen who expected prices to fall could buy contracts for cattle in the reasonable expectation that no real cattle ever needed to change hands. His real interest in futures then was his expectation that cattlemen, knowing the cattle market as well as anybody, could now become speculators in their own right.

Waldner understood better than many professional economists that futures could never be the “panacea for a collection of near-broke cattlemen,” but he also sold them better. Rather than simply present hedging with futures as an antidote to the risk of the cattle market, he captured the glamour of the other side of futures—speculation itself. Waldner argued that there was no greater risk investing in cattle futures than in buying feeder calves to fatten for market, and, “The futures investor need hire no labor; amortize no equipment; store no feedstuffs; repair no fences; have no “vet” bills; wade through no mud; undergo no death loss; suffer no “cost of gain” squeeze; mend no broken water lines in the sub-zero winter; ship, receive and process on cattle; be constantly plagued by “something else” going wrong; ad infinitum.” Waldner captured a reality that university economists and government experts refused to admit—cowboys like to gamble.

Waldner softened his praise a few months later after a second trip to Chicago to observe and report on the futures market.³⁵⁷ He still believed in the futures market, but after a visit to “the pit” in Chicago, Waldner began warning his readers that the futures market was only for cattlemen who really understood it. In six weeks, speculators had driven the price of slaughter cattle up by over \$2 cwt, to which Waldner exclaimed, “*This rise is abnormal!* [...]”

³⁵⁷ Stanley C. Waldner, “How Live Beef Futures Work—and how these contracts may support your feeding program,” *Feedlot*, July 1965, Folder 18 “Subject Files, Futures Trading - Commodity Markets, Clippings, 1964-75,” Box 260, NCA, AHC.

It's dangerous!" Though cattlemen generally viewed this as "financially refreshing" news and a long-overdue readjustment of the market to reflect the real value of their products, Waldner understood that this was a speculative bubble and it would pop causing more trouble for cattlemen than if they never saw the increase in the first place.

The pit was the physical space in which Chicago speculators conducted their gambles, and Waldner, ever the early-riser, got to the visitor balcony overlooking the beef pit in advance of the opening of trading at 9:10 am, where he watched the men assemble "shouting their orders and waving their arms." He saw how a man would stick his arm up, palm out, and yell "sell 5 Dec at 52" meaning he wanted to "offer" 5 contracts representing 125,000 lbs. of live beef cattle for December delivery at \$26.52/cwt each (the dollar value is generally left off for brevity). If a man, palm inward, was "bidding" at an identical value, the trade was made. The seller had to fill out a card with the details, which he passed to a clerk, who took it to the men who recorded such things on a giant blackboard. In fact, Waldner explained, if trading volume was low enough, trades were recorded directly to the blackboard by the technical means of yelling. Waldner, like many observers of "the pit" before him, found the scene "exciting and unusual," but he also believed it was within the capacity for cattlemen to understand, since it bore resemblance to a rural livestock auction.

The trouble with futures, vis-à-vis the livestock auction, was again that the animal was not there (or anywhere yet). In an auction, a group of buyers assemble to offer the best price on a given animal, which is a pretty good representation of its value based on supply and demand, since it is literally the supply and the demand zoomed in to a specific location.³⁵⁸ In the pit, both buyer and seller were guessing what was going to happen in the

³⁵⁸ In some ways, these cattle markets embodied the abstract ideal of a free and competitive marketplace, but in others ways they undermined it. The problem was that buyer and seller did not "meet in the marketplace," but

market, and they both had to guess differently meaning someone had to be wrong. The futures price was therefore, by intention and definition, the wrong price on the value of those cattle. Waldner struggled with this paradox—both buyer and seller pursued rational self-interest based on better pricing information than ranchers had ever had before ... but one of them had to be wrong.

Futures straddled the space between the real physical world and a fictitious or abstracted financial world. The futures price was *about* the cash price, but real delivery of goods was a threat and not a goal. A widely known folk story in the Chicago futures sector warns traders that the futures market still carries the threat of delivery as a reminder to follow the rules and keep the market fake. Most Chicago traders have heard the story of some young sap, who forgot to close a live cattle futures contract and suddenly got a phone call announcing that his cattle had been dropped off and telling him to come get them.³⁵⁹ However, the abstract financial futures market was also fundamentally a physical practice made up of telephones, chalkboards, and hands. This market was an entirely new thing that did not exist before 1964, but the rush of cattle producers and others into the exchange rendered the whole economic-philosophical conundrum of whether futures trading in living things was possible absolutely moot.³⁶⁰ However, the sudden and surprising success of

rather the seller travelled to the buyer's marketplace, and once there the seller had to take the quoted price or worse—pay to ship her cattle again. The Union Stockyards, especially, was subject to the collusive influence of a few large meatpackers, who ranchers believed conspired to keep prices low. The terminal markets began to decline in the 1950s and 1960s with the advent of "direct buying," "farm gate buying," and "liveweight auction buying."

³⁵⁹ It sort-of actually happened. National Public Radio's "Planet Money" program tracked down Chicago trader Bob Lassendrello, who accidentally took delivery on forty plus cattle to the East St. Louis Stockyards, which was not impressed that it had to manage a botched futures transaction an absent individual. See: Podcast, "Episode 471: The Eddie Murphy Rule," *Planet Money, NPR*, 9 July 2013, <http://www.npr.org/sections/money/2013/07/09/200401407/episode-471-the-eddie-murphy-rule>.

³⁶⁰ The invention of live cattle futures is an observable case of market "performativity." Please see also: M.F. Garcia-Parpet, "The Social Construction of a Perfect Market," *Do Economists Make Markets*, D. MacKenzie, F. Muniesa, and L. Sui, eds., (Princeton, NJ: Princeton UP, 2007).; D. Buena and D. Stark, "Tools of the Trade: The socio-technology of arbitrage in a Wall Street trading room" *Industrial and Corporate Change* 13 (2004),

futures opened new questions. Who was actually participating, and who did cattle futures work best for? Cattle futures and the cash-for-cows market were different, but they were connected. Could futures, which were supposed to represent a wrong prediction of cattle prices several months in the future, somehow alter or affect the actual cash price for cattle? Waldner certainly believed the early excitement around live cattle futures led directly to an artificial spike in the price of beef. Remember also that a pretty significant boycott erupted in 1966, and the price of beef did fall back down immediately. The CME listed live cattle futures without the express consent of anyone really. Would they still be permitted?

The Problem of Delivery

“The problem of delivery” was the *de facto* name given to the economic-philosophical law made futures trading in large living animals impossible before 1964. Live cattle futures broke that law opening a financial Pandora’s box of derivatives in non-deliverable, or “strange” things.³⁶¹ However, the problem of delivery did not go away, it just changed. Waldner would probably say, “the problem of delivery” was exactly what would keep cattle producers from trying to pay off their futures losses in animals. In 1989, some economists returned to this question, and argued that the un-deliverability of cattle actually did create unique problems for cattle futures and the cattle industry compared to more realistic markets like grain.³⁶² I believe we could also use “the problem of delivery” to

369-400.; M. Callon and F. Muniesa “Economic Markets as Calculative Collective Devices” *Organizational Studies* 26 (2005), 1229-1250.; D. MacKenzie, “The Big Bad Wolf and the Rational Market: Portfolio insurance, the 1987 crash, and the performativity of economics” *Economic Sociology* 33 (2004), 303-334.; Michael Callon and Fabian Muniesa, “Economic Markets as Calculative Collective Devices,” *Organizational Studies* 26 (2005), 1229-1250. Kieran Healy, “Sacred markets and secular ritual in the organ transplant industry,” *The Sociology of the Economy*, ed. F. Dobbin (New York, NY: Russell Sage Foundation, 2004).

³⁶¹ Millo.

³⁶² Kandice H. Kahl, Michael A. Hudson, and Clement E. Ward, “Cash Settlement Issues for Live Cattle Futures Contracts,” *Journal of Futures Markets* 9, no. 3 (1989), 237-248.

describe the inability of economists to determine with any conclusiveness what futures markets in non-deliverables really did to the real world after the CME delivered them.

It proved especially difficult to determine if producers actually could hedge using live cattle futures.³⁶³ The problem was that there was a paradox built into futures due to the fact that hedgers and speculators (never mind buyers and sellers for now) wanted different things from the market. Hedgers wanted, and were promised, a general leveling of prices. Speculators wanted, and futures markets necessarily required, wild and unpredictable price swings.

In much of the literature distributed to cattle ranchers before and after the futures offering in live cattle, there was an implication that they, as hedgers, were getting the best of those frivolous Chicago speculators. It had the distinct and simplified taste of propaganda, but in 1960 the path breaking right-wing economist Milton Friedman turned the notion into theory. Friedman built off the premise that futures markets were basically analogous to gambling dens, and that speculators were motivated by greed, thrill, and addiction. It was the exact argument that producers and the other enemies of futures trading had been levelling against speculation since the 1860s, but Friedman, in a style that was typical of conservatism to come but shocking at the time, said that was not a bad thing. He dismissed Puritan aversions to vice and proceeded to hypothesize that these gamblers could have a net positive effect for society, since the gamblers had a propensity to lose thus removing the risk distributed to the rest of society:

“Suppose that there exists independent gambling establishments in which all gambling takes the form of betting on the future price of the commodity in question—say rubber. The people who bet on the

³⁶³ Skeptics on hedging included: M.J. Skadberg and G.A. Futrell, “An Economic Appraisal of Future Trading in Livestock,” *Journal of Farm Economics* 48 (1966), 1485-9; T.A. Hieronymus, “Futures Trading in Hogs,” *Illinois Agricultural Economics* 6, no. 2 (1966), 1-10; Gene A. Futrell, “Do Live Cattle Futures Differ from other Existing Futures Contracts?,” *Futures Trading in Livestock – Origins and Concepts* CME, ed. (Madison, WI: Mimir, 1970), 69-75.

price of rubber in the hypothetical gambling establishment do not buy or sell rubber, and neither do the people who run the establishment. Their operations therefore have no direct effect on the price of rubber; the rubber market simply takes the place of the roulette wheel at Monte Carlo. We may suppose the proprietors of an establishment to operate solely as brokers, engaging in no gambling themselves but being paid a fee for providing facilities and bringing together people willing to take opposite sides of a common wager. And we suppose throughout that the people engaging in the gambling do so deliberately and are reasonably well informed: they like to gamble and are willing to pay a price to do so. Let us put to one side any moral objections to gambling, and suppose that the gambling services are provided under competitive conditions. The proprietors of the gambling house are then devoting economic resources to producing services to satisfy the wants of consumers, who are willingly buying the services and paying a price equal to the cost of the alternative services that could have been obtained with the same resources. Clearly there is economic gain rather than loss through the operation of the gambling house.³⁶⁴

In fact, futures trading in the nineteenth century had been commodity gambling, since many smaller “bucket shops” acted as bookies on the larger CBOT outcomes.³⁶⁵ But Friedman’s iconoclast conservatism would not play well in middle America, and it failed to even begin to actually say how hedgers might use the market.³⁶⁶ Speculation was definitely real, but hedging turned out not to be so much.³⁶⁷

Professional economists were slow to examine the question of futures contracts on living things empirically,³⁶⁸ and the plurality of knowledge on the topic in the decades after 1964 was driven by seminars sponsored by the Exchange itself in 1965, 1966, 1967, and

³⁶⁴ Milton Friedman, “In Defense of Destabilizing Speculation,” *Essays in Economics and Econometrics* Ralph W. Pfouts, ed. (Chapel Hill, NC: University of North Carolina Press, 1960), 133-141.

³⁶⁵ Levy.

³⁶⁶ For more on popular ideas about and opposition to commodity speculation, see: B. Peter Pashigian, “The Political Economy of Futures Market Regulation,” *Journal of Business* 59, no.2 (1986), S55-S84.; Jacks, “Populists versus Theorists [...]” (2007), 343-346. Jacks attempted quasi-experiments using the real history of futures introductions and abolitions to determine whether speculation has impacted prices. He found popular fear of speculators ungrounded.

³⁶⁷ Hedging on futures is still promoted: Andrew P. Griffith, R. Curt Lacy, and John C. McKissick, “Commodity Options as Price Insurance for Cattlemen,” Paper (Knoxville, TN: University of Tennessee Institute of Agriculture, 2014). [NB, also discusses proliferation of marketing options]. For more on futures as useful to cattle producers as price predictors, see: Scott H. Irwin, Mary E. Gerlow, and Te-Ru Liu, “The Forecasting Performance of Livestock Futures Prices: A Comparison to USDA Expert Predictions,” *Journal of Futures Markets* 14, no. 7 (1994), 861-875.; Matthew P. Schaeffer, Robert J. Myers, and Stephen R. Koontz, “Rational Expectations and Market Efficiency in the U.S. Live Cattle Futures Market: The Role of Proprietary Information,” *Journal of Futures Markets* 24, no. 5 (2004), 429-451.

³⁶⁸ Guesses at early listing: Skeptics on hedging were Skadberg and Futrell (1966, p1485-6)

Hieronymus (1966, p. 3), success suggests sig use by cattle feeders

Samuelson 1965: ft prices “will turn out, *on the average*, to have no upward or downward drift anywhere!”

1979.³⁶⁹ The proceedings of these seminars reveal two general tendencies expressed in the viewpoints of economists on live commodity futures—including those who endorsed them and those who doubted them—up to 1979: 1. Enthusiasm for live commodity futures, and 2. Recognition that empirical evidence did not justify their enthusiasm for live commodity futures. The most common refrain across all the essays was “more research needed,” which was understandable in 1967 but not so much in 1979. Ironically, since futures markets thrived on the notion that they embodied the economic chimera of a free and competitive market responding perfectly to supply and demand information, there was almost no conclusive information about these markets fifteen years later!

On the occasion of the “First Annual Livestock Futures Research Symposium” held sponsored by the CME and held in Chicago in June 1979, economists Raymond M. Leuthold (University of Illinois) and William G. Tomek (Cornell University) attempted the most thorough and comprehensive review of the empirical literature on live commodity futures (by then cattle and hogs) yet.³⁷⁰ Leuthold and Tomek identified eighty-four relevant publications primarily from US universities and the US Department of Agriculture. They apologized for neglecting foreign and popular publications, but it was still the largest of such undertakings ever completed, since the “First Annual” symposium also proved the last. They remained positive on the outlook for live commodity futures throughout, but their findings may prove troubling for anyone who believes major financial institutions should do what they are supposed to.

³⁶⁹ Proceedings published in: Henry H. Bakken, ed., *Futures Trading in Livestock: Origins and Concepts*, Madison, WI: Mimir Publishers, 1970.; and Raymond M. leuthold and Parry Dixon, eds., *Proceedings from the First Annual Livestock Futures Research Symposium*, Chicago, IL, June 13 and 14, 1979, Cosponsored by the Chicago Mercantile Exchange and NC117.

³⁷⁰ See also: R. W. Gray and D. J. S. Rutledge, “The Economics of Commodity Futures Markets: A Survey,” *Review of Marketing and Agricultural Economics* 39 (1971), 57-108, for the most thorough review of futures in general at the time.

The greatest fear of producers was that futures impacted price movements in some way other than was natural in a “real” free market. One of producers’ concern was that due to an excess of price information, futures trading drove real prices in response to known “fake” futures prices. In other words, futures artificially amplify their own effects. Advocates of futures shot back the opposite—that futures trading unbound the market from constraints caused by a lack of information or means of efficient exchange. Thus futures were a much more “real” free market. The latter theory of belief was called, in economics, the “efficient market hypothesis,”³⁷¹ and the specific subset of it concerning futures markets’ response to information was called the “random walk hypothesis.” Leuthold and Tomek identified four studies that tried to test whether a known futures price had any influence on subsequent futures prices.³⁷² Three found that prices for live cattle futures did not walk randomly, and one found that they were basically “serially independent,” but Leuthold and Tomek spoke personally to the authors of that study, who admitted they had since discovered calculation errors and privately doubted their own conclusions.

More importantly, producers feared that futures prices directly affected cash prices. The driving hypothesis lending support to futures by the USDA, bankers, and key beef industry advocates was that they futures did, in fact, affect cash prices but only to make them less volatile. Leuthold and Tomek identified two studies that tested cash price variability before and after the introduction of futures trading, and both found evidence that, on a

³⁷¹ Developed for futures in Holbrook Working, “A Theory of Anticipatory Prices,” *American Economic Review* 48 (1958), 188-199.

³⁷² R.M. Leuthold, “Random Walk and Price Trends: The Live Cattle Futures Market,” *Journal of Finance* 27 (1972), 879-889.; T.F. Cargill and G.C. Rausser, “Temporal Price Behavior in Commodity Futures Markets,” *Journal of Finance* 30 (1975), 1043-53.; Cargill and Rausser, “Time and Frequency Domain Representations of Futures Prices as a Stochastic Process,” *Journal of the American Statistical Association* 67 (1972), 23-30.; J.S. Mann and R.G. Heifner, *The Distribution of Shortrun Commodity Price Movements* (Washington, DC: USDA-ERS, 1976).

weekly or monthly scale at least, futures did correlate with reduced cash price variability.

Leuthold and Tomek did not think the research was perfect, but the main problem was

“simply that farmers and their representatives do not believe the results.”³⁷³

In defense of sceptical farmers, this was not exactly their point. A lack of volatility was admittedly a good thing, but they feared that futures drove cash prices down.

Unfortunately, there was not a clear way to test that—when prices were already changing

dramatically due to unknown variables, how can you tell if any given variable added or

removed is changing them one way or the other? Only one study attempted to trace causation

between futures and cash prices for live commodities (it was on hogs, not cattle), and it found

“evidence of some causality running from futures to cash prices. The magnitude or the effect

of this causality is not ascertained in their study.”³⁷⁴ This hardly sounds like news to stop the

rural presses, but what it meant was that the only available empirical evidence on the

question supported producers’ greatest fears. Leuthold and Tomek weighed all this

information and made the only conclusion two educated, respected academic economists

could make: live cattle futures were great.³⁷⁵

Cattle producers did not find such unanimous consent on futures. When Stanley C.

Waldner appointed himself Kansas’ official boot stomper for futures trading within the cattle

³⁷³ Raymond M. Leuthold and William G. Tomek, “Developments in Livestock Futures Literature,” *Proceedings from the First Annual Livestock Futures Research Symposium*, Raymond M. Leuthold and Parry Dixon, eds. (Chicago, IL: CME, 1979), 48.

³⁷⁴ Leuthold and Tomek, 48.

³⁷⁵ For more on the likelihood that futures do impact cash prices, since 1979, see: Charles M. Oellermann and Paul L. Farris, “Note on Trader Concentration Effects in Feeder Cattle Futures and Comparison with Live Cattle,” *Journal of Futures Markets* 8, no. 1 (1988), 103-113.; Charles M. Oellermann and Paul L. Farris, “Futures or Cash: Which Market Leads Live Beef Cattle Prices?” *Journal of Futures Markets* 5, no. 4 (1985), 529-538.; Robert D. Weaver and Aniruddha Banerjee, “Cash Price Variation in the Live Beef Cattle Market: The Causal Role of Futures Trade,” *Journal of Futures Markets* 2, no. 4 (1982), 367-389. (NOTE: cash stability is dependent on futures stability, thus linked indeed); Robert D. Weaver and Aniruddha Banerjee, “Does Futures Trading Destablize Cash Prices? Evidence for U.S. Live Beef Cattle,” *Journal of Futures Markets* 10, no. 1 (1990), 41-60.

industry, he was surprised—or so he claimed, since I doubt he was surprised at all—to find most cattlemen were opposed to them. “Aren’t you interested in becoming a ‘futures cattleman’,” Waldner asked “a well-to-do, weather-beaten old cattleman,” but the man “smiled, slowly shook his head and said, ‘Not me, Sonny, I just can’t eat those paper steaks’.” Perhaps a better way to put it was that cattlemen distrusted futures, since they, like everybody else, had no way of knowing what this thing would or would not do in real application.³⁷⁶

In the summer of 1964, *American Cattle Producer* captured the optimistic end of the spectrum in an article aptly titled: “Cattlemen don’t understand futures but say they’re interested.” It was not exactly a glowing endorsement, but as the article explained, “after the way the market has acted this year they’d be willing to try it just to see if it wouldn’t help.” Good news for the CME, since that is exactly what it was counting on. But the cattlemen interviewed for the piece said some interesting things. Field Bohart of Colorado claimed to understand it all quite well, and he said, “It might be alright. It would definitely be interesting to see what it would do [...]” John McNey, of Farr Co., a huge and influential Colorado operation, approved strongly of the idea, but he still worried that it might bring in too much outside oil, movie or industrial investment money through men who are looking for what they think are tax advantages in agricultural investments.” D.A. Peterson of Wyoming thought it might be a useful way to estimate future prices, and for some reason he thought, “I like to think it might put a stop to this flood of imported beef. Americans are eating too much imported beef with no labels, so they didn’t really know what they are eating.” It would seem he just thought imports were a bigger issue than futures, so elected to discuss that instead

³⁷⁶ Stanley C. Waldner, “Can Live Beef Contracts be Realistically Delivered,” *Feedlot*, June 1965, Folder 18 “Subject Files, Futures Trading - Commodity Markets, Clippings, 1964-75,” Box 260, NCA, AHC.

apropos of nothing.³⁷⁷ The final interviewee was a USDA marketing official named Tom Ferrell, who was doubtful that cattle futures could be of much use to cattlemen, since “Futures buyers are speculators.” Plain and simple.

The most enthusiastic cattleman I found on record discussing futures was Herman E. Lacy, a feeder from Illinois, who saw the futures market primarily as a means to stick it back to the meatpackers, whom he hated for reasons economic, cultural, and historical, of course. Lacy was responding to an opinion published by Herrell DeGraff, President of the American Meat Institute, which outlined packers’ opposition to futures trading on the grounds that it provided no new useful marketing tool and that it would not work because cattle are not uniform. Lacy was outraged that the meatpackers would try to deny producers a chance to hedge their risk, and on the issue of cattle being too difficult to store: “Dr. DeGraff, what in the world would you call the millions of head of cattle on ranches and in feedlots this very day? They are cattle and calves in storage—in inventory awaiting shipping day. They are not perishable—they sometimes have flies on them, but they are not spoiled.”

In other words, producer support for futures trading did exist, but not really because all those producers believed strongly in its potential. Initial support for futures did indeed stem from the volatile price swings of the previous two decades, and it dried up to near drought conditions during the price swings of the following two decades. Which of course futures were supposed to prevent, and which, of course, they did not.

The mid 1960s, mid 1970s, and early 1980s all saw dramatic and devastating price swings for cattle producers. This was bad for futures advocates because, as Clayton Yeutter, President of the CME, noted it in writing to the NCA, “Futures markets are always an issue

³⁷⁷ “Cattlemen Don’t Grasp Futures Trading, But Say They’re Interested,” *American Cattle Producer*, 13 Aug 1964, Folder 26 “Subject Files, Cattle and Beef Futures, Clippings, 1964, 1967,” Box 214, NCA, AHC.

when the cattle industry is in economic straits,” which in his mind had nothing to do with futures, obviously. Peter Stubben, also of the CME, saw this thinking in action during a meeting with seventy-five cattle feeders in Sioux City, Iowa:

I asked how many of them felt the cattle market in the ‘70s was more volatile than the cattle market in the ‘60s. Everyone put up their hands. I asked how many of them felt this additional volatility in the cattle market in the ‘70s was caused by the futures market. Everyone put up their hands. Then I asked how many people felt grain markets have been more volatile in the ‘70s than in the ‘60s. Everyone put up their hands. Then I asked the obvious—how many people felt this higher volatility is due to the grain futures market? No one raised a hand.³⁷⁸

Stubben made a good point. Futures probably were not to blame for all the problems of the cattle industry. It was way more complex and involved climate, international trade, economy-wide structural transition, population and urban growth, developments in real estate and portfolio investing, taxes, consumer boycotts, etc. ad infinitum. Futures trading, at worst, could have exacerbated the impact of some of these other forces. But, and this is the big point, there was also no good reason for them to exist if cattle producers did not want them to.

Cattle producers began agitating for the abolition of futures trading in live cattle. The Iowa Cattlemen’s Association adopted resolutions calling for an end to cattle futures in 1974 and again in 1982.³⁷⁹ Women Involved in Farm Economics (WIFE) called for the same in 1982.³⁸⁰ These resolutions are difficult to track, but it seems that local and state organizations all over the West and Midwest passed these kinds of resolutions in the late 1970s and early 1980s, and they began putting pressure on the national organization to do something about it.

³⁷⁸ Commentary on Wayne D. Purcell, David Flood, and James S. Plaxico, “Cash-Futures Interrelationships and Pricing Processes,” *Proceedings from the First Annual Livestock Futures Research Symposium*, Raymond M. leuthold and Parry Dixon, eds. (Chicago, IL: CME, 1979), 157-159.

³⁷⁹ Statement of William Shermer, chairman, marketing committee, Iowa Cattlemen’s Association, “Live Cattle Futures Market,” Hearing before the subcommittee on livestock, dairy, and poultry of the committee on agriculture, House of Reps., 97th Cong, 2nd Sess., (26 Feb 1982),18.

³⁸⁰ Statement of Nancy H. Espy, National Beef Chairman, Women Involved in Farm Economics (WIFE), Boyes, MT, “Live Cattle Futures Market,” Hearing (1982), 110.

The National Cattlemen's Association received a great deal of correspondence from its members expressing doubt or fear in the first years of the contract, to which the association had no response. As late as October 1964, the executives of the NCA had not seen a copy of the CME's proposed contract, did not know for sure if it would be offered that November, and had no official position on the matter.³⁸¹

At the annual meeting of the NCA in January 1980, the question rose, "should futures trading in live cattle continue?" The organization formed a subcommittee on futures trading within the important marketing committee, and the subcommittee decided to conduct a mail-out survey to poll the association's membership on the question. The committee analyzed 1701 responses, and found that cattlemen's thoughts "were extremely mixed" just on the question of whether futures markets even constitute a marketing tool of any use by cattle producers. Just over half believed that futures could "be a tool which can increase operation stability and profitability," but over half said futures were becoming less valuable in "today's uncertain economy," and 60% ultimately concluded "delivery on futures contract is not a practical merchandizing tool."³⁸²

Respondents were even less generous in regard to how they thought futures markets were being applied. "There is a fairly strong belief among the respondents that futures markets have a negative influence on cash markets. Almost two-thirds believe that futures are a major cause of price fluctuation." And worse, "More than 90 percent believe that large-volume trading by some brokerage firms enables those firms to influence price movements;

³⁸¹ Letter, C.W. McMillan to Mr. D. Paul Andre, Editor of *Beef*, 7 October 1964, Folder 27 "Subject Files, Cattle and Beef Futures, Correspondence, 1964-1966," Box 214, NCA, AHC.

³⁸² "National Cattlemen's Association Membership Survey on Cattle Futures Trading: Results and Conclusions," Prepared by Subcommittee on Cattle Futures Trading of the Marketing Committee, NCA, October 1980, Folder 14 "Subject Files, Commodity Futures Trading Commission, Reports, 1979-1980," Box 217, NCA, AHC.

and 59 percent believe the cattle industry would be more economically sound without futures.”³⁸³

The survey finally asked, what should be the NCA’s position on futures? 52% said positive, 8% said neutral, and 40% said negative. It was also pretty clear that the survey was not representative of the opinions of cattle producers as a whole, since 54% of those who decided to return the survey had experience in cattle futures, when the large majority of cattlemen in America refused to touch them. Of those, who had tried futures trading, the majority rated futures between “moderately necessary” and “not necessary” to their operations, and most had never hedged more than 40% of their real cattle stocks at a time.

The NCA concluded from these results that its membership wrongly believed futures were bad, so the organization redoubled its efforts to educate membership on the wonders of futures trading.³⁸⁴ The truth is, the stated purpose of the membership survey on futures was disingenuous. The purpose was not to determine whether the association should support, remain neutral, or oppose futures—it was rather to determine how much the association needed to support futures and in what ways. The Cattlemen’s Association, for reasons that were never stated explicitly in their internal documents, had already become an essential proponent of futures trading. The “Final Report of the NCA Cattle Futures Market Surveillance Committee,” admitted that “At the very least, the cattle futures markets influence cash prices in the short term,” but it downplayed that problem in context: “[...] just as other factors, in addition to basic supply and demand, influence prices. Other factors include such things as supplies and prices of competitive meats, interest rates, meat imports and exports, government actions, international events, market psychology, cattlemen’s

³⁸³ “National Cattlemen’s Association Membership Survey [...],” 1980, Folder 14, Box 217, NCA, AHC.

³⁸⁴ “National Cattlemen’s Association Membership Survey [...],” 1980, Folder 14, Box 217, NCA, AHC.

bargaining positions, and a host of other factors.”³⁸⁵ That was not a bad point, but it was curious that the NCA sought to defend futures.

Perhaps, the association saw its role as ensuring stability, and the removal of futures trading would surely cause some form of instability. More likely, it was due to the fact that the cattlemen’s association was by the 1980s dominated by larger operators and especially cattle finishing operations (corn feed lot owners), which tended to be the highest value and most capitalized outfits in the cattle growing chain. This in itself marked a pretty remarkable transformation in the membership, since cattle feeders had barely existed before 1940 and were barred from membership in the organization until 1977. Regardless of the reason, Yeutter could praise the NCA in 1981 for “do[ing] a fine job in keeping those emotions [from the membership against futures] under control” and for “mak[ing] a very major educational contribution in the interim.”³⁸⁶ The CME had a vital interest in attracting cattle producers and dissuading those already trying futures from leaving when it did not work out.³⁸⁷

The early 1980s marked an important moment of challenge to futures trading in cattle. The context of “the farm crisis” meant producers were on the defensive and looking for someone or something to blame. In the absence of a meatpacker’s oligology, futures markets were an obvious and available culprit. Furthermore, a report entered to Congress in September 1980 by representative Neal Smith of Iowa, garnered widespread attention when it discovered that small traders (mainly hedgers) lost \$115.5 million to large traders

³⁸⁵ NCA CloseUp, “Final Report of the NCA Cattle Futures Market Surveillance Committee,” Beef Business Bulletin, 13 Aug 1982, Folder 8E6, Box 68, CCD, ANU.

³⁸⁶ Letter, Clayton Yeutter [CME Pres.] to J. W. Swan [NCA Pres], 2 March 1981, Folder 16 “Chicago Mercantile Exchange, 1981-1986,” Box 216, NCA, AHC.

³⁸⁷ See also CME to small business committee, 1980, Folder 12 “Subject Files, Commodity Futures Trading Commission, Correspondence, 1979-1980,” Box 217, NCA, AHC.

(speculators and firms) over a 16 month period. Smith's report concluded, "the cattle futures contracts still fail to meet minimum requirements necessary to make them a justifiable economic tool and as presently constituted, they do more harm than good to farmer-feeders as a whole."³⁸⁸ To this the CME responded that the statistics were all correct, but Smith had misread their meaning. Futures were actually good.

In 1982, the US House of Representatives Committee on Agriculture oversaw hearings into cattle futures in Iowa (the center of cattle feeding in the country) in 1982. The testimony ranged from humorous—"One of them said he had used them one time and lost his shorts and that was it; he was through"—to tragic—"He said that he would never again use the cattle futures as a marketing tool [...] the psychological affects on himself and his family were more than he would care to go through again."³⁸⁹

The committee heard testimony from nine cattle producers with varying experience with futures, and they learned of a common pattern among those who tried to hedge cattle on the Merc. William Utesch reported that he and his three sons were driven by declining profits to try to learn to use futures in 1980, but he summed up the experience: "And let me tell you right now our experience there has been none too good."³⁹⁰ Victor Tomka tried to hedge with futures in 1973 and lost money. He pushed it off as inexperience and misunderstanding and avoided futures until 1980, when serious losses motivated him to try to learn how to do it right. He attended seminars, met with several brokers, and, "After amassing this evidence and studies and experience of others, in May 1981, I began in earnest to hedge cattle futures.

³⁸⁸ "Smith Release," 1980, Folder 13 "Subject Files, Commodity Futures Trading Commission, Press Releases, 1980," BOX 217, NCA, AHC.; Neal Smith, "An analysis of the futures trading activity in live and feeder cattle contracts," c.1980 and CME to small business committee, 1980, Folder 12 "Subject Files, Commodity Futures Trading Commission, Correspondence, 1979-1980," Box 217, NCA, AHC.

³⁸⁹ Espy, "Live Cattle Futures Market," Hearing (1982), 110, 114.

³⁹⁰ Statement of William R. Utesch, Cattleman, Washta, IA, "Live Cattle Futures Market," Hearing (1982), 118

Since May 1981, I have hedged hundreds of contracts with my sons.” He had a small profit on the first few contracts, but, “Since that date, there has been no time that I could hedge cattle at a break- even price.”³⁹¹ Donald Smith also began using futures after “profits began to fade away feeding cattle” in 1973, but he made money. However, Smith was not there to defend futures; he was there to admit that he learned to make money by buying fat cattle that should have been sold to a meatpacker to be processed into food and re-“hedging” them on futures. What Smith was doing was short-term speculating under the guise of a hedger, and he admitted, “I don’t believe this type of business is good for the cattle industry because this tool was being used against me and the only way I could survive was do the same thing.”³⁹² Two other cattlemen who tried to defend futures revealed that they, too, engaged in speculating and never really “hedged” a majority of their stock.³⁹³ A poll in *Livestock Weekly* in April 1981 found that 96 percent of respondents believed futures trading was harmful to the cattle industry.³⁹⁴

Why did the majority of American cattle ranchers oppose futures trading in live cattle? And more importantly, why did it matter if they could simply choose not to participate (which is exactly what most of them did)? Cattle producers alleged that the mere existence of futures trading disrupted the normal forces of the “supply and demand” market and, at best, caused greater price volatility, or at worst, systematically drove down the price producers received for their real cattle.

³⁹¹ Statement of Victor C. Tomka, Cattleman, Carroll, IW, “Live Cattle Futures Market,” Hearing (1982), 97-98.

³⁹² Statement of Donald L. Smith, Cattleman, Washta, IW, “Live Cattle Futures Market,” Hearing (1982), 86.

³⁹³ See Statement of Donald G. Budlong, Cattleman, Tiltonka, IW “Live Cattle Futures Market,” Hearing (1982), 91.; and Statement of Carl L. Jensen, Cattleman, Everly, IW, “Live Cattle Futures Market,” Hearing (1982), 104.

³⁹⁴ As reported in Statement of Doug G. Wildin, Cattleman, Hutchinson, KS, “Live Cattle Futures Market,” Hearing (1982), 79.; The same was done in the Sioux City, Sioux Falls, and Omaha World Herald newspapers with 92.7 percent vote to abolish the cattle futures contract. See Statement of Smith, 87.

Critics of futures trading said that cattle producers did not necessarily become hedgers on the Merc willingly. Many smaller cattle producers using futures (and futures are especially poorly suited to small operators), were forced (or strongly encouraged) to do so by large banks, which were moving increasingly into rural lending and preferred financial metrics of risk to old rural bankers' handshake method.³⁹⁵ Nancy Espy, a range cattle grower from Montana and the National Beef Chairman of WIFE, went out and asked a number of bankers about the role of futures in their lending policies and practices. She found that many rural banks actually regretted their early advocacy of futures, and one banker, "said he was scared to death every time he read accounts of manipulations in the futures because he felt a great deal of responsibility for those clients that he had encouraged to go ahead and go into the feedlots and hedge their cattle."³⁹⁶ Further, the choices cattle producers made once they did hedge were often strongly influenced by others. Espy spoke to several cattle feeders, who had the experience of receiving calls from their brokers urging them to day trade, and she believed many just did whatever a broker said since they had pressing farm business to deal with and couldn't seriously consider their options in the moment.³⁹⁷ In fact, it was such a problem that every bank that Espy spoke to had instituted explicit contracts barring lendees and brokers from trying to alter or lift hedges without the bank's approval.³⁹⁸

Many cattle producer claimed that futures affected them even if they did not participate. Donald Budlong expressed a reasonable defense of futures as an option for some cattle producers, saying, "I certainly have no quarrel with people that do not want to use the

³⁹⁵ Walter W. Minger [Bank of America], "Financing Live Beef Cattle Futures Contracts," *Futures Trading in Livestock: Origins and Concepts*, Bakken, ed. (Madison, WI: Mimir Publishers, 1970), 147-152.

³⁹⁶ Espy, "Live Cattle Futures Market," Hearing (1982), 111.

³⁹⁷ Espy, "Live Cattle Futures Market," Hearing (1982), 115.

³⁹⁸ Espy, "Live Cattle Futures Market," Hearing (1982), 112.

Mercantile. If they want to play as I used to do, play big stakes poker, I certainly hope that the ability for me to reduce my risk is not taken away from me.”³⁹⁹ But many cattle producers reported that they didn’t have to participate to lose on futures, since cattle buyers representing meatpacking firms would use low futures prices to undercut producers during farm sales.⁴⁰⁰ Donald Smith recounted three examples of how shady the meatpackers were in using futures against cattlemen:

I called a packer and asked what the market was doing. He told me it was too early to tell yet. I said, “What do you mean? Are you waiting for the futures to open?” He said, “I guess so.”

At about 10 a.m., this same superior announced on his radio, “Futures are down the limit. Better take off \$2 from the beef card.” This same cattle buyer told me he couldn’t understand what the futures had to do with the market that day and he was very disgusted.

In the afternoon on Monday, January 11, 1982, I priced four loads of heifers to a packer buyer at \$59.50. On Tuesday morning, January 12, he came to my place to buy the cattle and at approximately 10 a.m., he asked me to sit in his car and listen to code calls.⁴⁰¹

Wildin explained, because packers used futures to quote prices, “Futures trading is the primary and major force in determining the prices we receive for our major livestock and grain commodities. Therefore, futures trading is the dominant factor in determining whether or not producers make a profit or lose money on their operation.” Cattle producers got no say in whether futures could be traded on their products, and no say in how the exchange would be handled.

Cattle producers further alleged that futures trading increased price volatility. William Shermer, chairman of the marketing committee of the Iowa Cattlemen’s Association, responded to the claim by futures advocates that futures should stabilize prices: “In reality, just the opposite is true. Speculators must have a volatile market if it is to work to their

³⁹⁹ “Live Cattle Futures Market,” Hearing (1982), 92.

⁴⁰⁰ Tomka, “Live Cattle Futures Market,” Hearing (1982), 98; Shermer, “Live Cattle Futures Market,” Hearing (1982), 19.

⁴⁰¹ Smith, “Live Cattle Futures Market,” Hearing (1982), 87.

advantage. We recognize that futures prices can also influence cash prices in an upward direction. As producers, we don't complain, loudly when this occurs. It does point out, however, that cattle futures contracts add volatility to our markets."⁴⁰² They had a strong point, as the President of the Chicago Board of Trade revealed to *Forbes* magazine in 1981: "Market breaks actually help us. Futures markets thrive on economic un-certainty, high interest rates and violent price swings."⁴⁰³

More often, cattle producers argued that futures systematically drove down beef prices.⁴⁰⁴ There were a couple possible explanations for how this would work. One was simply that the way meatpackers used futures meant they would lower prices if futures were down, but they obviously would not raise them. Mike Madden, who owned a livestock stockyard and brokerage, opined expertly, "I don't think there is any doubt that cattle futures are setting the highest cash cattle prices."⁴⁰⁵

Most critics argued (in direct contrast to the guiding justification for futures markets) that they obscured and obstructed the proper functioning of the free market. Cattle producers said futures were a "rumor" market; a "psychology market"; a "Pyramid" scheme; a "yo-yo market; and just "hot air."⁴⁰⁶ Cattle producers railed against the idea that futures reflected actual supply and demand in any way because:

Far and away the most devastating aspect of futures trading is the fact that an unlimited number of people that have no cost of production and no investment in land, livestock or equipment can sell livestock or grain they don't even own to begin with and they can do this at prices the actual owner

⁴⁰² Shermer, "Live Cattle Futures Market," Hearing (1982), 19

⁴⁰³ As quoted in "Live Cattle Futures Market," Hearing (1982), 81.

⁴⁰⁴ For Economic studies of this phenomenon, see: John W. Helmuth, "A Report on the Systematic Downward Bias in Live Cattle Futures Prices," *Journal of Futures Markets* 1, no. 3 (1981), 347-358.; Emmett Elam and Chaw Wayoopagtr, "A Reexamination of the Systematic Downward Bias in Live Cattle Futures Prices," *Journal of Futures Markets* 12, no. 3 (1992), 329-338.; Lennart A. Palme, Jr. and James Graham, "The Systematic Downward Bias in Live Cattle Futures: An Evaluation," *Journal of Futures Markets* 1, no. 3 (1981), 359-366.; Darwin M. Pluhar, Carl E. Shafer, and Thomas L. Sporleder, "The Systematic Downward Bias in Live Cattle Futures: A Further Evaluation," *Journal of Futures Markets* 5, no. 1 (1985), 11-20.

⁴⁰⁵ "Live Cattle Futures Market," Hearing (1982), 112.

⁴⁰⁶ "Live Cattle Futures Market," Hearing (1982), 18, 83, 86, 87, passim.

never agreed to take. The term used to describe this practice is speculative short selling. Speculative short selling provides processors and wealthy speculators with opportunities to make monumental profits each time a bearish cattle on feed report, crop report, weather report or any other potentially depressing rumor surfaces.⁴⁰⁷

And it turned out to be a well-documented fact that the majority of meatpackers using the futures market were doing just this—selling, not buying, cattle on the bet that the price of cattle would go down! Another cattleman pointed out the rather obvious fact during the 1982 hearings: “It [The futures market] is billions of dollars taken out of industrial investment, out of industrial capital investment, and put into a market that produces nothing.”⁴⁰⁸

Cattle producers basically made the argument that it did not matter whether futures markets theoretically impacted cash markets because they knew that the live cattle futures market literally, de facto, objectively, actually did impact the price they got for their cattle. The producers’ argument turned the economic theory on its head. One of the main justifications for futures markets is that they help make cash-for-commodity markets function more like the idealized free market. They are supposed to do this by assembling a large group of faceless competitors and distributing free and equal pricing information. The ranchers turned it around and said the futures market provided too much price information that was not linked to the specific animals or places of the exchange. It was too much market abstraction.

Whether or not you believe that, it mattered a lot that cattle producers *did* believe it. Cattle futures upset the normal ways of doing business in the beef industry, and there were a proliferation of new ways to buy cattle after 1970.⁴⁰⁹ One of those was direct buying by

⁴⁰⁷ Wildin, “Live Cattle Futures Market,” Hearing (1982), 79.

⁴⁰⁸ “Live Cattle Futures Market,” Hearing (1982), 82.

⁴⁰⁹ Henderson et al., “Marketing Alternatives for Agriculture,” Folder 15 “Market Structure, 1982,” Box 442, NCA, AHC [See also all other reports and articles in this file].; Andrew P. Griffith, R. Curt Lacy, and John C. McKissick, “Commodity Options as Price Insurance for Cattlemen,” Paper (Knoxville, TN: University of Tennessee Institute of Agriculture, 2014).; For more on current debate over automated computer trading in

meatpacking firms through predatory forward contracts. In the 1910s and 1920s, cattle producers had fought for and won some of the strongest regulations to prevent corporate manufacturers from capturing supply and dictating prices, but in the 1970s and 1980s cattle producers rushed directly back into those types of relationships leading to a meatpacker oligopoly that would have made Amour, Morris, Wilson, and Swift blush (See figure 13). In fact, Koontz et al. argued that cattle futures became less accurate cash price predictors in the 1980s exactly because of greater “direct buying” by meatpackers.⁴¹⁰

cattle futures, see: Gregory Meyer, “Cattlemen lock horns with futures exchange over market volatility: industry group urges crackdown on high-frequency trading, proposing a delay between trade actions,” *Financial Times*, 25 Jan 2016.; Flyer, CME, “Frequently asked questions: CME Cattle Market Volatility,” June 2016.; Letter, Philip Ellis and Ed Greiman [NCA] to Terrence A. Duffy [CME], 13 January 2016, Posted online: <http://pointsandfigures.com/2016/01/23/the-national-cattlemen-say-markets-are-broken/>.; Richard Haynes and John S. Roberts, “Automated Trading in Futures Markets,” CFTC White Paper (2015).

⁴¹⁰ Stephen R. Koontz, Philip Garcia, and Michael A. Hudson, “Dominant-Satellite Relationships Between Live Cattle Cash and Futures Markets,” *Journal of Futures Markets* 10, no. 2 (1990), 134.

6. Beef, Oranges, & Comparative Disadvantage

In May 1982, the first of a string of anti-American beef protests erupted in Japan. About eight thousand farmers marched on government buildings and the US embassy in Tokyo chanting, “no more beef” and “no more oranges.”⁴¹¹ In December 1982, the *Argus-Leader* of Sioux Falls, South Dakota, reported that “war banners festoon the cow barns of rural Japan” in opposition to US trade demands.⁴¹² In January 1983, ten thousand farmers marched on Tokyo again chanting the more aggressive slogan “down with America.”⁴¹³ The farmers presented the Japanese legislature, called the Diet, with a petition carrying 9.7 million signatures in opposition to US beef and citrus imports.⁴¹⁴ As protests raged in Japan, American ranchers demonstrated in Colorado to urge on their government’s aggressive trade policy, and Australian ranchers threatened “violence,” according to one source, if the Japanese Diet acquiesced to US demands.⁴¹⁵ Five years later in April 1988, protests flared up again, this time smaller but more violent. About three hundred farmers in headbands reading, “protect Japanese agriculture,” demonstrated in Kokonoe in western Japan, and they smashed an American car, loaded it up with oranges and an American flag, and set the pile on fire.⁴¹⁶ This was how “free trade” worked.

Proponents of free trade theorize that all nations will benefit if all nations produce only the goods they are best (or most economically efficient) at producing and import other

⁴¹¹ Steve Lohr, “Business VS. Farmers in Japan,” *New York Times* (New York, NY) [Hereafter: *NYT*], 5 May 1982, D1.

⁴¹² David Lammers, “Japanese Farmers Against Higher U.S. Imports,” *Argus-Leader* (Sioux Falls, SD), 26 December 1982, 44.

⁴¹³ Henry Scott Stokes, “Anti-U.S. Farm Rally in Japan,” *NYT*, 13 January 1983, D15.; Clyde H. Farnsworth, “Trade War Feared over Food Export Issue,” *NYT*, 21 February 1983, A1.

⁴¹⁴ John W. Longworth, *Beef in Japan: Politics, Production, Marketing & Trade*. (St. Lucia, QLD: University of Queensland Press, 1983), xxiii.

⁴¹⁵ Longworth, *Beef in Japan*, xxiii.

⁴¹⁶ “Japanese Farmers Hold Angry Rally Against U.S. Trade Demands,” *NYT*, 24 April 1988, A5.

goods from nations that have advantage in those. It is also clear that free trade ideas dominate economic theories of transnational markets as well as the political ideologies of the transnational capitalist elite and many of the world's national governments. Free trade is even the official policy of international trade law due to the General Agreement of Trade and Tariffs, created along with the United Nations in 1946. And yet, free trade in Pacific Rim beef met with fierce resistance in the 1980s, which continues in various forms to the present.

The “beef and citrus war” of the 1980s was part of an ongoing process to impose free-market international trading conditions in the Pacific Rim. The United States wanted Japan to remove its import quotas restricting beef and citrus imports; Japan wanted to continue protecting domestic food-production; and Australia wanted the US to stop meddling in Japanese markets that Australia previously held uncontested access to. The conflict was surprisingly hard fought on all sides, especially, since there was very little to gain in terms of actual dollars and yen. The conflict highlights the political construction of global trade markets; the confluence of social, cultural, and environmental constraints to market-formation; the role of national-scale governmental, non-governmental, and semi-governmental organizations in negotiating and enacting market rules; the power of economic ideas in driving market-change; as well as the folly of proscribing abstract economic principles to a real-world market that you do not actually understand.

During the conflict, United States trade negotiators, with the backing of beef producers, tried to change the rules of the Japanese beef import market to make trading across the Pacific Rim better match their vision of free trade based on comparative advantage theory—the idea that American soil and market conditions were superior and more efficient for beef production on a global scale, and that free competition across borders was natural

and best for all citizens of the capitalist world. American pressure did force important changes to the Japanese market, but the US team never secured a real advantage for its cattle producers. Not only did US leaders fail to understand how and why international beef trading *actually* worked the way it did, but they also encountered a strong system of non-free-trade in beef that the United States helped create during the preceding fifty years. Following the US model, national producers' trade associations and other governmental and semi-governmental industry organizations became the key drivers and negotiators of transnational beef trading, and they tried to manipulate a wide variety of institutions that regulated national and international beef exchange—including trade laws, tariffs, import quotas, domestic subsidies, consumer cultures, local land use patterns, and even health-and-safety regulations.

The existence of a nearly decade-long trade war between equally rich nations over a basic agricultural commodity casts doubt on the very freeness of free trade. In fact, the prominent inclusion of oranges in a trade war over beef foreshadows the complexity of these market politics. Free trade is more than a myth; it is a lie designed to obscure the violence of market aggression across national borders. The history of US market imperialism is lined with the corpses of small-producers from across the Global South, but they are not the victims of free markets. Free markets are not real, and they certainly do not have agency. The beef and citrus war is a rare case of failed globalization that lays bare just how unnatural this process has been.

The Beef & Citrus War

The beef and citrus war was a bitter, drawn out conflict fought with words and threats as well as commodities. At the heart of the dispute were three different visions of the transoceanic beef market, which state and beef-industry representatives from the United

States, Australia, and Japan tried to impose onto the rules of beef exchange around the Pacific Basin. The bulk and heat of the trade war occurred between 1979 and 1988, when Japan apparently acquiesced to US demands and began a formal process towards total liberalization of its beef import markets. However, the United States still, in 2017, does not have totally free access to the Japanese beef market. The beef and citrus war carved out the market conditions for what is now the largest, most valuable, and most complex market within the global beef economy, but it is an obscure and all-but-forgotten episode of a decade that already seems so far away.

I first learned about the 1983 demonstrations in Japan, the United States, and Australia over US beef and orange imports to Japan in the preface to Australian scholar John W. Longworth's *Beef in Japan*, a 325-page tome on the origins, practices, economics, labour processes, politics, consumption, distribution methods, legal structures, and culture of beef in Japan, which I picked up from the University of California, Santa Barbara Library in the United States. *Beef in Japan* was published just months after the demonstrations, and it left only a hint in a few sentences. The authoritative work is well distributed across university libraries in North America, and it closed the door on the subject for long enough that when the Anglophone world considered East Asian beef again (mostly after 2003), the beef and citrus war must have seemed unimportant if anyone even remembered it. After all, US exports to Japan, rose slowly from zero after 2003.

I learned that this shadow of a trade war was a big problem for the executive branch of the United States federal government across two presidential terms, when I consulted the Japan and Australia files at the Ronald Reagan Presidential Library in Simi Valley, California. The beef and citrus war aligned with the overall global free trade mantra of the

Regan Whitehouse, but the specific focus on this issue for so long was a result of the specific political context; the culture-driven symbolic importance of the commodity; and the pressure of a lobby group called the National Cattlemen’s Association, but which Whitehouse insiders called “the cattlemen,” was putting a lot of pressure on the US government to push for full elimination of Japanese trade restrictions long after the issue lost excitement for the President.

When Ronald Reagan took the White House in 1980, he inherited a trade crisis with Japan decades in the making. In the postwar economic boom years, it looked like the United States could buy another country out of depression.⁴¹⁷ And that was what it did for Japan, as president Dwight Eisenhower said in 1954, “If we will not trade with her [...] what is to happen to Japan? It is going to the Communists.”⁴¹⁸ However, Eisenhower underestimated the real ability of the Japanese economy to fully recover. In fact, the secretary of state argued in 1954 that there would be “little future for Japanese products in the United States,” but by 1960, some White House insiders began to note that Japan’s recovery might actually be coming a little too quickly, and they noted the potential for a protectionist reaction in the United States.⁴¹⁹

In 1981, the trade deficit with Japan crossed \$10 billion dollars, and the American economy appeared decidedly less impervious following a decade of run-amok inflation, declining manufacturing output, and increasing unemployment.⁴²⁰ American workers and

⁴¹⁷ Judith Stein, *Pivotal Decade: How the United States Traded Factories for Finance in the Seventies*, (New Haven, CT: Yale UP, 2010), xi.; Robert Brenner, *The Economics of Global Turbulence: The Advanced Capitalist Economies from Long Boom to Long Downturn, 1945-2005*, (New York: Verso, 2006), 217.

⁴¹⁸ As quoted in H.W. Brands, Jr., “The United States and the Reemergence of Independent Japan,” *Pacific Affairs*, 59 No. 3, (Autumn 1986): 387-88.

⁴¹⁹ Brands, Jr., 399-401.

⁴²⁰ Letter, Malcolm Baldrige to Edwin Meese III, 2 Nov 1981, File 04900-054999, CO078, WHORM: Subject File [Hereafter W:SF], Ronald Reagan Presidential Library [Hereafter: RRL].

sympathetic members of Congress especially resented surging Japanese auto imports as midwestern auto plants closed and turned to rust.⁴²¹ In this context, congressman Ronald M. Mottl (D-OH) now complained that America's Cold War ally was "exporting a recession to the United States," and sure enough the American public and their advocates in Congress began articulating the desire for protectionist restrictions against Japanese cars and other goods.⁴²²

The Reagan administration was ideologically opposed to protectionism, and it went in search of an issue that put Japan on the spot, distracted from the auto issue, and forwarded the case for free trade. During the frantic exchange of letters over Japanese autos in Reagan's first year, the US department of agriculture (USDA) dropped the issue in Reagan's lap saying, "We believe that agricultural and overall trade interests would be best served by a policy that does not restrict U.S. imports of Japanese autos."⁴²³ The USDA realized that American interests in auto manufacturing ran counter to American interests in agricultural trade. Even as the auto issue raged in Washington DC, the Department of Agriculture identified a much different concern—Japanese quota barriers to U.S. exports of beef and citrus. American ranchers reinforced the USDA argument, as a Montana rancher testified: "There is something wrong here. I can go to a Datsun dealer in Billings and buy a nice little pickup truck for an attractive price [...] but when it comes to offering my tasty Montana beef

⁴²¹ Senators John Danforth (R-MO) and Lloyd Bentsen (D-TX) had a bill pending before the Senate Committee on Finance, which proposed to solve the problem by erecting restrictive quota barriers against Japanese automobile imports, and the White House was seriously worried about it. Letter, Bob Dole to Edwin Meese III, 10 March 1981, File 015022-018502, CO078, W:SF, RRL.

⁴²² Letter, Ronald M. Mottl to Caspar W. Weinberger, 9 Feb 1982, File 055000-060999, CO078, W:SF, RRL.

⁴²³ Memorandum, Department of Agriculture to Thomas A. Hammer, n.d., File 018503(3), CO078, W:SF, RRL.

at a competitive price to the Japanese worker who made the pickup truck, the Japanese Government says no. This just isn't fair."⁴²⁴

Beef served a symbolic more than economic, dollars-for-yen, purpose.⁴²⁵ In 1988, the US trade deficit with Japan was \$50 billion, and the most outlandishly optimistic projections estimated that the US could sell up to \$1.2 billion of beef to Japan (It was selling about \$750 million at the time).⁴²⁶ The US could never make up the difference this way, but beef had immediate cultural resonance in the United States, and the White House expected that a nation of beef-eaters could really get behind the issue. US ranchers also wanted the government to act, as the NCA wrote directly to the President, in 1983: "The government of Japan is arbitrarily and unfairly restricting our ability to export high quality U.S. beef to that market. [...] Therefore, denying both the U.S. producers of a market and the Japanese consumer of a good product at a reasonable price."⁴²⁷ It was not even the Reagan administration's first attempt to deflect from the auto issue with an extra-American commodity; first they tried cigarettes and aluminum baseball bats.⁴²⁸ The USDA linked the beef and citrus issues because they faced similar types of quotas, but American citrus growers did not support the trade war. Oranges got taken for a ride to make it look less like a one-item issue, but really it was all about pushing American beef.⁴²⁹

⁴²⁴ As quoted in "Senator Baucus on United States-Japan Trade," Congressional Daily Record, US Senate, 131 Cong Rec S 731, 29 January 1985.

⁴²⁵ For more on theories of symbolic markets, see: K. Healy, "Sacred markets and secular ritual in the organ transplant industry," *The Sociology of the Economy*, ed. F. Dobbin (New York, NY: Russell Sage Foundation, 2004).

⁴²⁶ Clyde H. Farnsworth, "Japan Warned to End Beef and Citrus Curbs," *NYT*, 23 March 1988, D2.

⁴²⁷ Letter, Sam Washburn to Ronald Reagan, 10 Jan 1983, 119000-119420, CO078, W:SF, RRL.

⁴²⁸ Steve Lohr, "How the U.S. Struck Out in Japan," *NYT*, 25 October 1981, A1.

⁴²⁹ Memorandum, Don Gregg, 29 March 1984, File 2/3/84-3/29/84, Box 8, Ex Sec, NSC: Country File, Japan [Hereafter: ESN:CFJ], RRL.

The main US trade representatives all recognized that they were engaged in a symbolic exercise. Bud McFarlane wrote to Reagan privately explaining the U.S. delegation's stance: "The key issues are beef and citrus quotas. The dollar amounts involved are not large but the symbolism is very potent—if we can reach a satisfactory agreement on beef and citrus, the rest of the issues to be decided in April should follow rather smoothly."⁴³⁰ Likewise David Demarest, a spokesman for Brock, let slip to the *New York Times*, "Everyone recognizes that the volume of trade does not equal the kind of symbolic importance that the beef and citrus issue has taken on."⁴³¹ During Congressional Hearings on the issue, Bob Dole claimed, "To argue that removing beef quotas couldn't help the bilateral trade deficit very much is to underestimate the symbolic importance of this issue."⁴³² Tom Cook of the NCA agreed, "The beef issue has become symbolic. We are the first to recognize that increased beef trade relative to the total picture will only make a dent in the trade imbalance. However, there must be a strong commitment from Congress and the administration to resolve our differences with Japan on the beef trade issue, or we can expect continued disappointments on the other trade matters."⁴³³ The Japanese delegates, too, recognized how much of the exchange was about pageantry, and they celebrated the 1984 agreement with a meal of Big Mac hamburgers from McDonalds.⁴³⁴ Despite the fact that beef and citrus could barely make a dent in the trade deficit with Japan, their symbolic value to the American and Japanese people propelled this issue into a full blown trade war.

⁴³⁰ Memorandum, Robert C. McFarlane to President Via Vice President, 29 March 1984, Box 9, ESN:CFJ, RRL.; See also: Steven Schlossstein, *Trade War: Greed, Power, and Industrial Policy on Opposite Sides of the Pacific* (New York, NY: Congdon & Weed, 1984), 75.; Longworth, *Beef in Japan*, 42.

⁴³¹ Joel Brinkley, "U.S. and Japan Reach Agreement on New Beef and Citrus Quotas," *NYT*, 8 April 1984, A1.

⁴³² "Japanese Quotas on U.S. Beef Producers," Hearing before the Subcommittee on International Trade of the Committee on Finance, US Senate, 98th Cong., 2nd Sess. (2 April 1984), 1.

⁴³³ "Japanese Quotas [...]," Hearing, US Senate, (1984), 25.

⁴³⁴ Brinkley, "U.S. and Japan [...]," A1.

The U.S. first vocalized its concern about Japan's quota restrictions on US beef imports during the Tokyo Round negotiations of the General Agreement on Tariffs and Trade (GATT) that concluded in 1979. The GATT was a multi-national treaty that emerged in response to the European trade wars of the 1930s. It was signed in 1947 and became one of the defining institutions of free trade in the second half of the twentieth century. It had three principals: 1. Non-discrimination—Signatories had to give fair and equal import preference to any member countries; 2. Tariffs—the only acceptable restriction on trade was the tariff, quotas were forbidden except by special bilateral agreements; And 3. Enforcement—the GATT provided an impartial forum and mechanism for settling trade disputes.⁴³⁵ In 1979, at the end of the Tokyo Round, the US and Japan signed the Strauss-Ushiba Agreement to permit the continuance of Japanese beef and citrus quotas while increasing the United States' share of imports. As the conflict progressed, the United States increasingly leaned on the GATT to pressure Japan. During Congressional hearings on Japanese beef quotas, Senator Danforth asked, "What's GATT for? Is it just a waste paper?" He suggested the nation pursue its GATT-given right to dump beef in Japan and find out.⁴³⁶

The GATT served as an important vehicle for expanding free trade, but it did not actually make up the rules of international trade as practiced. Japan had a complex system of national import quotas and other non-tariff-barriers (NTBs) to free trade that could be very difficult to identify. United States leaders (from government and industry) saw that Japan exhibited explosive beef consumption trends; Japanese people still ate much less beef than consumers in economically-similar "Western" nations; the Japanese Government strictly

⁴³⁵ A. Richard DeFelice, "General Agreement on Tariffs and Trade," *The Yearbook of Agriculture 1964* [Special trade issue] (Washington DC: USDA, 1964), 477-78.; Timothy E. Josling, Stefan Tangermann, and T. K. Warley, *Agriculture in the GATT* (New York: St. Martin's Press, 1996), 101.

⁴³⁶ "Japanese Quotas [...]," Hearing, US Senate, (1984), 2, 6.

limited US beef imports; domestically-produced Japanese beef sold for much higher prices than US beef. Some estimated that US producers could deliver beef to Japan at one tenth the price if allowed.⁴³⁷ Seeing these things, the Americans concluded that abolishing the Japanese trade barriers would make a giant new market for US beef. It was supply-and-demand, and the locals be damned. Instead, the locals put up fierce resistance, the Japanese government outmaneuvered the Americans, and economically-pointless conflict dragged on for over five years.

The beef and citrus trade war with the US was a central issue in Japanese national media. A photograph in the newspaper, *Asahi Simbun*, from 13 January 1983 depicted tens of thousands of Japanese protesters filling a stadium, and I identified them as beef and citrus protesters by the posters flanking the main stage.⁴³⁸ The posters depicted Ronald Reagan, dressed as superman and flying, attacking a personified Mt. Fuji using cows, oranges, and lemons. The heavily muscled Mt. Fuji appeared up to the fight as it held the onslaught at bay. Political cartoons from various issues showed: Ronald Reagan dressed as a sheriff force-feeding beef and oranges to Prime Minister Nakasone dressed as the deputy; Reagan and Nakasone as ventriloquists using puppets to trade autos for beef and oranges; A cafeteria serving a “net domestic lunch” covered in little Japanese flags under the banner “Welcome Agricultural Cooperative Customers!”; Nakasone’s report card for “USA school” depicting full 5/5 grades for various military spending issues but 0/5 grades for beef and oranges; and, my favourite, an orange, standing on a cow, throwing a tomato at a well-dressed businessman

⁴³⁷ See for example, Senator Baucus in “Japanese Quotas [...],” Hearing, US Senate, (1984), 2.

⁴³⁸ *Asahi Simbun* (Tokyo, Japan) [Hereafter: *AS*], 13 January 1983, 9-14.



Figure 21: Photograph of a poster designed and printed by a Japanese Agricultural Cooperative (unspecified), c. 1983. © Richard Kalvar / Magnum Photos. Reprinted with Permission.

or government official.⁴³⁹ Senator Danforth claimed that in the Fall of 1983 he received over 1,300 postcards from Japanese people saying, “Please don't [...] force the liberalization of restrictions on U.S. beef going into Japan.”⁴⁴⁰

The United States trade team was ill-prepared for Japanese resistance to liberalization. Negotiations began in October 1982, but Alan Middaugh, President of the Meat Export Federation (MEF), warned that the US was going in “with what appears to be a less than well articulated strategic plan for dealing with the Government of Japan.” Middaugh advised caution, saying: “I believe we had better approach the problem with greater finesse than has been exhibited up until this point. The temptation to come down particularly hard with the “Jap bashing” technique is one way to possibly accomplish short term goals. On the other hand, I feel there is much more to be gained by negotiating “Japanese style” whereby we avoid finally backing them into a corner, and do a little horse trading on our own.”⁴⁴¹ Nonetheless, Middaugh also made clear that it must be made clear to the Japanese that anything short of full liberalization of the beef market by 1 April 1984 would be unacceptable.

The US trade negotiators did not behave as Middaugh suggested. In anticipation of the Strauss-Ushiba agreement's expiration, Japan and the United States scheduled discussions to set new quotas agreements on a broad array of goods for October 1982. But by the time the delegations assembled in Hawaii, the United States team had an express “objective of full liberalization in beef and citrus,” and the Americans deliberately refused to

⁴³⁹ Sherriff: *AS*, 19 January 1983, 14.; Ventriloquists: *AS*, 3 January 1984, 11.; Lunch: *AS*, 17 January 1983.; Report card: 20 January 1983, 14.; Tomato: *AS*, 17 January 1983, 5.; Special thanks to Travis Seifman (expert on Japanese history at the University of California, Santa Barbara) for help translating the image captions.

⁴⁴⁰ “Japanese Quotas [...]” Hearing, US Senate, (1984), 5.

⁴⁴¹ Letter, Alan Middaugh to John Morse, Jr., 15 July 1982, BOX 427, FOLDER 1 - Subject Files, U.S. Meat Export Federation, Correspondence, 1978-1987, RRL.

address any other quota issues, so they could not be used as leverage against the U.S. position of beef and citrus.⁴⁴² The U.S. delegation's aggressive tactics offended the Japanese, and the Japanese delegation left the discussions a day early without coming any closer to a new agreement.⁴⁴³ According to the Japanese U.S.-Japan Trade Subcommittee, the Japanese were open to discussions on increasing quotas, but they viewed total removal as unrealistic due to strong domestic resistance to import liberalization. According to the Japanese, the American position posed a major impediment to starting a meaningful discussion on quota expansion.⁴⁴⁴ From there the government of Japan just stonewalled American efforts, which embarrassed the Whitehouse.

A little over one year later Reagan returned from his visit to Japan (November 1983) to immediate criticism that he had not conveyed the importance of removing beef and citrus quotas. Senator Max Baucus, for one, expressed his stance that the state of Montana simply could not tolerate Japan's continuing restrictions against "high quality beef." Baucus argued that the glaring absence of Ambassador William E. "Bill" Brock (United States Trade Representative) and Secretary of Commerce Malcolm Baldrige from Reagan's entourage during the visit to Japan suggested to Japan that the U.S. did not place a high priority on trade. Baucus also made the thinly veiled threat that Congress might not support free trade any more if Japan did not change its position.⁴⁴⁵ Meanwhile, the Japanese began to build up the beef and citrus issue, too. The Japanese media mistakenly reported that beef and citrus had been a central issue of Reagan's November visit, and they subsequently reported that

⁴⁴² Memorandum, Wendell W. Gunn to Edwin L. Harper, 14 June 1983, File 139000-140499, CO078, W:SF, RRL.

⁴⁴³ Letter, Kenneth M. Duberstein to Bill McCollum, 28 Dec 1982, File 105000-109999, CO078, W:SF, RRL.

⁴⁴⁴ Summary Report, American Embassy Tokyo to Secretary of State, 10 Dec 1982, File 12/7/82-1/5/83, Box 8, ESN:CFJ, RRL.

⁴⁴⁵ Letter, Max Baucus to Ronald Reagan, 19 Dec 1983, File 190000-199999, CO078, W:SF, RRL.

Sigur was making rounds in Japan calling for an early solution to prevent beef and citrus from becoming a political tool of the Democrats in the 1984 Presidential race.⁴⁴⁶ The news only emboldened the Japanese because they believed Reagan was in a vulnerable position, and another meeting in January between Vice President George Bush and Prime Minister Abe ended in yet another stalemate.⁴⁴⁷

American interests became increasingly aggressive about the Japanese quota issue as the Strauss-Ushiba agreement approached expiry on for 31 March 1984. Bob Dole, head of the Senate Subcommittee on International Trade, argued, “At a minimum we must assert our rights under international law.” Dole pointed out that the US could not drag Japan to GATT prosecution so long as the Strauss-Ushiba bilateral agreement was in place, but “now that this agreement has expired, our rights under GATT entitle us to initiate dispute resolution proceedings.”⁴⁴⁸ The issue grew dire in 1984, when Congress launched hearings into “Japanese Quotas on U.S. Beef Products” that turned highly critical of the executive. Bonnie Kuraoka, an American living in Japan, wrote to the committee leading the hearings: “With an air of arrogance and smugness, they [the Japanese] do not believe that the American Congress will ever really have the guts to impose trade restrictions. [...] I wonder if you know just how proud the average American would be to see the U.S. stop acting like the paper tiger she is believed to be here.”⁴⁴⁹

By 1984, the beef and citrus issue was not moving forward, and the US government was ready to settle for a symbolic increase in the American quota that fell well short of real

⁴⁴⁶ Summary Report, American Embassy Tokyo to Secretary of State, 18 Jan 1984, File 11/9/83-1/26/84, Box 8, ESN:CFJ, RRL.

⁴⁴⁷ Memorandum, Don Gregg and Walt Doran to George Bush, File 11/9/83-1/26/84, Box 8, ESN:CFJ, RRL.

⁴⁴⁸ “Japanese Quotas [...]” Hearing, US Senate, (1984).

⁴⁴⁹ “Japanese Quotas [...]” Hearing, US Senate, (1984).

trade liberalization, but the NCA kept the issue hot. As even Bob Dole knew, GATT arbitration could be “slow, tedious and do not directly redress the problem at hand” because the GATT could award compensation for continued quotas rather than actual liberalization. The White House and the US trade representatives all agreed that the GATT was not the best option, mostly because they did not want to offend Japan, but American ranchers blocked a moderate compromise.

National security advisor Robert “Bud” McFarlane believed the Japanese could be willing to offer a 7,000 metric tonne increase per annum over a five-year period. That would ultimately double the quota, which would satisfy the American delegation if they could get the NCA on board:

“Undersecretary Amstutz of the Department of Agriculture believes he could sell an increase of 7,000 tons per year to the U.S. Cattlemen [...] Bill Brock is perfectly willing to keep negotiating with the Japanese and is willing to settle for anything that will guarantee a vote of support and appreciation to you from the Cattlemen’s Association. [...] Brock will be very much influenced by Cattlemen’s attitude as he believes that we must gain their support for any agreement that we sign with the Japanese.”⁴⁵⁰

Bill Brock, the lead negotiator, met with the Cattlemen’s Association the same day and learned that the NCA “were markedly not enthusiastic about the Japanese offer.”⁴⁵¹ Brock’s partner, Donald Gregg of the CIA recorded his impression of the meeting:

Mrs. Smith [NCA President Joanna Smith] spoke up and said that the Cattlemen’s Association would prefer taking the Japanese to the GATT rather than having Brock “sell out” with a low offer. [...] Mechanics of the GATT were then explained. It was made clear that long delays would be involved and that even a positive ruling would not allow the U.S. to sell any more beef to Japan. I pointed out that this was why hard-line conservatives in Japan were hoping that we would take them to the GATT. I also stressed that President Reagan viewed Mr. Nakasone as the best possible Prime Minister we are likely to have in Japan and he would not want to see his political standing damaged. (This made little visible impression.) [...] Brock was very fair in spelling it out to the Cattlemen the other equities involved. He stated that the citrus growers want to settle and that the Japanese have hinted at more generous settlements in other aspects of the follow-up process if beef is surmounted. None of these points seemed to make much impression on the Cattlemen.⁴⁵²

⁴⁵⁰ Memorandum, Gaston Sigur and Don Gregg to Robert C. McFarlane, File 2/3/84-3/29/84, Box 8, ESN:CFJ, RRL.

⁴⁵¹ Memorandum, Don Gregg, 29 March 1984, File 2/3/84-3/29/84, Box 8, ESN:CFJ, RRL.

⁴⁵² Memorandum, Don Gregg, 29 March 1984, File 2/3/84-3/29/84, Box 8, ESN:CFJ, RRL.

Brock took the cattlemen's demands to heart and rejected the Japanese offer of 6,900 tonnes per annum.⁴⁵³

Internally, the White House sung a different tune. After the NCA meeting, an anonymous staffer wrote to McFarlane in a private, hand-written note:

Bud, We simply can't let the Cattleman's Assoc. drive this problem. We've been told by Okawara recently that we will get everything else we want. It seems to me one possibility is to push for 7000 increase and make argument on that contingent on getting the other items we want. We've made the point to Don that the VP will have to exercise some leadership here with our own negotiations. Don will (over) [...] talk to the VP during the trip.⁴⁵⁴

McFarlane responded: "Agree - I expect they will come back to us with some 'grief.' GATT solution doesn't help them."

It is clear in the internal correspondence that the NCA was pushing US policy in the Pacific, and it is also clear that the government was growing weary of the whole issue. In 1984, the US settled for the Japanese offer to double quotas over four years. William Brock, US trade representative, told the media that "I'll take a doubling of exports any day of the week – especially to Japan," and he claimed, "We've just guaranteed our cattlemen a minimum of \$300 million in new sales over the next four years."⁴⁵⁵ Nonetheless, the cattlemen remained unimpressed, beef quotas had not been removed, and the US only managed to buy a four-year bilateral extension of the quota system they set out to eliminate after over two years of hard negotiations.

In response to its unpleasant experiences with both the Japanese negotiators and the NCA in 1984, the Reagan administration overhauled its trade policy after the second election. In December 1984, Bill Brock and Malcolm Baldrige outlined the administration's new trade policy based on the lessons they learned from beef and citrus in an extended

⁴⁵³ Note, Gaston Sigur to Bud McFarlane, 7 April 1984, File 4/4/84-4/28/84, Box 8, ESN:CFJ, RRL.

⁴⁵⁴ Note, [Initial unidentified] to Bud McFarlane, 29 March 1984, File 2/3/84-3/29/84, Box 8, ESN:CFJ, RRL.

⁴⁵⁵ Brinkley, "U.S. and Japan [...]," A1.

memorandum for the President. First, they contextualized the Japan issue reminding Reagan that the United States had a trade deficit with the whole world, and the deficit had increased more rapidly with Europe, Canada, and Latin America each than it had with Japan.

Nonetheless, Japan was “poisoning the well of world trade” and would have to continue being a target for free trade—just not in beef. They criticized past efforts for focused on removing the formal barriers to imports such as quotas on beef and citrus rather than focusing on real increases in sales to Japan, which would be much more promising in other areas.⁴⁵⁶ Previously, the Americans singled out beef and citrus for their political importance while other restrictions on valuable commodities like nuts went virtually unnoticed.⁴⁵⁷ Brock and Baldrige realized that beef and citrus had garnered far greater attention than their actual importance to bilateral trade warranted.

However, beef was like the issue that would not die for the Reagan administration. In the heat of the much more important “Microchip War” of 1987, Sam Nakagama, chairman of an international economic advisors firm, brought the issue right back to beef and citrus saying, “Destructive as it is, the microchip war will do nothing to realign the basic forces that are producing the enormous trade imbalance between the United States and Japan. A much more promising route is through agricultural trade.”⁴⁵⁸ The NCA drove the United States into hardline negotiations again in 1988 despite the quota increases.⁴⁵⁹ This time, the US

⁴⁵⁶ Memorandum, William E. Brock and Malcolm Baldrige to Ronald Reagan, 20 Dec 1984, File 241000-245184, CO078, W:SF, RRL.

⁴⁵⁷ Christina L. Davis, *Food Fights Over Free Trade: How International Institutions Promote Agricultural Trade Liberalization*, (Princeton, NJ: Princeton UP, 2003), 137.

⁴⁵⁸ Sam Nakagama, “Business Forum: The Key is Agricultural Policy; Turning Japan Into an Importing Nation,” *NYT*, 18 April 1987, A2.

⁴⁵⁹ US political discourse became very “bitter” in 1988. See: “What’s the Beef with Japan,” Congressional Daily Record, 134 Cong Rec H 3460, 19 May 1988.

negotiators got what they wanted—an agreement for liberalization of Japanese beef and citrus imports gradually from 1988 to 1991.

Forceful-liberalization of Japanese beef imports was a colossal economic mistake that compromised the US export position overall. As Iwamochi Shizuma, President of an organization called *ZENCHU*, wrote directly to the US President to remind him in 1981: Japan was already “the American farmer’s best customer” buying 15% of total U.S. Agricultural exports. By the 1970s, Japan was the single largest grain importer taking about 27% of global exports, and 90% of that came from the United States.⁴⁶⁰ The US agricultural trade with Japan was so important that, in April 1968, “To promote goodwill, and as a token of respect for the Meiji centenary celebrations, the United States Department of Agriculture [staged] a major 17 day show at Tokyo,” which featured American farm products and livestock.⁴⁶¹ Select US cattle breeders had also made major gains in the Japanese breeding stock market since the 1960s.⁴⁶² All that American grain and semen fed Japan’s domestic beef industry. In other words, the US gambled an established fourteen-million-tonne grain market for the hope of selling just thirty-thousand tonnes of beef, and apparently the President was informed of the fact.⁴⁶³

⁴⁶⁰ Booklet, “Beef Industry in Japan,” June 1983, pg. 11, File 140500-144999, CO078, W:SF, RRL.; “Perspectives: Japan’s Beef Market,” Booklet, (Tokyo: Agricultural Policy Research Committee, [1982]), 3. This was a pamphlet offering, “Why Doesn’t Japan Import More Beef: Some Questions and Answers,” for Americans.; Frances M. Ufkes, “Trade Liberalization, Agro-Food Politics and the Globalization of Agriculture,” *Political Geography* 12.3 (1993), 221.

⁴⁶¹ Frank H. Johnston, “Japan’s Farmers are the Backbone of the Economy,” 21 March 1968, Book 46, Box 16, MS 8272 Papers of Frank Johnston [Hereafter: FHJ], National Library of Australia [Hereafter: NLA].

⁴⁶² Clipping, Johnston, “U.S. Cattlemen Look to Japan’s Needs,” *Australian Financial Review* (Sydney, NSW), 5 December 1963, Book 48 “Published Press Clippings” [Note this is a large scrapbook including clippings as well as correspondence and ephemera], Box 16, FHJ, NLA.; Johnston, “Some Background Information about Japan’s Agricultural Industry,” June 1976, Book 46, Box 16, FHJ, NLA.

⁴⁶³ Schlossstein, 83.; Longworth, *Beef in Japan*, 299.; Booklet, “Beef Industry in Japan,” RRL.; “Perspectives: Japan’s Beef Market,” (1982), 3, 6.; The United States actually had a longer (though unacknowledged) history working with Japan to establish agricultural imports markets. See: Audrey Ames Cook, “Agriculture’s Man in Japan,” *Yearbook of Agriculture 1962* (Washington DC: USDA, 1962), 608-14.; Dwight R. Bishop, “Meat Production and Trade,” *Yearbook of Agriculture 1964* (Washington DC: USDA, 1964), 146-154.; Kenneth W.

Further, the Japanese market could not really absorb that much new American beef. From 1984 to 1991, a huge proportion (as much as half) of the quota increase went into government storage due to oversupply. The Japanese government basically bought and froze tens of thousands of tonnes of beef just to placate the US government.⁴⁶⁴ When markets liberalized in 1991, this artificial preference for US beef—fostered by the Japanese state and the very institutions Americans so resented—disappeared, and US imports dropped. In the short term, Australia seized on Japan’s now de-regulated markets and increased sales to the direct detriment of US exports. The imposition of *ad valorem* (landed-value-based) tariffs in 1991 put Australia, the much closer nation, back on top.⁴⁶⁵ In fact, an Australian report from 1989 estimated that the Australian quota was equivalent to a 200% tariff, so 50-70% was very acceptable, and gave “Australia a potential market larger than any other in its history of beef production.”⁴⁶⁶ Many observers predicted this would happen throughout the crisis, but the American State and cattle ranchers ignored them.⁴⁶⁷ For example, Curtis Anderson, President of Sunkist Growers Inc., argued on behalf of citrus interests, “Without quotas the

Olson, “U.S. Farmers Suppliers of Food to the World,” *Yearbook of Agriculture 1969* (Washington DC: USDA, 1969), 75-86.; Carmen O. Nohre, “U.S. Foreign Trade is Vital to Our Farmers and to Our Economy,” *Yearbook of Agriculture 1970* (Washington DC: USDA, 1970), 255-263.

⁴⁶⁴ Ufkes, 225.; “Liberalization of Beef and Oranges (1): Catch 22: Consumers May Pay More, Not Less,” *The Japan News* [Hereafter: JN], 2 April 1991. (Please note, all *The Japan News* articles accessed on *Yomidas Rekishikan* database).

⁴⁶⁵ Ufkes, 225-6.

⁴⁶⁶ Colin Boord [Beef marketing Officer, Benalla, Victoria], “Beef in Japan: A Study Tour Report of the Beef Industry in Japan, 1989,” Study Tour Report Series No. 146 ([Canberra, ACT?]: Department of Agriculture and Rural Affairs, 1989), 10.

⁴⁶⁷ Colin Carter, Economist at UC Davis, was a major voice objecting to the beef and citrus war on the grounds that the US would not be able to increase sales after liberalization. See also: Letter to Editor, “A Trade Gap Made in America, Not Japan,” *NYT*, 4 Oct 1985, A30.; Andrew Pollack, “Japan’s New Farm Belt,” *NYT*, 14 May 1989, A1.; Towards the end of the conflict, researchers at the Meat Export Research Center of the University of Iowa argued that a sudden reduction in Japanese assistance to “domestic producers could have poor effects on both price politics and price expectations. Thomas I. Wahl et al., Japanese Beef Policy and GATT Negotiations: An Analysis of Reducing Assistance to Beef Producers,” MERC Staff Report No. 176, [1987].; The CC determined that Australia had a strong competitive edge over the US in 1975 and maintained that opinion throughout. “The Market in Japan for Australian Beef,” (Canberra, ACT: Australian National Cattlemen’s Council, 1975).

Japanese Market would be in chaos [...] We couldn't win. There are countries much closer to Japan who would come in and who we couldn't compete with. We'd most likely lose the market."⁴⁶⁸ As it turned out, US beef exports to Japan actually during the liberalization process from 716 million lbs. in 1989 to 574 million lbs. in 1990.⁴⁶⁹ Japan cut US imports immediately down to zero in 2003.

The announcement of Japanese beef market liberalization in 1988 set off a wave of outside investment in the US and Australian beef sectors. Japanese companies bought up US ranches, feedlots, and packingplants. "American trade officials predicted that sales of American beef and oranges to Japan would double within a few years. Judging from their investments in American ranches and citrus groves, Japanese companies agree," opined Andrew Pollack of the *New York Times*, "even the American cowboy now seems to be falling under Japanese sway."⁴⁷⁰ American ranchers were less impressed, as Tom Cook of the NCA remarked, ranchers "want to sell them the beef, not the operations."⁴⁷¹ A disproportionate share of American beef going to Japan turned out already to be Japanese-owned. Japanese producers, in turn, launched major exports of "Kobe beef" to the US which came to dominate the upper tier of the market.⁴⁷² The Japanese domestic beef industry ultimately survived, and it was still worth \$4.4 billion in 2008.⁴⁷³ Recognizing the advantage of Australia due to its

⁴⁶⁸ Keith Schneider, "Japan and U.S. Still at Odds over Beef and Citrus Trade," *NYT*, 1 April 1988, D4.

⁴⁶⁹ John Marsh and Derrell S. Peel, "International Beef and Cattle Trade," *Managing for Today's Cattle Market and Beyond* (Laramie, WY: Western Extension Marketing Committee, University of Wyoming, n.d. [c.1995, updated 2002]), 5.

⁴⁷⁰ Pollack, "Japan's New [...]," A1.; "Liberalization of Beef and Oranges (2): Opening of Beef Market Brings New Opportunities," *JN*, 3 April 1991.

⁴⁷¹ Pollack, "Japan's New [...]," A1.

⁴⁷² Japan identified the US as a market for their own beef as early as 1963: "American Market Eyed by 'Kobe Beef' Traders," *Mainichi Daily News*, 8 October 1963, from "Japan – meat," NAA: A1313, 1960/2477, 12209160, National Archives of Australia [Hereafter NAA].

⁴⁷³ Kakuyu Obara, Michael McConnell, and John Dyck, "Japan's Beef Market," (Washington DC: USDA, 2010), 21. This report also estimated that a new government support scheme accounted for over \$600 million to beef producers.

proximity, a number of Japanese and US firms began buying up Australian operations and investing in the expansion of feedlot infrastructure.⁴⁷⁴ Since Australia lagged in lot feeding, local capital was cut out of the modernization of the industry. More importantly, Australian ranchers no longer performed—and therefore collected profits from—the full maturing of cattle. The most capital intensive and profitable part of production now belonged to American and Japanese businessmen. Geographer Frances Ufkes predicted in 1993: “The fortunes of farmers in the US, Japan and elsewhere are less likely to be determined by struggles within national forums as they are by the deals made by corporate leaders in boardrooms or on golf-courses halfway around the world, all of which are highly insulated from public scrutiny.”⁴⁷⁵

The was no tangible victory for American ranchers, but the beef and citrus war did advance the interests of global capital. As Roderick Francis argues, only a superficial analysis makes it look like the US, Australia, and New Zealand compete for markets in North Asia today. Actually the same corporations source for consumers from these regions.⁴⁷⁶ The US attempt to assert dominance over Japan’s markets did not really benefit the United States, but it did benefit capital broadly. Ufkes speculated that this may have been the point. “Japan’s beef sub-sector was the creation of another geopolitical era; its viability became incongruous within the dynamics of the current capitalist world economy.”⁴⁷⁷ The point was to ruin Japan’s domestic livestock industry—not to promote America’s. And yet, it seemed

⁴⁷⁴ Ufkes, 216.; Christopher Nelson, “Tariff and Non-Tariff Barriers to Trade in the Beef, Dairy & Wheat Industry in Japan, Taiwan & Thailand Between 1974 & 1994,” (MA Thesis, Department of Economic History, University of Melbourne, 1995), 73, 75.

⁴⁷⁵ Ufkes, 228.

⁴⁷⁶ Roderick Francis, “Eating More beef: Market Structure and Firm Behavior in the Pacific Basin Beefpacking Industry,” *World Development* 28.3 (2000), 533.

⁴⁷⁷ Ufkes, 228

clear in the Whitehouse letters at the Ronald Reagan Library that the 1988 outcome would not have come without the insistence of “the cattlemen.

	Governmental and semi-governmental organizations regulating cross-border beef trading	Private Producers’ organizations involved in cross-border beef trading	Import Restrictions	Goals during Beef and Citrus War (1982-1988)
United States	Office of the US Trade Representative; State Department; Foreign Agricultural Service (FAS), a sub-organization of the Department of Agriculture (USDA)	National Cattlemen’s Association (NCA); Meat Export Federation (USMEF)	Tariffs; quotas; domestic subsidies; health-and-safety regulations	Total removal of all non-tariff barriers (mainly quotas) to Japanese beef imports
Australia	Various trade and agriculture departments*; Australian Meat Board (AMB)	Cattle Council of Australia (CCA)	Domestic subsidies; health-and-safety regulations	Continued Japanese preference for Australian beef through national quotas; scaled liberalization of Japanese beef import system
Japan	Ministry of International Trade and Industry (MITI); Livestock Industry Promotion Corporation (LIPC), a sub-organization of the Ministry of Agriculture, Forestry, and Fisheries (MAFF)	Various Nokyo organizations including ZENCHU, ZENNOH, et al.; All Japan Beef Cattle Association	Tariffs; quotas; domestic subsidies; health-and-safety regulations	Continued use of all non-tariff barriers to protect Japanese producers; stable foreign import markets for remaining demand

* Australian government organizations change name more often than is common in other contexts. The current trade and agriculture arms of the government are the Australian Trade and Investment Commission (Austrade) and the Department of Agriculture and Water Resources, but neither existed during the beef and citrus war. The Australian Meat Board (1936-1977) became the Australian Meat and Livestock Corporation (1977-1998), but AMB is used in this essay for consistency.

American Ranchers & Transnational Beef

The beef and citrus war was not the first time the National Cattlemen’s Association got involved in transnational beef markets; in fact, the organization helped shape the whole system of un-free transnational beef that prevailed around the Pacific. In the records of the National Cattlemen’s Association at the American Heritage Center in Laramie, Wyoming, I learned that the NCA was much more than a lobby group, and it operated at the center of the cattle industry and its relationship with the US government in not only the Whitehouse, but also Congress, many federal departments and agencies, and, through its state and local affiliate organizations, State legislatures, and county governments. The NCA and associated producers’ organizations were the most important and successful architects of US import/export policies on beef for most of the twentieth century, and they helped develop the protective market technologies that came to make the Pacific beef trade such and un-free market.

The history of transnational beef trades predated, and included of course, the arrival of cattle in America.⁴⁷⁸ Following Megan Black’s observation that the interior American West was in the nineteenth century essentially foreign lands with many sovereign and subjected nations, the American beef trade has been fundamentally transnational for most of its history.⁴⁷⁹ The American beef industry increasingly overlapped with markets in other countries in the late nineteenth century, when European investors—especially Scottish and

⁴⁷⁸ The most comprehensive treatment of the meat trade before 1900 is Derek Rixson, *The History of Meat Trading* (Nottingham, UK: Nottingham UP, 2000), which covers the Paleolithic, Ancient, Mediaeval, Early Modern, and nineteenth-century periods focusing ultimately on Great Britain.

⁴⁷⁹ As observed in “The Closing of the Interior: The Shared History of Expansion and Environmental Management,” conference presentation at the American Society for Environmental History Annual Conference, Chicago, IL, 30 March 2017. See also: Megan Black, “Interior Imperialism: Fossil Fuels, American Expansion, and Rebel Park Rangers,” *n+1* (2017), Available: <https://nplusonemag.com/online-only/online-only/interior-imperialism/>

English—sunk capital into American rangelands and US cattle and beef products shipped across the Atlantic Ocean. Contrary to the belief that some might have that trans-Atlantic beef trading was an obvious and inevitable outcome of the expansion and industrialization of American beef production, economist C. Knick Harley demonstrated that, in fact, the trade was shaped primarily by the opportunism of shipping companies and the special constraints of their technology.⁴⁸⁰ The Atlantic beef trade surged in response to war demand, but overall it dwindled until it was all but cut off entirely by the European Economic Community in the 1960s.⁴⁸¹ Europeans have upheld restrictions on US beef ever since due ostensibly to concern of disease, growth hormones, antibiotics, and other things hiding in American beef.⁴⁸²

The South American beef industry also expanded into an important global exporter in the late nineteenth century, but it did not penetrate US markets significantly. The Argentinian beef export trade focused almost exclusively on Britain, and the Uruguyan trade focused on continental Europe.⁴⁸³ For example, in 1890, only three firms controlled the whole Argentinian export trade; two were British, and one was Argentine with offices in Liverpool and London.⁴⁸⁴ Nonetheless, this oligopoly also meant that the firms dictated low prices to Argentine ranchers, which made Argentine beef imports a potential threat to domestic American cattle producers.

⁴⁸⁰ Harley, C. Knick. “Steers Afloat: The North Atlantic Meat Trade, Liner Predominance, and Freight Rates, 1870-1913.” *Journal of Economic History* 68, no. 4 (December 2008): 1028-1058.; See also: Richard Perren, “Big Business and its Customers: the European Market for American Meat from 1840 to 1939,” *Journal of European Economic History* 32, no. 3 (Winter 2003): 591–620.

⁴⁸¹ Perren, 175-177.

⁴⁸² Perren notes that concerns for poor animal welfare from long travel also impacted trade starting with the Council for Europe’s *European Convention for the Protection of Animals during International Transport* drafted in 1968. Perren, 240.

⁴⁸³ Perren, 115-118.

⁴⁸⁴ Rixson, 327.

South American import beef was the first issue to get cattle producers directly involved in shaping the American beef market's place in international markets. American cattle producers saw an immediate and competitive threat to their beef consumer market, which was the biggest in the world, and they launched successful resistance to cheap beef imports through the same organizations they created to resist shepherders and monopolistic meatpacking corporations in the 1930s. United States cattle producer's actions against South American imports developed an important, but not obvious, strategy and mechanism for livestock industries to interfere in international trade against the foreign policy of powerful global capitalist elites, who support free trade. They used health-and-safety regulations as a means to manage market competition.

The first and formative example of this was American ranchers' scuttling of the *Argentine Sanitary Convention* in 1933 and every time it reappeared after that.⁴⁸⁵ The *Tariff Act* of 1930 banned beef imports from countries known to have foot and mouth disease. Foot-and-mouth disease is a deadly and highly contagious virus for hooved animals, and while it does not harm humans, it threatened the economic vitality of unexposed cattle industries. In 1933, the State Department—following the United States' "good neighbor policy" towards South America—put forward an argument that the region of Patagonia in northern Argentina should be considered a geographically—if not politically—separate country and therefore should not be penalized due to cases of the disease in southern Argentina. The proposed treaty made sense since viruses do not naturally align with political borders, and there was a lot of

⁴⁸⁵ Bryce Wood, "The Department of State and the Non-National Interest: the Cases of Argentine Meat and Paraguayan Tea," *Inter-American Economic Affairs* 15, no. 2 (July 1961): 3-32.; Rock Livingston Comstock, "American Cattlemen and the Argentine Sanitary Convention," (PhD Dissertation, University of Wisconsin – Madison, 1951).; Charles E. Ball, et al. *Building the beef industry: A Century of Commitment* (Denver, CO: National Cattlemen's Foundation, 1998), 102.

capital support behind it. Americans had invested heavily in the Argentine cattle industry, and American packers welcomed cheaper import product for processing. Nonetheless, the treaty failed spectacularly.

Cattle ranchers feared exposure to foot-and-mouth in general, but in this case they were most concerned with economic competition from cheap imports. Protection from foot-and-mouth became a convenient way to regulate a beef supply chain that was threatening to expand globally. Ranchers held political influence disproportionate to their economic significance due to their regional distribution in western ridings with fewer people and less industry as well their cultural significance as the heirs of America's imagined cowboy past. Stockmen's associations also organized their members on the issue and encouraged them to harass their Congressional representatives. As Sam Hyatt, president of the Wyoming Stockgrowers' Association, dictated to cattlemen at their annual convention in 1938, "The Argentine Convention at present is lying with the Senate Committee of Foreign Relations and let us hope that there it remains." Hyatt warned members to "be ever alert to guard against any move to bring about its ratification," and it worked.⁴⁸⁶ Ranchers continued to pressure Congress to the chagrin of the State Department, and the federal government dropped the treaty entirely in 1947.

Blocking the *Argentine Sanitary Convention* was a huge victory for cattle ranchers that protected domestic producers from South American imports for decades thereafter and shifted the balance of power over the American beef supply chain further in producers' direction. The incident emboldened ranchers' protectionism, and ranchers' trade policy grew

⁴⁸⁶ Sam Hyatt, [President of Wyoming Stockgrowers Association], "Annual Address," before Annual Convention, 2 June 1938, Folder "Misc. Statements, Statements 1938-1949," Box 668, National Cattlemen's Association (U.S.) Records [Hereafter NCA], American Heritage Center [Hereafter AHC].

to oppose any reciprocal trade agreement or any increase in cattle import quotas.⁴⁸⁷ This drew the NCA into an enduring animosity with the US State Department, which wanted to use import markets to curry favour with Cold War allies. The cattle producers most-often got the better of their own nation's free-trade advocates, but their tactics exported easily to other domestic livestock industries that feared competition from cheaper beef from the United States. Disease regulation became an essential part of the political economy of beef, especially after the General Agreement on Trade and tariffs (GATT) made free trade a cornerstone of international law in 1946.

American ranchers became vocal opponents of the Executive branch's free trade policies, which F.E. Mollin, executive secretary of the American National Live Stock Association, likened in 1953 to "robbing Peter to pay Paul." "We have no sympathy for those who advocate free trade, either as a manifestation of good will toward all, at the expense of Uncle Sam, or for the selfish purpose of encouraging greater imports of foreign products," explained Mollin, because it was not fair to burden "the American workingman or the American farmer or stockman" with the surplus goods of "underpaid foreign labor." According to Mollin, free traders were "not even entitled to be considered true Americans."⁴⁸⁸

⁴⁸⁷ Hyatt, "Annual Address," 1938, NCA, AHC.; F. E. Mollin, "Statement of F. E. Mollin, Executive Secretary of American National Live Stock Association, Denver, Colorado, Hearings before Senate Finance Committee, February 18, 1949, On Extension of Reciprocal Trade Act," Folder "Misc. Statements, Statements 1938-1949," Box 668, NCA, AHC.; Mollin, "Statement of F. E. Mollin, Executive Secretary of American National Live Stock Association, Denver, Colo., Trade Agreements Extension Act of 1953," Folder "Misc. Statements, Statements 1950-1955," Box 668, NCA, AHC.; "Statement of American national Cattlemen's Association, before the United States Tariff Commission," *Investigation by the United States Tariff Commission, Pursuant to Section 332 of the Tariff Act of 1930, of the Conditions of Competition in the United States Between Beef and Beef Products Produced in the United States and in Foreign Countries*, Folder "Misc. Statements, Statements 1964-65," Box 668, NCA, AHC.; DFM, Memorandum to file: Policy on Import Legislation, "RE: Conference with Bill Galbraith, Deputy Under Secretary," 24 April 1969, Folder 20-23 "Subject Files, Meat and Food - Prices - Spreads - Consumers II, Correspondence, 1969-70," Box 440, NCA, AHC.

⁴⁸⁸ Mollin, "Statement [...] Trade Agreements Extension Act of 1953," NCA, AHC.

Ranchers saw free trade as charging producers for debts incurred by others or by all Americans together. In 1969, in conversation with William Galbraith, deputy undersecretary of the USDA, another cattleman scoffed at the idea that ranchers “owe these people something for their assistance with various conflicts in which we are and have been engaged, as well as their general loyalty to the United States.” Galbraith asked, “what we can possibly do in the foreign trade field in order to not alienate our friends and allies in Australia and New Zealand?” The cowman answered the “obligation is really the responsibility of the entire country,” and really the problem was “that European markets, where much of this meat could go, are practically closed to these exporters unless the governments in Europe want to let it in.” He thought “our situation would be relieved materially if the US State Department could force the European countries to reduce or eliminate their non-tariff trade barriers and take part of the meat from Australia and New Zealand which they definitely need and could use.”⁴⁸⁹

The National Cattlemens’ Association (NCA), the main producers’ organization, actively fought against the State Department on this issue. In about 1963, the NCA caught wind that Robert E. Lee, the deputy assistant secretary of the State Department, was distributing materials in Congress to discourage them from passing any legislation to restrict meat imports. In notes prepared by the NCA for its members to start another harassment campaign, the NCA wrote: “In our opinion, this “epistle” of the State Department emphasizes the “free trade” philosophy adopted by our government and indicates the ominous overtones [...]. Their position is contrary in everyway to our own and many other industries. It must also be assumed [...] they consider certain products and industries

⁴⁸⁹ DFM, “RE: Conference with Bill Galbraith [...],” NCA, AHC.

expendable. Apparently beef is one of them.” The document then took each State Department claim in turn and provided a detailed and aggressive response for ranchers.⁴⁹⁰

Despite the opposition of the State Department and several presidents, cattlemen repeatedly succeeded in building up institutional restrictions to free trade in beef. From Eisenhower forward, no US presidents really wanted to restrict beef imports—even Johnson, who ranchers’ though was one of their own—but over and over again they signed laws doing just that. Australian observers, also the main targets of beef import restrictions by the 1960s, identified the cattlemen’s association as the key driver of legislation saying “A pretty high wind has been blowing steadily across the President’s desk from cattle areas.”⁴⁹¹ Following hard NCA campaigning, the US Congress passed the *Meat Import Act* of 1964, which instituted new import quotas. Then in 1979, cattlemen won a revision to the Act that provided for a counter-cyclical quota system that responded directly to domestic prices and the cattle cycle.⁴⁹² O.R. Strackbein, a protectionist ideologue from the Nation-Wide Committee on Import-Export Policy, pointed to meat import legislation and cattlemen’s work to pass it as one of the most important examples in the fight against free trade.⁴⁹³

The other side of American rancher’s success at restricting trade was through personal cooperation with foreign cattlemen’s Associations, especially in Australia and Canada.⁴⁹⁴ Ranchers learned that even with legislation presidents could not always be trusted

⁴⁹⁰ Untitled document, Folder 2 “Subject Files, Import Legislation, Reports, 1963-1968,” Box 452, NCA, AHC.

⁴⁹¹ “Australian meat exports to United States of America,” A1209, 1964/6054 ATTACHMENT 1, 3044915, NAA.

⁴⁹² Ball, 153-4, 191, 194.; (See also NCA, AHC: 1968, Folder 9, Box 177.; 1977, Folder 2, Box 207.; Folder 1, Box 260.) Ranchers’ victories were tempered somewhat by the fact that the executive branch of the federal government frequently neglected or outright refused to enforce protectionist legislation passed in Congress. (Ball, 191.; AHC, NCA: Folder 5, Box 450.; Folder 8, Box 292.)

⁴⁹³ O.R. Strackbein (Nation-Wide Committee on Import-Export Policy), “Export benefits cannot outrun import damage,” 1964, 4281-4303, Folder 25, Box 459, NCA, AHC.

⁴⁹⁴ For NCA cooperation with Australian cattle industry leaders see: C.W. McMillan to William Gunn, 26 August 1964, McMillan to Maurice O’Connell, 7 Feb 66, Folder 3 “Subject Files, Australia, Correspondence,

to enforce protectionist laws passed in Congress, so they negotiated for voluntary restrictions at the source by using the threat of those laws. Importers were willing to work with American cattlemen simply because they sought stability more than export volume. Following the 1964 law, a news report directed at attracting US capital to Australia explained, “but Australian cattlemen aren’t complaining. They say that their share of the U.S. market is generous and that the built-in expansion factor provided by Congress gives them an assured market in the years ahead.”⁴⁹⁵ Really, Australian or Canadian producers never posed a threat to American cattle markets like American capital invested in cheap labour regions. American cattlemen ultimately resigned themselves to Australian imports, since most Australian beef—being grass-fed and therefore of lower quality—ended up in hamburger.⁴⁹⁶ American ranchers even helped cover up an error that had Kangaroo meat enter the US meat supply mislabeled as beef from Australia.⁴⁹⁷

In fact, the very idea of competition between US, Canadian, and Australian cattle producers assumes falsely that they were separate industries. The total integration of the Canadian and US stock industries is well documented, but the US also helped develop and

1964-1967,” Box 202, NCA, AHC.; Folder 4 “Subject Files, Australia, Correspondence, 1968,” Box 202, NCA, AHC.; Folder 5 “Subject Files, Australia, Correspondence, 1969,” Box 202, NCA, AHC.; “Background Material for Australian and New Zealand Trip, American National Cattlemen’s Association, July, 1963,” 4043-76, Folder 2 “Subject Files, Import Legislation, Reports, 1963-1968,” Box 452, NCA, AHC.

⁴⁹⁵ “From “Down Under”—Where Competition Grows for U.S. Cattle Industry,” U.S. News and World Report, 19 July 1965, Folder 1 “Subject Files, Australia, Clippings, 1965-1970,” Box 202, NCA, AHC.

⁴⁹⁶ Long-term this had the problem of incentivizing grain fattening of American cattle that much more.

⁴⁹⁷ The kangaroo meat export trade (for human consumption, as opposed to pet food) has been controversial in Australia since at least the 1960s. Internal Australian government correspondence suggests that the Cabinet secretly supported the trade despite their own belief that the rate of killing threatened to wipe out the species. See: “Exportation of kangaroo meat for human consumption,” NAA: A4940, C4180, 1345629, NAA.; Folder 7V1 “Kangaroo Meat,” Box 33, Z659 Cattle Council of Australia Deposit [Hereafter CCD], Noel Butlin Archives at Australian National University [Hereafter ANU]. Unfortunately, the file on the US incident (“Export of kangaroo meat to Unites States of America – complaints,” NAA: 1960, 20318550, NAA) was not yet open for research at the time of the author’s visit. I did learn from my hosts in Canberra, ANU students, that Kangaroo meat is currently being reimagined as a new sustainable food source due to the animals’ soft feet.

modernize Australian grazing in the twentieth century.⁴⁹⁸ Australia welcomed greater integration with the United States cattle industry. No one was as instrumental in shaping this relationship as Sir William Gunn, a cattle grower and head of the Australian Woolgrowers Association.⁴⁹⁹ Gunn invited American ranchers to Australia starting in the 1950s and personally led tours of the country's expansive and under-utilized rangelands.⁵⁰⁰ Gunn and leaders in the Australian cattle industry recognized that they needed greater capital in the industry and they valued American ranchers' particular emphasis on capital investment in breeding and land improvements. The *Financial Times* estimated that modernization of the Australian beef industry would cost two billion pounds, and Americans seemed like the best source.⁵⁰¹ For example, H.C. Forster of the college of agriculture at the University of Melbourne, told an American reporter, "We would be delighted to have more American capital and manpower come in to develop our northern areas."⁵⁰² Another Australian expert corroborated, saying "If the land is valued at 50 cents an acre, the Australian rancher usually doesn't see any point in spending, say, \$10 an acre on improvements. But along comes one of your countrymen. He looks at the land in terms of what he figures it will produce—and in view of what comparable land back home is worth. He determines it is worth spending \$10 an acre or more on improvements. There's no mental barrier there."⁵⁰³

⁴⁹⁸ Michael J. Broadway, "Where's the Beef? The Integration of the Canadian and American Beefpacking Industries." *Prairie Forum* 23, no. 1 (1998): 19-29.; There is also a frank discussion of the Canada-US integration issue in Australian study trip reports. See: Folder 7U7 "Canada," Box 33, CCD, ANU.

⁴⁹⁹ "Sir William Gunn is the best one of the group ... He knows the country like the back of his hand and has wide acquaintances here in the United States" McMillan to Maurice O'Connell, 7 Feb 66, Folder 3 "Subject Files, Australia, Correspondence, 1964-1967," Box 202, NCA, AHC.

⁵⁰⁰ M.J. Gettings, "Florida Cattlemen Pioneer Frontier Ranching in Australia," *Orlando Sentinel, Florida Magazine*, Folder 1 "Subject Files, Australia, Clippings, 1965-1970," Box 202, NCA.

⁵⁰¹ "Australia Takes Lead in World Beef Trade," *Financial Times* (London, UK), Folder 1 "Subject Files, Australia, Clippings, 1965-1970," Box 202, NCA.

⁵⁰² "From "Down Under"—Where Competition Grows for U.S. Cattle Industry," *U.S. News and World Report*, 19 July 1965, Folder 1 "Subject Files, Australia, Clippings, 1965-1970," Box 202, NCA.

⁵⁰³ "From "Down Under" [...]," 1965.

Some Americans viewed Australia as an extension of their lost frontier with the opportunities it had once offered. “What the Americans are finding is a cattle country much like the American West in the early 1900s,” a journalist wrote back, “problems and prospects are much the same as those that faced American cattlemen when they began to fence the open range.”⁵⁰⁴ Asa Townsend emigrated because “it was getting too crowded here.”⁵⁰⁵ Francis J. Cheney of South Dakota wrote to McMillan seeking advice saying he and his family were not afraid of real work or an outdoor toilet, but “If I have to live with a bunch of cows, I feel like doing it where there is some reward for that, instead of increasing discrimination.”⁵⁰⁶ Aside from the lure of frontierism, some estimates placed Australian production costs for land at as low as 11 cents per head versus upwards of \$30 in the United States. As Forster put it, “Land is virtually free in the North.”

Bigger cattle operations saw Australian holdings as a capital diversification strategy. The famous and enormous King’s Ranch of Texas in cooperation with Swift and Co. meatpackers acquired a massive but troubled ranch (of almost a million acres) in Northern Australia and quickly turned it around raising the calving rate from 40% to 70% (good US ranches could expect 90%) in a relatively short time.⁵⁰⁷ Likewise, Cushman Radebaugh, a Florida cattleman, partnered with Gunn and acquired over a million acres in Northern Australia on a cut-rate government lease—they secured a fifty-year lease for just four hundred dollars per half million acres, all tax free. The Duda brothers, also of Florida, got 2.7 million acres under similar circumstances. Radebaugh told a reporter, “We’re doing all the

⁵⁰⁴ “From “Down Under” [...],” 1965.

⁵⁰⁵ “From “Down Under” [...],” 1965.

⁵⁰⁶ Letter, Francis J. Cheney to McMillan, 20 Aug 66, Folder 3 “Subject Files, Australia, Correspondence, 1964-1967,” Box 202, NCA, AHC.

⁵⁰⁷ “From “Down Under” [...],” 1965.; “Australia Takes Lead [...].”

things over there that cattlemen did here 50 or 60 years ago [...] We're clearing, fencing, developing good pastures, crossbreeding the scrub cattle. This country is one of the last frontiers, and it really grips you." But Radebaugh and the King operation really only managed these lands temporarily. As a result of deals like these, Gunn personally managed twelve million acres of Australian rangeland.⁵⁰⁸

United States cattle producers, therefore, developed a set of structures that severely restricted free trade in beef despite important pro-free-trade international laws. They developed means of regulating imports from low-cost competitors by associating them with disease threat as well as flexible import quota structures linked directly to the profits of US producers. The producers' association provided a powerful constituency to support these structures, and it also negotiated independent non-free-trade compacts with foreign producers' associations. These rules probably hurt the producers and consumers of excluded nations, but they seemed to work well for Americans as well as Canadians, Australians, and New Zealanders. Producers in all these nations benefitted from stable, non-free international trade in beef commodities as well as parallel sharing of ideas and capital investment.

However, US producers created and supported this whole system because they had the largest and most desirable domestic consumer market, but that changed after 1975. Americans started eating less beef, the price of beef started falling, and the American cattle herd went into a steady and continuous decline. Just twenty years earlier, the head of the NCA was whining, "It seems to us that there is altogether too much emphasis on the current need for exports and too little consideration given to the tremendous consuming power of our own country," but suddenly American ranchers needed exports as an outlet for an industry

⁵⁰⁸ Gettings, "Florida Cattlemen [...]."

faced with a crisis of overproduction.⁵⁰⁹ Rather abruptly, ranchers had to look outwards and what they found was a Canadian industry already integrated with their own, a British market locked up by commonwealth exporters, a European market cut off by import regulations, and, in general, a world too poor to buy expensive, high-quality American beef. By process of elimination, there was only one country with a wealthy enough population that was not already eating lots of beef—Japan.

⁵⁰⁹ Mollin, “Statement of F. E. Mollin, Executive Secretary, American National Cattlemen’s Association, Denver, Colorado, before the House Ways and Means Committee in Hearings on H.R. 1, Extension of the Reciprocal Trade Act,” 4 February 1955, Folder “Misc. Statements, Statements 1950-1955,” Box 668, NCA, AHC.

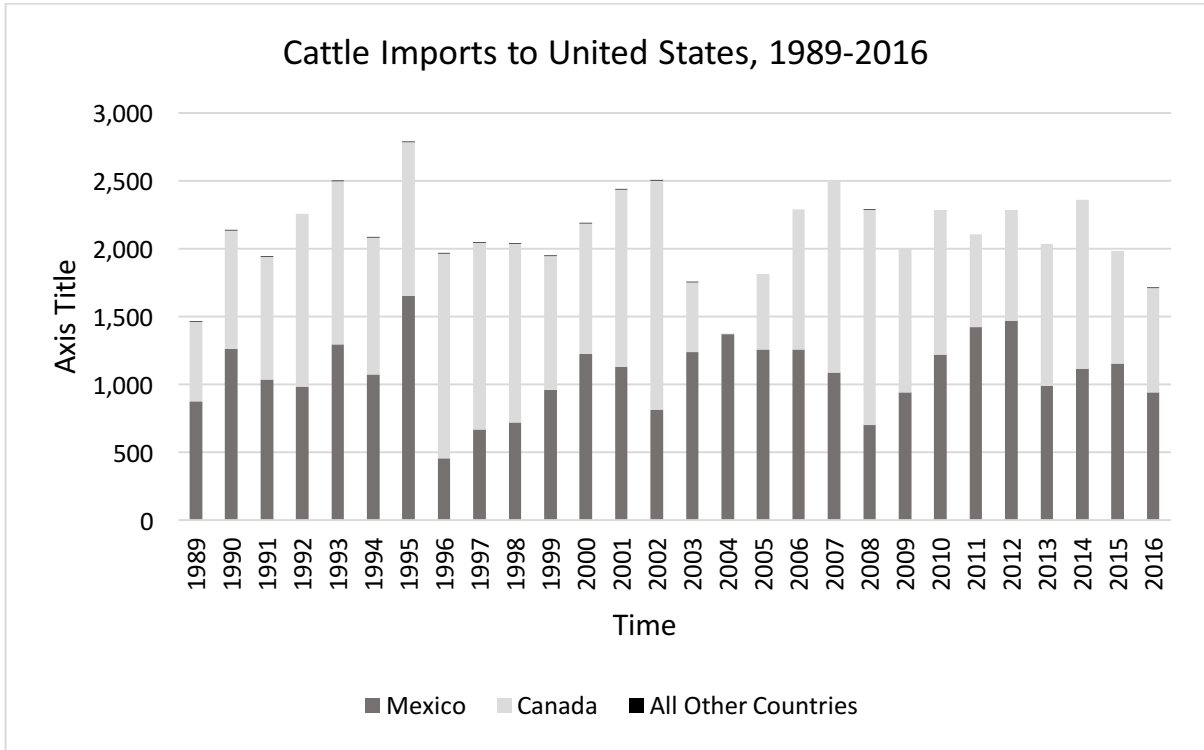


Figure 22. “Cattle: Annual and Cumulative Year-to-Date U.S. Trade – All Years and Countries,” USDA ERS Livestock and Meat International Trade Data Online. Graph by author.

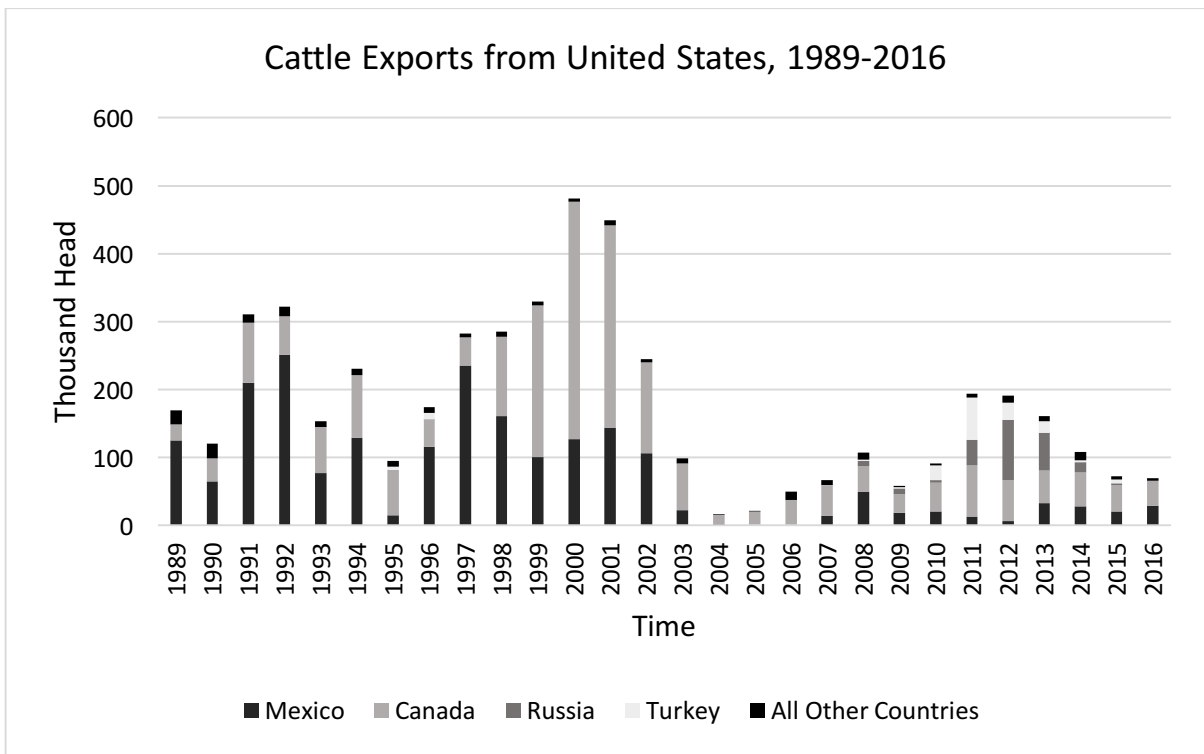


Figure 23. “Cattle: Annual and Cumulative Year-to-Date U.S. Trade – All Years and Countries,” USDA ERS Livestock and Meat International Trade Data Online. Graph by author.

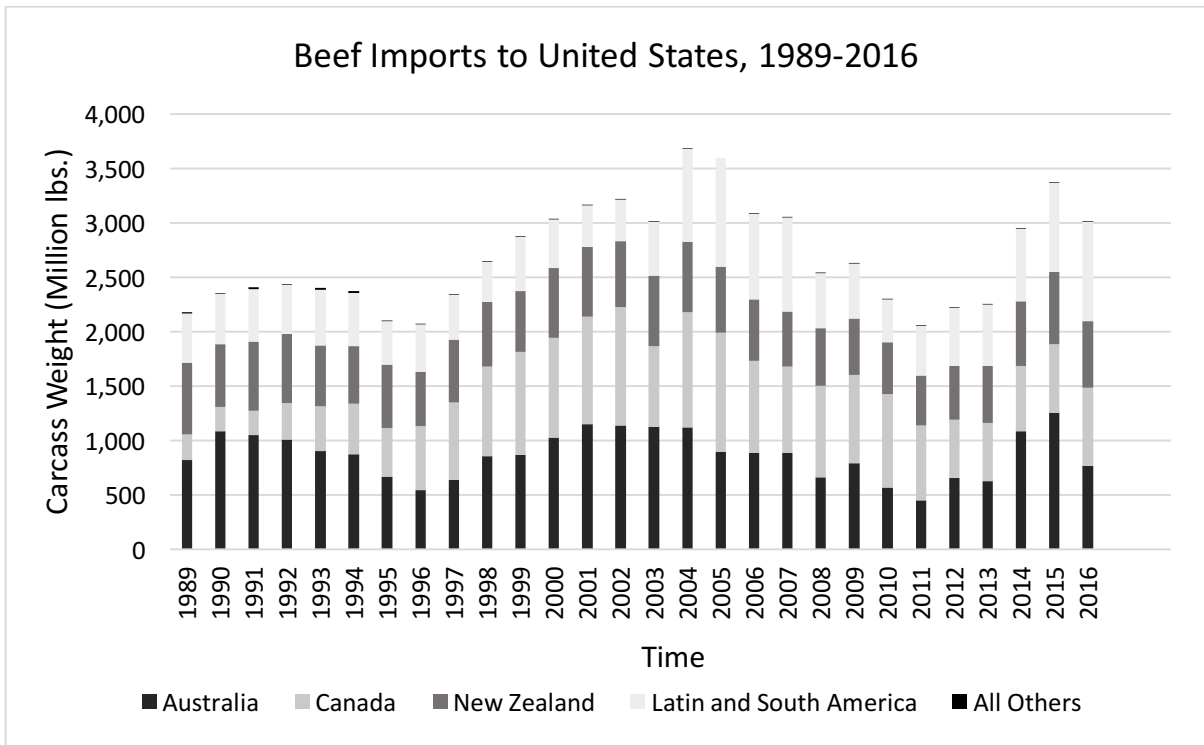


Figure 24. “Beef and Veal: Annual and Cumulative Year-to-Date U.S. Trade (Carcass Weight, 1,000 pounds),” USDA ERS Livestock and Meat International Trade Data Online. Graph by author.

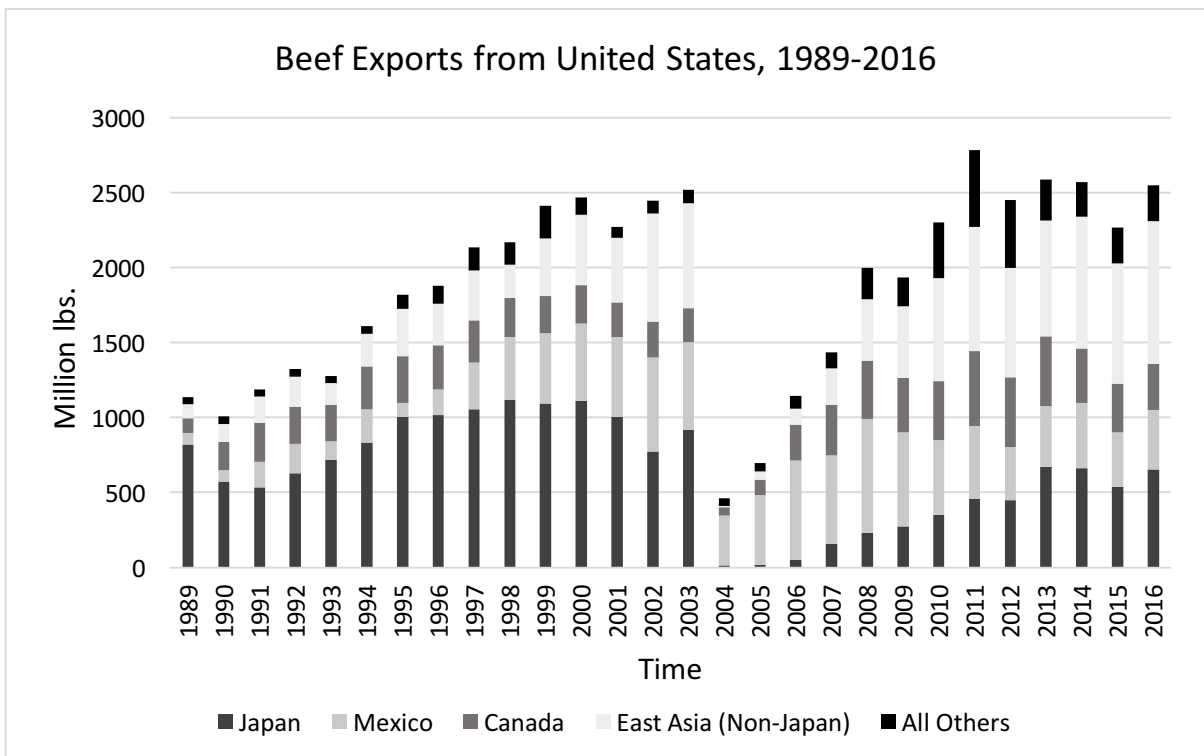


Figure 25. “Beef and Veal: Annual and Cumulative Year-to-Date U.S. Trade (Carcass Weight, 1,000 pounds),” USDA ERS Livestock and Meat International Trade Data Online. Graph by author.

Australian Stockraisers & Transnational Beef

Japan was indeed an emergent beef consumer market when Americans discovered it in the late 1970s and early 1980s, but it was not brand new. The American trade team quickly learned they could not freely or easily make it into what they wanted. One issue that vexed me about this trade war even more after I learned about the NCA and its history restricting imports was the alleged violence threatened by Australia. Longworth seemed to think it mattered, but neither US trade policymakers nor beef industry leaders cared or knew enough about Australia as an impediment to US-Japan beef trading for it to come up in any serious way. I travelled to Canberra, the capital city of Australia, to learn more about why Australian cattle producers, represented by organizations that sounded similar to the American's producer associations, would submit to, and even seem satisfied with, aggressive US restriction of their imports and why they would be upset with the US trying to open up the Japanese market to more Australian as well as American imports.

The short answer was that the Australians got there first, and the emergent market that the United States discovered in Japan was in part something Australians had made for themselves. At the National Archives of Australia, I learned that the Australian national government, like the United States federal government, actively pursued the interests of the Australian beef cattle industry on a global scale, but unlike American trade negotiators, who fought an ideological and symbolic trade war, the Australian trade team seemed genuinely interested in securing greater sales for producers.⁵¹⁰ At the National Library of Australia, I examined various materials from the Australian Meat Board, and at the Noel Butlin Archives at Australian National University, I consulted the extensive records of the Cattle Council of

⁵¹⁰ Memorandum, Prime Minister's Department to Prime Minister, 24 December 1969, in "United States of America – Curtailment of Australian beef imports – Protests," A463, 1964/3767, 1864835.

Australia.⁵¹¹ I learned that these organizations took an even more active role in creating and regulating beef trade flows than the NCA had done in the United States. In these archives, I learned that the longer answer to my question was that Australia and the United States in the 1980s represented two remarkably different varieties of bovine capitalism.

American ranchers' approach to Japan stood in stark contrast to Australian ranchers, who became export oriented from almost the inception of their industry. Australians resisted US efforts during the beef and citrus war because they had already learned to work expertly with the status quo. Even though Australia could produce some of the cheapest beef in the endemic-disease-free world, the Australian national government and beef industry leaders were not interested in price-based competition for foreign markets; rather, they sought stable and well-regulated international markets. In fact, many of them saw domestic East-Asian beef production as a driver of local demand that Australians could build on in areas that did not traditionally eat beef. The Australian approach to international markets (relative to the United States) was not to compete but to make advantage through market intelligence and cooperation with locals. In general, Australia viewed the institutions regulating trade not as artificial barriers to a preferable and freer market, but as the market as it actually was, and Australian ranchers learned to work with them. Therefore, Australian beef export policymakers had a remarkably different philosophy and set of strategies for global beef trading, despite these two nation's similar histories of bovine colonialism and bovine capitalism.

The Australian beef cattle industry developed in the nineteenth century autonomously from the United States, though the industries shared networks that brought immigrants from

⁵¹¹ Formerly the Australian National Cattlemen's Council.

the same sorts of places to both frontiers. The histories of the two industries have remarkable parallels, but also important differences and outcomes. The Australians created a distinct indigenous vocabulary to describe the frontier cattlescape and market just as Americans did. All livestock growing, including open range and ranching methods, was called “pastoral”; “mob” was a very large herd held tightly together; stockyards were “stations”; gathering or wrangling cattle, was “mustering”; trailing cattle over the vast distances was “droving”; stealing or rustling cattle was “duffing”; and illegal squatters were “selectors.” “Tramps” would not compare well, since the selectors became the heroes in the Australian narrative. The “trailing” period lasted for less than twenty years in the United States, but “droving” dominated in Australia until at least the 1940s, and the Australian industry still marches “mobs” over such distances that some use aircraft and helicopters.⁵¹²

Cattle came to the Southern tip of Australia with the British colonizers in the late eighteenth century, but the colonial state immediately claimed cattle and grazing lands as crown property. The cattle population grew from a handful to about 54,000 head in 1818. Most still belonged to the “government herd,” but there were some notable private owners who also own and ran large sheep herds. The English settlers in Australia advanced genocidally though aboriginal lands, and in 1813 they forged a path across the Blue Mountains that separated Southern Australia from the vast and mostly arid lands to the North and West, which caused a land crisis for the colonial state. The British government for centuries restricted access to crown land, and the colonial state outlawed settlement across the blue mountains. The “selectors” ignored it, and the human and cattle immigrant populations of the Australian continent expanded quickly in the 1830s. The colonial state

⁵¹² As ascertained from: Glen McLaren, *Big Mobs: The Story of Australian Stockmen* (North Fremantle, West Australia: Fremantle Arts Centre Press, 2000).

compromised with a fee for grazing, which partly inspired the American system, too. Driven in part by belief in a great “inland sea,” the immigrants found some good grazing lands and many deadly deserts. Poor conditions and low stocking capacity meant settlers needed to get as much land as possible, and they developed a mustering system that paralleled open range stockraising in America. Just as in the American West, cattle producers formed protective associations to regulate grazing and prevent losses from duffing.⁵¹³ In the late nineteenth-century, trans-continental infrastructure and the discovery of the Great Artesian Basin, an massive aquifer source of water, enabled a much greater expansion of cattle North and West out from Queensland. The aboriginal population became deeply intertwined in the cattle industry first by hunting the semi-wild open range herds; then by providing land expertise to “overlanding” cattle drivers trying to cross spaces on a continental scale; then by entering the stock industry themselves, first under colonial force and later in earnest. The Australian industry has faced similar changes to the American industry since the 1960s—including greater corporate control and the subdivision of ranches—but it remains distinct as even the subdivided ranches dwarf the largest holdings in Texas.⁵¹⁴

The Australian industry tapped global export markets later than the American industry, but it became more fundamentally export-oriented much sooner, and it quickly outpaced the domestic Australian consumer market.⁵¹⁵ The Australian beef industry made its first major transnational export of beef to England in 1877, but the meat spoiled and ended

⁵¹³ See for example: MS 6932, Cattle Stealing Prevention Assn., 1873-1880, NLA.

⁵¹⁴ Nigel Austin, *Kings of the Cattle Country: The Epic Story of Australia's Beef Empires* (Kensington, NSW: Bay Books, 1986).; Kathrine Bell, *Cattle Australia: The Story, the Icons, the Drives, the Big Runs* (Belrose West, NSW: Murray David Publishing, 2009).

⁵¹⁵ The Australian stock industry's early global focus can be found all over a publication called “The Pastoral Review” that ran from 1891-1977. The full run of the publication is held and indexed by the Noel Butlin Archives at Australia National Archives, and it published information on livestock industry and market developments in distant corners of the globe as a matter of routine.

up dumped in the Thames. A successful shipment landed two years later, and the United Kingdom became Australia's primary export market and *raison d'être* until the 1970s. The Ottawa Agreements of 1932 established British commonwealth buying preferences, and Australia drove the American cattle industry out of the most important beef consumer market in the Atlantic.⁵¹⁶ In the 1970s, Australian beef export preference shifted towards Japan, and Australia has continued to dominate emergent beef markets all over East Asia, South East Asia, and the Middle East. Due to its open range cattle industry, Australia today is, by far, the world's largest exporter of pasture resources and energy, chiefly to Japan, the United States, South Korea, and China, in that order.⁵¹⁷

Australia pioneered new global beef markets earlier than any other major beef producer because it lost the UK trade that functioned practically like an assured, stable domestic consumer market. In 1958, the UK released its dominions from the Ottawa Agreement giving them the freedom to trade on the world market. Really the UK released itself, and it slowly shifted its official buying preferences towards Denmark until it formally joined the European Economic Community (EEC) in 1973 leaving Australia to fend for itself. Australia increased its beef exports to the United States significantly, but American cattle producers placed strict limits on the trade. Australians identified Japan as a potential market to replace the UK market almost immediately, and in 1963, the beef industry and the Australian government launched a campaign to liberalize Japanese beef imports.⁵¹⁸ A 1963

⁵¹⁶ Bell, *Cattle Australia*.

⁵¹⁷ MacDonald et al. attempted to re-analyze world trade in simultaneous terms of money, calories, and natural resources. Graham K. MacDonald et al., "Rethinking Agricultural Trade Relationships in an Era of Globalization," *BioScience* 65, no. 3 (2015): 275-289.; For another fascinating attempt to combine economic and ecological analysis of global beef trading patterns, please see: Kelly Austin, "The 'Hamburger Connection' as Ecologically Unequal Exchange: A Cross-National Investigation of Beef Exports and Deforestation in Less-Developed Countries," *Rural Sociology* 75, no. 2 (2010), 270-299.

⁵¹⁸ "Aust/Japan Trade Agreement Beef Discussions 1954," NAA: A1313, 1969/8069, 202136, NAA.

memo from the Australian embassy in Tokyo states not only that Japan could swap out the UK market, but also that it could alleviate pressure on the controversial US trade.⁵¹⁹

Australia did not convince Japan to remove all import restrictions in 1963, and both government and industry shifted to a strategy of working with the complex, highly-regulated Japanese import market.⁵²⁰ Some efforts sought holes through the barriers. William Gunn tried fattening a herd of Australian cattle for a duration in Okinawa hoping to get them graded as domestic product in mainland Japan.⁵²¹ But other efforts sought to strengthen Australian ties to the people and organizations that controlled the Japanese market. In 1964, the Australian Meat Board hosted a 23-man Japanese mission to observe sheep and cattle farms and meat processing facilities in Victoria, Australia. Photographs of the tour held by the Australian National Archives depict Australians politely showing Japanese men around stockyards and packingplants, and the captions announce optimistically, “Japan is expected to import increased quantities [...] as a result.”⁵²²

The Cattle Council of Australia (CC) and the Australian Meat Board (AMB) investigated, promoted, negotiated, and strengthened foreign markets for Australian beef. The organizations sponsored research and established relationships with individuals and organization around the globe. The CC was an independent producers’ association like the

⁵¹⁹ Memorandum, R.F. Felgenner, Australian Embassy Tokyo, “Confidential Priority, For McIntyre,” 27 May 1963. “Japan – meat,” NAA: A1313, 1960/2477, 12209160, NAA. Australian exports of beef and veal to the US rose from 17.7 million pounds in 1958 to 444.9 million pounds in 1962, which accounted for 81% of all Australian beef exports. See John A. Edwards, “Beef Imports and the U.S. Beef Cattle Market,” (Corvallis, OR: Agricultural Experiment Station, Oregon State University, 1964), fn. 3.

⁵²⁰ Australians actually had reason to believe the Japanese market would liberalize in the early 1960s. Few yet understood the political power of Japanese producers, and Mr. Kaora Nakamura, Director of All Japan Meat Association, wrote a letter predicting full liberalization of the market within two years in 1963. Memorandum, Australian Government Trade Commissioner and Commercial Counsellor to The Secretary, Department of Trade, “Japan: Beef,” 12 December 1963. In “Japan – meat,” NAA: A1313, 1960/2477, 12209160.

⁵²¹ Memorandum, M.M. Summers, Australian Embassy, Tokyo, “Confidential Priority, Beef from Okinawa,” 2 December 1963. In “Japan – meat,” NAA: A1313, 1960/2477, 12209160.

⁵²² Photograph, Cliff Bottomley, “Japan is expected ...,” 1964, NAA: A1501, A4850/1.; Photograph, Cliff Bottomley, “Japan is expected ...,” 1964, NAA: A1501, A4850/7.

NCA, and the AMB was a semi-governmental industry organization produced by statute.⁵²³

The two organizations were intimately aligned, and the CC communicated stockmen's desires to the AMB, which at cattlemen's behest increasingly acted as a single national seller on the global market. The CC developed ties with the NCA, and both the CC and AMB worked to ensure the "voluntary restraint" quotas to the United States ran smoothly.⁵²⁴

Australians, some of whom knew American ranchers well since they fought together in the Second World War, could see plainly that the NCA used dubious politics to circumvent free trade precedents.⁵²⁵ Many Australians were truly upset, but rather than fight the US in the GATT arena, they broadened their international focus. The organizations also launched and hosted missions to and from other potential buyer-nations—none more than Japan in the 1970s and 1980s.⁵²⁶

Trips of Japanese to Australia and Australians to Japan served both relationship-building and practical reconnaissance goals. For example, the CC launched a visit to Japan in May 1975 with the express goals: "learn something of the manner in which the meat industry in Japan is structured"; and "establish a liaison with Japanese cattle farmers, so that both Australian and Japanese farmers have a better understanding of each others [*sic*] problems."⁵²⁷ They carried out the first goal by meeting with many Japanese government

⁵²³ Folder 3E1 "AM&LC," Box 10, CCD ANU.

⁵²⁴ Folder 4H7 "American National Cattlemen's Association," Box 14, CCD, ANU.; Folder 8E6 "National Cattlemen's Association (USA)," Box 34, CCD, ANU.; Folder 8E6 "NCA," Box 52, CCD, ANU.; Folder 8E6 "NCA," Box 68, CCD, ANU.; Folder 8E6a "NCA/CCA Australian Visit," Box 95, CCD, ANU.

⁵²⁵ Letter, W.F.M Clemens to Prime Minister, 21 October 1968, in "United States of America – Curtailment of Australian beef imports – Protests," NNA: A463, 1964/3767, 1864835, NAA.

⁵²⁶ Folder 3E4 "Japan market – chilled beef," Box 11, CCD, ANU.; Folder 5 "Special Fund," Box 1, CCD, ANU.; Folder 42 "Japan Visit," Box 6, CCD, ANU.; Folder 3G3 "Ad Hoc working committee on Australia/Japan relations," Box 12, CCD, ANU.; Folder 4K2, "USA, Canada, and Japan Visit, 1977," Box 16, CCD, ANU.; Folder 4K8, "Japan Visit," Box 17, CCD, ANU.; Folder 7R9 "Japan, 79-72," Box 24, CCD, ANU.; Folder 7U9 "Japan," Box 40, CCD, ANU.; Folder 7U9 "Japan," Box 65, CCD, ANU.; Folder 7U9 "Japan 1984," Box 91, CCD, ANU.

⁵²⁷ "Australian National Cattlemen's Council: 'Australian Beef Cattle Industry'," [Trip strategy document, 1975], 2, Folder 42 "Japan Visit," Box 6, CCD, ANU.

officials and beef industry leaders over several carefully-planned days, and team members collected and recorded-by-hand many sorts of data on the Japanese beef industry and market. The team carried out its second goal by meeting with *nokyo* representatives and delivering their message of cooperation at a press conference attended by twenty five different Japanese news sources.⁵²⁸ Japanese cattle producers also travelled to Australia to learn from the more advanced industry. Ken Miyakita worked as a jackaroo (Australian variation of “cowboy”) for some years at Booroomooka Angus Stud in Bingara, NSW, before going on to be one of Japan’s more successful non-purebred-Wagyu cattle producers.⁵²⁹ In Miyakita’s words, “ “I learned what I know in Australia.”⁵³⁰

In addition to the work of the Cattle Council and the Australian Meat Board, was the work of an individual. At the National Library of Australia, I also consulted the papers of Frank H. Johnston, who, I learned in a document on the origins and importance of the collection provided by Johnston, donated his papers to the National Library in return for a tax break from the Australian federal government. The collection consists of Johnston’s field note books from his personal and professional travels, clippings of his writings from decades in the Australian rural press as well as personal correspondence with people all over the world to support the same, correspondence and ephemera from his business providing special tours of foreign stock industries for Australian ranchers, and an extensive and beautiful collection of black and white photographs from all those trips. Johnston’s photographs alone are the most extensive window into this global trade that has ever been amassed. Johnston ended his career somewhat bitter that his influence on the Australian beef industry was not

⁵²⁸ Folder 42 “Japan Visit,” Box 6, CCD, ANU.

⁵²⁹ Johnston, “Japan’s Farmers are the Backbone [...],” 1968, Book 46, Box 16, FHJ, NLA.

⁵³⁰ Johnston, “Americans Press Japan’s Cattle Industry,” 30 November 1967, Book 46, Box 16, FHJ, NLA.

greater, but his legacy (so narrowly preserved by the “Taxation Incentives for the Arts Scheme”) ought not be underappreciated.⁵³¹

In my estimation, it is likely that the Australian Frank H. Johnson knew the global cattle industry in the 1960s and 1970s better than any other person alive, and he did not raise cattle. Global and industry are slight misnomers here, since what he actually knew were the cattle production practices of many different nations and regions that were in the process of knitting together into something global and something much more business-like—this was a process Johnson was personally advancing. Johnson was a writer and newspaper editor for the rural Australian press with a longstanding personal interest in livestock, and he spent much of his personal and professional life visiting and writing about livestock raising in many countries on all six continents with livestock populations.⁵³² In fact, by the time the Americans discovered Japan, Johnston was already writing detailed articles on the cattle industries of Bali, Taiwan, the Philippines, Brunei, etc.⁵³³ “My interest in the world of meat was second only to my lifelong love of the land,” Johnston explained, “I regarded myself as an extension worker in the field and my object was to encourage country people to get out for themselves about the influences affecting the success of their products in the international market places.”⁵³⁴ To this end, Johnston also became a travel entrepreneur, and he launched his own company, Intra World Travel Services, that specialized in organizing and conducting tours of international livestock industries especially for Australian stockraisers. The service

⁵³¹ See for example, Book 57 “Japan Supplement, 1966,” Box 20, FHJ, NLA, which covers Johnston’s attempt to establish a regular joint publication of articles on the Australian and Japanese beef industries in the *Asahi Evening News* and NSW’s *Country Life*. Johnston put great effort into the plan and produced one remarkable, simultaneous Japanese-Australian issue, but *Country Life* did not choose to sustain the project.

⁵³² Johnston also wrote for major papers—including the *Sydney Morning Herald* and the *Australian Financial Review*—and many of his articles ended up reprinted in Japan, Argentina, and the United States.

⁵³³ See: Johnston, “Taiwan’s Good Earth,” (1972), Book 46, Box 16, FHJ, AHC.

⁵³⁴ From the introduction document to Johnston’s scrapbook, Book 48, Box 16, FHJ, NLA.

was an astounding success with tours usually selling out quickly, and Johnston, thus, personally took groups of Australians to view different aspects of the beef supply chains in Japan, Taiwan, Canada, the United States, Mexico, Argentina, and more.⁵³⁵

Johnson was a keen supporter of the Australian stock industry, and a tireless booster of modernization through capital improvements and international trade, but he never wanted local stockraisers to suffer for his own countrymen's benefit. Johnson was a liberal and a social progressive who painted a vision of stockraisers all over the world benefitting together from global networks.⁵³⁶ In fact, Johnston kept personal correspondence with American cattle ranchers, including NCA leaders, and he openly criticized Australian producers and the Australian Meat Board when they failed to cooperate well with the Americans. He publicly warned Australian beef exporters that American ranchers were not stupid and knew that lots of high quality Australian product snuck in to the US market labeled as "manufacturing grade" beef.⁵³⁷ Further, a letter Johnston wrote to CW McMillan of the NCA indicated, "Sir "Bill" Gunn scowled at me recently during a visit to Queensland's Cattle Show, so perhaps he got the message," after Johnston criticized the AMB for mismanaging a trip of NCA visitors.⁵³⁸

The fundamental difference between the American and Australian approach to the Japanese beef import market was that the Americans sought to proscribe market conditions, in which they would have a theoretical advantage, while the Australians studied the complex market conditions to better work towards their advantage. It would be wrong to say that in general Australian cattle producers and government and industry leaders understood the

⁵³⁵ Editorial, "Meat Industry Bulletin" March Issue, nd., Book 48, Box 16, FHJ, NLA.; Betty St. Clair, "Cattlemen's Holiday," February 1968, Book 48, Box 16, FHJ, NLA.

⁵³⁶ Editorial, "Meat Industry Bulletin" March Issue, nd., Book 48, Box 16, FHJ, NLA.

⁵³⁷ "Truth Wanted by Americans," Book 48, Box 16, FHJ, NLA.

⁵³⁸ Letter, FHJ to CW McMillan (ANCA), 24 August 1970, Book 48, Box 16, FHJ, NLA. See also for context: Letter, CW McMillan to FHJ, 6 August 1970, Book 48, Box 16, FHJ, NLA.

Japanese beef industry or global beef trading especially well, but more Australians were engaged in these topics than anywhere else in the Anglophone world.⁵³⁹ My attempts to write this narrative of the beef and citrus war from all sides has been somewhat thwarted by my strict limitations in Japanese, but we can learn a lot about Japan from the Australians.

Japanese Beef Farmers & Transnational Beef

The thing that really perplexed Americans about the Japanese beef industry was how it could sustain such a high price for beef when such a price could easily be lowered by increasing imports. The US beef industry, after all, faced regular consumer revolts over high prices, and after the mid-1970s ranchers had no choice but to accept a domestic bargain beef market. The thing that really perplexed me about the beef and citrus war was how a much smaller group of Japanese beef farmers could stave off the greedy force of the world's largest beef industry and the world's foremost enforcer of (selective) global free trade. It is one thing to point out that US trade objectives tried to reshape transnational markets, but it is entirely another to explain why it did not work. The Americans failed to re-make the Pacific Rim beef market as they desired precisely because they did not understand what was really going on, which left me with a wealth of sources full of flawed notions of Japan and no answers to why Japanese beef could be so expensive or how Japanese beef farmers could be so powerful.

John Longworth travelled to Japan four times from 1975 to 1981, for durations of one to six months, to study the beef industry. He was compelled by the crisis his nation faced

⁵³⁹ See also: Christopher Nelson, "Tariff and Non-Tariff Barriers to Trade in the Beef, Dairy & Wheat Industry in Japan, Taiwan & Thailand Between 1974 & 1994," MA Thesis, Department of Economic History, University of Melbourne (1995).; Roderick Grieve and Alan Peggs, eds., "Beef Market Prospects in North East Asia," (Bunbury and Albany, Western Australia: Western Australian Department of Agriculture, Cattle Industry Residue Testing Trust Fund, 1989).; "The Market in Japan [...]," CC, (1975).

when Japan shut out imports in 1974, and he described his published monograph as “an essay in market intelligence.” His words coming on the cusp of a bitter and needless trade war sound ominous: “Only by appreciating the complexities of the subject can producers, packers, exporters, industry leaders, trade negotiators, and politicians in Oceania and North America formulate reliable expectations about their future prospects in the Japanese beef market.”⁵⁴⁰ It is strange that such a statement was not and is not obvious. Frank Johnston travelled to Japan dozens of times from 1936 to his death in 1989. Johnston, as a “privileged visitor to Japan,” also sought to counter the views “of other experts on the subject who viewed it without, in my opinion, much actual knowledge of Japan and its people.”⁵⁴¹ Both relied heavily on local contacts forged through friendship.

Longworth’s *Beef in Japan* (1983) and Johnston’s unpublished manuscript, “Essay – The Beef Situation: Japan – Australia, 1981” (1981), reveal that Japanese beef production developed rapidly from obscurity in 1945 to a uniquely impressive, modern industry and a cornerstone of rural Japanese life as well as Japanese politics and culture writ large at the outset of the beef and citrus war. Japan, in the 1980s, had even stronger structures against free trade than the United States, and an even more powerful network of producers’ associations behind them. Japanese beef producers deserve much credit for the explosive growth of their industry and for their political resistance to hegemonic US free trade, but ironically, the basis of their strength originated in large part from American interventions in Japanese society during and after the postwar US Occupation.⁵⁴²

⁵⁴⁰ Longworth, *Beef in Japan*, xviii.

⁵⁴¹ From intro in archive to Johnston’s unpublished manuscript, “Essay - The Beef Situation: Japan – Australia, 1981,” Book 49, Box 18, FHJ, NLA.

⁵⁴² Yakata Yoshioka, “Development of Agricultural Policy in Postwar Japan,” from *Agriculture and Trade in the Pacific: Toward the Twenty-First Century*. William T. Coyle et al., eds. (Boulder, CO: Westview Press, 1992), 91-93.; Johnston, “Beef Situation,” 9-10.; Frank H. Johnston, “Some Background Information about

Beef growing was a marginal practice for most of Japanese history. Ungulate-rearing and eating were legally taboo in Feudal Edo Japan (1603-1867), and Japanese society confined people involved in hooved meat trading to special, disadvantaged hamlets called *buraku*. These people became a sort of untouchable caste called the *burakumin*. Although the formal feudal structures outlawing beef were abolished in 1871, beef as well as all people who handled cattle faced stigma and discrimination into the mid-twentieth century. John Longworth estimated that in the 1980s, as many as three million people continued to bear the burden of being *burakumin*.⁵⁴³ However, a significant social, cultural, and political shift began to change the fate of beef and the *burakumin* after the Second World War (1931-1945 for Japan).

The Japanese beef industry was bolstered by both Japanese and US dietary policies. In the postwar (Cold War) period, the United States promoted livestock production—a decidedly anti-Communist pastime—around the world, and to help feed the animals it dumped cheap grain on its allies’ markets as a sort of back-handed aid that also served to prop up farm receipts in the surplus conditions of the period.⁵⁴⁴ Japan, of its own accord, also sought to diversify its agricultural sector (previously over-focused on rice) and to strive for national “food self-sufficiency,” especially in protein-rich products like beef.⁵⁴⁵ The two policies proved symbiotic as Japan imported greater shares of cheap US grains to help grow

Japan’s Agricultural Industry,” June 1976, Book 46, Box 16, FHJ, NLA., NLA.; Frank H. Johnston, “Japan’s Farmers are the Backbone of the Economy,” 21 March 1968, Book 46, Box 16, FHJ, NLA.

⁵⁴³ Longworth, *Beef in Japan*, 25, 71, 305 fn. 11.; See also: Schlosstein, 74-75, 84.

⁵⁴⁴ This is the argument of the Marxist “food regimes” school. See: Harriet Friedmann and Philip McMichael, “Agriculture and the State System: The Rise and Fall of National Agricultures, 1870 to the Present,” *Sociologia Ruralis* 29 no. 2 (1987), 93–117.; Ufkes, 218.; Francis, 534, 536.

⁵⁴⁵ Akira Miyazaki, “Production and Consumption of Beef in Japan,” *Research Opportunities in Beef Export Markets: United States and Pacific Rim Countries, Proceedings of an International Symposium, [...] Tucson, Arizona, November 19 and 20, 1986* (Chicago, IL: Western Regional Beef Research Project and Farm Foundation, 1987).

expensive Japanese cattle. From 1955 to 1986, livestock production rose from 7% to 27% of Japanese agricultural output, and Japan protected its domestic beef producers by imposing quotas on cheap beef imports from places like the United States and Australia.⁵⁴⁶

Beef-eating, a practice that disgusted polite society for centuries, became rather suddenly elevated in Japanese culture. “It used to be a sin to eat meat in Japan but now it’s a pleasure,” wrote K.M Yamaguchi in the 1950 edition of a handbook to Japanese culture and society called, “We Japanese.” “In fact, it has become a patriotic duty to do so in order to help build up the strength of the Nation’s youth,” Yamaguchi explained, but “Never was a patriotic duty so delightful.”⁵⁴⁷ “We Japanese” was proscribing the change as much as describing it, and Yamaguchi, a restaurateur, stood to profit handsomely from the future expansion of beef eating in his country, which increased 800% from 1955 to 1986.⁵⁴⁸

Johnston got a hold of the text, in which he learned much about the Japanese beef dish *sukiyaki*.

Sukiyaki is a dish of very thinly sliced beef, cooked rapidly, and served on its own, with rice, or with vegetables often in a hot pot.⁵⁴⁹ Japanese beef recipes like this echo Japanese preparation of fish, but Johnston relished in the low-class origins of this dish when *burakumin* would carve and grill (*yaki*) strips of meat on their spades (*suki*) while out in the field far from Feudal scrutiny. “It appears that the aroma of this plough-share cooking got wafted across the countryside,” Johnston jested as he explained, “Sukiyaki was destined to become famous throughout Japan as the best of all meals and the most delicious ‘ever

⁵⁴⁶ Francis, 536.

⁵⁴⁷ K.M. Yamaguchi, “We Japanese,” a handbook quoted from the 1950 edition by Johnston, “Beef Situation,” 14.

⁵⁴⁸ Francis, 536.

⁵⁴⁹ See: Akira.; Letter, Iwasa Yoshizane to Orville L. Freeman, 6 Jan 1983, File 114000-114767, CO078, W:SF, RRL.; Longworth, *Beef in Japan*, 1, 3, 12.

created’.”⁵⁵⁰ The cult of sukiyaki that rose in the mid-twentieth century captivated visitors to Japan from the hamburger nations of the world, even when they sought to abolish it.

Sukiyaki and like-recipes formed one cornerstone of the high-price beef market in Japan. *Sukiyaki* was a sort of normative rule about how beef could be distributed and sold in Japan, and it meant that Japanese beef was traded in highly-visible small portions. Johnston described how Japanese consumers shopped for beef in “some of the most attractive retail butchers shops to be found anywhere in the world. Bright, modern, hygienic places which sprang up like mushrooms during the late 1960s and 70s.” The butchers were highly skilled and would “strip the flesh from a side of beef and leave the bones as clean as the proverbial whistle not leaving a vestige of meat on them,” which was necessary to achieve the *sukiyaki* standard.⁵⁵¹ A whole vocabulary developed to interpret these slivers of flesh. A 1972 publication of Kobe beef described the commodity as, “Bright cherry-red lean and a creamy-white fat that is agreeably firm and sticky. [...] the taste must be pleasing to the palate and give a melting feeling in the mouth!”⁵⁵² The butchershop was a setting that justified a high cost product, and a set of cultural practices developed to make the cost more palatable.

Johnston believed that Japanese consumers were more finely attuned to the subtleties of beef marbling than Australians, and they could make sense of the prices through the patterns of muscle and fat displayed so carefully behind the glass.⁵⁵³ Johnston observed that the Japanese consumers, “mainly women, unhurried and selective,” would only purchase beef for one meal per visit to the butcher unlike Australian women, who managed their

⁵⁵⁰ Johnston, “Beef Situation,” 14.

⁵⁵¹ Johnston, “Beef Situation,” 16.

⁵⁵² As quoted, Johnston, “Beef Situation,” 26.

⁵⁵³ Johnston, “Beef Situation,” 18.

family economy by buying for two, three, or more meals at one time.⁵⁵⁴ According to Johnston's contact Mrs. Fumiko Miyamoto, an impressive but representative woman who managed a working-class home, "My family eats beef once or twice a week [...]" even though "Everyone in my family likes beef [...]" "Of course most people like beef steak [high-grade beef] best, but this is too expensive for common people to afford often," Miyamoto explained, "My friends say they serve steaks only once every one or two months."⁵⁵⁵ Some Japanese consumers clearly resented the high prices, but they accepted them as legitimate.

Japanese consumers believed that only the Japanese beef supply chain could produce the perfect look and taste. Miyamoto told Johnston that none of the butchershops she frequented carried any Australian products, and she estimated "I think that both the butchers and the customers in my community are likely to believe that Japanese beef only is tasty." Some large supermarkets in the cities sometimes had United States, Australian, and New Zealand beef but not always, and it received 200 to 300 yen per 100 grams of sukiyaki compared to 350 to 500 yen "and up" for Japanese sukiyaki where Miyamoto shopped. Miyamoto was a woman with a family that loved eating beef but could only afford it for a few meals a week, but Miyamoto said she would rather switch to pork chops than have Australian beef. All her friends also complained that they could not afford much Japanese beef, but "they think that imported beef including Australian is not so tasty, and they say that they don't want to buy it even if it is much cheaper."⁵⁵⁶ According to Johnston, a general

⁵⁵⁴ Johnston, "Beef Situation," 16.

⁵⁵⁵ Johnston, "Beef Situation," 22.

⁵⁵⁶ Johnston, "Beef Situation," 24.

complaint in the 1970s was that Australian beef had a “smell of grass” that turned off Japanese consumers.⁵⁵⁷

Imported beef served only to supplement—not compete with—the preferred supply. Even though imports could sell for several hundred yen less per hundred grams, they sold much nearer to the high price set by Japanese beef than their landed price justified. Johnston dwelled on Miyamoto’s comments as a warning to Australian producers about getting too optimistic for higher sales even if greater imports were permitted to sell at lower prices. In other words, domestically-produced Japanese beef drove the expansion of beef consumption on the archipelago, and exporters from other countries ought to support and build on continued local production. Longworth found support for this assumption, when he separated data on Wagyu from Dairy cattle being slaughtered for beef. From 1965 to 1983, the beef supply from the Dairy herd grew from a marginal fraction to over two thirds of total Japanese beef production, while traditional Wagyu production remained overall constant.⁵⁵⁸ Japanese Dairy cattle beef sold in between Wagyu and the imports. Not only were the Japanese already learning to buy beef across different price strata, but it was also clear that traditional Japanese beef production was not capable of growing at pace with the human population and beef demand. Johnston and Longworth both believed Australian and Japanese beef could be compatible, but they certainly were not interchangeable commodities.

The Japanese people were proud of their special beef cattle. According to Longworth, “Japanese with even a passing interest in beef wax lyrical about the wonderful Wagyu.”⁵⁵⁹ The Black Wagyu cattle breed developed from the draught animals kept by *burakumin*, but in

⁵⁵⁷ Johnston, “Beef Situation,” 36.

⁵⁵⁸ Longworth, *Beef in Japan*, 81.

⁵⁵⁹ Longworth, *Beef in Japan*, 79

the 1980s, these giant animals were “treated as household pets.”⁵⁶⁰ Japanese rice farmers raised only one to three Wagyu cattle at a time, kept the animals mostly indoors (often in the family home), hand massaged the animals’ muscles to tenderize meat over a lifetime, and strictly managed the animals’ diets.⁵⁶¹ The animals grazed only in summer, when the farmers tended to the rice. For example, Johnston’s friend Mr. Higetard Okubu grew rice, barley, and award-winning beef for the selective sukiyaki market in Tokyo on a 1.6-hectare farm near Kyoto. Okubu fed his animals exclusively on rice straw from his own farm, fresh grass gathered from a local hillside, and grains cooked in the family kitchen on bovine-sized pans. The whole family participated in massaging the animals whenever time permit.⁵⁶² Traditional practices like these were accompanied by strict and modern breeding registry (all Wagyu were artificially inseminated like thoroughbred horses) backed by producers’ organizations and breeding programs (including one hundred research centres) backed by the national government.⁵⁶³

Raising beef on the taxed Japanese landscape required prodigious use of space and compensation for lost roaming through human energy. The intensive labour put into producing Wagyu beef meant that despite beef prices that outraged outsiders, beef farmers did not receive significant compensation. Many Americans believed, or at least argued, that this meant Japanese land was inherently inefficient and it would be better for Japanese consumers if beef production was left to lands that could do it right—lands an ocean away. Considering the real costs of American agriculture (the United States is the world’s leading

⁵⁶⁰ Longworth, *Beef in Japan*, 79

⁵⁶¹ Johnston, “Beef Situation,” 29

⁵⁶² Johnston, “Beef Situation,” 31.

⁵⁶³ Longworth, *Beef in Japan*, 81-93.; Johnston, “Beef Situation,” 12-13.; Meat processing and marketing were also highly advanced and well-regulated by the 1980s, Longworth, *Beef in Japan*, 141.;

exporter of irrigated water), that is a dubious claim.⁵⁶⁴ Thanks to an aggressive land conversion and improvement program launched by the federal government in the 1960s, Japan was said to have the world's highest agricultural yield per acre.⁵⁶⁵ The traditional Japanese beef sector might be commended for raising a limited beef supply through highly-efficient mixed agriculture, although they still relied heavily on imported feed grains. Either way—comparative advantage, or not—hopeful American exporters encountered fierce resistance to their attempts to share cheap beef with Japanese consumers.

Formerly marginal Japanese beef farmers became a powerful political force due to structural changes prompted by the postwar US Occupation. Following Japanese defeat in the Second World War, American occupiers and their new Japanese allies re-cast Japanese agriculture in the Jeffersonian vision of an American yeoman society in order to democratize the Japanese state and alleviate rampant starvation after the war. Two laws from the American Occupation became the key institutional structures propelling Japan towards this goal. *The Farmland Law* redistributed land to establish small owner-producers and prevented future urban or industrial development. *The Agricultural Cooperative Law* encouraged these small owners to join into cooperatives, called *nokyo*, that functioned to manage supply and prices and to express the farmers' political needs.⁵⁶⁶ According to Johnston, *Nokyo* were “strongly capitalised” and handled “most of the business related to agricultural material and equipment used by their members” meaning, most importantly, imported feed grains.⁵⁶⁷

⁵⁶⁴ MacDonald et al., 275-289.

⁵⁶⁵ Johnston, “Beef Situation,” 9-10.; Frank H. Johnston, “Japan’s Farmers are the Backbone of the Economy,” 21 March 1968, MS 8272 Papers of Frank Johnston, Box 16, Book 46, NLA.

⁵⁶⁶ Yakata Yoshioka, “Development of Agricultural Policy in Postwar Japan,” *Agriculture and Trade in the Pacific: Toward the Twenty-First Century*, William T. Coyle et al., eds., (Boulder, CO: Westview Press, 1992), 91-93.; Johnston, “Beef Situation,” 9-10.; See also: Frank H. Johnston, “Some Background Information about Japan’s Agricultural Industry,” June 1976, Book 46, Box 16, FHJ, NLA.

⁵⁶⁷ Johnston, “Beef Situation,” 8.

Unlike most attempts to save family farming in the United States, these laws succeeded and made Japanese farmers some of the most politically and economically powerful farmers around the Pacific Rim.⁵⁶⁸

The *nokyo* in general and the beef farmers' *nokyo*, in particular, had significant influence in national politics. The National Central Union of Agricultural Co-operatives, or Zenchu, was the lobby arm of the *nokyo* system, and it had direct access to the Liberal Democratic Party which had ruled Japan continuously since 1955.⁵⁶⁹ Japanese beef farmers backed Zenchu's strong protectionist demands with "massive grass-roots membership" and sophisticated political mobilizing.⁵⁷⁰ Japanese beef farmers also concentrated in voting districts that had disproportionate electoral power in the *Diet* system.⁵⁷¹ Sam Nakagama, an economic consultant, estimated that a Japanese beef farmer's vote was worth as much as three times more than an urban consumers'.⁵⁷² Finally, In 1969, the Japanese government launched a formal decade-long program to alleviate this discrimination mainly by pump capital into beef-producing regions.⁵⁷³ By the 1980s, the *burakumin* had become politically conscious and militant, and they made themselves untouchable in a completely different sense. A USDA report from 1987 found that Japanese beef producers received some of the

⁵⁶⁸ Ironically, the USDA actually distributed a report in 1964 arguing that cooperation between US and foreign agricultural cooperatives was the best route to stable trade. See: John H. Heckman, "Cooperatives in World Trade," *Yearbook of Agriculture 1964* (Washington DC: USDA, 1964), 346-357.

⁵⁶⁹ Johnston, "Beef Situation," 8.; Fumio Egaitu, "Japanese Agricultural Policy: Unfair and Unreasonable?," *Agriculture and Trade in the Pacific*, 114-15.; Longworth, *Beef in Japan*, 54-55, 61-63.; Christina L. Davis, *Food Fights Over Free Trade: How International Institutions Promote Agricultural Trade Liberalization*, (Princeton, NJ: Princeton UP, 2003), 115.

⁵⁷⁰ Longworth, *Beef in Japan*, 59.

⁵⁷¹ Longworth, *Beef in Japan*, 71-75.; Schlosstein, 74-75, 84.

⁵⁷² Sam Nakagama, "Business Forum: The Key is Agricultural Policy; Turning Japan Into an Importing Nation," *NYT*, 18 April 1987, A2.

⁵⁷³ Longworth, *Beef in Japan*, 71-72.; Booklet, "Beef Industry in Japan," RRL.; Booklet, "Citrus Fruit Cultivation in Japan: The Worsening Demand and Supply Balance," (June 1983), 7, File 140500-144999, CO078, W:SF, RRL.; See also Letter, Okawara Yoshio to William P. Clark, 13 Jan 1983, File 119421 (2), CO078, W:SF, RRL.; "Perspectives: Japan's Beef Market," (1982), 6.

highest government subsidies to agricultural producers in any commodity in any country in the world.⁵⁷⁴

Contrary to the position in the United States that catalyzed American ranchers' aggressive exports agenda, consumers did not represent a significant countervailing power against high retail prices in Japan. Japanese Consumers accepted higher prices because they bought into a State rhetoric of food self-sufficiency that was especially strong in the 1970s and 1980s. An internal Australian government memo called it the "our producer right or wrong philosophy," and it suggested that even if Japanese homegrown beef could never fulfill demand, there was no place for economic efficiency arguments in discussions of beef imports with the Japanese.⁵⁷⁵ This, too, was partly America's fault. By the 1970s, Japan was the world's largest soybean importer, and the United States controlled 90% of that market. In 1973, there was an unexpected disruption of the anchovy market. Anchovies were used in animal feed, and soybeans were a useful replacement, so the US imposed an export embargo on soybeans to prevent inflation in the beef sector. Soybeans were used in Japan as both a human staple and animal feed, and the sudden shortage caused panic (both economic and psychological). The "soybean shock" was barely noticed by Americans at the time, but it made Japanese consumers especially distrustful of reliance on US food exports.⁵⁷⁶ Since consumers never advocated against high food prices, politicians in all the major political parties of the Japanese Diet had little impulse to challenge high prices or the status quo system of tariff and non-tariff restrictions against agricultural imports.⁵⁷⁷

⁵⁷⁴ "Government Intervention in Agriculture: Measurement, Evaluation, and Implications for Trade Negotiations," (Washington DC: USDA Economic Research Service, 1987).

⁵⁷⁵ Memorandum, Office of the Minister (Commercial) Australian Embassy Tokyo to The Secretary, Department of Overseas Trade and The Secretary, Department of Agriculture, 21 October 1974, "Japanese Beef Quotas Representations 1974," NAA: A1313, 1974/1959 PART 1, 12908044, NAA.

⁵⁷⁶ Nelson, 61.; Schlossstein, 84.; "Perspectives: Japan's Beef Market," (1982), 9.

⁵⁷⁷ Longworth, *Beef in Japan*, 76-77.

Not only did these particular Australians understand how strong Japanese resistance to free trade in beef would be, they also recognized that the status quo was an admirable market system that Australian beef producers could work with. The Japanese beef import market, like the regulated market for access to public grazing lands in the American West, deliberately took exchange off the open market and transferred it to bureaucratic organizations (governmental and semi-governmental) that could manage exchange deliberately and ensure a responsive, stable market. The Ministry of Agriculture, Forestry, and Fisheries (MAFF) would set national import quotas based on domestic production trends, and the Livestock Industry Promotion Corporation (LIPC) would act as a single, centralized national buyer to see that it was all carried out smoothly and non-competitively. The LIPC also set the retail price of imported beef so that it would not compete with Japanese beef.⁵⁷⁸ Johnston especially appreciated this, since he wanted Australian producers to improve their methods and expand into high-quality production—not compete with Americans for the bottom of the price spectrum.

This Japanese beef import cartel was willing to work with Australians to ensure a stable market. The first Australian export of beef to Japan occurred in 1957, but it was utilitarian brisket (barely considered beef in Japan), and the trade did not blossom immediately. In 1968, the Australian Meat Board and the Japan Meat Conference negotiated an increased quota for Australia, which led to the first real import of Australian chilled beef in 1970.⁵⁷⁹ The Japanese showed a strong preference for Australian beef until the United States used political force to seize greater market share starting in 1982. In 1972, the president of Nippon Meat Packers Inc. in Osaka claimed, “We in the Japanese meat industry

⁵⁷⁸ Johnston, “Beef Situation,” 39; Longworth, *Beef in Japan*, 171-207.

⁵⁷⁹ Johnston, “Beef Situation,” 34.

are always pressing our Government to extend quotas for imported beef and you Australians can expect these to rise steadily in the future,” and in 1976 a MAFF official revealed, “It appears that we may have to rely on your country [Australia] for the supply of much of our meat in the future.”⁵⁸⁰

In the late 1970s, Yoshihiro Yamashita, a senior bureaucrat in the Japanese agriculture ministry, toured Australia to assess Australian thoughts on the Japanese beef market. He concluded that Australians thought Japan was a much bigger place than the Japanese did. Australians wanted Japan to be like the UK used to be—a stable, guaranteed export market—and the Australians felt victimized whenever Japan proved otherwise (as had happened suddenly in 1974).⁵⁸¹ Yoshihiro also noted misunderstandings and distrust of Japanese business practices, but overall he was sympathetic to Australian efforts to work with Japan. He acknowledged the ongoing hardships of Australian cattle producers in a volatile export industry without the domestic market to sustain them, and he suggested that the Japanese ought to work with Australia to avoid any sudden changes again.⁵⁸² Most importantly, Yoshihiro found that Australians did not want liberalization of Japan’s beef markets.⁵⁸³ Yoshihiro’s visit and report, published and distributed by the Australian National University, was part of a much larger effort in Australia to make sense of the peculiarities of the Japanese market and assure their favoured access to it.

⁵⁸⁰ As quoted by Johnston, “Beef Situation,” 1.

⁵⁸¹ The price crises of 1973-4 led the Japanese to shut out all beef imports. This hit the Australian beef industry especially hard, since it had already started orienting towards Japanese consumers by opening grain-feeding operations. The incident partly explains why Australia still favours range-finished cattle, in contrast to most modern beef industries. For details on the incident see: Ufkes, 221.; Nelson.

⁵⁸² Yoshihiro Yamashita, “The Australia-Japan Beef Trade: Hopes in and Doubts About Japan,” Australia-Japan Economic Relations Research Project Research Paper, No. 51, (Canberra, ACT: Australian National University, 1978).

⁵⁸³ Yoshihiro, 19.

By the 1980s, Australia had become dependent on a stable Japanese market for its beef. With the help of American capital, Australia had developed a beef industry with productive capacity far exceeding the consumptive capacity of its population. Australians knew the Japanese market much better than Americans did, and Australia had certain underappreciated advantages in trade. Even though the Australian beef industry was most vulnerable to changes in the Japanese market, it was also the most responsive. In general, Australia viewed the institutions regulating trade not as artificial barriers to a preferable and freer market, but as the market as it actually was, and Australian ranchers learned to work with them. However, Australian advantage declined when the United States focused political pressure on Japan. As Japanese quotas increased between 1984 and 1988, Australian exports rose, but their relative market share fell significantly.⁵⁸⁴ Australians recognized that US beef was not outcompeting them on the open market; but rather, the Japanese government has deliberately shifting its preference due to US pressure. It was only when the regulatory institutions began working against them, that Australia pushed for liberalization along with the United States.

⁵⁸⁴ Nelson.; Australia's share of the Japanese quotas fell from 81% in 1976 to 57% in 1988. "Japan Taking Australia Beef," *NYT*, 24 June 1988, D9.



Our country is the world's biggest exporter of farm products, with American hot dogs even becoming a popular new food in Japan, above, where they are often sold by street vendors from small motorized stands. U.S. wheat grower groups, working with USDA, introduced the hot dog to Japan. The photos below show grain inspection in Oregon, at left, and processing of Bing cherries.

Figure 26: Japanese consumers eating American hot dogs, c.1969. *Yearbook of Agriculture 1969* (Washington, DC: USDA, 1969), frontispiece.

Conclusion: Pacific Rim Beef?

The beef and citrus war, thus, pit at least three different varieties of transnational bovine capitalism against each other. None of these visions survived the trade war fully intact. Free trade (as an ideological and political project) transformed the Pacific Rim beef market, but the result was no more a “free market” than what existed before. Free trade had a coherent free-market justification behind it based on comparative advantage theory, but even the staunchest supporters of global free-market ideology (in this case, the US Whitehouse trade team) pursued free trade for ends and with means that were symbolic, opportunistic, disingenuous, and mathematically dumb.⁵⁸⁵ Even though American cattle ranchers were losers in the conflict, the free-market ideas that helped propel US policy have become even more influential since.⁵⁸⁶ The beef and citrus war of 1979 to 1988 was a stupid conflict, and yet, as of 2017, the nations of North America, Oceania, and East Asia look well poised to do it all over again.

I first learned that there was such a thing as the Pacific Rim beef trade, when I worked seasonally at a local meat processing and distribution facility on Vancouver Island, British Columbia, as a student in 2008 and 2009. I worked in final-stage processing and packaging of red meat, which included labeling boxes with what was inside and where it was going. The facility supplied restaurants and hotels all over the thirty-one thousand square kilometer island—including two cities, Victoria and Nanaimo, and many towns. Unlike at supermarkets that only label the country-of-origin on fresh meat when it is favourable (ie.

⁵⁸⁵ Although, there is a strong consensus around economic liberalism among mainstream economists and many political elites (with obvious exceptions), there is still a long tradition in the history of foreign relations that argues lofty liberal goals were pursued through illiberal means. See William Appleman Williams and Michael Schaller, for example.

⁵⁸⁶ Graham Dunkley, *Free Trade: Myth, Reality, and Alternatives* (Dhaka, Bangladesh: University Press Ltd, 2004), 1-17.

“We Sell Canadian Beef!”), this company labeled products with their country of origin because it explained the wholesale price and quality-level to the restaurateur. I was surprised to learn that these restaurants, many of which I had eaten at, bought a significant amount of beef and lamb from Australia and New Zealand for prices well below the Canadian products that did not come from all the way across the world. This isolated local market was linked to a transnational market as large as the ocean that surrounded it. I was a part of it, but I knew nothing about it or its contested history.⁵⁸⁷

How do you make sense of a market that spans the biggest thing on Earth—the Pacific Ocean—and crosses many nations with unique (sometimes fundamentally different) histories, societies, cultures, economies, geographies, and natural resource landscapes? Economists tend to rationalize such things by reducing them to measurable units that have internally coherent rules. There is value to this approach, but in the course of the beef and citrus war, theory was taken for reality waiting to burst forth. The failure of US economic predictions to come true led me to investigate a different way of conceptualizing Pacific Rim beef. I have followed the approach of a few pioneering Australians, who sought to study the Japanese beef market for what it was, rather than for what they thought it should be. One of the first things I learned, and perhaps one of the biggest problems from a global free trade perspective, was that there was indeed a distinct and identifiable Pacific Rim trade market within the global beef economy.

⁵⁸⁷ This experience also drove my previously-published research into the British Columbia meatpacking industry. Tim Paulson, “From ‘Knife Men’ to ‘Streamlining with Curves’: Structure, Skill, and Gender in British Columbia’s Meat-Packing Industry,” *BC Studies* 193 (Spring 2017), 115-145.

Meat is the highest value-per-calorie commodity sold on the world market,⁵⁸⁸ and the Pacific Rim beef trade is the largest, most valuable, and most complex market in the global meat economy.⁵⁸⁹ The primary participants are, in order of trade volume, the United States, Australia, Canada, Japan, New Zealand, Taiwan, and South Korea. These nations import and export less than 5% of their beef outside the Pacific Basin.⁵⁹⁰ The Pacific market is confined and defined by the absence of Foot-and-Mouth disease (FMD), a deadly and highly contagious cattle virus, over the past sixty years in all the nations listed above.⁵⁹¹ China, Mexico, Argentina, and many other non-FMD-free countries ranging from El Salvador to Indonesia have had inconsistent, but sometimes significant, access to this trade in the past fifty years, and China is rapidly becoming the most significant beef trader in the Pacific.

In a time when the majority of manufacturing has moved to East and South Asian nations with low labour costs to supply first-world markets, the meat trade defies the prevailing logic of globalization.⁵⁹² Labour costs matter, but they matter less than land availability, available financial and industrial capital, strong domestic markets, and stable disease control. It is a distinct feature of the Pac Rim beef trade that most producer nations

⁵⁸⁸ McDonald et al. identify that on global scale, about 5% of the total calories of meat and animal products are traded across borders, but over 25% of the value of meat and animal products is traded. It stands alone among other commodity groups with only category, fruit and nuts, crossing 10%. They also found that meat and animal products had an especially narrow and high price range with the majority falling between \$1000 to \$5000 per million kilocalories. MacDonald et al., "Rethinking Agricultural Trade Relationships in an Era of Globalization," *BioScience* 65, no. 3 (2015): 275-289.

⁵⁸⁹ While the European Union, and Russia import and export significant amounts of meat, the trade is fairly straightforward and influenced principally by E.U. Politics. See: John H. Dyck and Kenneth E. Nelson, *Structure of the Global Markets for Meat*, Market and Trade Economics Division, Economic Research Service, U.S. Department of Agriculture, Agriculture Information Bulletin No. 785, (Washington DC: U.S. Government Printing Office, 2003), 5, 12.

⁵⁹⁰ Dyck and Nelson, 4, 8.; Francis, 532.

⁵⁹¹ Dyck and Nelson.; Rae Allan, Chris Nixon, and Peter Gardiner, *The Pacific Rim Beef Trade: Impacts of Lifting Foot-and-Mouth Disease Trade Barriers* (Wellington, NZ: New Zealand Institute of Economic Research, 1998).

⁵⁹² This phenomenon is widely documented. For a more detailed examination of Chinese manufacturing for American and world markets, see Nelson Lichtenstein, *The Retail Revolution: How Wal-Mart Created a Brave New World of Business* (New York: Metropolitan Books, 2009).

have advanced developed economies and most cattle growers are (relatively) high-income, politically powerful, and economically autonomous producers.⁵⁹³ This means that beef is expensive, and rich nations trade it with other rich nations. There are also no windfall profits, and the beef industry historically operates at a profit rate of just 2-3%.⁵⁹⁴

The Pacific Rim beef industry, therefore, relies on something called “intra-industry trade,” which means the nations involved trade in particular body parts and types of meat in a biologically precise pursuit of scale economies. In this context, the United States becomes both one of the largest exporters and one of the largest importers of beef in the region. According to expert trade analysts, it works something like this: Canada and the United States produce high-quality grain-fed cattle favoured for cuts like steaks and roasts. Australia and New Zealand produce lower-quality grass-fed cattle, which can undercut domestic North American prices, where it is used for cuts like hamburger. At the same time, the United States sends its fatty marbled beef to Japan for sukiyaki, while Australia sends its own utilitarian product to South Korea for various processed products. More importantly, neither the US nor Australia have a strong market for offal (including organ meat and other off-cuts), while offal is actually prized in Asian markets.⁵⁹⁵ Shipping different organs of animals to different, distant markets like this perfects the long-time goal of industrial meatpacking to maximize profits on every animal part “except for the squeal.”

⁵⁹³ Dyck and Nelson, 4. NB: This structure does not extend to the seafood trade. For an excellent examination of East Asian manufacture of seafood products (like New England style crab cakes) for the American market, see Kelly Feltault, “Trading Quality, Producing Value: Crabmeat, HACCP, and Global Seafood Trade,” *Food Chains: From Farmyard to Shopping Cart*, (Hagley perspectives on business and culture), Roger Horowitz and Warren Belasco, eds. (Philadelphia: University of Pennsylvania Press, 2009): 62-83.

⁵⁹⁴ Francis, 542.

⁵⁹⁵ Dyck and Nelson, 7 n.4., 18.; Francis, 540.; Kakuyu Obara, Michael McConnell, and John Dyck, “Japan’s Beef Market,” USDA Economic Research Service Report LDP-M-194-01, 2010.

Please note: the situation described is at least a decade out of date, since the US is now the major exporter to South Korea, and the role of China is neglected.

Viewed this way, the Pacific Rim beef trade looks like a perfectly rational mapping of bovine biology onto the unique geographic, economic, and cultural characteristics of the Pacific basin. The market therefore captures well the basic notions of comparative advantage in free trade—nations produce what they are naturally good at producing and everyone consumes the things they want. Comparative advantage theory dates back to Adam Smith and a contemporary named David Ricardo, who developed a mathematical proof that free trade necessarily benefits all participant nations in his 1817 work *On the Principles of Political Economy and Taxation*. A nation’s comparative advantage in a given commodity stemmed from a combination of its natural environment and social conditions. Smith reduced it to “soil, climate, and situation,” while Ricardo labeled it the nation’s “situation, its climate, and its other natural and artificial advantages.”⁵⁹⁶ Ricardo argued that nations should only produce the goods that they have comparative advantage in, and they should import all goods that other nations have comparative advantage in. If all nations do this, they will all receive the maximum amount of consumer goods for the most efficient expenditure of labour and natural-resource costs on a global scale. Even adherents of comparative advantage realize that the theory fails to describe what actually happens when rich nations economically colonize poor nations, but Ricardo’s idea still forms the theoretical and ethical basis of free trade, which lies at the heart of late twentieth-century globalization.⁵⁹⁷

Comparative advantage is the dominant way of understanding international markets today, and it was highly influential in US trade policy during the beef and citrus war, but it does not apparently make sense to most people.⁵⁹⁸ Nobel-prize-winning economist, Paul

⁵⁹⁶ As quoted in Dunkley, 24.

⁵⁹⁷ Dunkley, 18-47.; Andrea Maneschi, *Comparative Advantage in International Trade* (Cheltenham, UK: Edward Elgar, 1998), 51-74.

⁵⁹⁸ Steven Lohr, “Why a Trade War May Be Looming with Japan,” *NYT*, 17 Jan 1982, A9

Krugman, called it “Ricardo’s Difficult Idea,” and he claimed that outside academic economist international trade experts, even “intellectual people [...] somehow find this particular idea impossible to grasp.”⁵⁹⁹ Krugman asserts that this is a problem, since it leads *regular* smart people to doubt free trade, when all the *really* smart people understand that comparative advantage is true.

Krugman attributed resistance to comparative advantage theory to people’s discomfort with mathematical explanations of human society. More likely, people sense that the math does not add up. Comparative advantage assumes that nations are (or can be) free to make choices about what they produce, export, and import in response to transnational supply-demand-type market forces. It also assumes that one can realistically measure the comparative advantage of producing goods in totally different contexts. During the beef and citrus war, the United States (as represented by the executive branch of its federal government, which I assume is what comparative advantage theorists mean when they attribute agency to bordered geographic entities in world history) believed in the transnational benevolence of free trade, but it found that powerful groups in all nations involved (including the United States) did not. The opposition and resistance free traders encountered from the overseas beneficiaries of their strategy should have called comparative advantage and the cult of free trade into doubt, but the United States pursued free trade in beef with ideological vigour. It struggled to impose free trade on Pacific Rim beef, and when it finally kind-of did, the United States found that its analysis of its own comparative advantage was dead wrong. Once the barriers came down, it turned out that Australia, the

⁵⁹⁹ Paul Krugman, “Ricardo’s Difficult Idea,” Conference paper, Manchester UK, March 1996, Available online: <http://web.mit.edu/krugman/www/ricardo.htm>.

much closer and much better-networked exporter, had an overwhelming advantage over the United States.

If free trade is mathematically better, why did Japan and Australia oppose the application of freer international market trading? Why did the United States even have to pursue an outcome that should emerge naturally from globalization? And why did the United States think it would have advantage in the beef trade over a nation whose imports it had to severely restrict lest they out-compete domestic American cattle ranchers?! My archival work in pursuit of these questions revealed a different version of market reality defined not by commodities or their production efficiency but rather by powerful rules about what could be traded and by whom. I also learned that national governments were not the only, or even primary, negotiators and creators of international trade policy or the aforementioned rules; organized groups of livestock producers were. My findings supported the approach of Francesco Duina, who argued that global free trade was actually a site-specific social and political construction that never really reflected widespread acceptance of the ideology. Duina examined several successful cases of free trade market creation but found “much like national market building, it occurs in the midst of rich institutional and political contexts. Market officials take action, but powerful constraints limit their choices. Traditions, structures, values, and norms along with the preferences of powerful actors define the range of what is possible.”⁶⁰⁰ Duina’s work, as well as my own, thus found support for an institutions-based approach to understanding markets. While I did find acceptance of free trade theory among US trade leadership, I likewise found that the United States’ pursuit of a

⁶⁰⁰ Francesco Duina, *The Social Construction of Free Trade: The European Union, NAFTA, and Mercosur* (Princeton, NJ: Princeton UP, 2006), 3.

particular version of free trade in Pacific Rim beef was motivated also by domestic economic and political context.

Comparative advantage was, and is, successful as a concept because it provides an environmental determinist argument that fits well with American beliefs about American landscapes as well as a political need for support (or posturing) for farmers and the rural sector. It is an irony that after a century of US leadership in industrial manufacturing, high technology, super-sized retailing, and advanced service economy infrastructure, the country still declares that its greatest assets and greatest advantage on world markets are in agriculture. Comparative advantage theory makes sense of ludicrous notions like solving an automotive trade deficit for a handful of beef and oranges. While mathematically plausible, the concept is fundamentally flawed. First, the United States has no natural advantage in agricultural production. American agriculture today (which is indeed world-class) is the result of almost two centuries of corporate and government effort to re-engineer landscapes. The United States, as a result, is the world's largest exporter of irrigated water.⁶⁰¹ Second, there is no free market on which the world's nations may choose what to produce, what to export, or what to import.

Japanese advocates for domestic production tried to offer an alternative environmental argument. The Japanese beef industry put together and distributed a handbook to educate Americans on the value of domestic Japanese production and the danger posed by low-price imports, which argued that Japanese people, just like Americans, believed that rangeland landscapes, however scarce, ought to carry cows. Not only did Japanese people like seeing cows on the landscape, "beef cattle farming is important in terms of effectively

⁶⁰¹ McDonald et al.

utilizing national land resources [...] and maintaining rural communities.”⁶⁰² Many Americans may well have believed that the continental US landscape was uniquely perfect for cows, but many of their ideas about cows and the land had already spread around the world and adapted to different lands and peoples.

The liberalization of the Japanese beef market in 1988 was supposed to create free market conditions, but American ranchers had long before proven that such rules were easily avoided with health-and-safety regulations. In December 2003, the first case of spongiform encephalopathy (BSE or “mad cow” disease) was detected in the United States. The US Secretary of Agriculture called it the “cow that stole Christmas.”⁶⁰³ Though the US blamed Canada for the afflicted animal, fifty-three countries including Japan, South Korea, Taiwan, and China banned US beef imports immediately. Japan briefly re-opened its markets in December 2005 only to re-impose the ban 6 weeks later after finding bone in a veal shipment. South Korea resisted US pressure to reopen its markets until 2008. Tens-of-thousands of Korean protesters tried to halt a re-opening of US beef imports, with demonstrations lasting for two months and police shooting protesters with water cannons before the nation folded to US demands. Taiwan opened its markets in 2005 only to place a ban on ractopamine and beta-adrenergic agonists, both used in US beef production, in 2006. Japan reopened its markets to all US beef products in January 2015, but has already restricted them again. China announced it would begin a process of opening markets to US beef imports in September 2016, which is ongoing. Different internal and external political forces

⁶⁰² “Beef Situation in Japan: From Production to Consumption,” Booklet, (Tokyo: Agricultural Policy Research Committee, [c.1983]), 22.

⁶⁰³ Michael Johanns in “Examining the Effects of Bovine Spongiform Encephalopathy (BSE) on U.S. Imports and Exports of Cattle and Beef,” Hearing before the Committee on Agriculture, Nutrition, and Forestry, United States Senate, 109th Cong., 1st Sess., (3 Feb 2005), 22.; The Canadian and US BSE scares caused serious “information shock” on the futures market, see: Yiuman Tse and James C. Hackard, “Holy Mad Cow! Facts or (Mis)Perceptions: A Clinical Study,” *Journal of Futures Markets* 26, no. 4 (2006), 315-341.

shape the market decisions of each of these Asian beef consuming nations, but a relatively minor epidemiological event has given them full control over beef imports for over a decade.

Health and safety regulations are rational and good in their own right, but it is generally understood that this is at least as much about how you do business now. For one thing, most of these countries have had more cases of BSE than the US has. They also work symbiotically with other trade agreements. Under the Uruguay Round GATT agreement on beef, Japan and other importers can impose emergency quotas if imports in a given fiscal quarter exceed 117% of the previous year's corresponding quarter. So if you have a BSE ban, you can hold down imports for years. Japan has never actually imposed this rule, but it is largely because countries voluntarily restrict their exports for fear of it.⁶⁰⁴ Another reason countries use BSE to regulate trade is that BSE is worse in older cattle. An importer nation can restrict beef above a certain age, and it looks like a reasonable response, but it also restricts the most value-added products. The U.S. International Trade Commission estimated that BSE regulations cost the US beef sector \$1.5–2.7 billion in lost revenue annually from 2003 to 2008. This is the new (and old) form of resistance to free trade.⁶⁰⁵

Perfect free trade is a myth, but transnational markets have certainly transformed the beef industry and will continue to do so. China's decision to begin importing US-beef reflects the fact that, perhaps for the first time ever, an East Asian nation wants as much beef as American cattle producers and meatpackers want to send them. The explosive growth of beef-eating in China may turn out to be the biggest development for the beef industry in

⁶⁰⁴ Kakuyu Obara, Michael McConnell, and John Dyck, "Japan's Beef Market," A Report from the Economic Research Service, US Department of Agriculture. (Washington DC: USDA, 2010), 33.

⁶⁰⁵ John Giamalva et al., "Global Beef Trade: Effects of Animal Health, Sanitary, Food Safety, and Other Measures on U.S. Beef Exports," Investigation No. 332-488, USITC Publication 4033, (Washington DC: United States International Trade Commission, 2008), xvi.; See also: "Examining the Effects of [BSE ...]," Hearing, US Senate, 2005.

almost a century (since regulation of industry and rangeland grazing, 1919-1934) with the greatest consequences for the economic, social, and environmental well-being of rangelands and rangeland communities around the world.

Less than a decade ago, China was not even on the list of relevant countries in the global beef trade. The Pacific Rim trade has been the most important beef market for some time due to the unique meeting of wealthy nations with large semi-arid rangelands and other wealthy nations with complementary tastes, but China was actually excluded from that trade due to poverty and its own health and safety risks to other nations. When China banned US beef imports in 2003, it did not matter. They did not import any US beef as it was, and they were jumping on a bandwagon led by other more important countries. That has all changed, and now China is the largest by volume and most influential beef importing nation in the world. In 2013, the year China passed the United States as the world's largest importer of beef, China increased imports by 1.5 billion pounds in a single year (for comparison, Wal-Mart, the largest beef retailer in the world, sells about 2 billion pounds a year). Gregg Doud, the NCA economist, called the explosion of beef imports in China "one of the biggest things to happen—possibly ever—to ranchers all around the world."⁶⁰⁶

American cattle ranchers have fallen on hard times (again) in the past half-decade. Actually, they live in a continuous cycle of hard times, but it seems we are in the midst of a bad one. And cattle ranchers have created a political-economic paradox for themselves that makes it hard to find good solutions. On the one hand, cattle producers, who often call themselves "cowboys" (a total misnomer), have embraced conservatism and free market ideology. They often point out that they are the only major producer group that does not

⁶⁰⁶ Gregg Doud, "Beef Trade: A Decade of Perspective," *Proceedings, The Range Beef Cow Symposium XXIII*, (3-5 December 2013, Rapid City, SD), 10

receive subsidies from the federal government (which is true except that their water, land, and taxes on capital are all subsidized indirectly). On the other hand, consumer demand for beef is capped by their unwillingness to pay high prices. So you have a bunch of supply-and-demand minded cowboys, who can't find demand for their supply but won't dare take direct subsidies or price supports (an obvious, if politically incorrect, solution). Some ranchers say the problem is that their cheap land is not cheap enough, so they wave guns around and occupy federal lands and buildings. Most ranchers are embarrassed by those types, and they look for markets abroad instead.

However, the Chinese beef bubble may cause social or economic crises in rangeland communities that rely of the beef industry. The American beef industry exists in a perennial boom and bust cycle, but some busts are worse than others. The industry has been managing relatively low prices in the last half decade by holding back product (in fat cattle on the range or frozen carcasses) and it is well prepared to respond to Chinese demand. The industry has been desperate for a period of high profits to cover capital losses incurred in past years, and it *will* expand its herds if China opens up. Referring to health-and-safety import bans, Gregg Doud of the NCA noted that “Historically these shenanigans have kept the U.S. government up at night,” but he remained very optimistic for US beef in China.⁶⁰⁷ However, the history of the international beef trade demonstrates how easy it is to close off a beef import stream, and China is not the kind of nation that becomes permanently beholden to the US for its beef supply these days. The very real possibility that China shuts out US imports again as

⁶⁰⁷ Doud, 12. Doud also says, “Of course we all know who wrote the book when it comes to using non-tariff trade barriers to block imports and protect domestic markets,” but he reveals it to be the European Union (13). It would be more correct to say that the European Union perfected the methods created by the American beef producers.

suddenly as it opens them, would mean massive oversupply on the US market and devastation for local beef economies.

Growing demand for beef in China comes at a time when the world needs to reduce its total beef consumption. Environmentalists have accused cattle of pushing out wildlife and trampling and chewing up important ecosystems since at least the 1970s, but cattle ranching is now being cited as major contributor to human-induced climate change. Cattle release some greenhouse gases in digestion, but more importantly, say some scientists, they encourage changes in the composition of the soil and types of plants that grow there that reduce the land's ability to store carbon. In other words, not only do they release carbon, but their continued presence prevents the land from sucking up carbon emitted from other sources. Rangelands cover at least one third of the earth's land surface, and as they become increasingly overstocked to feed China, they may contribute as much to climate change as industrial pollution.

The United States has long over-taxed the natural advantage from its Western rangelands, and American cattle producers should not re-orient production towards China. Not only will that be bad from a net environmental position, but it is also unlikely that the United States will excel in the Chinese beef market. The Chinese market is at least as complex as Japan's was in the 1980s, and Australian policymakers, academics, and beef industry leaders have already been engaged in a deep exploration of market conditions there since at least 1988.⁶⁰⁸ The exciting new Chinese market clearly already belongs to someone else, and the United States will only suffer from its comparative disadvantage.

⁶⁰⁸ E.J. Champion, "China – Yunnan Livestock and Pasture Development Project – Final Report," Adelaide: Australian Agricultural Consulting and Management Company, 1988, held at NAA: A8950, 835, 7444054.; Ivan Roberts and Neil Andrews, "Developments in Chinese Agriculture," Canberra: Canberra: Australian Bureau of Agricultural and Resource Economics [ABARE], 2005.; KE Bingsheng, "Recent Developments in

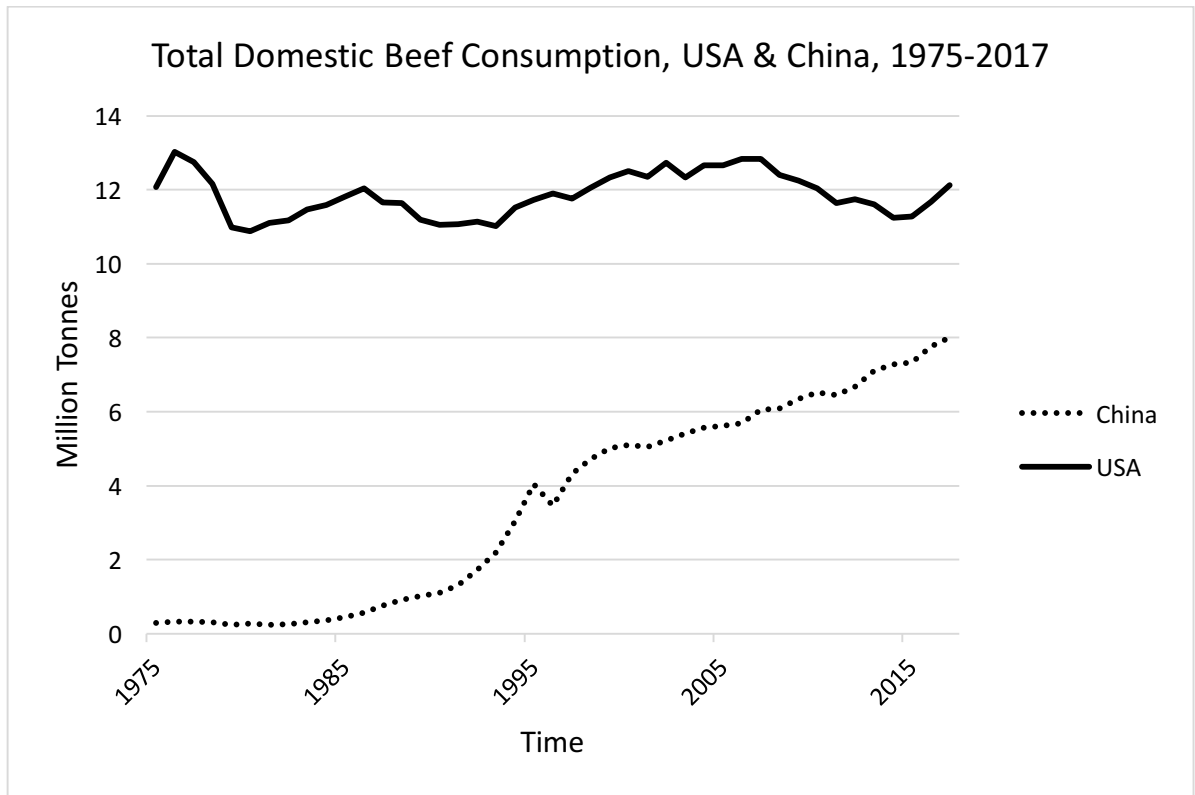


Figure 27. Data compiled by Earth Policy Institute from U.S. Department of Agriculture, Production, Supply and Distribution, electronic database, at www.fas.usda.gov/psdonline, updated 10 May 2013. Graph by Author.

the Livestock Sector in China and Changes in Livestock/Feed Relationship,” Originally presented to FAO in 1997, Reprinted by; Ralph A. van Gelder et al., “Urban Consumer Attitudes to Beef in China,” University of Queensland School of Natural and Rural Systems Management, Agriculture and Natural Economics Discussion Paper Series [ANEDPS], 1998.; Zhang Cungen, “Challenges Facing Animal Production in China,” ANEDPS, 2000.; KE Bingsheng, “Perspectives and Strategies for the Asian Livestock Sector in the Next Three Decades: Sub-Regional Report, China,” ANEDPS, n.d., ...; Liang Shumin and Dominic Smith, “Spatial Integration, Regional Specialisation and Transport Linkages in the Chinese Cattle and Beef Industry,” ANEDPS, 1998.; Xiong Cunkai, “Beef Marketing Channels in China,” ANEDPS, 2000.; Haiou Cai et al., “Effects of Urbanisation on Beef Consumption in China,” ANEDPS, 1998.; Zhang Cungen, “The Livestock Revolution in China: In Addition to Comment on the Implications of the Recent Economic Crisis on Livestock Sector,” ANEDPS, 1998; Hu Dinghuan, “Beef Consumption and the Beef Marketing Chain in China,” ANEDPS, 1998.; Lin Xiangjin and Ian Jarratt, “Beef Marketing in China,” ANEDPS, 1998.; Xiong Cunkai and Zhang Cungen, “Live Cattle and Beef Trade in China,” ANEDPS, 1999.; Liu Yuman and Chen Jiyuan, “Impact of Developing the beef Industry in China on Farm Household Income: A Case Study of Fuyang Prefecture,” ANEDPS, 1998.; Li Suoping and Zhang Cungen, “Products of the Beef Cattle Industry in China,” ANEDPS, 1999.; Scott Waldren and Zhang Jinhang, “Grain and Oilseed Consumption in China’s Beef and Cattle Industry,” ANEDPS, 1998.; Scott Waldron, “Models of Agro-industrialisation in China: The Case of the Cattle and Beef Industry,” ANEDPS, 1999.; Zhang Cungen and John Longworth, “Bovine Breed Improvement in China,” ANEDPS, 1998.; Colin Brown and Chen Kai, “Location of beef Production and Production Systems in China,” ANEDPS, 1998. Please note that many of these essays have coauthors from both Australian and Chinese institutions.

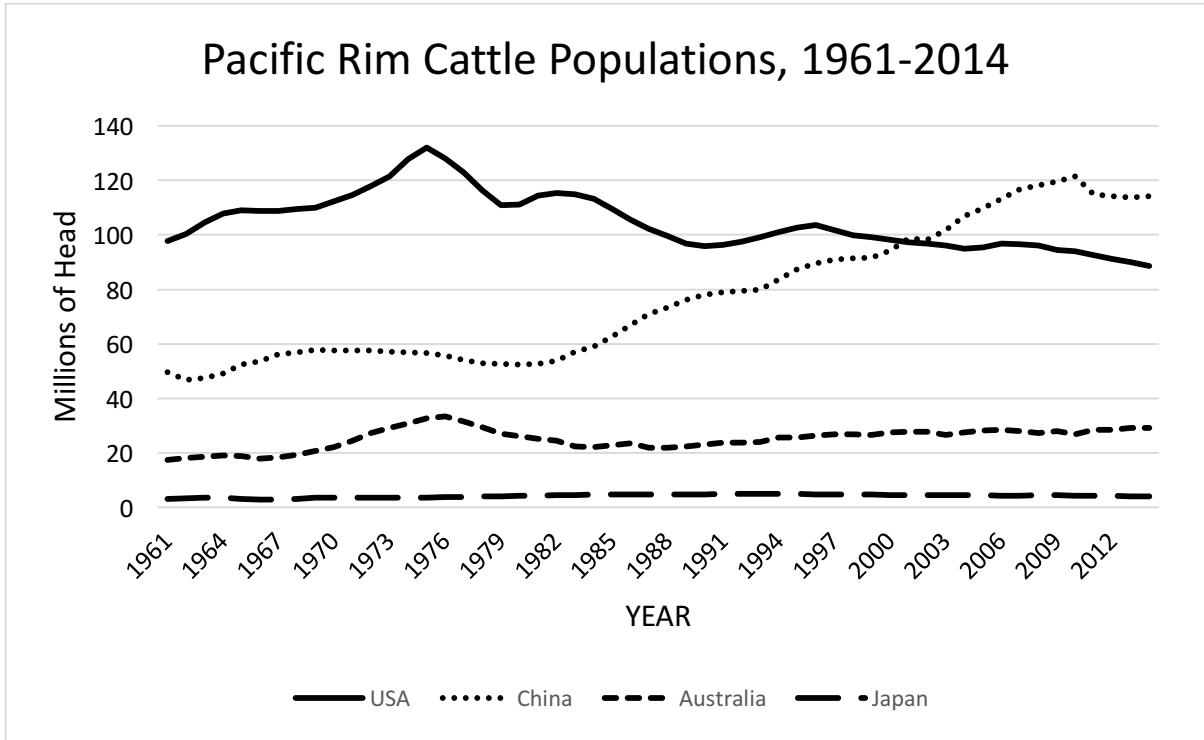


Figure 28. “Live Animals, Cattle,” Food and Agriculture Organization of the United States, FAOSTAT online database, <http://www.fao.org/faostat/en/#data>. Graph by Author.

Epilogue: Carbon-Neutral Cows

American cattle producers and others are in the process of creating another new market for the sale of greenhouse-gas-emission offsets to large-scale industrial polluters. The polluters are in state-regulated carbon cap-and-trade markets. Cattle producers do pollute (all first-work humans pollute significant amounts), but the architects of carbon markets have not heretofore created these things for cows. Some environmentalists think cap-and-trade will solve climate change; some cattle producers believe they could profit from it. In this case, again, the rules of the market will depend on what people believe the relationship of cattle is to the natural environment and climate. If successful, cattle producers could begin trading in a climate-based market as large as the troposphere. It is also possible that the economic-environmental link in this market-to-save-climate-change could be the most broken thing in the whole history of poor market-environment relationships for the American beef industry.

Cap-and-trade is supposed to reduce pollution by assigning it an exchangeable commodity price.⁶⁰⁹ The idea behind cap-and-trade markets is that the government sets a limit on a firm's pollution allowance, and that firm must either reduce emissions or purchase offsets at market value from another firm that can reduce below the cap. United States National Air Pollution Control Administration economists pioneered the cap-and-trade model in the 1960s, but it has exploded in the past decade, and emissions trading has become the darling solution to climate change.⁶¹⁰ Governments and industry have launched carbon markets in the United States, Australia, Canada, New Zealand, Japan, China, and others; and

⁶⁰⁹ Please see also: D. MacKenzie, "Making Things the Same: Gases, Emission Rights and the Politics of Carbon Markets" *Accounting, Organizations, and Society* 34, no. 3/4 (2009), 440-455. Marion Fourcade, "Cents and Sensibility: Economic Valuation and the "Nature" of Nature in France and America," *American Journal of Sociology* 116, no. 6 (2011), 1721-77.

⁶¹⁰ Ellison Burton and William Sanjour, *An Economic Analysis of the Control of Sulphur Oxides Air Pollution* (Washington, DC: Ernst and Ernst, 1967).

many major national environmental non-governmental organizations (NGOs) in the United States have some sort of statement or policy approving cap-and-trade.⁶¹¹ Emissions trading promises to become increasingly vibrant and lucrative, and it is touted as a solution to economic problems as well as environmental problems.

Parts of the American cattle industry have already integrated into emissions trading markets. Starting in 2015, some dairy producers have installed biogas digesters that convert methane from manure into electricity, and they have constructed a way to sell not the electricity, but the methane (or rather its absence in the atmosphere), and they sell it through a market fiction as carbon in California. The State of California launched a carbon cap-and-trade market in 2011 that requires major industrial carbon polluters to participate, but it does not cover agriculture or methane pollution. But as of 2015, the rules allowed a polluter to seek out cheaper equivalent greenhouse gas offsets outside the market such as methane from a dairy. Dairy owners from all across the country were allowed to sell and they worked through agents and brokers similar to the futures exchange. John Upton for *Scientific American* explained that the trade has faced opposition and a lawsuit, but it has far greater supporters, like the Environmental Defense Fund, and won on the verdict that: “It is not standard practice to install anaerobic digesters [...] Cost is the primary barrier to installing

⁶¹¹ “How Cap and Trade Works,” *Environmental Defense Fund* 2017, <https://www.edf.org/climate/how-cap-and-trade-works>.; “Statement Regarding the Expected House Resolution Opposing a Carbon Tax,” *The Nature Conservancy* 8 June 2016, <https://www.nature.org/newsfeatures/pressreleases/the-nature-conservancys-statement-regarding-the-expected-house-resolution-op.xml>.; “World Wildlife Fund Statement on Climate Change and the State of the Union,” *World Wildlife Fund* 28 January 2008, <https://www.worldwildlife.org/press-releases/world-wildlife-fund-statement-on-climate-change-and-the-state-of-the-union>.; Charles Komanoff, “Can Viable Carbon Tax Arise from the Senate’s Ashes? Big Green’s Pursuit of Carbon Cap-and-Trade in the U.S. Branded the Climate Movement as Servants of Wall Street Elites,” *Carbon Tax Center* 27 July 2010, <https://thewrongkindofgreen.wordpress.com/2010/07/27/big-greens-pursuit-of-carbon-cap-and-trade-in-the-u-s-branded-the-climate-movement-as-servants-of-wall-street-elites/>.

digesters and offset credits directly address this problem.”⁶¹² The scope is limited, though. The Environmental Protection Agency (EPA) estimated that the digesters were “technically feasible,” at just 8,200 dairies and hog farms in the United States.

It is possible and highly likely that cattle producers will be able to sell carbon offsets for carbon sequestration in the soil soon, which would allow a great deal more cattle producers to participate at a great deal less effort. *Modern Farmer* explained that “carbon farming” has stalled due to the difficulty of quantifying the actual offset, and at current prices a farmer with 100 hectares, who converted to no-till agriculture, might only make \$3,000 and that was not guaranteed to repeat annually.⁶¹³ However, the Marin Carbon Project, an organization of California dairies north of San Francisco demonstrated successfully that spreading one-half inch of compost on grazing lands and converting it to pasture for milk or grass-fed beef cows yielded a predictable one metric tonne of carbon per year, which repeated annually without reapplication. San Francisco has a mandatory composting program, so there could be plenty of compost available for pasture conversion.⁶¹⁴

The questions now are: How far will it go, and in what direction? The direction is a big question because it is not clear right now whether cattle producers will have to continue to participate in the market by investing in pollution-reduction projects or spreading compost, or whether they will be able to claim that they suck greenhouse gasses from the atmosphere

⁶¹² Judge Ernest Goldsmith as quoted by John Upton, “To Cut Methane from Cows, Put a Price on Carbon: California’s cap-and-trade system spurs farmers to install biogas digesters,” *Scientific American* 24 April 2015, <https://www.scientificamerican.com/article/to-cut-methane-from-cows-put-a-price-on-carbon/>; See also: Pauline Bartolone, “Cap and trade pays for out-of-state manure-to-fuel projects,” *San Francisco Chronicle* 16 August 2015, <http://www.sfchronicle.com/science/article/Cap-and-trade-pays-for-out-of-state-6447724.php>; Justin Gillis, “A Price Tag on Carbon as a Climate Rescue Plan,” *New York Times* 30 May 2014, <https://www.nytimes.com/2014/05/30/science/a-price-tag-on-carbon-as-a-climate-rescue-plan.html>.

⁶¹³ Brian Barth, “Farmers are Capitalizing on Carbon Sequestration: How Much is Your Carbon-Rich Soil Worth?” *Modern Farmer* 6 April 2016, <http://modernfarmer.com/2016/04/carbon-sequestration/>.

⁶¹⁴ Brian Barth, “Farmers are Capitalizing on Carbon Sequestration: How Much is Your Carbon-Rich Soil Worth?” *Modern Farmer* 6 April 2016, <http://modernfarmer.com/2016/04/carbon-sequestration/>.

simply by running their cattle. If this latter thing happens, cattle producers, their expert advocates, environmental movement NGOs, and policymakers, will produce a climate-based market that will be terrible for the climate. Grazing cattle can have positive ecological and social effects on rangeland landscapes, and a growing number of ecologists, land managers, and others in groups previously opposed to grazing have positively reassessed the role of cattle and ranchers on the land.⁶¹⁵ But cattle are bad for greenhouse gas emissions. How could cattle producers then sell carbon offsets? Because there is growing understanding emerging around the idea that the opposite of what is true, is true. In the creation of new market rules, we can often see a layering of cultural and social norms with legal and economic laws. This idea that cows are good for the climate is an emerging norm. It is also a re-expression of the understanding that market capitalist production is good for the land going back to rancher conservation, wise use, the open range, and before that underwrites landscape-based capitalist market in general.

Allan Savory, a highly-celebrated and controversial grasslands ecologist and grazing management expert, says he can solve climate change by increasing global livestock grazing several orders of magnitude. Savory articulated this most explicitly in his most influential work—a 2013 *TED Talk* distributed by *YouTube* and viewed over 4 million times (counting just one version).⁶¹⁶ Savory described his own history of trying and failing to stop animals

⁶¹⁵ Susan Charnley, Thomas E. Sheridan, and Gary P. Nabhan, eds., *Stitching the West Back Together: Conservation of Working Landscapes* (Chicago, IL: University of Chicago Press, 2014).; Al Tohill and Jim Dollerschell, "'Livestock' the Key to Resource Improvement on Public Lands," *Rangelands* 12, no. 6 (1990), 329-336.; Curtin, Sayre, and Lane, "Transformations of the Chihuahuan Borderlands: Grazing, Fragmentation, and Biodiversity Conservation in Desert Grasslands," *Environmental Science & Policy* 5 (2002), 55-68.; Hobbs et al., "Fragmentation of Rangelands: Implications for Humans, Animals, and Landscapes," *Global Environmental Change* 18 (2008), 776-785.

⁶¹⁶ Allan Savory, "How to Fight Desertification and Reverse Climate Change," *TED*, February 2013, [https://www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change](https://www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change;).; Please note: Most *YouTube* videos on rangeland ecology are viewed less than 100 times.; Please also see: Allan Savory, "Will We Be Able to Sustain Civilization?" *Population and Environment* 16, no. 2 (November 1994),

from turning grass to desert, which set up a paradox leading to: “There is only one option. I repeat to you, only one option left to climatologists and scientists, and that is to do the unthinkable. And to use livestock, bunched and moving, as a proxy for former herds and predators, and mimic nature. There is no other alternative left to mankind.” He goes on to claim that by quadrupling livestock grazing animal numbers, “we can take enough carbon out of the atmosphere and safely store it in the grassland soils for thousands of years, and if we just do that on about half the world’s grasslands that I have shown you, we can take us back to pre-industrial levels while feeding people. I can think of nothing that offers more hope for our planet, for your children, and their children, and all of humanity. Thank you.” Savory can make that claim because: 1. People want to believe it. 2. The science on the relationship between cattle and climate change is mixed and inconclusive.

What is the relationship between cattle grazing and human-induced climate change?

Based on a review of scientific articles, there are theoretically four major answers. The relationship between livestock grazing, as a form of land use, and climate change may be direct or indirect, and it may worsen climate change or alleviate climate change in both cases. The bulk of literature finds that cattle directly increase atmospheric greenhouse gasses (GHGs) from their own bodily processes, or cattle producers and others in the beef supply chain tend to do things with or for those cows that pollute GHGs. However, Savory and others argue that cattle may directly decrease GHGs by doing something to soil and vegetation that makes them suck carbon from the atmosphere.⁶¹⁷ Irregardless of direct GHG emissions, some argue that cattle may make the effects of climate change worse on rangeland

139-147.; Holechek et al., “Short-Duration Grazing: The Facts in 1999,” *Rangelands* 22, no. 1 (February 2000), 18-22.; Teague et al., “Grazing Management Impacts on Vegetation, Soil Biota and Soil Chemical Physical and Hydrological Properties in Tall Grass Prairie,” *Agriculture, Ecosystems and Environment* (2011).

⁶¹⁷ Studies of both types of direct impact are cited below.

landscapes.⁶¹⁸ Alternatively, since cattle do have documented positive impacts on historically-grazed ecosystems, cattle might alleviate or counteract select landscape impacts of climate change.⁶¹⁹ I contribute another possible positive-indirect response below that I extrapolated from the “cooperative conservation” literature:⁶²⁰

	DIRECT	INDIRECT
BAD	Cattle contribute to total atmospheric greenhouse gases by emitting methane and nitrogen through digestion and excretion. Conversion of forest to grazing land and running and grazing cattle on rangeland soils both release significant carbon and decrease global capacity to cycle carbon forever.	Cattle, even when run well, put significant pressure on fragile arid and semi-arid ecosystems. Overgrazing cattle have similar negative impacts on grasses, soils, and water resources to what are predicted with climate change. Thus, cattle will only make things worse as climate change advances. Climate change will also reduce the stable stocking capacity of lands making even good current levels unsustainable.
GOOD	Cattle, when grazed properly, increase the carbon storage capacity of rangeland soils causing them to suck carbon from the atmosphere.	Western landscapes facing pressure from climate change will need strong land stewards with roots, experience, and networks in these remote places. Cattle ranchers are the best available group, and keeping them on the range and keeping their operations profitable is in the best interest of these communities and landscapes.

Figure 29. Possible statements on the relationship between beef cattle production and human-induced climate change.

The science behind these claims is complicated and contradictory. Sometimes, the same observed change in a rangeland ecosystem may justify any of the above conclusions on the relationship of grazing to climate change. Vegetation change from tall grasslands to

⁶¹⁸ Robert L. Beschta et al., “Adapting to climate change on western public lands: addressing the ecological effects of domestic, wild, and feral ungulates,” *Environmental Management* 51, no. 2 (2013), 474-491.; See also: Joy Belsky, “Cattle and Sheep: The Forgotten Pathogens,” *Inner Voice* (July/August 1995) 6-7.

⁶¹⁹ Clausen, Stjernholm, and Clausen, “Grazing Management can Counteract the Impacts of Climate Change-Induced Sea Level Rise on Salt Marsh-Dependent Water Birds,” *Journal of Applied Ecology* 50 (2013), 528-537.; Pyke and Marty, “Cattle Grazing Mediates Climate Change Impacts on Ephemeral Wetlands,” *Conservation Biology* (2005), 1619-1625.

⁶²⁰ See note above.; See also: R. Emiliano Quiroga, Lisandro J. Blanco, and Carlos A. Ferrando, “A Case Study Evaluating Economic Implications of Two Grazing Strategies for Cattle Ranches in Northwest Argentina,” *Rangeland Ecology & Management* 62, no. 5 (2009), 435-444.; Cox, Gardner, and Fraser, “A Survey-Based Assessment of Cattle Producers’ Adaptation to Climate Change in British Columbia, Canada,” *Rangeland Ecology & Management* 68 (2015), 119-130.; Eldon W. Dixon, “The Impacts of Selected Changes in Management of Public Lands on Functional Demand Areas in Utah,” MSc. thesis, Utah State University, 1971.

woody shrubs has been a common indicator of grazing-degraded landscapes since before consideration of the climate. In the climate debate, the transition from grasses to shrubs becomes ambiguous. Some ecologists argue that the loss of tall grasses decreases the capacity of rangeland soils to store carbon, but others argue that woody shrubs actually store much greater amounts of carbon making the transition desirable as a climate change mitigation strategy.⁶²¹ Still others argue that the transition from grasses to shrubs increases the probability of potential climate impacts like soil erosion and atmospheric heating by increasing the amount of bare ground. Erosion, whether caused more by climate or by grazing, would ultimately release carbon into the atmosphere.

The arguments that cattle directly worsen climate change associate cattle and beef production more broadly with three main sources of global warming: carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄). Cows emit N₂O from their manure and urine, and CH₄ from their manure and farts. Many scientists and activists argue that cow farts are no joke because CH₄, even though it has a much shorter lifespan in the atmosphere, can have much more severe global warming potential in the short term.⁶²² Cattle grazing may also have effects on soils and vegetation that cause them to release carbon and lessen the ability of those landscapes to capture and store carbon thereafter. Studies differ as to whether this is necessarily true of all grazing or just highly likely due existing practices. For example, clearing forests and converting the lands for grazing, which few ranchers in the United States

⁶²¹ S.B. Bird et al., "Spatial heterogeneity of aggregate stability and soil carbon in semi-arid rangelands," *Environmental Pollution* 116 (2002), 445-455.

⁶²² In fact, the short life span of CH₄ means it is overlooked in many long-term projections about climate change. See: H. Steinfeld et al., "Livestock's Long Shadow," *UN Food and Agricultural Organization*, 2006, <http://www.fao.org/docrep/010/a0701e/a0701e00.HTM>.; R. Goodland and J. Anhang, "Livestock and Climate Change: What if the key actors in climate change were pigs, chickens and cows?," *World Watch*, November/December 2009.; S.M. Grobler, et al., "Methane Production in Different Breeds, Grazing Different Pastures or Fed a Total mixed Ration as Measures by a Laser Methane Detector," *South African Journal of Animal Science* 44, no. 5 (2014).

do anymore, would be the absolute worst way cattle could increase CO₂ in the atmosphere.⁶²³

Cows pollute GHGs from their bodies, through digestion and excretion, and through their land impacts, but they also have GHGs polluted on their behalf, since they are commodities in capitalist production. Cattle producers, meatpackers, consumers and others all do things that pollute GHGs through the overall beef making and eating process. Estimates quantifying Livestock's direct impact on atmospheric GHGs vary wildly depending on the scope of the data, and studies attempting to trace the entire life cycle of a beef cow—accounting for all the fossil fuel inputs from farming petrochemicals, fertilizer, transport, industrial processing machines, refrigeration, and supermarket lighting, as well as the lost mitigation potential from soil and vegetation recovery that would happen if that cow did not exist—may attribute as much as 51% of all global GHGs right now to livestock agriculture.⁶²⁴ One study even found that life cycle GHG emissions from pasture grazed cattle were substantially worse for grass-fed cows than for CAFO or Factory Farm fed cattle.⁶²⁵ Viewed this way, no matter which gas you focus on, the direct relationship between grazing and industrial pollution ranges from bad to ugly.

However, the relationship between cattle grazing and GHGs is less straight forward when scientists measure by soil. Soil contains carbon, and soil is capable of capturing carbon

⁶²³ Roger A. Pielke Sr., "Land Use and Climate Change," *Science* 310 (December 2005), 1625-6.

⁶²⁴ Grobler et al. 2014; De Vries and de Boer, "Comparing Environmental Impacts for Livestock Products: A Review of Life Cycle Assessments," *Livestock Science* 128 (2010), 1-11.; Beauchemin et al., "Life Cycle Assessment of Greenhouse Gas Emissions from Beef Production in Western Canada: A Case Study," *Agricultural Systems* 103 (2010), 371-379.; Nguyen, Hermansen, and Morgensen, "Environmental Consequences of Different Beef Production Systems in the EU," *Journal of Cleaner Production* 18 (2010): 756-766.; David A. Cleveland, *Balancing on a Planet: The Future of Food and Agriculture* (Berkeley, CA: University of California Press, 2013).

⁶²⁵ Pelletier, Pirog, and Rasmussen, "Comparative Life Cycle Environmental Impacts of Three Beef Production Strategies in the Upper Midwestern United States," *Agricultural Systems* 103 (2010), 380-389.

from the atmosphere and storing it under ground, where it does not contribute to climate change.⁶²⁶ Livestock grazing may adversely impact soils by compaction, erosion, and breaking with visible consequences for landscape functioning. These actions may also release the carbon that is in the soil into the atmosphere or compromise the soil's ability to store carbon in the future. However, theoretically, cattle might also cause vegetation and soil change that leads to increased carbon storage. The latter idea motivates several new pro-cow environmental strategies that praise themselves for thinking outside the box of past eco-biases. There is a serious scientific debate about this.

The majority of scientific research finds that grazing, and especially overgrazing, releases stored carbon and reduces the capacity of the soil to sequester carbon in the future, thus compacting the overall negative impacts of livestock grazing well into the future.⁶²⁷ An Australian study took this as the consensus and sought to quantify the economic potential from increased carbon sequestration against the economic returns from existing grazing

⁶²⁶ Elaine Ingram et al., "Grazing impacts on soil carbon and microbial communities in a mixed grass ecosystem," *Soil Science Society of America Journal*, 72 (2008), 939-948.

⁶²⁷ Chen et al., "Grassland Carbon Sequestration Ability in China: A New Perspective from Terrestrial Aridity Zones," *Rangeland Ecology and Management* 69 (2016), 84-94.; R. Sommer and D Brossio, "Dynamics and climate change mitigation potential for soil carbon sequestration," *Journal of Environmental Management* 144 (2014), 83-87.; LeCain et al., "Carbon exchange and species composition of grazed pastures and exclosures in the shortgrass steppe of Colorado," *Agriculture, Ecosystems and Environment* 93 (2004), 421-435.; Fang Fei, Chang Rui-ying, Tang Hai-ping, "Effects of Grazing on Carbon Sequestration in Temperate Grassland, Inner Mongolia of North China Vegetos," *An International Journal of Plant Research* 27, no. 3 (2014), 126-134.; J. Cheng et al., "Cumulative effects of 20 year exclusion of livestock grazing on above and belowground biomass of typical steppe communities in arid areas of the Loess Plateau, China," *Plant Soil Environment* 57, no. 1 (2011), 40-44.; Changliang Shao, Jiquan Chen, and Linghao Li, "Grazing alters the biophysical regulation of carbon fluxes in a desert steppe," *Environmental Research Letters* 8, no. 2 (2013), 025012.; Liping Qiu et al., "Ecosystem carbon and nitrogen accumulation after grazing exclusion in semiarid grassland," *PLOS ONE* 8, no. 1 (2013), e55433.; Renou-Wilson et al., "To Graze or Not to Graze? Four Years Greenhouse Gas Balances and Vegetation Composition from a Drained and Rewetted Organic Soil Under Grassland," *Agriculture, Ecosystems and Environment* 222 (2016), 156-170.; Wang et al., "Grazing Effects on Soil Characteristics and Vegetation of Grassland in Northern China," *Solid Earth* 7 (2016), 55-65.; Villenave et al., "Grassland Management History Affects the Response of the Nematode Community to Changes in Above-Ground Grazing Regime," *Nematology* 13, no. 8 (2011), 995-1008.; Chaplot, Dlamini, and Chivenge, "Potential of Grassland Rehabilitation through High Density-Short Duration Grazing to Sequester Atmospheric Carbon," *Geoderma* 271 (2016), 10-17.

based on the Australian cap-and-trade price for carbon, and it found that the profit from not having cows could be roughly equal to continuing ranching.⁶²⁸ Although I seriously doubt cap-and-trade can stop or even slow climate change, this would at least be an interesting and somewhat justified way for cattle ranchers to participate in carb markets.

However, other research—including a smaller but growing number of case studies—finds that grazing, under certain management methods, can and does increase the capacity of rangeland soils to capture and store atmospheric carbon.⁶²⁹ The potential for carbon sequestration whether by adding or removing cattle is site context-based making studies difficult to compare and conclusions elusive.⁶³⁰ There are several convincing arguments against getting too starry-eyed about studies showing increased carbon sequestration as a result of cattle grazing. Even if it could be proven that cattle have the potential to increase carbon sequestration, it would be difficult, costly, and slow to implement this as a significant climate change mitigation strategy.⁶³¹ The total carbon-storage potential of arid and semi-arid rangelands is actually relatively low in the best of times, so this would be a poor area to focus.⁶³² It would seem to me especially unlikely that free market forces would be a good way to manage these carbon cattle. Finally, there is the issue of cow farts again. A study in China seeking to demonstrate the carbon storage potential of sheep grazing, found that the

⁶²⁸ Daryanto, Eldridge, and Throop, “Managing Semi-Arid Woodlands for Carbon Storage: Grazing and Shrub Effects on Above- and Belowground Carbon,” *Agriculture, Ecosystems and Environment* (2013).

⁶²⁹ A.B. Frank et al., “Soil carbon and nitrogen of Northern Great Plains grasslands as influenced by long term grazing,” *Journal of Range Management* 48 (1995), 470-474.; Y.H. Gao et al., “Grazing intensity impacts on carbon sequestration in an alpine meadow of the eastern Tibetan Plateau,” *Research Journal of Agriculture and Biological Sciences* 3, no. 6 (2007), 642-647.; Bird et al. (2002).

⁶³⁰ M. Mcsheery and Mark Richie, “Effects of grazing on grassland soil carbon: a global review,” *Global Change Biology* 19 (2013), 1347–1357.; See also: Campbell et al., “In Search of Optimal Stocking Regimes in Semi-Arid Grazing Lands: One Size Does Not Fit All,” *Ecological Economics* (2006), 75-85.

⁶³¹ R. Sommer and D Brossio, “Dynamics and climate change mitigation potential for soil carbon sequestration,” *Journal of Environmental Management* 144 (2014), 83-87.

⁶³² D. Briske et al., “The Savory Method cannot green deserts or reverse climate change: A response to Allan Savory’s TED video,” *Rangelands* 35, no. 5 (February 2014), 72–74.

increased carbon storage only offset 3.1-8.6% of the animals' methane emissions from digestion.⁶³³

Thus, Allan Savory is not really telling the truth. However, I believe Allan Savory and other boosters for climate-saving cows have a greater influence on cattle producers, policymakers, and the carnivorous public than do most of the authors of the scientific studies cited above.⁶³⁴ Denis Hayes and Gail Boyer Hayes interviewed many top organic and green-branded cattle operations in the United States and found, "virtually all of the exceptional ranchers we interviewed for this book acknowledge their indebtedness to Savory's teachings."⁶³⁵ Land managers accuse Allan Savory of failing to produce any replicable set of methods that achieve his goals without one hiring his company for a site-specific plan, and scientists accuse Allan Savory of falsifying data.⁶³⁶ Allan Savory alleges he discovered and fundamentally proved his method during grazing experiments in former Rhodesia, but the records and data seem to have been lost in the civil war there.⁶³⁷ But most people who hear him, believe him. And cattle producers' role in emissions markets does not depend on the reality of emissions, but rather the rules people make to link the market to them.

⁶³³ X. Wang et al., "Methane uptake and emissions in a typical steppe grazing system during the grazing season," *Atmospheric Environment* 105 (2015), 14-21.

⁶³⁴ See for example: Sherren, Fischer, and Fazey, "Managing the Grazing Landscape: Insights for Agricultural Adaptation from a Mid-Drought Photo-Elicitation Study in the Australian Sheep-Wheat Belt," *Agricultural Systems* 106 (2012), 72-83.

⁶³⁵ Denis Hayes and Gail Boyer Hayes, *Cowed: The Hidden Impact of 93 Million Cows on America's Health, Economy, Politics, Culture, and Environment* (New York: W.W. Norton and Co., 2015), 49.

⁶³⁶ Briske et al., "Commentary: A Critical Assessment of the Policy Endorsement for Holistic Management," *Agricultural Systems* 125 (2014): 50-53.; Carter et al., "Holistic Management: Misinformation on the Science of Grazed Ecosystems," *International Journal of Biodiversity* 2014, 1-10.; C.J. Hadley, "The Wild Life of Allan Savory," *Rangelands* 22, no. 1 (2002), 6-10.; Joseph et al., "An Extensive Review of the Charter Grazing Trials and Other Short Duration Grazing Studies on African Rangelands," *Rangelands* 24, no. 4 (August 2002), 9-12.; David E. Brown, "Out of Africa," *Wilderness* 58, no. 207 (Winter 1994).

⁶³⁷ Jon Skovlin, "Southern Africa's Experience with Intensive Short Duration Grazing," *Rangelands* 9, no.4 (August 1987), 162-167.

If our society produces a market in which the existence and expansion of cattle on fragile landscapes can be sold for the right to emit more industrial pollution, it can only be bad for climate change. It does not even really matter whether cows increase or decrease carbon in the soil, since the best cap-and-trade has to offer is a slight reduction of already terrible global pollution levels. Markets are not, and have never been, a good solution for environmental problems. Cattle ranchers ignited a revolution in financial derivatives trading, do we really want them to do it for emissions trading, too?