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SCIENCE, ANIMALS, AND PROFIT-MAKING IN THE AMERICAN RODEO ARENA

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SCIENCE, ANIMALS, AND PROFIT-MAKING IN THE AMERICAN RODEO ARENA

by

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Dedication

In memory of my grandmother, Jeanne Goury Bauer, who taught me many hard lessons – unyielding attention to detail, complete mastery of the task at hand, and the inviolable values of secretarial skills – and without whose strength of character I would not be here, having written this, and having loved the work. I did not thank you enough.

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Science, Animals, and Profit-Making in the American Rodeo Arena

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Supervisor: Janet M. Davis

The Professional Rodeo Cowboys Association (PRCA) has grown in scope and popularity since the mid-1970s, cultivating large rodeo audiences with spectacles of human and animal athleticism, speed, and skill. While the sport is popularly understood as an outgrowth of "traditional" western culture and ranching practices, this dissertation argues that its modern iteration depends on scientific advancements pioneered in animal nutrition, reproduction, and injury treatment in industrial beef production and on the creation of new narratives about animals in the past and present. Through analysis of industry documents, oral history interviews, and popular western lifestyle publications, this dissertation shows how rodeo and its partners in the beef industry responded to changing consumer perceptions of animal welfare in food and entertainment. After charting the emergence of a network comprised of agricultural scientists, businessmen, and rodeo participants from the 1950s to the 1970s who successfully nationalized the sport, this dissertation investigates how reproductive transformations of cattle in response to declining beef demand in the 1980s emphasized the virility and power of bulls, and shows how rodeo used these technologies to make bull riding the centerpiece of its popular appeal. From there, the dissertation argues that the cultural redefinition of wild horses from 1950 to the present created new understandings of pain and animal welfare that played out in the rodeo arena's dramatization of wildness against a backdrop of a

growing horse crisis in contemporary America. Finally, an analysis of contemporary efforts to reconcile the growing practice of rodeo and agricultural animal cloning with rodeo tradition shows how rodeo continually reinvents its history to incorporate new scientific technologies while still marketing identification with the past. Taken together, these episodes show how professional rodeo, industrial beef, and veterinary science responded to changing public attitudes about nonhuman animals, continually producing both new animals and new histories that obscured the modern technologies fueling these transformations. In the process, the rodeo and its allies promoted conservative gender ideologies and political alignments, further enfolding innovation with tradition.

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Introduction

The Cheyenne Frontier Days is one of the oldest professional rodeos in the United States, known as one of the most storied and lucrative stops during "Cowboy Christmas" every July. It draws spectators from all over the world to the town of Cheyenne, Wyoming, to watch as the top professional rodeo contestants vie for prizes and prestige over two grueling weeks of competition. Widely promoted as the "Daddy of 'Em All," the Cheyenne Frontier Days claims to be the first rodeo of its kind, and is the longest-running annual rodeo in the United States, holding a contest every year since 1897.[1] From its founding to its present-day form, the Cheyenne Frontier Days rodeo has been conceived of as a spectacle meant to transport its audience back in time, dramatizing traditions from a past era, while less visibly depending on modern technological innovations to put on the show.

The original idea for the show came from a passenger agent for the Union Pacific Railroad, F.W. Angier, who put a notice in the *Wyoming Sun-Leader* in August 1897 to gauge interest in putting on a "Frontier-Day" that would bring tourists to Cheyenne, which had recently suffered an economically devastating cattle business bust. Angier's letter to the editor is familiar, referring to their shared interest in increasing traffic to the well-connected but now desolate outpost, and he describes his idea for a proposed event in Cheyenne as cheap, easy, and widely appealing:

[1] While the town may not be able to claim the honor of hosting the "first" rodeo – a hot contest among

> I have talked with some of the people here on the subject of Frontier Day, and they all say that Cheyenne can get up a day that will take the people. The attraction which can be made with cowboys alone is something that few people here have ever seen, and if they will arrange for handling cattle and horses and give exhibitions of their riding, throwing rope and doing feats that are common to them, mounting wild horses and things of that sort, it will make something novel and exciting, yet having no expense attached to it.[2]

Angier's letter offers a grainy, though telling, snapshot of the turn-of-the-century industrializing American West. It reveals an enduring fascination with ranch labor as mysterious, novel, and entertaining – just a few years after the cattle boom and bust – while at the same time suggesting that such labor was cheap and readily available, if hidden to most of the public including the residents of western towns. It also reveals the inextricability of this kind of entertainment with the rail line. Frontier Day was part and parcel of Cheyenne's identity as a modern, industrial western town adjusting to the movement of its ranch labor away from the town center. Putting on an event with cowboys would be something "novel and exciting," denoting the growing rupture of ranch life and labor from everyday culture. This conception of the event displays a sense of loss and alienation from the town's not-so-distant ranching economy that is at the same time tied to a nostalgia for its romance, revealed in the "novelty" of cowboy tasks. Most

[2] Correspondence, Box 2 Folder 1, J.S. Palen Collection, Collection 10471, American Heritage Center, University of Wyoming.

tellingly, though, Angier's Frontier Day was wholly dependent on Cheyenne's rail transport economy. The importance of the tracks remained constant in Cheyenne's history, first bringing the military, then the cattle, and finally, the rodeo. The combined factors of technology and nostalgia conceptually fueled one of the original ideas for rodeo, and sustained the biggest, oldest, most famous rodeos as the sport grew to nationwide prominence over the course of the twentieth century.

Angier's conception of what that Frontier Day would look like, in terms of what activities these cowboys would perform, is strikingly familiar to anyone who has attended a rodeo in the past century. "Handling" horses and cattle, "throwing rope," and "mounting wild horses and things of that sort" have remained stable features of rodeo performances over time. While rodeos can and have taken many forms, from local contests and county fairs to popular spectacles and professional labor, they are all divided into two genres of events: timed events and rough stock riding. Timed events measure the speed and accuracy of one or two horse-human teams as they complete the set task of immobilizing a calf in various ways: by roping its neck or legs, or in "bulldogging," by jumping off a running horse onto the calf and dragging it to the ground by its head. Each method of immobilization constitutes a separate timed event. Another timed event is barrel racing, in which a mounted pair races around three barrels in a cloverleaf pattern, sprinting wildly back the end of the arena. In all of these events, the time it takes to complete the task determines the winner, and the human competitor rides his or her own animal teammate. In rough stock events, however, the animal is more of an adversary, and is provided by the rodeo. Rough stock events include bronc and bull riding. Bronc

riding has two variants: saddle and bareback, whereas bull riding is always bareback. The aim is for a cowboy to remain mounted on the bucking animal for eight seconds in order to attain what is called a "qualified ride," but both the animal and the rider earn points based on their style, and it is this accumulation of points that determines the winner. A cowboy who spurs his animal to buck harder, and an animal who spins, plunges, and pitches wildly will earn a much higher score than a rider who simply hangs on, or an animal who does not put forth sufficient agility to challenge the rider's seat. Therefore, while the central feature of rough stock riding is antagonism between the human who wishes to remain mounted and the animal's objective to dismount him, they are scored as a team. These events define rodeo competition across multiple rodeo platforms.

Despite the consistency of rodeo events, rodeos are so ubiquitous across much of the United States in various forms that it is nearly impossible to catalog them. In the rural part of Virginia where I was raised, for example, "going to the rodeo" could mean going to a host of different places at different times: the local 4-H fundraiser where children competed on their ponies, or the county fair, where semi-professional rodeoers competed for money and prizes; or, it could mean going to one of the big expo centers out of town to see a collegiate, regional, or national-level professional competition, such as the American Professional Rodeo Association, the Cowboy's Professional Rodeo Association, the International Professional Association, the United Professional Rodeo Association, the National Senior Pro Rodeo Association, or the Professional Rodeo Cowboy's Association. Across the West, these national associations are joined by state-

level bodies, like the Intermountain Pro Rodeo Association or the Colorado Pro Rodeo Association.

Other associations claim a space for rodeo outside of the confines of mainstream rodeo conventions. Rodeos held by the Working Ranch Cowboy Association adhere to working skills, and eschew the rough stock spectacles of conventional professional rodeos. Rodeo groups can also be divided by race, gender, and sexuality. The All Indian Rodeo Cowboys Association sponsors Native American professional rodeo competitions and holds its own National Finals competition. The African American Rodeo Group, African American Heritage Rodeo Association, and local groups like the Atlanta Black Rodeo Association promote black rodeo history and competition. The Women's Professional Rodeo Association supports female professional rodeo athletes, especially barrel racers. The International Gay Rodeo Association holds rodeos throughout the United States and Canada, promoting gay and trans athletes of all gender identities and raising funds to support queer communities and their allies. These vibrant, thriving rodeo communities outside of rodeo's main arena speak to one of the main contentions of this dissertation, which is that mainstream rodeo, in the second half of the twentieth century, has deliberately constructed a space that privileges whiteness, masculinity, and conservative politics. Mainstream professional rodeo bolsters a particular white masculine identity that serves the cultural and political interests of modern industrial agriculture at the expense of women, people of color, and diverse historical, territorial, and political stakeholders in the West. Rodeo actively whitens western history.

While this dissertation foregrounds contemporary history, this project of re-writing is built directly into its earliest formations. The first Frontier Day reveals a powerful desire on the part of Angier, an agent of western "civilization" after Indian Removal, to re-write what it meant to be western, drawing from the boom years of the open range. Angier's idea focused on the most dramatic cowboy labor (no one was going to come to Cheyenne to watch them perform more mundane tasks, like laying fence lines, after all), and erased the modernizing, civilizing influence of the Britons who had made the initial investments in land and cattle in the Wyoming territory.[3] Just as Cheyenne was a modern town from the get-go, so was rodeo always an entertainment designed to efface the realities of that modernization, including messy periods of war. As Angier's letter proves, ranch labor was ongoing and laborers were ready at hand. But the Frontier Day also had to carry the burden of proving that this labor was still relevant as it was slipping beyond immediate view. This is the Frontier Day's enduring legacy as it anchored the growth of professional rodeo: keeping cowboy labor both traditional and current – both

[3] Business historian Richard Graham argues that American investment in cattle was on shaky ground by 1883, despite the willingness of investors to continue to funnel money and cattle into the market. From the 1860s to the 1880s, American cattle investors had overproduced cattle on land that could not sustain them, leading to a steady sinking of prices for property in 1884. This decline led "experienced cattlemen" in the United States to sell land rapidly to British companies who still, incredulously, were willing to buy. As prices plummeted in 1885, the rush to sell increased until the market for land and cattle crashed. The economic devastation to the British investors across the country was compounded by the fact that, despite appearances, they had made no real profits. In 1887, an observer described the ruse: "'for the first year or two...big dividends are paid by the evergreen device of emptying one pocket in order to fill the other, which means in cattle enterprise by including in the original purchase a disproportionate number of steers to be re-sold for dividend purposes," that is, many cows were counted twice to inflate perceived profits. From 1885 forward, the major British-owned investment companies reported minimal to no dividends, and by 1887 were reporting losses quadruple that of the profits they had reported when the boom was cresting in 1883. In Cheyenne, this unstable economic picture was compounded during the summer and winter of 1886-7, which brought record heat and crippling blizzards, essentially wiping out the cattle population that had survived the speculation bubble burst. See Graham, "The Investment Boom in British-Texan Cattle Companies, 1880-1885," *The Business History Review* 34 (1960): 442-45.

past and present – became the central feature of American rodeo as it grew into a national sport.

The tension between modernity and rurality in the face of technological change and urbanization have carried through into contemporary professional rodeo despite its transformation into a modern athletic contest. This dissertation maps how professional rodeo navigates the tensions between tradition and modernity through a strategic use of animal science. While the sport is popularly understood as an outgrowth of "traditional" western culture and ranching practices, I argue that its modern iteration depends on scientific advancements pioneered in animal nutrition, reproduction, and injury treatment in industrial beef production in the latter half of the twentieth century. The beef industry and rodeo are close political allies, with the latter forming an effective "entertainment arm" of the former, in which beef is associated with Americanness. Rodeo's promoters have become increasingly invested in aligning the sport with "tradition" in the last quarter of the twentieth century and the beginning of the twenty-first, and the sport actively dramatizes nostalgia in generating agricultural counter-narrative to such diverse cultural phenomena as the culture wars, the 9/11 terrorist attacks and subsequent wars in the Middle East, the over-scheduling and constant supervision of children, and the hyper-technologizing of daily life through computers and mobile devices. This overarching theme, however, disguises the ways in which modern professional rodeo is built upon scientific and technological change. The spectacular animal entertainment that drives the popularity of professional rodeo depends on sophisticated scientific advancements in animal science that have created and supported formidable animal athletes. However,

while the rodeo world touts the quality of its animals and the veterinary treatment that supports them, it enfolds these scientific animals into the overarching narrative of tradition, linking them to a rural agricultural past. This dissertation argues that the story that rodeo tells about western traditions, patriotism, and the importance of animals to rural America obscures how the sport is deeply implicated in the growth of a profit-driven, industrialized, and corporatized beef industry.

The foregrounding of agricultural labor in the spectacle of rodeo, from Angier's original conception of cowboys performing "feats that are common to them" to today's exaggerated spectacles, likewise played its part in obscuring the scientific settling of the West, which is still not the dominant public American history about western expansion after the Civil War. Despite nearly forty years of scholarship engaging with the technological, environmental, and cultural complexity of Western history, the origin stories Americans encounter at the information desks in western towns usually begin long after the surveying teams determined the location worthy of a name, a depot, and a dot on the map, and long after the initial town-founding labor was done by itinerant workers.[4] These tales emphasize a civilizing narrative, starting with a "colorful" period after the railroad was established populated with outlaws, prostitutes, and gamblers, who were increasingly made governable by the success of the commercial opportunities that fulfilled the town's original mission – or conversely, its eventual dissipation in the face of commercial failure. In the case of Cheyenne, the Frontier Days program uses the

[4] Patricia Nelson Limerick writes explicitly against these gaps in her groundbreaking book *Legacy of Conquest: The Unbroken Past of the American West* (New York: Norton, 1987).

"colorful" aspects of history to market the rodeo as a nationalistic pageant devoid of both the Indian wars that resulted in the town's name and the surveying teams who determined this part of the Rocky Mountain shelf was geologically sound enough to support a rail depot that would serve the West. While the details varied from era to era, the 1945 Cheyenne Frontier Days program exemplifies the most common of these erasures: "On June 28, 1867, a party of railroad and government officials met at what was even then called the Crow Creek Crossing...; General Grenville [sic] M. Dodge...selected the railroad division point on July 4 and named it 'Cheyenne.'"[5] Narratives like this one connect the rodeo to Cheyenne's importance as a military bastion of the frontier, a cow town, and an important center of the nation's commercial transportation system. But the story obscures two important points: first, the scientifically determined geological foundations of the land on which Cheyenne sits, and second, that the first Frontier Day happened after the cattle industry had failed.

As this dissertation shows, these strategic erasures inhabit the story of rodeo nearly a century later. The human subjects of this dissertation navigate similar dilemmas of drawing from the past in order to speak to, and influence, the present. In the course of my analysis, rodeo participants and promoters interact with agricultural scientists, cattle raisers, beef industry lobbyists, politicians, and markers to show how rodeo's deliberate dramatization of the past is continually re-written to promote an association of beef with "traditional" American identities, while beef itself has been transformed by modern

[5] Official CFD program, 1945, Box 3, Folder 1, J.S. Palen Collection, Coll. 10471, American Heritage Center, University of Wyoming.

scientific advancements in nutrition and reproduction in order to satisfy consumer demands. These actors, all primarily men, also interact with women who struggle to gain traction in agricultural veterinary jobs, who are pushed out of professional rodeo competition, who campaign for the protection of animals from industrial profit-making enterprises, and who actively promote scientifically-aided definitions of animal care to make their own profits from the bodies of animals. However, the animal subjects of this dissertation – the cattle and horses both within rodeo arenas and connected to them through the intwined histories of rodeo and beef – prove that any claim to the modernness of their bodies, especially through advancements in veterinary reproductive technologies, is compromised by the long history of agricultural animal "improvement," despite the "modernity" of any particular scientific technique. Understanding the historical antecedents of these "modern" animal subjects reveals how mainstream rodeo erased complex diversities of race, class, and gender that countered its conservative values as it went about the work of rewriting what counted as "tradition" to privilege a white masculine culture in the latter part of the twentieth century.

Many stories are lost in rodeo's telling of history, even at the most historic rodeo: the Cheyenne Frontier Days. The rise and fall of the city of Cheyenne in the 1880s forms the basis of Angier's idea for a rodeo in the first place, yet even in this first conception, the actual history of Cheyenne is obscured in favor of rural working-class cowboy "novelty." By contrast, twenty years after the first train rolled into Cheyenne, it was

known (arguably) as "the wealthiest city per capita in the world."[6] Cheyenne was attractive both because of its rail access and the protection offered by Fort D. A. Russell. During their prosperous years, the British cattle speculators who populated the town offered a stark contrast to the "riffraff" population of the town described in its origin stories. They built grand, European-style houses in the middle of town. British cattlemen also built the Cheyenne Club, a social gathering space where they mingled their old and new identities, constructing themselves as wealthy neo-westerners. The walls were hung with contemporary western art, the racks were stocked with the latest issues of *Harper's Magazine*, and a formal dress code was required for entrance. They blended the marks of gentility and wealth brought from Europe with the romance and fantasy of a western American adventure. These wealthy men kept alive the romance for open ranges and cattle drives despite the fact that they were actively involved in promoting its destruction, both by increasing the scale of meat production well beyond what drives could handle, and also by using the very technologies that made a cattle drive economy impossible to maintain.

First of all, the sheer number of speculators and their desire to become rich meant that a huge number of cattle were grazing on rangeland from Texas all the way to Wyoming. This overstocking, combined with a parallel boom in individual farming and homesteading across the western states, changed the nature of land ownership and helped spur the rapid demarcation of private land with barbed wire, limiting the use of already-

[6] W.K. Stratton, *Chasing the Rodeo: On Wild Rides and Big Dreams, Broken Hearts and Broken Bones, and One Man's Search for the West* (New York: Harcourt, 2005): 91-92.

stressed grasslands and pushing cattle transport towards the railroads and away from the trails. Fencing accelerated erosion and increased stress on the network of streams and tributaries that watered land and cattle, concentrating more cattle into smaller areas. In Cheyenne, imported English Herefords also contributed to environmental destruction. Their thickset bodies required lush pasturage and mild climates -- exactly what their importers had been promised in the pages of the *London Times*. However, their needs and their numbers quickly depleted grazing and water resources. This rapid depletion of grazing was compounded by extreme weather events in the following years.[7] The searing summer of 1886 (some reports claimed North Dakota temperatures reached 120 degrees in the shade) decimated already-stressed pasturage from Texas to North Dakota. Many animals who survived that lean, harsh summer perished in an equally brutal winter of 1887 that brought multiple blizzards and extreme cold that killed cattle "by the tens of thousands" across the bleak, denuded west, putting a tangible nail in the papered-over coffins of investors.[8]

Despite becoming the state capital when Wyoming added a star to the American flag in 1890, Cheyenne was hard hit by this precipitous drop in cattle fortunes. By 1893, British cattle companies "were liquidated one by one," coinciding with Frederick Jackson Turner's famous announcement of the "closing" of the frontier.[9] The decimation of the cattle industry at the end of the nineteenth century certainly changed the realities of "frontier" life. Cheyenne, like cattle towns across the west, was deserted by the

[7] Graham, 443.
[8] Stratton, 94.
[9] Graham, 445.

departures of bankrupt European company representatives and ranch owners. Left in their wake were grand empty houses in town, which became populated with working people – those who worked on the remaining ranches, for the railroad, and in the military. A shuttered Cheyenne Club, once the social hub for aspirational European culture, was replaced by the Plains Bar, where the social hierarchy was drunkenly determined more often by one's fists than by one's wealth.

This social transition in Cheyenne is indicative of broader cultural changes within the cattle industry at the turn of the century. First of all, the shift became a story of class, and the failure of European mores to "civilize" the rougher edges of the west. Cattle ranches became identified less with their owners and more by those who worked with animals on the range, and that labor became at once less visible and more glorified, if no less difficult and low-paying, especially for those on small holdings. Secondly, it became enmeshed in a narrative of loss, nostalgia, and authenticity – a narrative that has been remarkably persistent into the present day. In some sense, the Britons who came to America to make better lives through cattle remain as an absent presence: their failures are woven into the fabric of a western imagination as the west constructed its identity against conceptions of the elitist, European east. Also, as American ranchers stepped into the physical vacancies of empty houses, ranches, and social clubs, they stepped also into the psychic vacancies of those departed, coming to themselves inhabit a previously accrued deep sense of loss.

The psychic legacy of these absent investors is not the only important thing they left behind. They also left a technological legacy that would continue the transformation

of the cattle industry into the modern age. The failures of Hereford cattle in open conditions did not spell the end for the breed in the United States. To the contrary, their needs spurred the use of technology to manage them, such as fences, hay harvesters, barns, windmills, and wells which allowed Herefords to thrive and to be used as a genetic improvement – in terms of pounds of meat per carcass – to the lean and rangy native longhorn cattle.[10] These twin legacies left by the British seem invisible, as their stories have largely vanished from popular accounts of cattle industry history. But they are only invisible if you ignore the animal body. When you consider the cows themselves, whether in the present ubiquity of Hereford ranches, especially in northern areas like Wyoming, or in the genealogies of crossbred cattle that populate ranches across the western states, the bovine legacy of Britain is everywhere inscribed.

From the first Frontier Day, rodeo has not only created new animals, but it has also revised the historical narratives about animals in the past and present. The British legacy of the technological management of those bodies only appears obscure until we realize that it is made invisible in order to facilitate an appearance of "authenticity" that does not square with Britishness or modernity. What emerges from these factors is a clearer picture of the power that animals have as nostalgic tokens. Their bodies are visibly inscribed with the transnational history of modern breeding, shifting understandings of landed property, and scientific management, but Americans instead read them as open ranges, dusty trails, and gritty western American entrepreneurship. The animals themselves make visible the tension between nostalgia for an authentic

[10] Ibid.

"American" past and the purposeful distortion and destruction of the actual source of nostalgic romance. A powerful wave of American nostalgia, into the void of British absence – conveniently empty also of earlier violent histories towards Native populations and the Civil War – while American ranchers actively used the legacies of their foreign predecessors to modernize, improve, and capitalize on cattle and culture: the nostalgia was for a way of western life that was either imagined, or actively ending. Cheyenne is just one example among hundreds of small western towns that rose and fell with the boom and bust cycles of western growth. But it is instructive as an introductory story to this dissertation because it shows how modern rodeo, with its vibrant spectacles of cattle and horse performance, is directly tied to commercial beef production from the beginning. A century later, the tensions between modernity, technology, and nostalgia in rodeo run along the same well-worn grooves established at the very first Frontier Day.

This dissertation begins in the middle of the 1970s, when both professional rodeo and the modern beef industry became the consolidated, organized, and sizable enterprises we recognize today. At this time, both institutions were at a crossroads: in the first part of the 1970s, the existing model of professional rodeo competition was straining under rising inflation and fuel prices, which restricted the ability of competitors to travel widely to contests flung far and wide across the country. Likewise, the beef industry was nearly somnambulant, as the existing systems linking beef to consumers were haphazard, unpredictable, and fiercely local: in 1970, in contrast to the pork, dairy, and poultry industries, there was no national beef industry, only insular breed associations, fungible

relationships between raisers, packers, and groceries, and frustrated national cattle lobbying groups that struggled to get beyond representing only certain local voices.

Due to the efforts of energetic beef industry advocates and agricultural businessmen, by the mid-1970s, the industry was rapidly promoting and adopting scientific research to increase its competitiveness in the modern marketplace and to gain political influence through federal research allocations. In 1975, the national competition structure of professional rodeo adjusted to a regional system in an effort to cut down on the travel limitations for its competitors, and began to offer larger prizes for rough stock events, such as bronc and bull riding, in which the animals used were local to the rodeo instead of belonging to individual contestants. The new system dramatically altered the spectator experience of rodeo by highlighting bucking events, which had been fairly ancillary to a more skill-based rodeo structure in which timed roping events were the most popular contests. As cattle breeders adopted new reproductive technologies for their beef herds, some enterprising breeders began applying them to their bucking stock, making new animals that were bigger, stronger, and more spectacular in the arena. These animals electrified audiences and propelled professional rodeo into the popular spotlight.

In order to foreground a nostalgia for the past, the first Cheyenne Frontier Day celebrated one technological innovation – rail transportation – and obscured other scientific realities. Likewise, contemporary rodeo celebrates certain kinds of scientific breakthroughs that support its large, complex human-animal infrastructure while obscuring other kinds of technological innovations that also undergird its production. In terms of its human and animal participants, professional rodeo is not separate from beef

production in any meaningful way. However, they diverge significantly in terms of what rodeo illuminates regarding the history of the American cattle industry specifically, and industrial food production more generally, including the less visible roles that wild and domestic horses have played in industrial food economies.

Both rodeo and industrial beef used scientific innovation to create new animals in order to address changing public attitudes towards animal use and value. Rodeo is the only arena where animals used for sport directly interface with those used for food. As a result, this dissertation focuses on two species, horses and cows, in order to examine the common histories and experiences of these animals, whose lives and deaths are central to the large social, economic, and geographical contexts framing this dissertation. In the 1970s, the scale of both animal sport and animal food production was growing because two different kinds of products, meat and athletic performance, could be maximally monetized. As corporate beef raising became a highly technologized science that depended on scientific research and skilled veterinary practitioners, recreational animals, especially horses, transitioned from utilities to athletes.[11] That is, performance value came to be measured as something to be enhanced and preserved, whether that performance meant producing maximum meat for minimum economic input or bucking higher, running faster, and enduring the rigors of competition. The high prizes and rising breeding fees for successful rodeo animals meant that an animal's performance was worth

[11] Some would argue that other profit-making animal ventures, such as horse racing, predated this transition. It is true that horses were used for recreational purposes, such as fox hunting, horse shows, and racing for centuries among people of various classes. However, the primary purpose of horses was utilitarian until the twentieth century. In the middle of the century, the primary way in which most Americans interacted with their horses became recreational, not utilitarian, a clear departure from the past.

investing in. This changing landscape of animal value prioritized veterinary expertise in deciding how best to make that investment, and animal athletes benefitted from the same agricultural research initiatives driving the scientizing of the cattle industry.

The animal bodies at the center of this dissertation demonstrate a greater understanding of the role that veterinary medicine plays in advancing the technologies that have changed the structure of American food production and consumption, which has in turn played a role in shifting the balance of political power westward. These animals also anchor the narratives that rodeo tells about this power shift, bringing an interdisciplinary American studies methodology to larger discussions about transcending the perceived binaries between nature and culture. Treatment of the animal body, whether in veterinary, cultural, or rhetorical terms, forms this project's basis for critique, as it connects both scientific and societal ethics to politics, commerce, and American culture more broadly.

In telling this story, I do not aim to give a comprehensive history of American rodeo. Other scholars have chronicled varying aspects of its fascinating trajectory from its origins and development over time from local contest to professional sport across its intersectional registers.[12] Instead, this dissertation seeks to understand the connections

[12] See, for example, among many others: Elizabeth Atwood Lawrence, *Rodeo: An Anthropologist Looks at the Wild and the Tame* (Chicago: University of Chicago Press, 1984); Kristine Fredriksson, *American Rodeo: From Buffalo Bill to Big Business* (College Station: Texas A & M University Press, 1985). Mary Lou LeCompte, *Cowgirls of the Rodeo: Pioneer Professional Athletes* (Urbana: University of Illinois Press, 1993); Tracey Owens Patton and Sally M. Schedlock, *Gender, Whiteness, and Power in Rodeo: Breaking Away From the Ties of Sexism and Racism* (New York: Lexington Books, 2012); Mary-Ellen Kelm, "Manly Contests: Rodeo Masculinities at the Calgary Stampede." *The Canadian Historical Review* 90, no. 4 (2009): 711–51; Elyssa B. Ford, "Race, Gender, and Cultural Identity in the American Rodeo." Dissertation, Arizona State University, 2009; Christoper Le Coney and Zoe Trodd. "Reagan's Rainbow Rodeos: Queer Challenges to the Cowboy Dreams of Eighties America." *Canadian Review of American*

between rodeo and industrial agriculture that are obscured by the archival record, and looks for clues in less travelled repositories full of dusty industry documents that reflect no vested interest in obscuring or framing such connections. One crucial note about rodeo history that I established at the outset, however, is there are as many kinds of rodeos as their are county fairs in the United States, and the simple word "rodeo" can mean a number of different things to different people. In this dissertation, "rodeo" refers only to the professional rodeo organization now known as the Professional Rodeo Cowboys Association (PRCA) and rodeos held under its auspices. The PRCA was formed in 1975 from its post- WWII era iteration, the Rodeo Cowboy's Association (RCA). The formation of the PRCA in the mid-1970s represents the mature vision of its business-oriented managers who were educated in agricultural animal science programs at land grant universities in the late 1950s. These men – and they were all men – were part of a network of rural westerners who, after World War II, brought collegiate rodeo programs to agricultural colleges and universities. They laid the foundation for the modern version of the old Cheyenne story: they thoroughly promoted and depended upon innovations in agricultural science in making beef an "agribusiness," but were also rodeo participants and enthusiasts, who built the modern professional rodeo into a technological spectacle while adhering to its core nostalgia for a rural American past. Despite the ubiquity of local rodeos and the existence of multiple professional rodeo organizations

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Studies 39, no. 2 (2009): 163–83; Allison Fuss Mellis, *Riding Buffaloes and Broncos: Rodeo and Native Traditions in the Northern Great Plains* (Norman: University of Oklahoma Press, 2003); Renee M. Laegreid, *Riding Pretty: Rodeo Royalty in the American West* (Lincoln: University of Nebraska Press, 2006); Jim Ryan, *The Rodeo and Hollywood: Rodeo Cowboys on Screen and Western Actors in the Arena* (Jefferson: McFarland & Co, 2006.)

operating in the United States, the PRCA is the most prestigious, the most lucrative, and the most visible to the widest audience through its live shows at large spectator venues and via telecasts through major cable and network outlets.[13] Therefore, the rodeo world this dissertation enters is the specific realm of the PRCA.

In bringing together two wide-ranging interdisciplinary fields, American studies and science and technology studies (STS), this dissertation speaks to several audiences: historians of the American West, veterinary medicine, agriculture, science, and the environment; cultural and critical animal studies scholars; food studies and sports studies scholars; multispecies ethnographers; and bioculturalists. American studies is this project's home base: at its core, this project is a cultural history of agricultural animals and science from 1975 to 2014. This grounding in American studies drives this project's main thesis, which is that rodeo makes visible, strategic connections to agricultural veterinary science while obscuring others. This strategy paradoxically reproduces an American agricultural past while promoting a modern, western conservative narrative about American nationhood that erases complex intersectional histories.

The methodological spine of this dissertation is its use of extensive archival records, and reading each collection not only against the grain, but in the context of the other collections, brings this strategy to light in unexpected clarity. The records from various beef industry, veterinary association, and personal collections I consulted have never been studied. Records of agricultural and animal science programs at western land

[13] Nevertheless, the live and television audiences for professional rodeo are significantly smaller than for other professional sports. Estimates on statista.com suggest the number of people who watched the National Finals Rodeo – the PRCA's equivalent to the Super Bowl – on television averages around 10 million viewers, in comparison to roughly 120 million Super Bowl viewers.

grant universities chart their growth and increasing sophistication in the post-World War II West, and document the historical network of students who studied range animal science while also participating in and popularizing collegiate rodeo. Records from beef industry and veterinary organizations show the industry's deliberate attempts to organize its far-flung scientific, marketing, and regulatory arms in the face of declining beef consumption in the United States in the early 1980s. The biographical archives of various college rodeo participants who went on to spectacular PRCA careers show the role of agricultural and cattle science training played in their trajectories to stardom and wealth, as well as giving a sense of how human pain and injury became a central part of modern professional rodeo while animal pain became increasingly less acceptable. The project enhances this archival record through a critical analysis of discursive and representational documentation in the media and the public record, notably in western lifestyle publications such as *Western Horseman Magazine*; industry publications for the PRCA and beef interests; popular media outlets such as major newspapers and magazines like *The Atlantic*; the web presence of various rodeo and agricultural interests; and online forums geared towards public discussions about issues relating to the breeding and competition of performance horses in rodeo. Lastly, author participant-observation of the backstage areas of PRCA rodeos, and oral history interviews with current PRCA medics and veterinarians, document the informants' perceptions of how scientific and veterinary advancements in rodeo have changed the culture of the sport from an insider perspective, adding depth and context to the written public and historical record.

STS provides crucial theoretical interventions that expand the boundaries of American studies inquiry into animal subjects. By considering the agency of technologies and animals as well as humans, STS scholarship offers a conception of rodeo as an assemblage of the social, scientific, regulatory, and corporeal material that simultaneously creates and responds to different expressions of exclusivity. This framework shifts the focus of research away from the persistent binaries of human/nonhuman, scientist/layperson, and, importantly, producer/consumer, and towards the recursive relationships between these perceived dualisms. The addition of STS methodologies pushes the historical narrative of this project further than the archive alone could. The archival material helped me center this project on scientific methods of animal reproduction. But by reading the archive through an STS lens, the dissertation's focus on animal reproduction expands to consider how scientific manipulations of animal sex aided reproduction of a different kind: the contemporary reproduction of historical methods of dominance is written into the very technologies used to make animals reproduce.

In order to navigate this large and occasionally confounding disciplinary intersection, I have organized the project according to four theoretical frames that blend these approaches. The first contends that the Cartesian split between mind and body persistently obscures scholars' ability to study animals without a speciesist bias, which assumes humans are above animals in a hierarchical understanding of innate intelligence

and value.[14] The second builds from this deeply rooted problem of speciesism by considering the entanglements of race and gender with animality. This project foregrounds white men in rodeo, but takes a critical look at how rodeo actively normalized conservative white masculinity through its capitalist regimes of agriculture and animal science.[15] The third theoretical position contends that major discourses of animal welfare tend to focus on companion animals, factory farms, zoo animals, wildlife, or other vulnerable animal populations, and that debates over valuable animals whose caretakers make genuine attempts to provide good care for is a much murkier and conflicted area of interpretation for both activists and scientists.[16] Lastly, my analysis hinges on the idea that asking an animal to do anything, whether to work, entertain, heal, or fatten, necessarily connects the animal body both to scientific and cultural contexts, and is related to symbolic political exercises of power.[17] I use these four tenets to open a

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[14] Sarah Franklin, *Dolly Mixtures: The Remaking of Genealogy* (Durham: Duke University Press, 2007); Franklin and Margaret Lock, *Remaking Life and Death: Toward an Anthropology of the Biosciences* (Santa Fe: School of American Research Press, 2003); Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science* (New York: Routledge,1989) and *When Species Meet* (Minneapolis: University of Minnesota Press, 2008); Bruno Latour, *We Have Never Been Modern*, Catherine Porter, Trans. (Cambridge: Harvard University Press, 1989) and *The Politics of Nature: How to Bring the Sciences Into Democracy* (Cambridge: Harvard University Press, 2004).

[15] Peter Singer, *Animal Liberation: A New Ethics for our Treatment of Animals* (New York: New York Review/Random House, 1975); Claire Jean Kim and Carla Frecerro, "Introduction: A Dialogue," *Species/Race/Sex: A Special Issue of American Quarterly* 65 (September 2013): 461-480.

[16] Temple Grandin and Catherine Johnson, *Animals in Translation: Using the Mysteries of Autism to Decode Animal Behavior* (New York: Scribner. 2005); Elizabeth Hansen, *Animal Attractions: Nature on Display in American Zoos*. (Princeton: Princeton University Press, 2002); Donna Haraway, *Modest_Witness@Second_Millenium.FemaleMan©_Meets_ OncoMouse™ : Feminism and Technoscience* (New York: Routledge, 1997); Kathleen Kete, *The Beast in the Boudoir: Petkeeping in Nineteenth-Century Paris* (Berkeley and Los Angeles: University of California Press, 1994); Susan D. Jones, *Valuing Animals: Veterinarians and Their Patients in Modern America* (Baltimore: The Johns Hopkins University Press, 2003); Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* (Cambridge: Harvard University Press, 1987).

[17] Janet M. Davis, *The Circus Age: Culture and Society Under the American Big Top* (Chapel Hill: University of North Carolina Press, 2002); Susan D. Jones, *Valuing Animals: Veterinarians and Their Patients in Modern America* (Baltimore: The Johns Hopkins University Press, 2003); Elizabeth Atwood

more holistic interpretation of how scientific innovation is bound to cultural values, specifically here through the lens of animal sport.

Another benefit to blending American studies and STS interdisciplinarity is the ability to confidently approach the central problem of understanding cultural change through the nexus of science, technology, animals, and entertainment. Examining these relationships sheds light on how science and pageantry together impact the popular – and political – sense of American identity. Yet to access this question, we must ask how Americans turn to science to define the use and value of animals. Animal studies scholars across the humanities often struggle to treat animals as physical bodies; conversely, scientists who study animals are often blind to the cultural context of their own work. Bridging these two perspectives is, I believe, an important step for animal studies, American studies, and science studies scholarship. Navigating the complexities of animal welfare and veterinary practices that permeate professional rodeo illuminates how activism, science, and profit-making can both reinforce and contradict each other in unexpected ways.

In this dissertation, the threads of conservative politics, masculinity, and animality weave through wider analyses of how professional rodeo and its allies promoted scientific animal innovation within a framework of normative American identity. While American studies and STS work together throughout this dissertation, the first half of the project foregrounds American studies methods while the second half moves more boldly

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Lawrence, *Rodeo: An Anthropologist Looks at the Wild and the Tame* (Chicago: University of Chicago Press, 1984); Sandra Swart, *Riding High: Horses, Humans, and History in South Africa* (Johannesburg, South Africa: Wits University Press, 2010).

towards an STS framework. The first two chapters take a historical approach, exploring how rodeo normalized ideas of whiteness, region, and class at a time when types of manual labor and the white male working class body were being transformed. Chapter 1 charts the emergence and growth of a tight-knit network comprised of agricultural scientists, businessmen, and rodeo participants from the 1950s through the 1970s. This chapter intervenes in existing agricultural histories by linking the postwar rise in federal investment in science with the growth of western land grant institutions, whose agricultural programs, including the emergent field of range animal science boomed. In considering the shifting economic and political alignments in the postwar west, I posit that rodeo and animal science were two common paths that white rural western men took to escape rapidly shrinking small towns with dwindling resources and no prospects of employment in the 1950s and 1960s. These avenues allowed rural men to remain connected with their agricultural roots by not having to move away from rural areas or to find work in unfamiliar cities. The men who found success in beef, business, and rodeo seeded a thread of rural/urban antipathy in the rodeo and beef worlds for decades to come, but they also were more acute businessmen than their forebears. This chapter argues that the 1976 Cheyenne Frontier Days brings together three western institutions that were in the act of reinvention, which became strong allies in the coming years: a vibrant professional rodeo looking to grow, a stagnant beef industry on the brink of tapping into a sophisticated animal science apparatus, and a strengthening coalition of conservative western politicians looking to take their message to a national stage. This network successfully nationalized their operations together, contributing different kinds

of power and visibility to each other's goals, and using the Bicentennial summer to re-write the West into national American history in order to serve conservative aims.

Chapter 2 extends this history into the 1980s, beginning with a beef industry crisis. Despite making progress towards creating an efficient and reliable product through the adoption of scientific advancements in nutrition, leading to steady gains among consumers during the 1960s and 1970s, beef consumption dropped dramatically in the first years of the 1980s, due to a confluence of rising prices, public concerns over newly publicized research warning of the negative health effects of fat and cholesterol, and the vulnerability of the still-disorganized industry in the face of such volatility. This crisis forced many small producers out of business, aiding the already-prominent trend of larger producers buying out their failing competitors to create large, commercial operations that created and slaughtered cattle in increasingly sequestered geographies. Yet, despite the precipitous decline in consumption, the commercial beef industry became a powerful political lobby during the Reagan administration. Part of this paradox rests with rodeo: rodeo's growing popularity in the 1980s furthered the political power of beef. Because the human, economic, and political connections between the two industries ran deep, a profitable PRCA energized the political power of the western beef industry even as beef profits themselves were stagnant. In the wake of the beef crisis, the bull became the central focus of scientific research, which aimed to maximize the amount of homogenous beef products that a minimum number of cattle could produce. At the same time, bull riding became the dominant event in professional rodeo, as the same reproductive technologies driving change in the beef industry were used to create bigger,

stronger, more spectacular bucking bulls. This chapter argues that the popularity of these new, genetically crafted bulls in the rodeo arena helped shore up the national influence of the beef lobby in the Reagan administration and beyond. The turn to bull riding hyper-charged the masculinity of the rodeo arena, which paralleled the sport's simultaneous deliberate confinement of professional women competitors to a single event, barrel racing, dramatically capping off a long trend of reducing women's participation in rodeo over several decades. Rodeo wove scientific innovation into a narrative that re-inscribed the marginalization of women into modern western "tradition."

Both Chapters 2 and 3 look at individual species – the cow and the horse – to show how rodeo and its partners in the beef industry responded to changing consumer perceptions of animal welfare. The complex role of women and the west is a further subject of Chapter 3, which turns to another, more contemporary problem: the ongoing horse slaughter controversy in the United States. The history of rodeo is bound up with the history of horses in the West, best exemplified in the bronc riding event that highlights a dramatic moment of a longer process in which horses were captured and either tamed for use in ranch work, as rodeo romanticizes, or sent to industrial slaughterhouse as flesh animals, which rodeo obscures. Western horses were central to this commercial western slaughter market until a small coalition of activists led by one woman, Velma Johnston, deliberately redefined wild horses in the 1950s in order to remove them from the flesh trade. Her act produced a radical re-making of equine bodies in the west, the consequences of which have reverberated through the west and the nation to the present day. Chapter 3 gives an account of this process and its long-range

consequences of redefining the value of both wild and domestic horses in the United States from a relationship based primarily on profit-making to one based primarily on care. This chapter takes a close look at how professional rodeo has used Johnston's legacy to construct a story about wild horses that romanticizes the harrowing realities of their history in the west, and also to undergird the sport's commitment to advanced veterinary care in the name of performance and animal welfare, especially the management of animal pain. As public attitudes towards animals have increasingly found animal pain less acceptable over time, the adjustments designed to protect animals from pain in the rodeo arena and in the American horse world have distorted Johnston's work and compromised both animal and human bodies in complex and contradictory ways.

Chapter 4 examines rodeo's turn to animal cloning in the early 2000s. The sport's struggle to reconcile the growing practice of cloning horses and bucking bulls with its narrative of tradition exposes the limits of the sport's ability to re-write its history in the face of scientific innovation. Cloning constitutes a contemporary meeting ground of the network of university veterinary scientists, rodeo competitors, and the agriculture industry that this dissertation has advanced in its preceding chapters. In contrast, cloning presents complex challenges to rodeo's capacity to create new animals while also successfully wrapping this animal technology into its pageant of a traditional past. This chapter investigates the disruptive relationship of cloning to the gender dynamic of rodeo established in Chapters 2 and 3, positing that its use in barrel racing horses and in bucking bulls complicates the definitions of "natural" that rodeo has used to masculinize the sport at the expense of women competitors. Like earlier reproductive technologies,

cloning spread into the beef industry and rodeo concurrently, via the well-worn network ties between them. This chapter argues, however, that unlike previous reproductive advancements, bucking bull cloning has been less successful at deflecting consumer concerns from the use of the technology in the food supply. I also trace the close connection between the cloning process and the horse slaughter crisis in the United States, showing how the same exploitation of horse flesh that that activists like Velma Johnston tried to eradicate now provide the raw material for cloning technologies. Dead horses are still necessary to the building of equine capital, even within a regime of care. Rodeo has romanticized this historical exploitation by advocating for the safety and comfort of the animals who dramatically re-enact activities once meant to cause animal pain, successfully distancing the sport from its actual historical roots in animal suffering. Cloning's connection to horse slaughter, however, closes this gap by connecting the sport directly to invisible equine exploitation, and shows that despite rodeo's use of veterinary technologies to support the health of its animals, it is and always has been implicated in the exploitative use of animals. Ultimately, cloning presents a technological challenge that threatens to destabilize the political, scientific, and cultural alignments that rodeo and the beef industry have shared over the course of this dissertation.

In each of these chapters, professional rodeo provides a lens through which to examine important transformations in animal bodies that both produce and respond to public concerns about nonhuman animals, but also how animals and science are woven into conceptions of what it means to be American. From its earliest iterations, rodeo has sought to define itself against an encroaching technological future, but has at the same

time had to incorporate those technologies in order to stay relevant and popular. From the mid-1970s forward, the sport successfully wove the cutting-edge veterinary technologies from its agricultural allies into a pageant that supported and promoted spectacular animal performances, which was central to its growth in popularity and the concurrent nationalization of western conservative politics. While a range of commenters such as Jefferson Cowie, Peter Applebome, and Rick Perlstein have argued that it was the South that dominated national politics from the 1970s forward, I argue that the western Sun Belt amplified its southern antecedents. In fact, Southern working class popular culture adopted western motifs, borrowing western markers of individualism such as cowboy boots and hats, as well as country and western music styles.[18] If American politics were "Southernizing," it was a South that was adopting western looks and sounds. The popularization of rodeo from 1976 forward played a visual and ideological role in making the West a national cultural and political touchstone.

Rodeo now finds itself at another crossroads, as the veterinary technology of animal cloning proves more difficult to enfold in arguments either for animal welfare or for its inclusion in the "traditional" values that rodeo espouses. Cloning may force rodeo to reject these new animals from its arenas; conversely, these new animals may result in the making of a new narrative for rodeo. In either case, understanding the historical contingencies of animals, technologies, agriculture, and politics to rodeo's definition of "America" shows how any attempts to define what constitutes animal care are

[18] Burt Reynolds and the characters he played in 1970s movies is an example of this phenomenon *par excellence*, epitomized in his turn in the classic film *Smokey and the Bandit* (1977) and its various sequels.

inextricably bound to, and sometimes compromised by, the complexities of performance and profit.

Chapter 1: Building a Network: Science, Beef, and Rodeo in the Postwar West

INTRODUCTION

In July of 1976, a lanky fifty-year-old named Harley May saddled up to compete in the steer roping event at the 80th annual Cheyenne Frontier Days rodeo, held every summer during the last week of July in Cheyenne, Wyoming since 1896. While he didn't make it to the mud-spattered final rounds at this venue, by the end of the rodeo season the long-legged, grey-haired veteran bulldogger and former president of the Rodeo Cowboys Association (RCA) he had accumulated almost enough points to qualify for the National Finals.

By 1976, May had been involved in organized rodeo for nearly thirty years. After serving as an Air Force B29 radio operator during World War II, the Deming, New Mexico native transferred to Sul Ross State College in Alpine, Texas, where he and other recent young war veterans started a rodeo club in 1948. This club soon became a charter member of the National Intercollegiate Rodeo Association (NIRA), with May as a key founder. He served as the NIRA's second president while earning his B.S. in Range Animal Husbandry, and was one of the first cowboys to use the NIRA as a pathway into professional rodeo, bringing both his competitive edge (he won his first professional steer wrestling title in his rookie season in 1952, and would do the same again in 1956 and

1965) and also his administrative experiences running a rodeo organization.[19] By 1957, May was president of the Rodeo Cowboys Association (RCA), which emerged as the main governing body of professional rodeo after World War II. Over the course of his four presidential terms, he reshaped the competitive structure of the sport. He engineered the inaugural National Finals Rodeo in 1959, which was the first limited-entry professional rodeo that contestants had to qualify to compete in over the course of the season – and in which he was still nearly qualified to compete himself in 1976.

May's trajectory mirrors that of postwar professional rodeo, both from an institutional perspective and a cultural one. Sul Ross and the NIRA were the origin points of modern rodeo, and the rapid organization of the college rodeo circuit under the leadership of former military veterans solidified what had been loose associations between rodeos, stock contractors, and cattle raisers across the west. By 1948, Texas historian Elmer Kelton recalls, "a handful of stock contractors, usually the same ones who provided bucking stock for professional and amateur rodeos, began hauling broncs and bulls to off-campus arenas" for college contests.[20] NIRA members like May often came from ranching backgrounds, and earned college degrees in scientific range management or animal science at agricultural schools that received increased federal funding and were adopting more advanced technologies after the war.[21] These emerging

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[19] Elmer Kelton, "The National Intercollegiate Rodeo Association: College Rodeo Comes of Age." Clipping from *Persimmon Hill*, 1978, Series IV, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University.

[20] Ibid.

[21] Correspondence between E. C. Kavanagh of the Office of War Mobilization, Surplus War Property Administration, to U.S. Congressman R. E. Thompson and H. R. Morelock, President of Sul Ross State Teacher's College, details the process of putting surplus war properties, technologies, and resources into

fields and educational opportunities reflected a trend towards making a science out of the cattle business, whether in animal nutrition, soil and grass composition, selective genetics, veterinary care, or business management. After his four terms as president of the RCA, May became a real-estate agent in Oakdale, California, specializing in brokering cattle ranch consolidations as the needs of the industry adapted to the ever-increasing demand for more, and cheaper, beef. He ran beef like a business: he bore witness to and aided the process of laying the groundwork for the large-scale corporate production of beef. At the same time, May drew his clients from his long Rolodex of cattle industry contacts that he had cultivated through his involvement in rodeo since his earliest days organizing NIRA events, using his administrative skill to shepherd professional rodeo into a business, too: one that grew in partnership with the newly scientific cattle industry.

Harley May's path from radio operator to rodeo organizer emphasizes the inseparability of rodeo, agricultural science, and the beef industry as these three institutions formed a tight network after World War II. May parlayed his transition from rural working class western teenager to urban western businessman through his military background, education in scientific agriculture, and rodeo, a sport with regionally embedded traditions. For many men of his age, the rural west was a place to leave behind because of its growing economic limitations. However, each outlet for that departure – military service, education in scientific agriculture (including business), and

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public educational facilities, 1944-45. Folder 1181, Clifford Casey Papers, Archives of the Big Bend, Sul Ross State University.

rodeo – tended to cultivate a persistent narrative of preserving rural western values. This dualism between the simultaneous growth of scientific agriculture and a culture of traditional Westernness is woven tightly together in professional rodeo, and proved to be a powerfully compelling political vehicle of the American West as it emerged on a national stage in the mid-1970s.

Studying rodeo and the cattle industry together exposes the critical role played by agricultural animal science in developing a modern western economy and its concurrent growth in regional political importance. Men like Harley May, who were educated at land grant universities in the early postwar years, were heavily invested in scientific agricultural education. Many of May's peers were also convinced of the potential for scientific research to increase the profitability of the livestock industry. Rodeo's popularity skyrocketed at the same time that May's generation was starting to turn its education into money. As they became successful businessmen, they promoted the interests of land grant universities to fund and support the expansions of their research programs through political avenues. But professional rodeo also provided an opportunity to create a public narrative about the cattle industry, and the West more broadly, that supported the growth of corporate agriculture.

Throughout May's involvement with the RCA, he labored to turn the sport from a regional novelty into a major national sport. In 1976, May's vision of a consolidated professional rodeo circuit had finally come to pass. The Rodeo Cowboys Association became the Professional Rodeo Cowboys Association (PRCA) in 1975, and today still retains the title and structure from that last modernizing push constructed by May and his

contemporaries. Essentially, 1976 marked the first year that professional rodeo was a modern professional sport in the sense that we understand it today, with corporate sponsorships, clear hierarchies among competitors, and elaborate infrastructures to support both human and animal athletes. May's presence at the 1976 Cheyenne Frontier Days adds a modern layer to the contest's long history. While the Cheyenne Frontier Days had been part of professional rodeo from its earliest days, 1976 was its inaugural year of being a PRCA rodeo – a distinction that seems only nominally significant, but that nevertheless reinforced the dualism between the modern, scientized rodeo business and the sense of history it works hard to remain identified with.

This tension becomes more apparent in the context of regionally inflected celebrations of the nation's Bicentennial. The 1976 Cheyenne Frontier Days was not an "official" Bicentennial event, and it occurred several weeks after the multitude of July 4th spectacles taking place across the country. However, the Bicentennial summer lent a kind of national historical provenance to the historic rodeo, also celebrating its own 80th anniversary – a highly local piece of historical meaning. Just as the PRCA matured into a truly national and professional sport organization, the Cheyenne Frontier Days transposed its local history onto a national backdrop, using the Bicentennial as a way of making its constructed history part of a national narrative. This one small move parallels a much larger one taking place at the same time: the growing political importance of the west, as western politicians began to gain notoriety in national elections and a regionally specific political rhetoric gained purchase beyond its geographic boundaries. Exploring the 1976

Cheyenne Frontier Days in the national context of the Bicentennial brings this power shift into sharp relief.

This chapter begins at the rodeo, examining the trappings of the 1976 Cheyenne Frontier Days and documenting the markers of its transition into the new structure of the PRCA. From there, it explores how the pressures of encroaching Sunbelt policies in western states shrank rural economies in the years after World War II, pushing young men towards agricultural education and rodeo and forming the basis of a network whose combined powers came of age in the 1970s. The chapter concludes by situating the 1976 Cheyenne Frontier Days in the context of the Bicentennial summer, which was celebrated across the western states by wrapping the patriotic fervor of the American Revolution into an anachronistic western story of historic individualism and burgeoning political power. Ultimately, this chapter argues that the re-writing of history made possible by the Bicentennial helped professional rodeo and its allies create a new usable past for the sport that made it relevant to modern, national audiences.

THE "DADDY OF 'EM ALL" ENTERS THE BIG TIME

For nine July afternoons and evenings in 1976, the stands of Frontier Park in Cheyenne filled to capacity for the 80th annual "Daddy Of 'Em All." Frontier Park had been outfitted with new bucking chutes earlier in the spring, which quickly got broken in: over 9 days of rodeo, roughly 930 competitors had their turn in the arena. The large number of entry fees made for a $198,000 purse – the largest in rodeo history, and well over the purse even for the National Finals Rodeo, which the professionals at Cheyenne,

including Harley May, were all attempting to qualify for.[22] Dust from the arena mingled with the grit already kicked up by the fleet of RV's lumbering into dirt lots as summer tourists from across the country took the Cheyenne exits off I-80 and I-25 for the Frontier Days.[23] By the last Sunday of the rodeo, the population of Cheyenne had nearly tripled from its estimated 52,000 inhabitants to over 170,000.[24] Excitement in the arena was matched by events outside of Frontier Park, as well: over the nine days from July 24th through August 1st, the CFD hosted three chuck wagon breakfasts (free and open to the public); four enormous downtown parades (the kick-off parade the morning of July 24th listed 192 entries, which took up nearly a full page in the local paper); five nights of street square dancing; and eight night shows featuring country and western stars Roy Clark, Freddy Fender and Barbara Fairchild, Conway Twitty, and Tanya Tucker.[25] Plenty of additional extracurricular entertainment could be found spilling out of Cheyenne's bars and campsites, as the police struggled to keep the "continued rowdyism" under control.[26] The rough-and-tumble Plains Bar – the one-time Cheyenne Club where English cattlemen had created an upscale European-style social club – had been renovated top to

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[22] Clipping from the *Wyoming Tribute-Eagle*, July 23, 1976, Box 12, Folder 1, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[23] Drivers of RVs vied with non-motorized campers for space in the month leading up to the CFD, creating "camping problems for the inhabitants and the committees who deal with them." Clipping from the *Wyoming Tribute-Eagle*, July 31, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[24] Clipping from the *Wyoming Tribute-Eagle*, July 23, 1976, Box 12, Folder 1, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[25] Clipping from the *Cheyenne Tribune-Leader*, July 24, 1976, Box 12, Folder 1, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[26] Clipping from the *Cheyenne Tribune-Leader*, August 2, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

bottom during the off-season of 1975.[27] During the rodeo's final weekend, a crowd of 8000 gathered at Frontier Park to watch cowboys vie for the championship prizes. Strong thunderstorms had pelted the arena the Friday before, and by the time the final bucking events got going just after lunch on Sunday afternoon, the summer sun had had time to ripen the mixture of mud, blood, and manure accumulated over eight days of rodeoing into a deep and sticky stink, bringing the Frontier Days to a "wild, mud-spattered end."[28]

The size of the competition and its spectatorship grew steadily since 1959, when professional rodeo made its first major appearance as a national concern. Harley May had become president of the RCA in 1957, and spent his first two years working to reshape the competitive structure of the sport. In 1959, he and the RCA inaugurated the National Finals Rodeo, the first limited-entry professional rodeo that contestants had to qualify to compete in over the course of the season. This method of cumulatively determining event champions came straight from the NIRA, which had to have a streamlined awards process to accommodate the academic year. The centralized annual single-champion competitive model replaced the looser, regional championship models from pro rodeo's past, where a number of rodeos proclaimed "national champions" within the purview of the RCA.[29] This change had a double effect. On one hand, it marginalized the large number of rank-and-file competitors who might have had a spectacular day every now and then, but who had more bad rides than good over the course of a season.

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[27] Clipping, Box 11 Folder 18, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[28] Clipping from the *Cheyenne Tribune-Leader*, August 2, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[29] Clipping from May's obituary, *Alpine Avalanche*, November 6, 2008. Series II, Bio Files, Harley May, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University.

Also excluded were competitors who held an RCA card but who did not follow the circuit exclusively, using it instead to supplement incomes from a regular job.[30] May was one of a handful of long-time competitors who was consistently in the qualifying tier for the National Finals while also managing a separate (but rodeo-related) career. On the other hand, it became easier for successful competitors to cultivate fans, as the accumulation of qualifying points was easy to follow through various rodeo publications, and created suspenseful competition between a handful of cowboys vying for qualifying spots as the rodeo season advanced. The qualifying system played a major part in growing the spectator fan base for professional rodeo by reaching beyond the immediate pool of competitors and enthusiasts.

May worked hard over his four terms as RCA president to build a national following for professional rodeo. He personally invited President Dwight Eisenhower to the first National Finals Rodeo, presenting him with a "gold honorary pass" to the event.[31] He also cultivated Hollywood connections that he made first while working as a stunt rider in western films, then acting in television commercials; he was also one of the first professional cowboys to land a major product sponsorship, endorsing Tony Lama boots in *Western Horseman Magazine* as early as 1960. Over the next decade and a half, his

[30] Kristine Fredricksson notes that several "World's Championship Rodeos" were held across the country at different times and at different locations in her book *American Rodeo: From Buffalo Bill to Big Business* (College Station: Texas A & M University Press, 1985).
[31] Clipping from *Alpine Avalanche*, October 22, 1959. Series II, Bio Files, Harley May, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University.

efforts at restructuring the competitive system and garnering a national audience expanded the popularity of rodeo beyond its regional origins.[32]

The 1976 Cheyenne Frontier Days, however, marked another major transition in nationalizing rodeo. When the RCA became the PRCA in 1975, it moved to a twelve-region system and standardized the qualifying points system across these regions.[33] This system streamlined the National Finals qualifying process that May had inaugurated in 1959. Though May had left professional rodeo administration for the California real estate business years ago, at the 1976 Frontier Days his most important legacies came of age. The tandem industries of beef raising, ranch consolidation, and professional rodeo – all increasingly corporate industries – were booming. In this context, the first Frontier Days to be held under the aegis of the new nationalized, streamlined PRCA reveals something about the co-constitutive elements of history and historical memory that imbues the sport. The PRCA had to walk a fine line in making rodeo current, in the sense of soliciting corporate sponsorships and gaining a wider national audience in order to increase its profits and visibility. All of those elements made the PRCA extremely successful in the long run. However, the organization could not *too* current: its narrative must privilege the preservation of tradition over modernization. This sleight of hand is part of what has made professional rodeo so potent: it could modernize to any degree and in any direction in its administration, as long as its public message held to the value of the

[32] Various clippings detail coverage in *Sports Illustrated*, *Cosmopolitan*, and on NBC; television served as an impetus to impose dress codes at PRCA rodeos. Box 11 Folder 18, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

[33] Various clippings from July 1976 detail the new entry and purse system in place for the 1976 Cheyenne Frontier Days and compares the historic rodeo to a live-action "national western." Box 12 Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

past. At the 80th annual "Daddy of 'Em All," whatever was new and modern about the PRCA was overlaid with the reverence that rodeo participants and spectators held for the history of the Cheyenne Frontier Days. In this manner, historical memory was once again rewritten at this event, showing on a national stage how rodeo turned the present into the past.

Larry Mahan, a 32-year-old bronc rider in "semi retirement," was a big draw for spectators to the 1976 Frontier Days. A chute reporter trying to interview Mahan noted the numerous interruptions as the cowboy was "stopping constantly to sign crumpled programs, shake hands, and smile while a husband photographs his wife with the rodeo star."[34] Mahan is a key example of a "modern" cowboy who exemplified the changing nature of rodeo competition and spectatorship among lay enthusiasts. Over the mid-1960s, Mahan had become one of the first national rodeo celebrities, thanks to Harley May's centralized point system and coverage in pro rodeo periodicals. His good looks and "rebel" image helped too: at a time where many professional rodeo cowboys were clean-cut ex-military men, like May, Mahan wore his hair long to go with his flashy shirts.[35] By 1976, he was parlaying his sex appeal and style into a clothing line bearing his name – one that remains popular today.[36] Despite his stylistic departure from the "cowboy fraternity," Mahan was one of the most successful competitors of his time. He was a six-time winner of the RCA All-Around title, a coveted mark of competence across

[34] Clipping from the *Cheyenne Tribune-Leader,* July 30, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[35] Clipping from the *Cheyenne Tribune-Leader*, July 30, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[36] The Larry Mahan brand remains a staple of rodeo and western wear at Western merchandise stores. Over time, the clothing line made him far more money than his arena performances.

several rodeo events. He also won two national titles in bull riding, and in his heyday was one of a handful of cowboys to qualify for the National Finals Rodeo in all three rough stock riding events – bull riding, saddle bronc riding, and bareback bronc riding – in the same year.[37] He was able to spin his success into a brand, and while his cumulative personal record at the Cheyenne Frontier Days was not the best, he just missed claiming the 1976 bareback championship by nine points, proving that even though he was no longer rodeoing full time, he was still at the top of the sport.[38]

Part of Mahan's success was his approach to rodeo as an athletic enterprise. He was one of the first professional cowboys to think of himself as an athlete, and to train his body accordingly. Especially interesting was his holistic approach to the mind and body in rodeo. Mahan explained his approach in a feature article in the *Cheyenne Tribune-Leader* published during the 1976 rodeo. "'The physical part is the easiest part,' Mahan said. 'The winners are the guys who use their minds.'" He continued, "'you have to displace fear with positive thinking,'" and described a visualization technique that he used in the chutes in which "'I have a little projection room up there'" that shows "a picture of the animal he's drawn, and the body that will hang on for those infinite eight seconds." While technique, strength, and sheer tenacity were all part of how rodeo cowboys commonly talked about preparing for bull and bronc riding events, luck was also a large part of what made a winning ride. In rough stock events, the bronc or bull that a cowboy rides is determined by a blind draw. Drawing an especially tough animal could be good

[37] Clipping from the *Cheyenne Tribune-Leader*, July 30, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[38] Clipping from the *Cheyenne Tribune-Leader*, August 2, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

or bad luck, since the ferocity of the animal's attempts to unseat its rider is factored into the score for the ride. Stay on a wild ride, and your score would be much higher than if your animal put forth lower bucks and fewer spins. But let go before eight seconds, and you'd have no score at all. Cowboys often attributed their successes and failures to this luck of the draw. Mahan departed from this kind of thinking as radically as his flashy shirts flouted clothing conventions. '"If a guy is lucky enough to draw an animal, then doesn't have the ability, what the hell is the difference? I don't think you have to be lucky to win. I think luck is preparation meeting opportunity.'"[39]

Mahan embodied the kinds of changes to the sport that the transition from the RCA to the PRCA engendered and ultimately rewarded. His emphasis on preparation, especially the mental game, was new, and represented a shift in how cowboys approached the achievement of success in professional rodeo, replacing grit and luck with a strategic athletic method. He was one of the first to treat rodeo as an athletic pursuit, bringing a "scientific" approach to the sport that gave him a proven competitive edge against his contemporaries. Another crucial difference is that his performance extended beyond the arena. He was easily recognizable by his looks and his physical presentation. Mahan's long hair and New Age-y visualization techniques flew in the face of rodeo's conventions of practicality and luck. Recall the reporter whose interview was punctuated by women having their pictures taken with Mahan: where rodeo enthusiasts certainly followed him because of his high scores and winning record, others followed him at least

[39] Clipping from the *Cheyenne Tribune-Leader*, July 30, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

in part because of his charisma and his visual branding. His combination of competitive success and sex appeal made him one of the first rodeo celebrities, drawing fans – and capital – from beyond the immediate rodeo community, and widening the audience for rodeo.

Fans found Mahan in part through his self-titled western clothing line, where he capitalized on his image by selling trademark flashy shirts, hats, and rodeo gear. Mahan was capitalizing on his own brand, which was a thoroughly modern activity for a rodeo cowboy. However, despite the newness of his approach to rodeo and personal branding, both aspects of his performative difference from traditional rodeo competitors, the new audience that Mahan brought to rodeo were drawn to the sport as a piece of Americana. In Cheyenne that Bicentennial summer, the Frontier Days drew the largest crowd on record. Joe Daly, ticket chairman for the rodeo, explained the increase in terms of both marketing and feeling: "National advertising this year went coast to coast, and it's a natural side effect from the Bicentennial year."[40] Mahan's celebrity, due in some part to the sport's modernization at an administrative level, increased rodeo's visibility and drew a much larger audience to the sport, but the new crowd did not necessarily come to professional rodeo for its modernness. The three factors that marked the transition from the RCA to the PRCA in 1975 – streamlined regional scoring that cultivated fans for successful individuals; competitors who approached the sport athletically and put up exciting performances; and a marketing apparatus that advertised coast to coast and

[40] Clipping from the *Wyoming Tribune-Eagle*, July 31, 1976, Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

encouraged personal branding – made professional rodeo accessible to more spectators than ever.[41] But what brought those people to Cheyenne in droves in 1976 was not a taste for the modern, but a desire to connect to a historical tradition.

When rail passenger agent F.W. Angier first conceived of Cheyenne's "Frontier-Day" in 1886 in the wake of its nascent cattle industry's collapse, his idea exemplified how nostalgia for a cattle ranching history was constitutive of the industrialized west. In the Bicentennial summer of 1976, a similar mixing of past and present was taking place, with the west at the center of a patriotic ideal of American history. In looking for a sense of national identity during the Bicentennial summer, many people donned their new Larry Mahan shirts and packed the stands of Frontier Park in particular because the Cheyenne Frontier Days was itself historic – its history lent it authenticity as a place to see a rodeo, especially for fans who were not necessarily rodeo enthusiasts. Sitting in the stands, spectators were both becoming-modern and becoming-historical as they watched cowboys wrestle with animals in the mud in solidarity with the "Spirit of '76." Yet they were also participating in a nearly-invisible technological revolution undergirding both the popularity of professional rodeo and the profitability of the cattle industry, one that had been building throughout the previous decades.

[41] Various correspondence documents the purpose of the change from RCA format to the new regional-qualifier PRCA format to become more favorable to television, as TV crews could identify and follow top competitors easily, and create fan bases beyond traditional rodeo attendees. Box 12, Folder 2, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

SUN BELT RODEO: AGRICULTURAL EDUCATION, COLLEGE RODEO, AND THE SHRINKING RURAL WEST

The 1976 Cheyenne Frontier Days reflects a turning point in the broader tide of corporate modernization enveloping the west in the postwar era. The consolidated PRCA, with its major corporate sponsorships, streamlined points system, and increasing focus on spectator-friendly rough stock events, was professional rodeo's analogue to the corporate consolidation of the western economy. By the mid-1970s, the western region had reached the peak of a long process of economic growth that had started during World War II. Much of this growth was fueled by military and federally-supported corporate investment in companies such as Kaiser Permanente Metals, Geneva Steel Works, and the Remington Arms Company, all of which continued the post-Civil War model of industrializing the West through heavy use of government contracts.[42] These industries were geared primarily towards scientific research and manufacturing technologies, and transformed the west into a modern, urban region. When professional rodeo competitors like Harley May and Larry Mahan took to the arena in Cheyenne that Bicentennial summer, the western economy had become a central hub of the national economy. It was also quickly becoming a central hub of national politics.

The benefits of this growth were unevenly distributed between rural and urban westerners. As the energy crisis and inflation reversed economic gains across the country in the middle of the decade, the rural west began to question whether or not it would ever be included in the overall rise in the region's fortunes. Before the western boom came to

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[42] Richard White, "*It's Your Misfortune and None of My Own:" A History of the American West* (Norman: University of Oklahoma Press, 1991): 500.

a devastating region-wide halt in the 1980s, rural and agricultural areas had already crashed. Yet this circumstance was not an anomaly; in fact, it was rooted in the structure of postwar western economic growth. The industries that fostered the modern, urban west did so at the expense of rural dwellers, both in terms of access to public resources, and in terms of labor, first by drawing rural dwellers into cities and later by closing off employment opportunities by bringing many thousands of workers to the west from other regions of the country, from Asia, and over the border with Mexico. Even the growth of the agricultural sector contributed to rural poverty and depopulation, as ranches became larger, displacing smaller cattle growers who went out of business when they could not sell cattle at low enough prices to compete with large operations.

Paradoxically, the conservative business and economic climate of this western Sun Belt boom had a rhetorical appeal to the very people it disenfranchised: the rural west, especially as the boom started to bust in the agricultural sector during the 1970s. As the west "came of age" in the 1970s, political rhetoric began to register a distinct resentment of federal involvement, despite the fact that federal investment had created the infrastructures for economic growth. Political opposition to federal intrusion, market regulation, and wilderness protection dovetailed with an ideology of individualism shared by many across the rural west, who had been losing their land, towns, and jobs since World War II. By the 1970s, after thirty years of decline, it was much harder for people in rural areas to believe they had a share in the economic promises of the 1950s and 1960s. Furthermore, at the moment the west emerged on a national economic and political stage, it turned to those most impoverished by modern growth to carry the

symbolic weight of a "western" identity. The politics of individualism forged a contradictory, but very powerful alliance between the urban corporate west and the rural agricultural west at the polls. Part of this alliance was an appeal by conservative politicians to the centrality of rural and agricultural identity to the "real" west, and by extension, "real" America.

Despite their rhetorical "real"-ness, small towns in the west shrank dramatically after World War II. From the 1940s to the 1970s, moving away from rural areas became the main avenue out of rural poverty for young westerners.[43] During World War II, the draft was the most obvious first step. However, in the postwar years, many young people – overwhelmingly male, and white – took other routes. In the 1950s, professional rodeo became a viable alternative to rural poverty. Others sought a way out through increasing access to agricultural and vocational education at land grant colleges and universities throughout the west. In order to satisfy the new environmental and technological challenges posed by consolidated agriculture, especially in the cattle raising business, the curricula of land grant universities increased their scientific rigor and research priorities, and as these programs expanded, they opened their doors to more students. Rodeoing and college education seem like divergent paths, but, like Harley May, many students in agricultural science programs combined them both. The modernization and urbanization of the west created a need for rural westerners to leave, but also created a strong desire to

[43] Richard White notes, "During and after the war the rural West lost people to the urban areas, but it did not always lose capital. Indeed, the flow of capital into rural regions paradoxically stimulated the migration of people out of it. The growth of large-scale, capital-intensive agriculture based on machines and chemicals forced a further decline of small farms over much of the West" (520). Maureen Ogle also details this phenomenon in *In Meat We Trust: An Unexpected History of Carnivore America* (New York: Houghton Mifflin Harcourt, 2013).

assert a rural, ranching identity. As the promises of the boom years receded in the 1970s, professional rodeo took on a more prominent role, reinforcing the dominant cultural power of a western tradition based on its least urban industry.

In the postwar years, the Sun Belt west and the Sun Belt south shared an economy that purposefully catered to the financial concerns of corporate businesses. Historians have documented the major post-World War II trends that led to urban and suburban booms in the south and parts of the west, which deviated from earlier models of development that concentrated on urban renewal in downtown core areas aided largely by federal funds, for which they traded federal regulations.[44] While northern Pacific Coast cities such as San Francisco and Portland followed this older, eastern model of urban renewal, areas in the interior west and southern California followed the south's lead in instituting tax exemptions, land grants, right-to-work laws and penalty-free extensions of public utilities and services to corporations interested in moving to undeveloped areas. These incentives, implemented in the south as early as 1936, drew industries to the region, especially in the "sunbelt boom" of 1958-1961.[45] During the 1960s, cities like Phoenix, Houston, Denver, and Los Angeles, like their southern Sun Belt counterparts, worked hard to attract outside business, and accepted federal money while shunning regulatory policies. These business-friendly "growth networks" effectively depopulated rural areas in the west as they had in the south, as workers moved to new, suburban industrial centers, and smaller towns that could not attract these industries were isolated

[44] White, 544-45.
[45] Thomas A. Lyson, *Two Sides to the Sunbelt: The Growing Divergence Between the Rural and Urban South* (New York: Praeger, 1989): 4-11; and Lisa McGirr, *Suburban Warriors: The Origins of the New American Right* (Princeton: Princeton University Press, 2001): 4.

from the growth that accompanied them. Thomas A. Lyson, writing about the Sun Belt south, attributes this discrepancy to the uneven distribution of economic success:

> one would have to conclude that [the practices of attracting industries and jobs to the region] have been very successful in stimulating economic growth. At the same time, however, as the average standard of living and quality of life of workers in the region have improved, the benefits of this economic growth have, in many cases, not "trickled down" to those at the bottom of the economic ladder...Rural communities, small towns, and less affluent counties, because they had fewer "chips" to offer prospective employers, are certainly placed in a structurally disadvantaged position in this game. In short, these places have become trapped at the bottom of a system that they unwittingly helped to create.[46]

Most of these businesses were manufacturing industries relocating from unionized northern headquarters to right-to-work states in the south. In the western version, these "growth networks" were primarily military and defense industries, and were heavily invested in developing modern technologies, such as chemicals, weaponry, electronics, and computers.[47] In the years immediately following World War II, "it was as if someone has tilted the country," writes Richard White: "people, money, and soldiers all spilled west."[48] This development was dominated by federal bureaucracies, which "devoted a disproportionate share of their enlarged resources to western development," supplying

[46] Lyson, 12.
[47] White, 503-13.
[48] White, 496.

roughly 90 percent of western investment capital in the 1940s.[49] Partially in response to the threat from the Pacific, during the war the west became a "vast wartime workshop" dotted with mineral refineries, aviation factories, and shipyards.[50] This kind of development was most prominent along the coastline.

In the interior west, from Texas and Oklahoma west through the Rocky Mountain states, military and federal projects expanded upon the existing extractive and agricultural infrastructure. Federal investment in oil pipelines and wheat production skyrocketed after having been abandoned during the Great Depression and Dust Bowl. Receipts for cattle ranching operations more than doubled in some areas from 1941 to 1945, and the Geological Survey redoubled its efforts in locating and mining seams of various minerals across the west.[51] This increase in industrial investment was matched by an investment in scientific research in the west, as "the government created scientific institutions in the West that were tied to the national scientific establishment and geared toward the national war effort."[52] Ninety-nine million federal dollars went into western universities during the war years, a number that was far outstripped by the secret atomic research facilities housed in Los Alamos, New Mexico and Hanford, Washington.[53] After the war's end, these industries and research facilities continued to provide an infrastructure for the production of scientific and technological innovations, much of which was funded by the federal government and the military.

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[49] Ibid., 496-7.
[50] Ibid.
[51] Ibid, 501-2.
[52] Ibid.
[53] Ibid.

The war and its concomitant western "tilt" quickly shifted the labor environment of the west. Before the war, the western working class was a loose and racially diverse assortment of agricultural laborers, miners and other extraction workers, small farmers and ranchers, and some small businessmen – people who worked in rural areas and small towns, many of whom were "Okies" who fled the Dust Bowl not long before. These were the first to be hired into western factory labor (though certain industries, such as aircraft manufacturing, refused to hire an integrated workforce).[54] As White put it, "Making $14.00 a shift in an aircraft or aluminum factory was more appealing than getting $7.50 and risking life and limb in the mines of Butte, Montana."[55] However, this labor pool was already small, and was limited more by the draft of male soldiers into World War II. The new industries in the west worked hard to attract labor from other parts of the country, and successfully encouraged the migration of millions of Americans west. Most of these workers were not from rural areas, and the massive growth in population in western cities (San Diego, for one, grew by 147% from 1941 to 1945) contributed to the rapid urbanization of western cities.[56]

This development and migration left a "vacuum" in much of the rural west. Not only were rural populations drained by manufacturing opportunities in growing cities, but the growth of agricultural industries actually fed rural outmigration as well. Paradoxically, the capital pouring into rural areas pushed rural workers out, as that investment was primarily focused on technological advancements in farming and

[54] Ibid., 507.
[55] Ibid., 503.
[56] Ibid, 507.

ranching, such as mechanized methods of planting and harvesting, chemical fertilizers and weed killers, and livestock concentration, that decreased the need for bodily labor. Cattle ranching experienced an enormous postwar boom as Americans began consuming beef at record levels.[57] The rise in beef consumption favored large producers while making it impossible for small producers to compete with the lower prices offered by bulk producers. Between 1940 and 1950, the average size of cattle ranches increased by 20 percent, but their number decreased by as much as 30 percent in the western states.[58] The increasing size of ranches necessitated advancements in mechanical, seed, and irrigation technologies, fueling the growth of those manufacturers in the cities while decreasing the need for ranching manpower. Those left behind in the "vacuum" faced added difficulties beyond population drain.

The military and federal industries coming to the west had a similar effect on rural dwellers as had private industries moving to the southern Sun Belt. With agriculture and energy extraction in decline after 1960, land prices declining, and small ranchers or oil extractors increasingly unable to afford to live as they had before Sun Belt development moved in, small town westerners increasingly found themselves either losing their jobs or losing their land. Rural communities bore the financial and environmental brunt of industrial development with little of the employment and quality-of-life improvements that came with urban and suburban economic growth. Residents of the rural west had to contend not only with the consequences of contaminated air, water, and land from Sun

[57] White notes that per-person beef consumption nearly doubled between 1950 and 1972, rising from 60 lbs per person to 116 (520).
[58] Ibid.

Belt policies that exempted industrial businesses from maintaining the quality of public utilities, but were also being squeezed by a growing environmental awareness of wilderness areas. Working class jobs in older western industries such as strip mining, logging, mineral and oil extraction, and ranching were being threatened by federal seizure of lands for wilderness protection. Less attractive land in rural communities was being bought up by military and defense technology industries headquartered in suburban areas, such as Motorola's move to Phoenix, Arizona in 1948, followed by General Electric, Sperry Rand, and Kaiser Aircraft and Electronics in the 1950s. These electronics companies were known as "clean industries" in contrast to the "smokestack industrialization" common to resource extraction and manufacturing.[59]

This double crunch in western rural areas during this critical decade is the point at which the southern and western Sun Belts diverge in their political rhetoric. Unlike the south, the modern west, even in its rural areas, had always been modern. As Lisa McGirr reminds us, "the modern West has drawn on a sense of identity rooted in notions of the self-made, individualist frontiersman counterpoised to an older, corrupt East."[60] This counterposition to the east was joined by a paradoxical rise in libertarian suspicion of the federal government. The federal government and the military together had created the modern west. In the immediate postwar years, White explains, the "reconversion of

[59] White 570-572; Peter Iverson also details the growth of so-called "clean industries,' such as electronics and computing manufacturing, as compared to "dirty" industries such as resource extraction and heavy manufacturing. The industrial waste produced by "clean" industries disproportionately affected rural westerners, because the pollution these companies did produce to land and water was, at first, invisible and unregulated. In *Barry Goldwater: Native Arizonan* (Norman: University of Oklahoma Press, 1997): 58-9.
[60] Lisa McGirr, *Suburban Warriors: The Origins of the New American Right* (Princeton: Princeton University Press, 2002): 18.

federally built factories in the West to peacetime uses, the continued diversification of the western economy, and the development of a new air and superhighway system" opened the west to nationwide and global markets, and expanded upon the long existing history of federal investment in the west.[61] White adds that during this time western politicians acted on the longstanding "desire for a vigorous, federally aided western economy independent of eastern control" that "cut across the usual political lines."[62] During the 1950s, the federal government was the "engine for development" that grew the western economy into a powerful component of the nation's economy.[63] Yet because the combined factors that fed this economic growth was choking rural communities, rural westerners increasingly emphasized individualism and opposition to federal encroachment. The regional trend toward individualist political rhetoric after the Civil War, especially in opposition to eastern control, was useful in forming a cohesive regional identity, one that, forged under the pressure exerted by modernity, would continue to hold water as the region modernized further. The suspicion of the east, however, was increasingly shifting to suspicion of the federal government.

The cost of modern economic growth to rural westerners was immense in the postwar years. In Texas alone, the number of farms and ranches decreased by a third from 1950 to 1970.[64] The farms that remained were increasingly corporatized, as large farms and ranchers took advantage of the economic climate and technological advancements that made large-scale agricultural production available. For some rural

[61] White, 514.
[62] Ibid.
[63] White, 531.
[64] Ibid.

westerners, competing in rodeo became a viable way out of devastating small town poverty, but without a concurrent sense of giving up on a rural identity. Due to urban migrations during and after World War II, a move to a job in one of the west's booming cities became increasingly unavailable in the 1950s. But, perhaps in part because of the inaccessibility of good jobs, it also became increasingly maligned. In this context, many young men who were born into ranch-owning families, or who came from families who worked ranches, were faced with the disappearance of ranch work and ownership. For a significant number of these young men, urban factory work did not have the same appeal as it had for the previous generation of rural westerners, who had gladly moved to growing cities for steady work. This generation came from families who took pride in hanging on to their land during World War II, who clung to a strong sense of western individualism, and who became increasingly conservative politically as their circumstances declined, despite the fact that the strong rightward swing of western politics was part and parcel of their disenfranchisement.

This rightward swing was propelled by commercial development. During the 1960s and early 1970s, civilian corporations moving to booming western urban centers such as San Francisco, Los Angeles, Houston, and Phoenix, used federal funds to finance downtown development.[65] Growth in the urban core also financed suburban growth, as downtown headquarters processed the information produced by the research and production sites lying beyond city limits. Yet these corporate pro-growth forces were joined by another kind of growth network that had little interest in the urban core: real

[65] White, 544.

estate. Developers looking to capitalize on available land on the periphery of urban and suburban areas eschewed the longstanding relationship between federal funding and western development. Their interest was in luring outside businesses to the region by advocating for "low taxes, minimal regulation, and nonunion work."[66] This growth network drew heavily from regional individualism, and fastened it to a much more politically conservative method of developing the west than had ever existed previously.[67]

The conservatism of the modern west straddled the paradox of dependence on federal economic support (even in the form of legal deregulation) and cultural aversion to it. The first western politician to swing hard to the right on the national stage was Arizona Republican Senator Barry Goldwater, whose failure in the 1964 Presidential election overshadows his effectiveness in mobilizing the libertarian wing of the Republican party in later decades. While Goldwater was staunchly pro-growth, he carefully managed a narrative about what should not be lost while making that economic transition. A real loss of western land via environmental protection and loss of rural economic viability through urban growth could be assuaged by appealing to the preservation of a frontier "spirit" of endurance and independence. In this rightward turn, rural westerners held considerable rhetorical power: though their land and livelihoods were threatened by conservative pro-growth politics, politicians touted the need for

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[66] White, 545.

[67] Richard White and Lisa McGirr are among many historians of the West from 1985-2005 who deftly describe the various economic, political, and cultural phenomena that squeezed rural western dwellers out of the benefits of the modern, urbanized West that I have merely glossed here. Gerald D. Nash's foundational book *The American West Transformed: The Impact of the Second World War* (Bloomington: Indiana University Press: 1985) is an excellent start, and for getting a sense of broader western social historiography, consult Richard W. Etulain and Gerald D. Nash, eds., *The Twentieth Century West: Historical Interpretations* (Albuquerque: University of New Mexico Press, 1989).

"traditional" rural values to serve as moral touchstones. Like the southerners who moved the Sunbelt South to the conservative right in the 1970s, westerners' rhetoric enmeshes modernization with the *idea* of a pre-modern past – an idea that can adjust as needed to suit the needs of the present time and lends itself to a protean libertarianism McGirr deftly describes as having "meshed preservationism with adaptation."[68] This kind of libertarianism was essential to the anti-government growth networks of both the South and West, but it also galvanized rural westerners who viewed federal intrusion on western land as a major source of economic concern. The most prominent of these were cattle ranchers, who negotiated a tenuous balance between the Bureau of Land Management and the Forest Service for grazing rights, and corporate packing houses that bought up increasing amounts of land for feed lots, and controlled prices and profits.[69] This contest over public land sets Western libertarianism apart from anti-government conflicts in the Sunbelt South.

Rodeo, in addition to providing an avenue for income, crystallized this paradoxical conservative identity for rural westerners. The alignment of corporate and rural libertarianism in the 1960s depended on the rhetorical use of tradition in order to straddle the paradoxical relationship between them. Despite the specific postwar factors contributing to these developments, this paradox has a familiar ring to it. Recall railroad manager Angier, riding the tracks to Cheyenne at the end of the nineteenth century. Angier's imagination of the first Cheyenne Frontier Days depends on exactly this same

[68] McGirr, 18.
[69] White, 520.

relationship between modernity and tradition: Cheyenne adapted to the departure of its first speculators because it had always been adapting to demographic, economic, and technological change since its founding. Yet even then, an event designed to preserve a piece of that ever-changing culture held great appeal, highlighting ingenuity in the guise of tradition. Nearly a century later, the libertarianism that took root in the west "explodes any easy dichotomy between tradition and modernity," a quality that resounded in the western Sun Belt boom and bust.[70]

The importance of science, technology, and migration to the withering of the rural west cannot be overstated. However, perhaps more important but less immediately visible was the centrality of cattle to rural life, both economically and culturally. If rural ranching economies were being choked, it was not because there were fewer cows – to the contrary, there were many, many more. This concentration made cattle and rangeland management the focus of scientific inquiry, corporate consolidation, and, at the same time, the acquisition of symbolic value. The turn to scientific agricultural education for young rural western men was, in some sense, a way of keeping up with rapid changes in cattle culture, of modernizing, and of actively contributing to the growth and industrialization of the cattle business across the west. The concurrent turn to rodeo, however, belied that compromise: it preserved the centrality of cattle and ranching to western cultural identity, making the animal a powerful cypher for "traditional" authenticity as well as for progress. The bodies of cattle also became more powerful: as meat producers changed the shape of cattle with advances in nutritional, pharmaceutical,

[70] McGirr, 8.

genetic, and management technologies, rodeo cattle, especially bucking bulls, received these same technologies in the service of creating bigger bodies and bigger bucks in the rodeo arena. The dual turn to rodeo and agricultural research reveals that the growth of professional rodeo and the scientific consolidation of agriculture across the west shared the same economic and political structures – structures that are visible in the very bodies of the cattle at the center of these changes.

Land grant institutions played a large role in this transformation of the postwar west. These colleges and universities typically housed agricultural research programs, which drew rural westerners looking to remain in the ranching business, as well as those looking for other scientific skills. As early as the 1920s, students organized campus rodeos. By 1927, Texas A&M and Colorado A&M (now Colorado State) used rodeos to raise travel funds for their livestock judging teams.[71] Students involved in agricultural research brought rodeo to these campuses. However, the organization of rodeo into a true "college sport" at these institutions was not attempted until after World War II. The growth of rodeo alongside the immense academic importance of land grants, especially in the west, exposes class conflicts that had long been lingering in the higher education system, but in a particularly western register.

Land grant colleges were established by the Morrill Land-Grant Act of 1862, which gave each state 30,000 acres of public land per senator and congressman to

[71] Sylvia Gann Mahoney, *College Rodeo: From Show to Sport* (College Station: Texas A & M University Press, 2004): 9.

monetize for the purpose of financing an institution of higher learning.[72] These institutions were meant to fulfill a mission of public education: to extend access to college beyond the elite, and to fund higher education through a cooperation of federal and state agencies. As such, these institutions were designed to serve the needs of the general population. The 1860 census showed that roughly half of the American population lived in rural areas, either living on farms or working on them.[73] Industrial and agricultural education was therefore the main thrust of these institutions, though Justin Morrill did not limit their function to vocational education.[74] By mandating the inclusion of traditional academic disciplines in the land grant system, Morrill ensured its ongoing legacy of high-quality public education, which attended to Morrill's interest in "the nexus between democratic access to higher education and the maintenance of political democracy."[75]

The founding of these institutions was, at its core, a radical policy regarding federal money and public mission. Land grants are about class, race, and access: "The land-grant view of scholarship directly challenged the prevailing norms of higher education," George McDowell argues, "by making the work of cow barns, kitchens, coke ovens, and forges the subject matter of their scholarship."[76] These new educational subjects became the basis for scientific research and advancement that would profoundly

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[72] George R. McDowell, *Land Grant Universities and Extension into the Twenty-First Century: Renegotiating or Abandoning a Social Contract* (Ames: Iowa State University Press, 2001): 3.
[73] National Research Council, *Colleges of Agriculture at the Land Grant Universities: A Profile* (Washington, D.C.: National Academy Press, 1995): 18. Not until the 1920 census do "urban" populations of 2500 persons or greater exceed rural ones.
[74] McDowell, 4.
[75] McDowell, 4.
[76] McDowell, 5.

affect American society. One example McDowell points to is the breakthrough Babcock test in 1890, which, by identifying the butterfat content in milk "was both a scientific advancement and a political/economic act necessary to rationalize markets for milk."[77] The research and education at land grants brought science, politics, and agriculture together, and together they came of age over the twentieth century, fully entwined.

The service mission of the land grant system, and its ability to impact rural dwellers, was solidified in 1914 by the Smith-Lever Act, which established the Cooperative Extension Service. The Extension service was a three-pronged partnership between the federal, state, and county governments "designed to disseminate agricultural college-generated knowledge beyond the campus to farmers and consumers."[78] The timing of the Smith-Lever Act reflects what science historians call the "Transition to Science" phase of agricultural research in the United States: the increasing rigor and experimental creativity of agricultural science blossomed from 1920 to World War II.[79] This dual trend of rigorous research and social outreach created radical changes in the scale and efficiency of American food production – changes that both depended upon and eventually undermined the cooperative relationships between the federal government, public research facilities, and individual producers. These developments had particularly

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[77] Ibid.

[78] NRC, *Profile*, 8. Extension also solidified the bureaucratic apparatus for land grant funding. The federal arm, the United States Department of Agriculture (USDA), worked with the states through the land grants, creating a cooperative funding environment to facilitate research. This knowledge was then distributed directly to producers through the local extension agents, who were employed at the land grant college or university.

[79] McDowell cites agricultural history researchers Huffman and Evenson (1993) for this phrase, which refers to hybrid corn in particular and the turn to research designed to scale up production before the Green Revolution of the 1950s and 60s.

impacted the West, as the populations of farm communities decreased while these scientific advancements aided a meteoric rise in farm production.

After World War II, land grant universities entered what has been called their "Golden Age." The years between 1950 and 1970 marked a remarkable success of the research and extension model that led to an expansion of production that made it possible for the first time for the scale of U.S. agricultural production "to compete with producers anywhere in the world."[80] This expansion was made possible by changes to the structure of government funding under the 1946 Research and Marketing Act, which scaled the funding mechanism to reflect the *regional* proportion of agricultural land and population in allocating USDA and state funds to land grant research programs. The Act increased general federal funding for land grant experiment stations by $2.5 million in 1947 and 1948, and by $5 million per year from 1949-1951, along with "such additional funds as Congress shall deem necessary for additional years."[81] These changes to the funding structure heavily favored the western land grants, which had the most rural land between them and, at the time, heavy rural and farming populations. As a result, they saw the

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[80] McDowell, 8.

[81] NRC, *Profile,* 11. This act also dramatically increased the USDA's funding allocations from $3 million in 1947 to $15 million per year after 1950, and increased funding for marketing nearly tenfold, from $2.5 million in 1947 to $20 million per year starting in 1950. Additionally, the Act changed its allocations to reflect regional, not just state, concerns. Previously, a state's share of federal funds for land grants was entirely determined by a formula based on its percentage of U.S. rural land and farming population, the 1946 Act readjusted this measurement. Now, all land grants would receive 20% of available federal funds equally. On top of that, 52% would follow the farm-populations and rural-lands formula. Additionally, and crucially, the Act specified that 25% of federal money should be allocated for regional research "involving two or more states involved in finding a solution to a problem of regional significance." This legislation "greatly expanded the volume and scope of marketing research, brought several innovations to the administration of research in general, and helped to train a whole generation of marketing researchers," and was "by far the largest boost ever given to research in agricultural marketing." Douglas E. Bowers, "The Research and Marketing Act of 1946 and its Effects on Agricultural Marketing Research," *Agricultural History* 56 (1982): 249.

largest increases in funding, especially since they could combine research efforts. Agricultural research at land grant schools, then, was a significant part of the massive federal investment in science and scientific research at higher education institutions across the western United States. This structure proved advantageous once the federal government began to "tilt" its scientific research funds towards the west during World War II.

In the late 1940s, young men from ranching and agricultural backgrounds returned from military service and, with the help of the GI Bill, enrolled in agricultural programs at land grant schools. It is no accident that the major shifts in land grant institutions can be correlated to wars: they were founded during the Civil War; their extension services were funded at the dawn of World War I; and they became globally competitive research facilities at the end of World War II. In each case, warfare tied agricultural advancement to the imperatives of national defense and national unification.[82] Yet the influx of students at this time was unprecedented, and not just in agricultural programs. In fact, the expansion of scientific education in the postwar era brought rural and non-rural students into more frequent contact. College rodeo came about in part because the more "traditional" collegiate sports, such as football, held less appeal to many rural students. Hank Finger, one of the founding members of the National Intercollegiate Rodeo Association (NIRA) in the late 1940s, drew this very distinction when he wrote to petition for a collegiate rodeo team at Sul Ross: "The boy from the country coming to

[82] NRC, *Profile* 11.; Lucrece Beale, *People to People: The Role of State and Land-Grant Universities in Modern America* (Washington, D.C.: Office of Research and Information, n.d.): 13-14.

college needs an extra-curricular activity to coincide with his classroom work the same as a city boy has his tennis, golf, or football."[83] Finger's observation points to the growth of the "country boy" demographic at research institutions after World War II. It also reveals a desire to promote a western rural identity in contrast to urban students, to remain steadfastly agricultural rather lose an attachment to ranching culture.

Indeed, the "Golden Age" of land grant productivity was also the "Golden Age" of NIRA. The growth of the sport on land grant campuses during the 1950s and 1960s was aided by an agreement between NIRA founders and the RCA, the leading professional association, wherein college students who were current RCA cardholders could compete in NIRA rodeos without relinquishing their professional status.[84] This agreement was crucial, as many student rodeoers used professional rodeo as a form of income to help pay for college. Faculty sponsors for college rodeo clubs often were from agricultural programs, because the NIRA drew most heavily from their students.[85]. These students represented a confluence of several push-and-pull factors that transformed American agriculture and professional rodeo in the decades following the war. These first postwar students were already feeling economic pressure to leave the farms and ranches they had grown up on, a trend that was on the increase in the Sun Belt West. A

[83] Mahoney, 24. This observation seems strange now, especially in Texas, where rural communities are bound together through youth and high school football. But after World War II, football was still an eastern game, and deeply classed. Theodore Roosevelt's Rough Riders were half-composed of Ivy League football players, and football at the Ivies in the first half of the twentieth century was part of the legacy of the strenuous life. At the same time, the National Football League, formed in 1922, was composed of teams from eastern industrial cities -- the farthest west being Kansas City, and was a working-class game.
[84] Mahoney, 26-27. This policy contrasted the NCAA's insistence on amateur college athletes, but reflected the fact that many college rodeo competitors had been competing professionally on some level in order to pay for college before collegiate-level rodeo flourished.
[85] Mahoney, 28.

college education, funded in part by the GI Bill and partly by rodeoing, was a particularly inviting avenue, and agricultural and industrial education was specifically appealing, especially as this opportunity expanded after passage of the 1946 Research and Marketing Act. Students entering these programs brought rodeo with them, as many already made ends meet as part-time professional competitors. Once NIRA had been established, it drew students to agricultural programs because of the chance to rodeo. These rural students brought rodeo and agricultural science together into a shared network, creating "a new direction for rodeo...a new image, a new way to network, a new recruiting field for professional rodeo,...and college educated rodeo contestants."[86] These students also participated in the transformation of American agriculture from a family-farm based model to a vertically-integrated corporate industry, as they used their business and scientific educations to revolutionize ranching.[87] At the same time, many, such as Harley May, played critical roles in the growth of professional rodeo.

Rodeo's particular relationship to cattle agriculture solidified during the prosperous decades between 1950 and 1970. While cattle ranching did not grow as exponentially as other agricultural sectors, such as corn, swine, and poultry, it did consolidate into a corporate structure based on feed lots and packing houses, with the number of ranches declining precipitously while the size of production facilities grew apace.[88] As the United States became a global agricultural producer, it also became vulnerable to global economic forces. In the early 1970s, global demand for grain soared

[86] Mahoney, 46.
[87] Mahoney lists the occupations of several 1950s era NIRA members -- many became big time ranchers and rodeoers, stock contractors, and cattle businessmen.
[88] NRC, *Profile*, provides data tables detailing several iterations of this larger trend, 19-32.

as feed lot technologies expanded overseas. This boom rippled into the cattle industry, which "increased the scale of their operations" in order to keep up with global demand for beef, much of which was grain fed.[89] In Montana, for example, grazing land sold for as much as $130 to $140 per acre during this boom. However, this expansion was short-lived, as the OPEC oil embargo of the United States in 1973, a precipitous drop in grain prices, and soaring food prices had disastrous long-term consequences for the agricultural sector. Industrial agriculture was energy-intensive, requiring cheap fuel to "run their farm machinery, to pump their water, and to manufacture their fertilizers...cattle that fattened on western feed lots at grain produced by energy-intensive farm operations."[90] Not only did fuel prices rise, but inflation did as well, which crunched cattle operations with high land mortgages from recent expansions.

By 1975, inflation and high fuel costs were also affecting the professional rodeo circuit. Most rodeo cowboys drove their own vehicles to rodeos across the west, and those performing in timed events such as roping often hauled their own horses, as well. As the 1975 Cheyenne Frontier Days got underway, entries were down 13 percent from the previous year, despite a record-high budget of $800,000 for the event.[91] Contestants Chairman Ed Patrick "attributed the decline in entries to the high cost of travel and noted that the trend has been nationwide."[92] The one event which did not see any decline in

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[89] White, 559.
[90] Ibid.
[91] Clipping, Bernard Horton, "Chamber Hears Reports on Frontier Days," *Wyoming Eagle*, July 15, 1975, and Clipping, "1,034 Pro Cowboys Enter 79th Frontier Days Rodeo" July 3, 1975, Box 11, Folder 18, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[92] Clipping, "1,034 Pro Cowboys Enter 79th Frontier Days Rodeo" July 3, 1975, Box 11, Folder 18, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

entries was bull riding -- an event that supplied animals from the rodeo's stock contractor.[93] A *Denver Post* reporter spoke to several cowboys preparing to compete in the CFD. Scotty Platts observed, "'It's taken practically every dime I've made to keep me on the road,'" referring to the cost of travel between rodeos.[94] 1975 marked the first year Platts decided to split the cost of a travel van with other rodeoers, with whom he also split motel fees; he also pared his eating expenses down to "one meal a day – usually a hot dog or a hamburger in the afternoon."[95] Inflation and fuel costs were the first major hurdle that the newly reconfigured PRCA had to address. PRCA representative Warren Wuthier acknowledged that "the PRCA may soon be forced to consider 'restructuring' rodeo's traditional format so the sport can stay afloat in the choppy seas of inflation."[96]

The rising cost of travel had a parallel effect on rodeo that inflation did on the cattle industry: it favored the largest competitions. Just as cattle operations with large amounts of capital were able to weather inflation and could expand their operations by buying out those who went bankrupt – the ranch land in Montana that had sold for upwards of $130 per acre sold for as little as $35 by the 1980s[97] – large professional rodeos like the Cheyenne Frontier Days offered large enough purses to attract competitors. The PRCA was also able to secure corporate sponsorship for large rodeos from companies like Winston Tobacco and Frontier Airlines, who had partnered with the

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[93] Ibid.
[94] Clipping, Joan Zyda, "Cowboys Ride a Savage Mount: Inflation," *Denver Post*, July 23, 1975, Box 11, Folder 18, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.
[95] Ibid.
[96] Ibid.
[97] White, 558-9.

RCA in the early 1970s.[98] The "restructuring" that PRCA official Wuthier predicted in 1975 happened immediately, as the organization quickly mobilized a regional competition model – one lifted straight from the NIRA – to minimize the distance that pro rodeo competitors had to travel and made it possible for some competitors to go to fewer rodeos in order to make ends meet. However, this change also marginalized smaller rodeos, which had depended on the willingness of cowboys to rodeo in volume. Large rodeos like the Frontier Days quickly became magnets for current and former champions, because only those who won enough at the regional contests could afford to travel to the large events, or had the sponsorships to do so. By 1976, the effects of this concentration of high-stakes competitors at big rodeos like the Frontier Days could already be felt in the growing number of fans in the stands.

A "Collection of Fairy Tales": Rodeo in the Bicentennial West

The Bicentennial summer contributed to the radical change in fortune for the Cheyenne Frontier Days between 1975 and 1976, as the glut of Americana-seeking tourists helped swell the crowds. Lacking a single national Bicentennial celebration, Americans were left to mark the occasion amidst a dizzying multitude of regional events, and the 1976 Cheyenne Frontier Days proved the power of western pageantry to attract American tourists seeking to feel the "Spirit of '76." What actually comprised this "spirit," which was one of the marketing slogans propagated by the American Revolution

[98] Kristine Fredriksson, *American Rodeo: From Buffalo Bill to Big Business* (College Station: Texas A & M Press, 1985): 191-194. A contemporary medical take on tobacco sponsorship can be found in an article by Pamela Ling, Lawrence Haber, and Stefani Wedl, "Branding the Rodeo: A Case Study of Tobacco Sports Sponsorship," *American Journal of Public Health* 100 (2010): 32-41.

Bicentennial Administration (ARBA), was elusive.[99] In 1972, the ARBA rejected Philadelphia's proposal to host a unified Bicentennial exposition as the city had one hundred years earlier.[100] With the approval of President Nixon, the Administration instead decentralized Bicentennial celebration planning, leaving individual towns, counties, and states to fund and plan their own Bicentennials.[101] This diffusion of space was matched by a diffusion of time: whereas the 1876 Centennial exposition in Philadelphia opened and closed on specific dates and drew celebrants from all over the country together, much like a World's Fair, official Bicentennial events were held as early as April 1975 and as late as December 1976 – and may well have continued until the end of the Revolutionary War in 1981 or the signing of the Constitution in 1987. On the one hand, an attempt to narrate a single, comprehensive account of what the Bicentennial should mean to Americans in 1976 could have led to a heavy-handed use of history as a blunt instrument. It was, after all, a postmodern age. Yet on the other, the lack of a central location, a defined time, and a sense of shared meaning could have also threatened to divest the event of any historical meaning at all. As David Lowenthal pointedly asked in his ruminations on the Bicentennial, "can such a dispersed event be called a national event?"[102]

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[99] The Commission was established in 1966 and terminated in 1977, according to the date range of records held in the National Archives.

[100] Natasha Zaretsky, *No Direction Home: The American Family and the Fear of National Decline, 1968-1980* (Chapel Hill: University of North Carolina Press, 2007): 149. She writes, "planners also recognized that international expositions had become riskier enterprises than they had been in the past," citing various protests during the New York World's Fair in 1964-65; and points also to the fact that "the original idea of an international exposition was ...discarded because it entailed financial risks that the federal government could not afford by the mid-1970s" (148-9).

[101] "Scattered Anniversary." *TIME Magazine*, 99:24, June 12, 1972.

[102] Lowenthal, 265.

While it is difficult to find a unified approach to the Bicentennial from region to region and town to town, one overarching definition for the mysterious "spirit" guiding the event was to rekindle a sense of strong national identity by foregrounding local pride. It was lauded as an opportunity "to stem the decline, to restimulate national enterprise, national pride, and national purpose" in the wake of a difficult start to the decade.[103] But in order to do this, historian Natasha Karetsky argues, Bicentennial planners needed "to downplay the category of the nation, foregrounding instead the local, the tribal, and the familiar" in the service of cultural pluralism.[104] Within the ARBA, decentralization fostered a pluralist vision of the United States by accommodating challenges brought by various minority groups towards celebrating the Bicentennial at all, such as Native Americans, African Americans, feminists, and ethnic whites descended from various immigrant origins who resisted the imposition of the "melting pot" image of a "homogenous and uniform American cultural identity."[105] Nevertheless, Karetsky reminds us, a pluralist Bicentennial "advanced a claim about the unique nature of American power," suggesting that "American domination was more the result of natural affinities than something imposed from the outside."[106] The divestment of the federal government from planning and the turn to the diverse local traditions, histories, and identities of the United States were still used to bolster pride in the nation.

The dispersion of Bicentennial events under the vague invocation of a "Spirit of '76" allowed Americans to view the Revolution as a "set of exemplary fables," reflecting

[103] Ibid.
[104] Zaretsky, 148-50.
[105] Ibid., 150.
[106] Ibid., 152.

the values and needs of the present.[107] Across the west, the Bicentennial presented an opportunity to graft a Revolutionary "spirit" onto a history that had, in reality, very little to do with the Revolution. The Bicentennial provided a perfect opportunity for the West to identify itself with the nation's origin myths. One of the key ways in which western communities did this was through a rewriting of colonial rebellion against Britain's imperial tyranny through the concept of independence from federal control. The decentralization of Bicentennial planning played into the cultural, if not economic, rejection of federal involvement in western life, enhancing "the antigovernment sentiment that was fueling the rise of the Right" of particular importance to the western states.[108]

In addition to the dispersal of local events, there was another unifying "spirit," which was an uninhibited frenzy of buying an outwardly unlimited supply of Bicentennial-related merchandise. This urge to wed consumption to the Bicentennial initially presents an odd disjuncture from the depressed state of the American economy in the mid-1970s. As budgets shrank, cities and towns had to scale down their initial plans for special Bicentennial structures and events. In Cheyenne, plans to construct a "Bicentennial building" at Frontier Park as a side attraction to the rodeo were scrapped.[109] Some state and federal grants were available to help cover the costs of Bicentennial plans, but most of the funds had to come from communities themselves. "Dear Bicentennial Planner," one letter from a fundraising seminar company exhorted its recipients, "You must be aware by now that Bicentennial is a 'do it yourself' program. If

[107] Lowenthal 264.
[108] Zaretsky, 171.
[109] Clipping, July 1975, Box 11, Folder 18, J. S. Palen Collection, Collection 10472, American Heritage Center, University of Wyoming.

you want money for your projects, you must find, identify, and raise it yourself."[110] An official pamphlet from the ARBA entitled "A Participation Celebration: Plan for Funding Bicentennial Community Events" castigated planners for seeing fundraising as an obstacle: "Finding help to produce and implement a creative event can be a problem unless you make it an opportunity for service...Financing your Bicentennial Community budget is a significant opportunity for service in your community which might be masquerading as a problem."[111] One way of solving this problem was through the massive distribution of material items.

In order to facilitate community fundraising, the ARBA contracted with diverse retailers to produce "officially recognized" commemorative memorabilia for community planners to purchase for resale. Retailers mailed information about their ARBA recognized products directly to people who were part of organized Bicentennial Committees across the country. Some of these items were intended as town monuments, such as the Erickson Memorial Company's Bicentennial Sundial, which measured over 7'4" in height and incorporated a time capsule into the sundial's base. The advertising booklet sent to Daniel A. Nelson, a Bicentennial Committee member in Laramie, Wyoming, asked him to consider making the Erickson Sundial "the theme of your Bicentennial for 1976," and offered several suggestions for raising the nearly $12,000 it

[110] Letter from Donald E. Hawkins, Editor of Bicentennial Sourcebook, to D. A. Nelson, April 22, 1975. Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.
[111] Pamphlet from ABRC, n.d., Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.

would cost to install it.[112] Judging by the flood of less permanent Bicentennial merchandise, the more common strategy for Bicentennial fundraisers was to offer a massive selection of official tchotchkes to individuals at a very small cost. Hard economic times made it difficult to establish funds for substantial or permanent structural monuments to the Bicentennial. In addition, contrary to the "efforts and feelings" the Erickson Sundial marketers attempted to cultivate, perhaps communities did not want a permanent reminder of what 1976 felt like. Instead, cheap, impermanent, and even disposable items flooded the Bicentennial merchandise landscape.

Nelson received innumerable solicitations for unofficial fundraising items for individual resale that could best be described as junk. Pamphlets offering Bicentennial belts, buckles, window stickers, badges, paperweights, and medals ("because nobody ever throws away a 'coin'") joined the avalanche of fundraising opportunities.[113] These items at least gestured towards a keepsake existence – albeit in the tchotchke genre – but Bicentennial fervor also graced such disposable items as facial tissues, single-use cups (with the Liberty Bell on one side and instructions to "please dispose of properly" on the other), and beer cans.[114] This extreme proliferation of Bicentennial-inspired trash caused one reporter for *TIME Magazine* to comment on the "air of Styrofoam patriotism" wafting across the nation.[115] The material culture of the Bicentennial – or, as Lowenthal

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[112] Booklet from Erickson Memorial Company, 1976, Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.
[113] Multiple pamphlets; quote from letter from The Mount Everest Mint, October 18, 1974, Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.
[114] Items, Boxes 2 and 3, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.
[115] "The Big 200th Bash." *TIME Magazine* July 5, 1976, pg 10.

put it, the "buy-centennial" – reinforced an impersonal, commercialized, and ahistorical connection to the occasion. But the willingness of people to buy the stuff, whether official items for community fundraising or non-ABRA-authorized disposables, also spoke to a *desire* to connect in some way, to find some meaning and identity in a highly dispersed "national" event, if only to help fund a community's effort to put forth a good local event.

This desire found expression in the Town Meeting movement, in which the ABRA encouraged individual towns to plan a Town Meeting for its citizens to come together and identify ways in which their towns could be improved. Official information booklets for "Town Meeting '76" emphasized the importance of grass-roots democracy: "Local man can thus participate in deciding America's destiny."[116] These town meetings were planned in 50 towns across the United States in 1975 and 1976, with several in Colorado and Wyoming, including Laramie, a university town a short drive from state capital and Frontier Days home, Cheyenne. Laramie's local paper, the *Boomerang*, ran announcements calling for participation on its front page throughout the first part of 1976. The Laramie Chamber of Commerce also invited citizen involvement, describing the meeting as a chance "to identify and rate community needs and priorities," encompassing anything from new schools to improved sewer systems or a criminal justice center.[117] This attachment of routine community needs to the Bicentennial offers a different view of the "Spirit of '76." In part because of its dispersal and

[116] Clipping, "Town Meeting '76: A Call for Achievement in the Bicentennial Era", Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.
[117] Clipping, "Chamber Chatter." *Laramie Boomerang*, April 11, 1976, Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.

commercialization, the Bicentennial was abstract – a quality even embodied in the word "spirit." Haunted in the economically depressed present by the lofty ghosts of the America's Revolutionary past, and flooded with temporary keepsakes, the Bicentennial was, to many, more about abstract ideas than tangible objects and activities. Yet in Laramie, the Town Meeting movement gave voice to more concrete desires for community improvement, and if the Bicentennial were the reason to address such on-the-ground needs as schools, jails, and sewers, then so be it.

Town Meetings were not the only way in which the western region engaged directly with Bicentennial community planning. In comparison with other states, by July of 1975, Wyoming ranked fourth in the number of official Bicentennial events in the works, according to figures compiled by ARBA. The Wyoming Bicentennial Commission, a state branch of the ARBA, was involved in 353 different events, "well ahead of many of the original Thirteen States on the eastern seaboard."[118] In fact, western states dominated the top five: while New York topped the list with 790 projects, it was followed by Colorado, Montana, Wyoming, and South Dakota. The nation's capital was a paltry sixth. Pat Hall, director of the Wyoming Bicentennial Commission, added, "'The high Wyoming ranking for Bicentennial projects compared with the state's 1970 population figures would surely put Wyoming to the top of the 50 states as far as number of projects on a per capita basis."[119] The Wyoming Bicentennial Commission dispersed $62,500 of federal grant money, in individual amounts from $75 to $7,800, to help

[118] Clipping, "Wyoming Ranks High in Number of Bicentennial Projects." *Wyoming Stockman-Farmer*, July 1975, Box 1, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.
[119] Ibid.

finance these projects. Some were educational, such as developing curricula to teach Wyoming history in public schools, publishing county and city histories, building programming for public library "Cultural Festivals," and creating museum exhibits. But many more were given to restore and maintain public places, such as planting trees in downtown areas or refreshing the landscaping at rail stations, refurbishing fountains and trails at parks, or making repairs at community centers.[120] Many of these projects were not related to the Bicentennial except at face value, but all of them engaged the immediate needs of Wyoming communities.

The high ranking of western states on the list of Bicentennial activities is a complex measure of what the Bicentennial meant to western communities. On the surface, the level of citizen participation per capita makes it seems as though the west was really into commemorating the nation's founding era, perhaps making up for the region's relative youth in the nation's composition, and asserting the region's unity with the United States as a whole. But the nature of the planned programs tells a different story. The needs being met by Bicentennial-inspired funding were needs that existed outside of the Bicentennial. The immediacy of the projects funded by the Wyoming Bicentennial Commission, on the one hand, contradicted the heady "feelings" embodied by the "Spirit of '76," but on the other, they were easily folded into the purview of what those "feelings" might entail. What Wyoming's Bicentennial projects reveal is that there was little interest – and little money – to make permanent monuments to a part of American history that did not include the western region. The opportunity that the

[120] Ibid.

Bicentennial did offer, however, was for the west to write itself into the national narrative on its own terms.

In an ironic twist, the primacy of local identity present in ARBA's pluralist framing of Bicentennial celebrations allowed western communities to efface the actual pluralism of western history in re-writing its narrative. Bringing the West into the nation's origin story was ultimately a project of constructing a conservative white, masculine, and individualist framework that aligned principles of the "colonial revivalism" with the rightward turn in western politics over the previous decade.[121] The logo for the Wyoming Bicentennial Commission speaks directly to the desire to meld western and national identity in this way. The red, white, and blue logo incorporated a familiar image of a cowboy riding a bucking bronc from Wyoming's license plates, which was designed in 1936, and which the Commission proudly identified as the first license plate symbol in the United States. But atop the bronco, instead of the original hat-waving cowboy was a stylized Revolutionary-war-era character: powdered wig; long coat with pronounced buttons and cuffs; a vaguely George Washingtonian prominent nose. His posture was the same as the cowboy's, with his left hand grasping the bridle rope, right arm waving his tri-cornered hat, and tall-booted legs raking across the horse's rounded, plunging shoulders. The figure and the horse were superimposed onto the state of Wyoming and the number 76, uniting the elements into a Bicentennially inflected

[121] Zaretsky, 159.

Revolution-cum-rodeo.[122] The "Colonial Cowboy" erases the historical distance between the formation of the United States and the inclusion of Wyoming within it: Wyoming had been granted statehood a mere 86 years prior to the Bicentennial, 114 years after the signing of the Declaration of Independence.

The collapse of time, geography, and iconography in this image suggests the question, did Wyoming superimpose a Revolutionary figure onto its existing western identity, or, does the Colonial Cowboy more accurately represent an equation of western identity with national patriotism? In either case, the logo clearly inscribes an Anglo-centric and rebellious symbol onto a history more accurately populated by multicultural and multiethnic bronc-riding peers. The image aligns Wyoming's western identity with "victimized" rebel colonies, which "tapped into longstanding American anxieties about the meaning of dependency" and associated the colonial figure with individualism, while also whitening the West by effacing the original image's potential to represent vaqueros, Native Americans, African Americans, and ethnic whites. This logo makes clear the terms of the West's inclusion in a national narrative in the context of the Bicentennial: it reimagines the visual lingo of rodeo, now couched in white rebellion, as part of a national American identity.

The PRCA was poised to capitalize on this moment of national enthusiasm for American history at the 1976 Cheyenne Frontier Days in front of record-breaking audiences. While the rodeo followed its familiar script of day and evening events,

[122] Mailing, "The Colonial Cowboy: The Spirit of '76 In the American West!" Box 4, D.A. Nelson Collection, Collection 06182, American Heritage Center, University of Wyoming.

barroom brawls, and campsite squabbles, it was also clear that a new era was afoot. In the Bicentennial summer, the flocks of tourists coming to Cheyenne were fitting rodeo and its regional identity into a definition of the nation, connecting its celebration of western individualism and ranching history to the Bicentennial project of nation-making. For rodeo veterans like Harley May, competing at the 1976 Cheyenne Frontier Days in front of a record-breaking crowd drawn not only from existing rodeo fans, but from Americans seeking western venues in which to commemorate the Bicentennial, was immensely gratifying. The success of enfolding rodeo into a larger sense of American identity represented the culmination of two decades worth of work for May and his contemporaries. Advancements in marketing, the emergence of celebrities like Larry Mahan, and the new streamlined points system that brought more rough stock riders to the chutes made for a polished, modern spectacle of a rodeo that simultaneously tapped into the Bicentennial summer's concern with connecting to history.

By 1976, May rodeoed for fun, not for his primary income. His main business was ranch real estate in California, in which he brokered deals with cattlemen and western land investors through the connections he first developed while studying Range Animal Science and rodeoing with the NIRA at Sul Ross in the postwar years. This network of cattle and rodeo interests, grown over time through agricultural science programs and college rodeos, was instrumental in crafting a new national story in which the economically depressed rural West could be celebrated as an integral part of American identity. At the same time, right-leaning libertarian political alignments were central to the connection between rodeo and its allies in western agriculture. While rodeo

dramatized the authenticity of a rural and historically important West, the network that May was a part of actively lobbied for policies that favored the growth of corporate agriculture and minimally regulated Sunbelt development at the expense of actual rural communities. As the nature of manual work and the place of the white working class male transformed in the postwar West, professional rodeo played a crucial role in aligning whiteness, masculinity, and regional conservatism on the national stage. At the dawn of the new decade, this re-written history was supported by the emergence of new animals, as veterinary technologies began to influence both the cattle business and professional rodeo in service of these conservative western aims.

Chapter 2: "There Will Be a Cow in our Future": The Beef Crisis, Scientific Reproduction, and the Rise of Bull Riding

INTRODUCTION

In July of 1987, President Ronald Reagan's cabinet was dealt a major blow when its Secretary of Commerce, 64 year old Malcolm Baldrige, was killed by his horse while warming up to compete in a roping competition in California. He had just roped a calf when his horse lost his balance and panicked, falling backwards onto Baldrige at "full force."[123] The tall horn of his roper's saddle made contact with Baldrige's belt buckle, crushing his abdomen.[124] His death was all the more shocking because he was a seasoned rodeo competitor. Baldrige, a longtime member of the Professional Rodeo Cowboys Association (PRCA), competed at three professional rodeos a per year while serving as Secretary, and more often at individual roping events such as the Contra Costa County Fair, where he suffered his fatal accident.[125] His high-profile public service had earned him a spot in the PRCA's Cowboy Hall of Fame in 1984.[126]

Baldrige was one of three of Reagan's original cabinet members remaining from his first term, and had family history in Washington.[127] As head of major Connecticut manufacturing firm Scovill, Inc. – which commanded over $1 billion in sales in 1980 –

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[123] "Commerce Secretary Baldrige Dies in Rodeo Accident in California," *The New York Times*, July 26, 1987, Section 1.
[124] Judith Havemann, "Baldrige's Body Flown to Home Town, Tributes Pour in For Commerce Secretary Killed in Riding Accident," *The Washington Post*, July 27, 1987, Section A.
[125] David Johnston, "Malcolm Baldrige, Cabinet Member; Businessman with a Love for Rodeo." *The New York Times*, July 26, 1981, Section 1.
[126] "Commerce Secretary Baldrige Dies in Rodeo Accident in California," *The New York Times*, July 26, 1987, Section 1.
[127] Johnston, "Malcolm Baldrige, Cabinet Member; Businessman with a Love for Rodeo." His sister, Leticia Baldrige, was President Kennedy's social secretary, and his father, an Omaha lawyer, served a term in Congress.

Baldrige had worked on George H. W. Bush's 1980 presidential primary campaign.[128] This relationship opened the door to his appointment as Commerce Secretary after Reagan and Bush, now Vice President, took office.[129] Baldrige had honed his affinity for steer roping while growing up in Omaha. Reagan's ascent to the Presidency on a platform of western values offered Baldrige the opportunity to brandish his western identity in the corridors of the White House. His office was full of western and rodeo memorabilia, evoking a ranch house parlor: "bronze cowboy statues, a coiled lasso, a saddle he won at a 1978 rodeo, and a collection of belt buckles won in roping contests" adorned the room where he negotiated trade deals and conducted the business of foreign policy.[130]

One of the largest crises in the American cattle and beef industry took place during Baldrige's tenure in the early 1980s, as a global economic downturn wreaked havoc on American beef export markets. While Baldrige himself was an industrialist more than an agriculturalist, as Commerce Secretary he was involved in the global markets that affected American agriculture, including the cattle industry, with which he was undoubtedly familiar through professional rodeo. By positioning himself as a sympathetic westerner, Baldrige was able to maintain support for his policies in the Reagan administration and among its grassroots supporters. Equally important, however, was his seeming authentication of Ronald Reagan's image as a "cowboy president" by directly connecting rodeo to the White House at a time when a western identity was a

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[128] Ibid.
[129] Ibid.
[130] "Commerce Secretary Baldrige Dies in Rodeo Accident in California," *The New York Times*, July 26, 1987, Section 1.

strategic national political tool.[131] As Reagan touted the values of western-style plain dealing, Baldrige both a Cabinet member and a "real" cowboy, who could rope, ride, and rodeo. The evening of Baldrige's death, President Reagan emphasized the role that regional identity played in their relationship: "Mac and I shared an affinity for the West and I will greatly miss his friendship," his statement read, adding that Reagan appreciated Baldrige's "independent spirit and down-to-earth nature."[132]

Baldrige's unexpected death brought this relationship into sharp relief, which was part and parcel of the larger role the West was playing in national identity in the 1980s. "The turning Westward is unmistakable," a writer for the *New York Times* asserted in 1981 in a piece that featured Baldrige and his rodeoing, "as is rodeo's impact on the national consciousness."[133] In 1980, over 12 million people attended just over 630 PRCA rodeos across the country, and sales of rodeo gear and apparel had, in some quarters, quadrupled since 1975.[134] Rodeo had become profitable enough to fuel its development into a full-fledged professional sport in ways that even the visionary Harley May might not have predicted.

The growing popularity of rodeo reflects wide-ranging political, cultural, and scientific changes that this chapter will investigate in various registers in the 1980s and

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[131] Reagan's "cowboy" image was a maturation of the western turn in conservative politics, which had begun in earnest with Barry Goldwater's run for the Presidency in 1964, and was continued through Nixon's campaigns in the late 1960s and early 1970s. These candidates used their western roots to promote their anti-Eastern, anti-"establishment" status. While neither of these candidates embraced the "cowboy" mythos, they laid the groundwork for accepting westerness as individualistic and anti-government in terms of regulation and oversight.
[132] Johnston, "Malcolm Baldrige, Cabinet Member; Businessman with a Love for Rodeo."
[133] Scott Eyman, "Rodeo is Riding High Again." *The New York Times*, September 20, 1981, Section 6.
[134] Ibid.

1990s. First, the longstanding relationship between rodeo and the cattle industry shifted economically after the PRCA was formed in 1975. After a decade of volatility in the beef industry, rodeo became much more profitable than ranching in the 1980s. Many small cattle operations were decimated in the beef crisis at the beginning of the decade, leading to the centralization of the industry in a few commercial feedlots and packing houses, most of which were hidden from view. Rodeo made huge gains in public visibility just as the cattle business, while not shrinking, moved into a more sequestered geography.

During the Reagan administration, the beef business was not nearly as profitable as its pork and poultry counterparts – in fact, US beef consumption was plummeting – but it nevertheless became a powerful political lobby.[135] Part of this power derived from the location of the cattle industry in the West at a time when the region was a powerful broker of cultural and economic capital. But another part of this puzzling paradox rests with rodeo: rodeo's growing profitability and visibility furthered the political power of beef. Rodeo became a successful "entertainment arm" of conservative politics, promoting narratives of self-reliance, independence, and "authentic" American history that aligned with a rightward political turn. A profitable PRCA energized the political power of the western beef industry even as beef profits themselves were stagnant.

Both rodeo and the cattle industry turned towards the body of the bull in order to increase production efficiency in the 1980s. Since the 1960s, cattle stakeholders had

[135] Maureen Ogle, *In Meat We Trust: An Unexpected History of Carnivore America* (Boston: Houghton Mifflin Harcourt, 2013): 188-222.

continually martialed the expertise of animal scientists to improve the efficiency of cattle production in the name of increased profits. The beef crisis of the 1970s accelerated these scientific efforts and focused research on genetic and reproductive technologies, which aimed to standardize the biological makeup of cattle bodies to benefit efficient production. This research focused heavily on artificial insemination (AI), which turned scientists' attention to bulls' reproductive "performance," something to be measured by his penis, testicles, the microbiological composition of his semen, and the potential for his semen to transform herds of cows in few generations. The scientific move towards bulls was paralleled by the growing prominence of bull riding within the professional rodeo arena as the sport gained popularity during the 1980s and 1990s. Bull riding served no practical purpose in ranch work, but it became the most popular and lucrative of rodeo's individual sports, epitomizing a version of masculinity that was becoming more visible in modern professional rodeo. Successfully riding a bull became a badge of a "real man," one who combined Baldrige's invocations of individuality with the ability – and desire – to take a beating. This trend was aided by the scientific reproductive research undergirding the efficiency of the beef business. Rodeo stock providers used the same techniques ranchers were using to transform their herds into beef, to breed bulls specifically for bucking. At a time when beef consumption was at an all-time low in the United States, why was the idea of beef, shored up by rodeo's surge to popularity on the backs of bulls, so culturally important? The idea of beef was gender power, for sure, but it was also nation-power, as the West ascended both in the national imagination and in real political impact. Americans may not have been eating as much beef, but the power

of the cattle industry to define beef consumption as an American imperative was inscribed onto the bodies of cattle like a modern-era brand.

Cows, then, are at the heart of complex questions about gender, power, and nation during this decade. This chapter takes a frank look at the bodies of cattle not only as a cipher for human attitudes, in this particular case, human masculinity, but as bodies unto themselves, with all their attendant inconsistencies, idiosyncrasies, and identifying markers. The bodies of cows complicate the narratives of progress espoused by the PRCA, the BIF, and the cattle industry. The cow's corpus – and, as importantly, its corpse, lest we forget the centrality of the beef *carcass* to this discussion – cannot account for consumer choices, political machinations, genetic manipulation, or performance. What it can do is show us how these forces interacted, and expose their strengths and weaknesses: where they succeeded and failed. This chapter first follows bulls into the rodeo arena, analyzing the cultural, political, and animal turn to bull riding as indicative of a broad shift in American attitudes towards masculinity. The remainder of the chapter looks to the beef industry and its turn to scientific methods of "improvement" to elucidate these broader changes enacted in professional rodeo. This chapter first follows bulls into the rodeo arena, analyzing the cultural, political, and animal turn to bull riding and its relationship to shifting American attitudes towards masculinity. The second section looks to the beef industry and its turn to scientific methods of improvement to elucidate changing definitions of bull "performance" in beef production and professional rodeo. Finally, the chapter concludes by examining the relationship between culture and science in transforming the bodies of beef and rodeo

cattle in the 1980s with an eye towards the gendered expectations of animal products and performances.

THE AGE OF THE BULL

In a 1981 *New York Times* article featuring Malcolm Baldrige as a newly appointed cabinet member, he was asked his opinion on "the connection between the rodeo and the American ideal of the self-made man." Baldrige replied, "'The rodeo...puts you in close and natural touch with the most independent and self-reliant group of people that are left in the U.S.A.'"[136] Rodeo's increased visibility brought with it a desire for independence and self-reliance to those beyond the traditional rodeo crowd, becoming not only features of rodeo competitors but goals to aspire to for spectators of all backgrounds. The article features one of the dozen or so rodeo schools that had popped up across the US in recent years, run by semi- or fully-retired successful professional rodeo cowboys looking to capitalize on the growing enthusiasm for the sport. These schools took on the burden of teaching ranch skills as ranch labor became scarcer while interest in rodeo grew. While rural work in the West drained away the supply of ranchmen, this school, run by PRCA veteran Bud Sankey, served plenty of suburban and "city" kids who flocked to rodeo schools to take up the slack. As Sankey observed, "'Things sure have changed since I started in rodeo...The kids joining rodeos are about 65 percent city kids, not ranch kids, like when I was growing up.'" Watching the action from the sidelines, veteran rodeo

[136] Eyman, "Rodeo is Riding High Again."

stock contractor Neal Gay summed up the phenomenon as a return to history: "'Well, the country ought to turn to the West; it's the only history we have.'"[137]

Sankey, however, remained pragmatic: "'My biggest love isn't rodeo, it's money.'" Sankey, like Baldrige, parlayed the desires of would-be westerners into an effective moneymaking venture.[138] The appeal of being, in Baldrige's terms, in "close and natural touch" with self-reliance was in many ways what drew this new demographic to rodeo. To be fair, western themes pervaded various popular culture outlets to the point of faddishness, perhaps best exemplified by the flotilla of mechanical bulls that proliferated in urban bars throughout the 1970s.[139] But the siren call of self-reliance pulled westward in two directions in the 1970s. One the one hand, those seeking self-reliance followed the long historical trail set by Henry David Thoreau, at the time most recently picked up by Edward Abbey in his anarcho-environmentalist tracts *Desert Solitaire* (1968) and *The Monkey Wrench Gang* (1975). Environmentalism in its various political forms was suspicious of postwar capitalism, and called for greater individual awareness of and attachment to land as a way to combat the heavy costs of urban living to the land and to the human body and mind. On the other hand, the desire for self-reliance could also go in an entrepreneurial direction. Instead of dropping away from capitalism, this branch of self-reliant actors leaned into it, seeking to remove government "impediments" to business, finance, and development. This was certainly not the first time that Americans experienced tension between left-leaning individualism and right-leaning individualism,

[137] Ibid.
[138] Ibid.
[139] Jason Mellard, *Progressive Country: How the 1970s Transformed the Texan in Popular Culture* (Austin: University of Texas Press, 2013): 171-198.

but its resurgence in the 1970s is useful to keep in mind when thinking through the popularity of the West and rodeo. The mixture of individualism with a desire for greater connectedness to land and personal space created a veritable maelstrom of attitudes towards the West from both native westerners and those who appropriated its tropes, but what they all shared was a desire to use (or imagine) land for self-reliant gain, whether as wilderness, resource, or real estate. Rodeo became an ideal middle ground: tied to historical uses of land, it drew those whose individualist thinking leaned towards an earlier utopian vision of rurality and agriculture, while at the same time fostering a rollicking entrepreneurial culture both inside the arena and out.

Those like Sankey knew there was substance to the desires of his growing pool of students, and a profit to be made on the new crowd. Rodeo schools typically would teach students how to ride horses, handle ropes, and other ranch-to-rodeo skills. However, the cheapest and quickest skill to teach to those with non-ranching backgrounds was rough stock riding. One did not have to learn how to ride in order to learn how to ride out eight seconds. Once out of rodeo school, suburban students could set up bucking practice in the back yard with nothing more than a rope and an oil drum. Regardless of whether such students became professional rodeo competitors, they added to a base of support for rough stock events that drastically changed the complexion of rodeo competition in the following decade.

Larry Mahan's widespread popularity in the mid-1970s helped draw a raft of spectators to the rough stock event of bull riding, which experienced what many rodeo enthusiasts call a "golden age" during the 1980s. Mahan's athletic and analytical approach

to the event, in which he attended to both the physical demands that it made on his body and the focused mental demands that bull riding required, represents a shift in how the event was perceived and approached within the rodeo community itself. Throughout rodeo's previous history, bull riding had been a kind of novelty act, requiring little skill and having little relevance to actual ranch work except as wild and ill-advised entertainment. Even the other rough stock events – saddle and bareback bronc riding – were more closely tied to the purpose of providing work horses, and conferred some degree of historically authenticated horsemanship skills. But bull riding was for those who were especially reckless, or "for those who did not possess the skills to rope and handle a horse."[140] During the 1950s, however, concern over the latter qualification began, slowly, to wane. A cowboy named Jim Shoulders, who competed in several events in addition to bull riding, became a bull riding sensation in the late 1950s. As a five-time all-around (multi-event) world champion, Shoulders had no lack of demonstrated rodeo skill; however, as an enthusiast for bull riding, he conferred a sense of legitimacy to the event for skilled cowboys.[141] Shoulders made bull riding a bonafide rodeo spectacle. During the 1960s and 1970s, by moving away from all-around competition and specializing in bull riding, riders such as Larry Mahan made it a sport.

The growth of bull riding in professional rodeo in the late 1970s and into the 1980s reflects changes within the rodeo world, but points also to political and cultural factors well beyond the arena. For example, the consolidation of the PRCA and the

[140] Professional Bull Riders. "It All Started in A Motel Room." Last modified April 10, 2013. http://www.pbr.com/en/news/features/20th-anniversary/2013/4/started-in-a-motel-room.aspx
[141] Kristine Fredricksson, *American Rodeo: From Buffalo Bill to Big Business* (College Station: Texas A&M University Press, 1985): 106.

institution of the circuit system in 1975 eased the travel burdens of many cowboys, as now they could compete regionally to qualify for the national finals. This also eased the travel demands on their animals, especially those used in timed events. A serious roping competitor could keep different competition horses in strategic locations close to the rodeos he was slated to compete in, traveling not only from rodeo to rodeo, but from horse to horse as well.[142] This practice was more tenable in a regional than a national setting. But for rough stock riders, regional circuit competition was even more advantageous. With a more limited area to cover, and without the need to travel with an animal (or to have a stable of animals stationed around the region), rough stock riders could travel to far more rodeos at a lower cost, and ride fresher local animals. The PRCA organizers instituted this system in part because rising inflation and fuel costs during the 1970s were severely hampering cowboys' ability to travel as extensively as they needed to, rapidly decreasing the number of cowboys who were able to compete professionally.[143] However, while the circuit system allowed timed event competitors to continue as professional rodeoers, the extent of the advantage it provided to rough stock riders was much greater. This, along with the "Sankey generation" of rodeo school rough stock graduates, generated a larger pool of bronc and bull riders as the PRCA moved into the 1980s.

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[142] Fredriksson details the traveling lives of professional cowboys in Chapters 13 and 14.
[143] Clipping from unidentified newspaper, "1,034 Pro Cowboys Enter 79th Frontier Days Rodeo." July 3, 1975, Box 11, Folder 18, J.S. Palen collection, Collection 10472, American Heritage Center, University of Wyoming; and newspaper clipping from the *Denver Post*, Joan Zyda, "Cowboys Ride a Savage Mount: Inflation," July 23, 1975, Box 11, Folder 18, J.S. Palen collection, Collection 10472, American Heritage Center, University of Wyoming.

As rodeo grew in scope and popularity under the circuit system, arena winnings increased. The year 1976 saw the first cowboy to clear $100,000 in winnings in one rodeo season. Oklahoman Tom Ferguson, an all-around competitor, tallied his regular and National Finals winnings at $114,110 that year.[144] However, earning potential was greatly enhanced by the entry of corporate sponsorships into the professional rodeo scene. The corporate sponsorship structure, as it was applied to professional rodeo, encouraged competitors to specialize in particular events, as they could win prize money provided by corporate sponsors separately from their arena winnings. Ferguson's six-figure year as an all-arounder quickly became more difficult to attain, as those who focused on single events were increasingly rewarded for that shift. Corporate sponsorships for single events became so lucrative so quickly that by 1982, a bronc rider named Bruce Kersey won $113,655 at the world championship alone.[145]

In the 1980s, corporate involvement in rodeo was not new, but its encouragement of specialization was a departure from previous arrangements. Corporate sponsorship of professional rodeo had been welcomed since 1960, when the new president of the Rodeo Cowboy's Association, Harley May, appeared in advertisements for Tony Lama Boots.[146] Early sponsors tended to be tied to the rodeo industry in some way, as was the case for Justin Boots and Wrangler, both apparel companies that sold products rodeo competitors already wore. In the 1970s, Frontier Airlines came a corporate sponsor, furnishing first a prize saddle in 1973 and then discounted airfares to full-time professional rodeo

[144] Fredricksson, 183.
[145] Ibid.
[146] Clipping from *Western Horseman* magazine, December 20, 1960, Sul Ross State University Collection, Series II, Bio Files, Harley May. Archives of the Big Bend, Sul Ross State University.

competitors starting in 1974.[147] The following year, the airline covered entry and lodging expenses at some rodeos for "top contestants," thereby garnering a loyal customer base among the most widely travelled competitors.[148] These top contestants were increasingly single-event specialists, as the most money could earned by traveling to the largest number of rodeos (sometimes back and forth between rodeos happening at the same time), and combining corporate-sponsored bonuses with regular winnings.

In the 1970s and 1980s, rodeo opened its advertising doors to non-rodeo-specific products, namely cigarettes and beer. The R.J. Reynolds Tobacco Company began its relationship with professional rodeo in 1971, when tobacco advertising was banned from television. Reynolds' Winston Championship Awards grew from $30,000 in 1972 to $175,000 in 1979.[149] The Schlitz Brewing Company had joined the rodeo world in 1976, sponsoring awards geographically according to the new PRCA circuit system. Schlitz's sponsorship was taken over by The Adolph Coors Company in 1980, which raised its sponsorship contribution to a total of one million dollars over 21 months.[150] By 1982, corporate sponsorship of PRCA, including prize money, travel, promotional activities, and television broadcasts, had reached 8.3 million dollars.[151] In 1980, Reynolds created its own "series" within the PRCA. Over seventy rodeos along the PRCA circuit were

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[147] Fredricksson, 187-90.
[148] Ibid., 190. Fredricksson details the numerous ways Frontier contributed to prizes, from saddles to championship rings and even trucks in collaboration with Ford Motor Company. Frontier Airlines became the "official airline" for the PRCA and offered direct routes and discounts for members. Frontier also assisted in promoting rodeos to the public through advertising.
[149] Ibid., 192.
[150] Ibid., 195-6.
[151] Ibid., 186. Reynolds sponsored the "Winston scoreboard" present at every PRCA rodeo, ensuring that despite the television ban for cigarette ads, their product still garnered air time during televised rodeos.

designated part of the "Winston Rodeo Series," and cowboys could earn points in these rodeos towards an annual prize, which was separate from earning PRCA points towards competing in the National Finals.[152] Reynolds was not a rodeo-specific business, but its corporate sponsorship shifted the balance of corporate power within professional rodeo. By making it possible for a single corporation to have a stake in competitors' choice of where to compete, Reynolds opened the door for closer relationships between cowboys and their sponsors, a relationship somewhat less mediated by the PRCA.

Bull riding came out on top of this alchemy between corporate sponsorship and shifting cowboy demographics. As far as spectator enthusiasm was measured, it effectively displaced what had been rodeo royalty, the "all-around cowboy" such as Jim Shoulders or Tom Ferguson, who earned his title by competing well in several timed and rough stock events over the course of a rodeo. Instead, the eight-second bull ride became the main draw of professional rodeos, and also the main moneymaker for many cowboys. PRCA bull riders such as Tuff Hedeman, Michael Gaffney, Ty Murray, and Cody Lambert became rodeo headliners and rich men as they competed throughout the 1980s and 1990s. By some measure this change was predicted by pragmatic men like Bud Sankey, who could teach men who hadn't ridden a horse or worked on a ranch to ride a bull much more easily than he could teach them the skills needed for timed events. But the reason why bull riding surpassed bronc riding in popularity and profit – an equally "easy" event to learn, if not to succeed at – reflects a ramping-up of hypermasculinity

[152] Ibid., 192.

within professional rodeo culture. This escalation was expressed equally in the sport's disinvestment in female competitors and in its turn to bulls.

Rodeo hadn't always been a "man's world," even if it had always been a masculine one. However, the rise of bull riding in the 1980s followed a deliberate move to make professional rodeo impenetrable by, not just unwelcome to, women. Women's official marginalization from the sport became complete in 1975 when the Girls' Rodeo Association (GRA), which had governed women's competitive rodeo since 1948, became the Women's Professional Rodeo Association (WPRA).[153] Women had been prevented from competing in professional rodeos since 1930, when professional rodeos stopped accepting women competitors.[154] The GRA was founded by these women who were shut out from competing at various rodeo events, including roping, rough stock riding, and barrel racing, creating parallel tracks for men and women that could not intersect in the arena.[155] GRA rodeos were small, less numerous, and paid far less than men's rodeos.[156] In 1975, historians Tracy Owens Patton and Sally M. Schedlock point out, the newly reorganized PRCA responded to the 1972 Congressional approval of the Equal Rights

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[153] Tracey Owens Patton and Sally M. Schedlock, *Gender, Whiteness, Power in Rodeo: Breaking Away from the Ties of Sexism and Racism* (Lanham: Lexington Books: 2012): 105-110.

[154] Patton and Schedlock, 47. These authors point to the combined factors of Depression cutbacks in rodeo events and the death of bronc rider Bonnie McCarroll in the arena at the 1929 Pendleton Roundup as factors leading up to the exclusion of women from professional competition.

[155] "History," Women's Professional Rodeo Association. http://www.wpra.com/history.asp. Patton and Schlock also give a history of the GRA, barrel racing, and the WPRA's break with the PRCA in 2007 in *Gender, Whiteness, and Power*, Chapter 4. Mary Lou LeCompte, in her wonderful history *Cowgirls of the Rodeo: Pioneer Professional Athletes* (Urbana: University of Illinois Press, 1993) tells the longer history of barrel racing as the signature female rodeo event even within a diverse GRA program as early as the late 1940s, pg 154-179. As of this writing, the WPRA website's tagline highlights the dominance of barrel racing as the only viable women's event, touting itself as "WPRA: world championship barrel racing."

[156] Patton and Schedlock, 84.

Amendment by admitting women competitors into its rodeos and allowing them to qualify for the National Finals Rodeo, but only in the event of barrel racing.[157]

The gendering of barrel racing as a female event was longstanding for several reasons: it required no rope skills, the rider stayed on the horse through the whole event, and the horse kept its feet on the ground except to run, all of which minimized the danger of rider injury. Its re-inclusion within mainstream – read, male – professional rodeo was in many ways both progressive and reactionary. While the WPRA/PRCA partnership opened up opportunities for corporate sponsorships and large purses for women who wanted to compete professionally, it codified the narrow limits as to what rodeo events were appropriate, and possible, for women to pursue. Roping and rough stock events were clearly unavailable if a female competitor wanted to make enough money to rodeo full-time. The ability to compete for more money and on a national stage shifted the entire women's competitive scene to this one event, and gutted the organizational structure of the GRA. Strangely enough, the move from "girls" to "women" in the organization's title, ostensibly a move towards dismantling sexist stereotyping, instead signaled a dismantling of a woman's ability to compete in whichever rodeo event she chose. From its highest membership number of over 3,000 in 1975, the WPRA's membership dropped by a third by 1979.[158] In 1981, the shift from the all-event GRA to the barrel-racing dominated WPRA severed women from mainstream rodeo almost completely. The formation of the WPRA made barrel racing the only event in which

[157] Ibid., 109.
[158] Mary Lou LeCompte, *Cowgirls of the Rodeo: Pioneer Professional Athletes* (Urbana: University of Illinois Press, 1993): 180.

women could compete professionally for good money as professional rodeo became increasingly lucrative in the 1980s.[159]

By concentrating women's competition on one event, professional rodeo strictly controlled the use and visibility of a woman's body and skills, confining the appearance of women at rodeos to a predictable schedule. While the WPRA's inclusion in PRCA rodeos certainly brought more women to professional rodeos and increased their purses, their presence was strictly controlled in a manner that reinforced male culture and dominance, not increased equality. The two times during a rodeo that women appear in the professional arena are for opening parades and processionals involving rodeo "queens" – a trend started in the 1950s of creating an unpaid rodeo-specific pageant that emphasized a woman's physical appearance and her supportive contribution to ranch and family, not her competitive merit in the arena[160] – and during the barrel racing event.[161] And even with access to PRCA purses, the prize money for women who qualified to compete in the NFR was roughly half of men's.[162] WPRA women were firmly relegated to "guest" status within the PRCA.[163] Corporate sponsorship for women was slower to appear. Purina Mills became the WPRA's first corporate sponsor in 1985, narrowing the

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[159] Ibid., 178.
[160] Patton and Schedlock point out that the emergence of the Rodeo Queen can be traced back to the 1930s, when prominent western families could participate in a sponsorship relationship with their local rodeos by having their daughters promote, rather than compete in, rodeos. The authors trace the development of the Rodeo Queen into a "sponsor girl" and eventually the contemporary pageant contesting on pages 64-74.
[161] Some contemporary rodeo novelty acts, like the One Armed Bandit, have female trick performers, which is a throwback to the earliest rodeo days when women commonly performed as highly skilled, daredevil "trick riders" in rodeo events. Patton and Schlock (Chapter 3) and LeCompte (Chapter 2) detail the entanglements between rodeos, Wild West shows, movies, and other entertainments that women navigated from the 1880s through the 1920s.
[162] Patton and Schedlock, 109.
[163] Ibid.

salary gap by a small margin.[164] However, this confinement did not diminish spectators' enthusiasm for barrel racing, which became the second most popular professional rodeo event by 1985 (second, of course, to bull riding).[165] The event is fast, exciting, and dramatic: short runs (15 seconds or less) make for holler-worthy sprints from the last barrel to the finish line, and contests are often decided by tiny fractions of a second. Despite the persistent salary gaps between barrel racers and single-event specialists in the men's events, since barrel racing is still the only PRCA event in which women can compete, the event generates 95% of the WPRA's revenue – effectively crushing the ability of women to compete professionally in any other rodeo event even outside of the PRCA.[166] WPRA all-women's rodeos simply cannot devote their resources to supporting women's careers in other events.

This effective excision of women from professional rodeo reached its apotheosis at the same time bull riding became the central attraction of rodeo. The bull became the most lucrative, popular, and legendary animal in professional rodeo, a living embodiment of a hyper masculinity that embedded itself into rodeo culture and made bull riders in to the richest competitors.[167] Specialization, corporate sponsorship, and conservative views

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[164] Ibid. The authors give a comparison of 2010 earnings for top male and female competitors to illustrate this point: "The pay difference between the top cowboy and cowgirl salaries is significant: $20,148.00." Top male competitors typically make over $200,000 per year (and NFR/corporate series winners can make much more), whereas the highest-paid female barrel racer made $179,852 in 2010 (109).

[165] Ibid.

[166] Ibid., 133. In 2006, the PRCA created its own barrel racing association under its umbrella, effectually gutting the WPRA. This move did not come without significant resistance. Patton and Schedlock describe the legal suit filed against the PRCA by the WPRA that resulted in a 2008 settlement that left the WPRA in control of barrel racing events in Chapter 6.

[167] In the last chapter I talked about Larry Mahan's clothing line, which was a popular representation of the celebrity of the bull rider made manifest in the broader culture. Jason Mellard's *Progressive Country*

of gender all had a hand in the relegation of women to barrel racing over the 1980s. Yet during this transition, the inscription of patriarchy was writ most largely by one's mount. The absence of ranch-worthy skill was clearly not the delineation between bull riders and barrel racers, nor the difference between male bronc riders and bull riders. While the skill sets for these events are very different, none advance a "traditional" sense of ranch culture or labor. During the 1980s, both bull riding and barrel racing surpassed bronc riding – the only one of these events with any tie to ranching, as the bucking horse would, historically, be turned into a submissive working animal – in popularity and profit-making. But why didn't broncs generate the same popularity? Broncs in rodeo were a facsimile of "wildness" but with the implied historical assumption that they could, eventually be tamed. Broncs were expected to look scruffy, rangy, "natural"; they were supposed to look and act wild, but the familiar image of the "broke" horse would always accompany them. In fact, large numbers of tractable riding horses filled the rodeo arena every day, many of them ridden by women running barrels. Horses, as a general category, could conceivably become "suitable" mounts for women in the logic of rodeo. Bulls, on the other hand, were not even in a category for taming. No use for a tame bull was anywhere in sight. Without the image of a tame, useful animal haunting the "wild" one, there was no need for superficial wildness. Unlike rough stock horses who needed to look a certain way in order to be believable as broncs, bulls had the potential for more

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examines the proliferation of mechanical bulls in honky-tonk bars in the late 1970s and 1980s, which is a further extension of this phenomenon that brought rodeo culture into other forms of American leisure.

physical variety. The only thing that mattered was their capacity for eight seconds of "rank" behavior.

The wildness of bulls ensured that they remain the domain of men in contrast to horses in rodeo. Anthropologist Elizabeth Atwood Lawrence observed in her study of rodeo culture that "rodeo people, like cattlemen, very often categorize women with horses," and not in a complementary manner. Her analysis of common jokes across rodeo culture link fractious horse behavior to women's sexual availability and unpredictability, such as "Cowgirls like to horse around," "Women are like horses – you can't depend on them," or any number of bumper-sticker-type slogans along the lines of "Calf ropers get it in the box." One longtime bronc rider Lawrence interviewed in the late 1970s commented that "horses and women are the same: they don't know if you treat them good or bad." These examples place women in a position submissive to men, or confounding to men; either they should obey or get out of the way. In contrast, Atwood argues, "since bulls stand as male symbols...it appears that men perceive them...as part of the masculine camaraderie complex, a bonding which excludes the female element, and indeed is in opposition to it."[168] In this logic, the potential for domestication automatically feminized horses in the service of creating a hyper-masculinized rodeo atmosphere, which made the virile, dangerous, and untamable bull the natural center of the sport.[169]

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[168] Elizabeth Atwood Lawrence, *Rodeo: An Anthropologist Looks at the Wild and the Tame* (Chicago: University of Chicago Press, 1982): 109-110.

[169] Mellard provides a fantastic counterpart to this argument in his reading of the gender and class confusion wreaked by the mechanical bull at the famous suburban Houston honky-tonk, Gilley's. This was a bull that women rode frequently, but not without confounding male participants who had to search for explanations for why women could "beat" them in mechanical bull riding contests. Mellard's analysis of male responses shows that men explained how "the reason the women...had begun to outcompete men on

Versions of masculinity conferred by bulls to men permeate even ancient historical myths, such as the Roman Mithras, and more recent tales, such as the common-sense yeoman John Bull. Beginning in the 1980s, the inviolable masculine body of the bull stood at the center of rodeo's performance of western identity, updating these longstanding associations in a new register.

The bull's new centrality to western-inflected culture and politics helped ensure that it was the body of the bull, not the horse, that became the subject of a large-scale revision in both rodeo and beef production. As bulls came to the fore of professional rodeo, recent developments in livestock breeding that were changing the cattle production landscape were also making significant impacts on the production of bucking bulls. Much of this change came from the laboratory, where animal scientists were exploring ways of improving the beef industry at the molecular level. Bulls were at the center of this research, the laboratory itself a zone of masculinization to rival the rodeo arena as the reproductive organs of bulls became the site of investigation. The research supporting the mechanization and standardization of the beef products Americans consumed during the 1970s and 1980s was strangely tied to a parallel project of increasing the size and

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Gilley's mechanical bull rested in the lack of a phallus, that it was the bull's power to castrate that threatened the urban cowboy's sense of masculine mastery" (*Progressive Country,* 180). Atwood observes an opposite male fear of women riding *live* bulls, wherein men "seem to have a preoccupation with keeping the female body intact" (*Rodeo*, 112) and believe that bull riding jeopardizes not only their femininity, but their reproductive genitalia. The mechanized animal, therefore, threatened a man's balls, but the animal in the flesh proved his masculine potency. Mellard asserts, "the inversions over the meaning of manhood and mastery slip over the categories of man and animal, man and machine, reducing [urban] working-class men to either brute creatures or cogs. The mechanical bull appears all the more threatening in this context," as were the women who "victimized" men by mastering the technologized facsimile of the animal (*Progressive Country*, 181). The machine in the honky tonk castrates the man, but in the rodeo arena, the animal sterilizes the woman, as the "authentic" rural cowboy identity has not been compromised by the wage work and urbanization that suffuse the modern west.

wildness of the bulls who terrorized rodeo cowboys. The reason for the cow to enter the laboratory in the first place, however, was a crisis in the country's beef supply. In the years leading up to bull riding's rise in professional rodeo popularity, the crisis spurred a scientific revolution in beef production in the United States.

MAKING THE COWS OF THE FUTURE

The beef crisis was, at first, a grain crisis. The bottom fell out of the U.S. beef market in 1973, when the price of grain doubled from 1972's cost owing to a worldwide grain shortage and a secret Soviet "grain grab" of U.S. stockpiles, and continued to rise more than 40% from there in 1974.[170] The United States stockpiled a substantial grain surplus during the 1960s, in part because of the Green Revolution, which seeded developing nations in Asia, South America, and Africa with genetically modified wheat crops that exploded the amount of crop yields in a single cycle. This revolution, aimed at reducing world hunger, had reached its full expression by the mid-1960s, drastically reducing the need for wheat exports from the United States and other developed nations, and allowing for the growth of stockpiles.[171] However, crops around the world were threatened in 1970 by a forecast of unusual drought and flood cycles.[172] As early as 1971, in response to this developing environmental crisis, the Food and Agricultural Organization (FAO) of the

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[170] Ogle, 168.
[171] Norman Borlaug and the Green Revolution are an entire dissertation unto themselves. For further reference, consult Lester R. Brown, *Seeds of Change: The Green Revolution and Development in the 1970s* (New York: Praeger, 1980); Per Pinstrup-Andersen and Ebbe Schioler, *Seeds of Contention: World Hunger and the Global Controversy Over GM Crops* (Baltimore: Johns Hopkins University Press, 2000); Leon Hesser, *The Man Who Fed The World: Nobel Peace Prize Laureate Norman Borlaug and his Battle to End World Hunger, and Authorized Biography* (Dallas: Durban House Publishing, 2006).
[172] Ogle, 167.

United Nations warned of a shortage in global food supplies.[173] The political rhetoric surrounding these shortages focused on the potential of widespread famine and "mass starvation," which seemed to convey a concern for *human* food supplies.[174] However, the 1971 FAO directive did not only ask developed nations to grow more grain, but asked developing nations to convert their existing grain surpluses into feed grain – grain for livestock to eat, not people.[175]

By any measure, the food-shortage rhetoric of the early 1970s created a global boom in beef production subsidized by U.S.-based multinational businesses. Feed grain supported the increasing demand for beef in the global market, where consumers from Europe to Japan were increasing their meat consumption sharply as their incomes rose after World War II.[176] The amount of grain needed to feed the growing global population of beef cattle was immense. Under the rhetoric of "feeding the world" or avoiding "mass starvation," wheat was produced primarily to satisfy newly acquired tastes for beef among an emergent global middle class.[177] This arrangement worked well as long as grain surpluses ensured that prices remained low. However, this United States-led global beef boom had dire consequences for the American beef industry as soon as grain prices rose. One break in the global food supply chain tipped the balance. Russian grain production

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[173] Ibid.
[174] Ibid.
[175] Jeremy Rifkin, *Beyond Beef: The Rise and Fall of the Cattle Culture* (New York: Plume, 1993): 162.
[176] Rifkin estimates meat consumption rose in these nations as much as 40% over the course of the 1970s.
[177] Rifkin,147-163. Transnational corporations, in partnership with the US government, facilitated this trend in the 1970s. Jeremy Rifkin, a historian of the global cattle industry, estimates that "over $3.5 billion in loans and technical assistance was pumped into Latin America to promote cattle production" from 1971-1977 alone. The U.S. government supported this transition from growing food to growing feed in developing nations by linking US food aid for the poor to the production of feed grain, while the governments of developing countries pulled in transnational companies, such as Ralston Purina and Cargill, with low-interest loans on agricultural facilities.

was wiped out by flooding in 1972. In a secretive "grain grab," the anxious nation purchased "billions of bushels of grain" from other nations' stockpiles, including nearly all of the US' stores.[178] This "grain grab" squeezed grain supplies and resulted in rapidly raising prices. Increased grain cost put a particular strain on American feed lots, which could not afford to purchase enough grain to finish the cattle they already had in the lot, much less afford to buy replacement cattle from ranchers. Unfinished cattle were worth much less at the point of slaughter. Producers were thereby crushed both at the front and back end of the market. Montfort, the nation's largest cattle feeder at the time, reported losses averaging $125 per head of cattle by 1974, compounded by rising overhead costs such as transportation fuel; the company's share price had fallen from $16 per share in 1970 to $4 in 1974.[179] The price of beef rose so sharply in the United States that consumers organized boycotts, protesting its "'ridiculous'" cost.[180]

The industry flourished in the years immediately after the crisis despite stagnant consumption. When the industry was threatened in the early 1970s, it supercharged its turn to efficiency and was able to produce beef at a much lower cost at every point along the production line, thus making it possible for companies to survive, and thrive, without

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[178] Ogle, 168. She notes that this purchase was arranged through private treaty unknown to US government officials.

[179] Ibid., 169. Nevertheless, Montfort and its main competitor, Iowa Beef Packers (IBP), took on considerable debt to buy out numerous small packers, whose businesses could not survive such catastrophic losses, at very little cost. These quiet buy-ups ensured their dominance in the market once the crisis abated. Still, at the height of the crisis, even these giants were at risk. (163-66). Christopher Leonard's The Meat Racket: The Secret Takeover of America's Food Business (New York: Simon and Schuster, 2014) and Maureen Ogle's In Meat We Trust tell comprehensive histories of how the meat industries – especially pork and poultry – became large corporate entities in the 1960s and 1970s, giving critical details about changing labor markets, moves towards right-to-work states in the south and west, and the obstacles that beef producers faced in trying to follow these trends.

[180] Ibid., 169.

selling loads of beef. This confounding paradox can be explained in part by a revolutionary turn to an efficiency model of production that began in the 1960s with the large corporate conglomerates Montfort and IBP. These companies contracted with feedlots, ensuring a steady stream of cattle that had shared environmental and nutritional conditions, and made what had been a chain of separate, disorganized interests in to a single process with controllable variables.[181] At the same time, the body of the cow itself became a site of vigorous, sophisticated laboratory research aiming to turn less feed into more meat. Great advances had been made in cattle nutrition during the 1950s and 1960s, especially in the context of grain research due to the Green Revolution. The cattle industry's importance to grain research in the postwar era had laid the groundwork for a close relationship between beef's main advocacy group, the American National Cattlemen's Association (ANCA), and the United States Congress. The ANCA had a history of lobbying for scientific research pertaining to grain agriculture in the context of the Green Revolution.[182]

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[181] Again, Ogle and Leonard provide in-depth studies of how this phenomenon unfolded, creating deep changes in the labor structure, geography, and technology of meat production in the US. In the postwar years, cows turned into beef by passing through several changes of ownership. Ranchers raised the cattle, then sold them either to a feed lot for grain-finishing, or directly to a slaughterhouse, or packer. The packers killed the cattle and created the raw carcass, then sold the product to groceries, which then butchered the meat and packaged it for consumers. Each link in this chain had its own system of governance and its own culture. The products that this system produced varied significantly in quality and price from store to store, and even steak to steak. Beef was a gamble for consumers in comparison to pork and, increasingly, poultry, as those production streams were more easily standardized.

[182] Cattle research in the 1950s and 1960s was focused intensely on grain and nutrition. The ANCA was instrumental in securing federal and state funding for such research, and was as a result intimately tied to the global grain producing industries. Correspondence and internal records throughout the NCA Papers refer to ongoing concerns with grain and nutrition research even as the beef industry turned primarily to reproduction and genetics in the 1970s. The ANCA's budgetary requests to the House Appropriations Committee for Fiscal Year 1973, for example, keep the number of funded Scientist Man Years for "Feed Conversion (Including Ruminant Nutrition)" the same as in previous years. In other words, this transition was not a cut to nutrition research, which remained crucial to the ANCA's priorities, but rather a ramping-

However, in the 1970s, the focus of research changed. Scientists turned away from what went *into* the cow from the outside, and started taking a hard look at the potential for a cow's genes to control how the body processed its intake. The ANCA proved invaluable during the beef crisis, as the group was able to martial governmental support for increased genetic research in cows, arguing that creating a more efficient cow in the United States was paramount to national and international food security. Over the 1970s and 1980s, the ANCA used this argument to aggressively lobby for federal research support, and equally aggressively marketed beef as a safe and nutritious product to reluctant consumers. At the same time, the ANCA shared significant contact with the PRCA, working with the rodeo world to promote the cattle industry as inseparable from American identity formation. The ANCA pulled important themes from rodeo – westernness, tradition, and masculinity – into its marketing campaigns for beef, such as adding western-style branding-iron marks to steak advertisements. As scientists started making bulls the center of their research, the unofficial partnership between the ANCA and PRCA ensured that bulls became equated with beef in the public domain.

Gordon Van Vleck, president of the American National Cattlemen's Association (ANCA), addressed a somber crowd at the Beef Improvement Federation (BIF) Research Symposium and Annual Meeting in Des Moines, Iowa in 1975. The cattle industry had come under attack from consumers and environmentalists, who decried rising meat prices and the amount of grain consumed by cattle while a food shortage loomed. Van Vleck's

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up of reproductive research. Information from "Statement of American National Cattlemen's Association Appropriations for Fiscal 1973, United States Department of Agriculture, Environmental Protection Agency, Food and Drug Administration," April 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

aim was to acknowledge the crisis affecting beef production and prices, and to counter the "unwarranted criticism" coming from "sincere but misguided people" regarding "the role of ruminant animals in providing food." As the industry seemed to be collapsing under the weight of economic and cultural change, Van Vleck bolstered morale at the BIF meeting by prophesizing recent scientific advancements to beef production would keep beef afloat. "I am convinced," he reassured them, "that there will continue to be a cow in our future."[183]

Unfortunately for cattle raisers, things were only getting worse. Between 1976 and 1983, annual per capita retail consumption of beef fell from 94.4 pounds to 78.7 pounds, a number that would continue to fall all the way down to 70 pounds in 1987.[184] One measure found that beef demand fell by 30 pounds per person per year from 1973 to 1983.[185] The initial beef crisis turned out to be just the beginning of a rough decade of bad publicity for the industry, as the consumer boycott over high prices was quickly followed up by "a flurry of reports" that linked beef consumption to poor health.[186] These blows made "clear that beef must be repositioned in the diet and its chemical composition changed, if its consumption in desired quantity was to be reconciled with

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[183] "The Future of Beef and World Food Production," Gordon Van Vleck, President of the ANCA, Proceedings of the Beef Improvement Federation Research Symposium and Annual Meeting, May 19-21, 1975, Box 4 Folder 3, Beef Improvement Federation Papers, Iowa State University Special Collections.
[184] "What is Being Done and What is Needed in Specification Programs," G.C. Smith, Texas A&M University, Proceedings of the Beef Improvement Federation Research Symposium and Annual Meeting, May 12-14, 1988, Box 20 Folder 1, Beef Improvement Federation Papers, Iowa State University Special Collections. This is a 1988 document but gives a concise history of 1970s pressures.
[185] "Cows and Politics," Gordon Van Vleck, Proceedings of the Beef Improvement Federation Research Symposium and Annual Meeting, May 5-6, 1983, Beef Improvement Federation Papers, Iowa State University Special Collections. Gordon Van Vleck was then former president of the ANCA and then-Secretary for Resources, California Resources Agency. Van Vleck cited economics, health concerns, vegetarian activism, and increase of supply of pork and chicken as detriments to the beef industry.
[186] Ibid.

recommendations by health professionals."[187] In other words, the task of scientific researchers was to help cattle raisers to create a new kind of animal.

The downturn in beef consumption was especially disappointing in light of recent *gains* in demand the industry had enjoyed in the early 1970s. Every year, the ANCA prepared an appropriations request to relevant federal agencies to promote the interests of the cattle industry. Their Fiscal Year 1973 combined appropriations statement to the United States Department of Agriculture, the Environmental Protection Agency, and the Food and Drug Administration made a case for the success of the beef industry:

> In 1971, the per capita consumption of beef was 113.8 pounds as compared with 63.4 pounds in 1950...The volume of production needed to meet present rates of beef consumption is massive. For example, in 1972 the U.S. beef cow herd is above 37.5 million head. Fed cattle slaughter is at a rate of over 26 million head – more than double the fed cattle production in 1950. The industry produced 21.7 billion pounds of beef in 1971 which sold at the consumer level for over $16.2 billion. This represents about 25% of the dollar spent for food.[188]

While the ANCA situated these gains as part of a long postwar trend, in actuality, the industry was in the midst of a bubble, seeing spectacular growth from 1970-1974. In fact, Van Vleck's address to stricken cattlemen at the 1975 BIF Symposium echoed an earlier impassioned speech to a room full of gloomy cattle industry stakeholders. In a

[187] Ibid.
[188] "Statement of American National Cattlemen's Association Appropriations for Fiscal 1973," April 1972, National Cattlemen's Association Papers, Box 113, coll. 01713, American Heritage Center, University of Wyoming.

conference room in the Continental-Denver Motor Hotel, in January 1967, representatives of various branches of the cattle industry received a stiff critique from Ferry Carpenter, director of Performance Registry International (PRI). From his vantage point, the profitability of cattle raising had stagnated since the 1930s. The men in the room breathed through clouds of smoke as Carpenter delivered his reprimand: "the production of cattle for beef in America today is an economic absurdity."[189] "Shame on the cowboy!", he continued, castigating the "beef fraternity" for squandering the first scientific standards of beef raising established by land grant researchers and the USDA in the 1930s by keeping their herd knowledge closed.[190] What the industry needed, he argued, was more objective information about cattle, not casual, "natural" methods of raising. This meeting, he continued, "marks the turning point of cattle raising from a 'way of life' to a business."[191] This gathering did, indeed, inaugurate a significant change in how beef was produced in the United States with spectacular early success.

The cattlemen's castigation in Denver in 1967 occurred during the home stretch of a years-long movement to reinvigorate the cattle business. Between 1964 and 1968, a remarkable gathering of cattle interests coalesced into the Beef Improvement Federation, an independent organization dedicated to centralizing the collection and distribution of

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[189] Proceedings of the International Conference of Beef Cattle Performance Testing Associations, Denver, January 14, 1967, Box 1 Folder 7, Beef Improvement Federation Papers, Iowa State University Special Collections.

[190] A.L. Eller, "An Overview of State BCIA Programs," Regional Beef Improvement Conference, Montgomery, AL, November 19-20, 1972, Beef Improvement Federation Papers, Iowa State University Special Collections. Eller details the difficulties of aligning cattle breeders' interests with state breed associations and the USDA, and highlights the insularity of beef cattle raisers in comparison to dairymen, who readily accepted performance testing and public record keeping in the dairy industry.

[191] Proceedings of the International Conference of Beef Cattle Performance Testing Associations, Denver, January 14, 1967, Box 1 Folder 7, Beef Improvement Federation Papers, Iowa State University Special Collections.

data about cows in the United States. The formation of this organizing body is notable for several reasons, but for two in particular. First, it united several institutions governing different aspects of cattle production that normally did not speak to each other. Second, it nationalized the country's widely scattered cattle production industries, which were divided not only by state and region but by breed. While PRI was the first record-keeping institution to break the insularity of cattle production, the BIF was the first to forge a united purpose for individual cattle breeders, industry marketers and lobbyists, university animal scientists, and the United States Department of Agriculture (USDA). By accomplishing this complex and unlikely unification, the BIF laid the groundwork for the efficient, more homogenized cattle industry we recognize today. While the early founders and members of BIF sought to make the production side of the cattle industry more efficient and profitable, it is hard to imagine they envisioned how the national standardization of record-keeping would translate directly onto the bodies of cows. A central genetic and performance record-keeping body, over time, created more standardized cattle bodies, right down to their genes.

Unlike in other animal industries like poultry and dairy production, which had been using national breeding databases since the beginning of the twentieth century, beef cattle raisers were fiercely independent and skeptical of pooling their knowledge. They were fearful that they would lose individual control of their herds, and more abstractly, that "the government," through the USDA, would dictate their needs. The BIF had to tread very carefully in promoting centralized record-keeping to western ranchers in particular. The BIF's ultimate success in scientizing the cow in the United States

depended on delicate political maneuvering, convincing ranchers that nationalizing the pool of herd data would strengthen their individual herds, and adhere to their understanding of individual rights. Dr. Charles Bell, then Chief of the USDA Extension Service, emphatically underscored the importance of maintaining a sense of independence and autonomy in a memo written as the BIF was forming in 1967:

> The key to success in any coordinating body is equitable representation from all segments of the industry concerned...As we see it in Extension, the decision on the direction of future performance organizations is the prerogative of the people who raise the cattle. THE INITIATIVE AND LEADERSHIP MUST COME FROM THE CATTLEMEN THEMSELVES.[192]

Dr. Bell's perspective on this point came from years of negotiating the tenuous relationship between cattlemen and government officials: he knew that any top-down mandate could quash support for the BIF at its most vulnerable level: the beef raisers themselves. When the BIF was chartered in 1968, one of its largest hurdles to overcome was to transform the attitudes of cattle raisers towards veterinary science, laboratory research, and the USDA Extension services by convincing them of the value university agricultural research could add to their business. Science was the key to reversing the "economic absurdity" of beef. As late as 1960s, surveys conducted by the state branches of the American National Cattlemen's Association (ANCA) revealed deep-rooted

[192] Charles Bell, "Standpoint of the Federal Extension Service," International Conference of Beef Cattle Testing Associations, January 14, 1967, Box 1 Folder 7, Beef Improvement Federation Papers, Iowa State University Special Collections.

suspicion among cattlemen of USDA Extension-aided herd disease eradication programs. Veterinary science and government interference fared equally poorly in many ranchers' minds. In the "free comments" section of a 1963 ANCA survey of which diseases he faced most acutely in his herds, a South Dakota rancher wrote, "More research in beef cattle diseases might be desirable. However it seems that research could possibly be followed by a compulsory eradication program, as in the brucellosis program, that might be unwanted. We would probably be better off to pay a vet for our own diagnosis, etc., than to be depending on someone else's [the USDA's] free services."[193] Another agreed, arguing that "Problems of sufficient urgency to require the expenditure of public funds will present themselves, I do not believe it is ever necessary to seek a problem."[194]

Other ranchers were less balanced. In response to a survey question asking, "Which parasite of beef cattle is causing the most economic loss in your area," a rancher flatly responded "government." An Oregon rancher put his thoughts in even more political terms: "Personally I never earned .50 on the dollar by spending money on a vet. The thing that I detest and despise is the fact, that State and Government Bureaucrats are

[193] "1963 Animal Health Questionnaires for Animal Health Survey Meeting, South Dakota." Box 53, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming. State cattle improvement associations would compile completed surveys and return them back to the ANCA Livestock Sanitary Committee, which sought to identify and solve animal health problems. This survey asked cattlemen to identify ten diseases and five parasites most affecting them and their geographic area, providing blank spaces to be filled out. While there was no designated space for commentary, many ranchers wrote their opinions in the margins. These surveys revealed differing degrees of literacy, spelling and penmanship, and scientific vs. lay names of diseases, such as "wooden tongue" and "black leg," proving that the sophistication of cattle raising varied across a large range well into the 1960s. These surveys also reveal the uneven adoption of large animal veterinary care across the industry.
[194] Ibid.

infiltrating our business and industry by the back door through this disease approach which is nothing more than socialized veterinary medicine."[195]

Struggling ranchers in the 1960s felt affronted and alienated by the dissemination of institutional research taking place at land grant universities, whether it came from veterinarians or Extension workers. Survey responders filled the margins of their ANCA questionnaires with resentment ranging from indignation to polemic. Many indicted laboratory researchers for not valuing the knowledge of ranchers. "I suppose they have to have something for their students to study but if they would take a little advise [sic] from some ranchers rather than trying to give it we would all be better off," wrote one. "I believe," wrote another, "that State College and the extension service have benighted the rancher through their research."[196]

The scientific focus of the BIF was supported by developments in US science policy. The late 1960s were a time of great expansion in veterinary research facilities. As it turns out, ranchers' misgivings about "socialized veterinary medicine" were not entirely misplaced, at least in the sense that the government was indeed funding massive expansions to veterinary schools and research facilities in order to mitigate a "shortage of veterinarians" in the growing fields of food safety and public health.[197] The 1966 Veterinary Medical Education Act allocated funds to establish eight new veterinary schools between 1968 and 1975, along with loan programs for students enrolled in

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[195] "1963 Questionnaire about parasites States A-K," Box 53, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[196] Ibid.
[197] Gretchen E. Klein, 2002. *Dr. Girl: The Feminization of Veterinary Medicine*. Ph.D. dissertation, Georgia State University. Ann Arbor: ProQuest/UMI (Publication No. 3075426): 29.

veterinary school.[198] During these years, the National Institutes of Health (NIH) also aided the funding of these schools, especially in livestock medicine and public health research.[199] Sociologist Gretchen E. Klein notes that veterinary research was virtually nonexistent before World War II, as veterinarians were typically trained as tradesmen. "Livestock research," she asserts, "was conducted in colleges of agriculture or by the United States Department of Agriculture," not by practitioners.[200] Of course, these colleges and USDA sites were typically attached to land grant universities, which housed Extension research services and agricultural programs. The new veterinary schools followed this edu-geographic logic, and opened their doors at state universities primarily across the south and midwest.[201] The particular need for public health and food safety experts stemmed from the 1962 Talmadge-Aiken Act, which coordinated federal and state meat inspection protocols, and then the 1967 Wholesome Meat Act, which mandated that state inspection programs be equal to federal standards set by the Food Safety and Inspection Service and the USDA.[202]

The architects of the BIF eagerly harnessed this new livestock research and veterinary apparatus, which was gaining steam at the same moment BIF was formed in 1968. In making the transition, as Ferry Carpenter had put it, from "way of life" to

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[198] Ibid.
[199] Ibid.
[200] Ibid.
[201] The veterinary schools established in this cohort were at the University of Wisconsin, Louisiana State, Mississippi State, Tennessee State, Florida State, North Carolina State, Virginia Polytechnic Institute, and Oregon State. This wave of land grant adjustment culminated a century of the establishment and growth of land grant colleges from the First Morrill Act of 1862, which established the land grant system, and its expansion under the Second Morrill Act of 1890, which sought to create educational opportunities for rural African American citizens.
[202] Alan I. Marcus and Amy Sue Bix, *The Future is Now: Science and Technology Policy in America Since 1950* (New York: Humanity Books, 2007): 50-60.

"business," the BIF prioritized scientists and scientific work. However, the kind of scientific research that was most desired by the BIF was not the kind of nutritional, range management, or disease eradication research that had been taking place at animal science or Extension laboratories. The BIF shifted cattle research priorities to genetics and assisted reproduction. As one BIF charter member put it, the BIF would aid in producing and promoting research that put a fine point on the "heritability of economic traits": small birth weights, high rates of calf weight gain, high weaning rates, high rates of gain in feedlots, and high meat yields of good grade quality.[203] The BIF wanted to prove that these traits could be genetically engineered in a controlled setting. These criteria are all tangible measures of the bodies of cattle as commodities – nothing shocking in the business of producing meat. But bound up in this transition was not only the promise of a profitable cow body, but of a utopian technological future of cattle, in which ranchers could make money by harnessing the scientific power of their herds. For the founders of BIF, genetics offered a way of imagining the cows of the future -- science offered a way to save the cattle industry from disappearing, which the economic state of the industry in the late 1960s certainly threatened. BIF's founding energized the industry, leading to a flurry of research in the early 1970s which laid a foundation of reproductive efficiency that the industry would turn to in full force just a few years later.

The ANCA, as a founding member of BIF, shared the opinion that reproductive efficiency would herald a new era of cows, and set to work moving reproductive and

[203] Charles Bell, "Standpoint of the Federal Extension Service," International Conference on Beef Cattle Testing Associations, January 14, 1967, Box 1 Folder 7, Beef Improvement Federation Papers, Iowa State University Special Collections.

genetic research to the forefront of university priorities. Burton Eller, ANCA Director of Membership Services and Chairman of the Beef Cattle Research Committee, solicited a report from the USDA's Agricultural Research Service that used statistical data on herd loss to endorse reproductive efficiency as the key to profitability in production. "Reproductive inefficiency," the report argued, "is one of the most critical and costly problems facing the beef cattle producer...The control of these and other related factors is basic to the industry-wide implementation of successful programs for increased calf crops, artificial inseminations, ova transplantation, sex control, and multiple births." The report continued to state that, between disease and reproductive inefficiency, calf loss to the industry annually could be estimated at $120 million.[204]

In 1971, Eller drew upon this report to lobby the Senate Committee on Appropriations for funding to support a number of initiatives in support of the beef industry, which he colorfully described as having "become the foundation of this country's agricultural skyscraper."[205] Reflecting the optimism of the industry following the formation of the BIF, Eller pounded home the idea that more funding was needed for reproductive research. "The beef cattle industry is in a new era," he argued, necessitating significant investment in research, especially in funding the new U.S. Meat Animal Research Center in Clay Center, Nebraska.[206] Eller suggested that a total of $1.2 million dollars be allocated to the center in fiscal year 1972, with $600,000 of that devoted to

[204] Letter from USDA to Burton Eller, February 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[205] Letter from ANCA to Senate Appropriations Committee, April 1971, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[206] Also the subject of Michael Moss's devastating expose in the *New York Times*, January 19, 2015.

reproduction and breeding systems – nearly half the total budget, including moneys for disease and nutritional research.[207]

Eller sent copies of this appropriations request to university researchers, many of whom responded with their own research priorities and observations that reflected the intertwinement of economics with reproductive engineering, as well as frustration with how funding had been allocated in the past. Utah State Professor of Animal Science John Butcher praised Eller's emphasis on the need for better record keeping from calf to carcass, and shared some of the problems with his program's existing reproductive research. Importantly, Butcher spoke candidly about "a big gap in getting the current information that we have available to the cattleman user of such information." Butcher wanted to know how best to communicate scientific findings to ranchers, which could be as simple as translating a scientist's standard metric units into the English system better understood by the lay population. Butcher's comments underscore an understanding of the isolation of individual ranchers, and a desire to make the laboratory less opaque. Butcher also argued of the need to "make more use of our land grant universities" and rebalance the use of state and federal funds and knowledge.[208] E.E. Wedman, Head of the Department of Veterinary Medicine at Oregon State University, expressed similar reservations with federal funding: "The USDA has not had sufficient funds to meet the livestock industries research needs." But on the other hand, he argued, "State budgets do not provide adequate support...We must encourage and assist the USDA in getting

[207] Ibid.
[208] Ibid.

sufficient resources to fund beef cattle research. Then, we must insist that the USDA assist and support our colleges and universities in their research to provide some of the badly needed answers for a more effective beef production."[209]

Responses such as these helped Eller form the ANCA Research and Animal Health Committees in 1972. In January, the ANCA national convention met in Denver and unveiled the collaborative mission for these two committees. In attendance at this meeting were Frank Baker, who had founded the BIF, numerous PhDs, and several veterinarians. Using data from the Current Research Information System, a Research Priorities Report for these committees showed the research priorities and expenditures for the year 1970, and compared these numbers to the kind of research and investment that the ANCA suggested would be more in line with the nation's beef industry needs. Using a two-columned table, one side showed the 1970 allocations, and the other showed ANCA's "opinion on the amount of beef cattle research the nation should do as soon as practical." This amount was more, much more, across the board. The ANCA suggested an increase of nearly 50% devoted to beef cattle research, and identified Reproductive Performance as their top research priority. They recommended that the current research investment should be tripled to become roughly 15% of the total research allocation envisioned by the ANCA. The document expressed grave concern with the ratio of sales to research expenditures in the 1970 numbers. "Beef cattle farm sales in 1970 amounted to over 12 billion dollars," the report asserted, whereas research cost $33,658,000. "This

[209] Letter from Wedman, April 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

represented only one third of one percent of the beef cattle farm sales – much too low. Many industries invest 3% to 7% on research."[210] The report outlined ANCA's role in facilitating this immense push for more research as a supportive one, "to support administrators in making such changes and to assist in securing of funding of research at state and national levels." The Research and Animal Health Committees, then, were to set the national cattle research agenda through land grant universities and the USDA, and to work through political channels in order to secure the funding necessary to perform the research.[211]

Professors and deans of agricultural and veterinary programs across the country welcomed the creation of these committees and their push to set clear research priorities and increase research activity. The response of James A. Whately, Dean and Director of the Oklahoma State University's College of Agriculture, expresses the typical sentiment that the priorities align with research plans already underway, as was the case in correspondence from Texas A & M's Dean of Agriculture: "We are currently involved in developing some long range plans for beef cattle research in the Texas Agricultural Experiment Station. Our priorities are in good agreement with those set forth in your

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[210] Research Priorities Report of ANCA Research and Animal Health Committees, Denver Convention Sessions, January 19, 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming. For comparison: the total allocation dedicated to beef cattle research in 1970 was 376 Scientist Man-Years (like a man-hour, this refers to the amount of work a scientist could reasonably produce in the span of a year); the Reproductive Performance category in 1970 received 32 SMYs of work, which the ANCA suggested be increased to 110 SMYs.

[211] Minutes from the Annual Meeting, ANCA Beef Cattle Research Committee, January 19, 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming: "This should include coordinated planning of projects of benefit to the beef business and legislative support for financing tax supported programs, at least to the degree of tax income from the beef business of the state. Such action should also include provision for support of other contributing universities and federal research centers. Total coordination should come through ANCA."

report."[212] Eller and the ANCA were moving to revolutionize beef cattle research, but they were also riding a wave of interest in reproductive and genetic science that had, as these letters reveal, already gotten underway.

Reproductive science was organized by the principle of "performance," which referred to the efficiency with which a cow could turn into beef, or, in the case of breeding stock, how quickly they could produce cows that put on the most pounds in the shortest amount of time. This concept had been around since the mid-1950s, when PRI first established a central data bank in Texas that departed radically from previous insular and spotty herd record-keeping practices. PRI was one of the BIF's foundational members, and had collected enough data by the mid-1960s to support the BIF's crucial function moving forward: combining the data-gathering strength of PRI with the lobbying and marketing power of the ANCA to influence and generate scientific research through land grant universities and the USDA, with the ultimate goal of transforming beef cattle into a consistent, standardized consumer product. The kind of data that PRI collected was called performance data, which measured the reproductive capacities and body development characteristics of cows, bulls, and calves. For example, a cow's "performance" over her breeding life was measured by the ease and frequency of conception, ease of calving, and the tendency to calves that were small at birth but put on weight quickly as they nursed. These standards were similar for bulls: semen potency and high weight-to-age ratios were considered desirable. PRI also collected data on the

[212] Letter to Burton Eller, May 3, 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming; Letter to Burton Eller, June 6, 1972, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

larger numbers of cattle meant for meat, not breeding, following them from calf to carcass to determine the long-range impacts of their genetics in order to increase the selectivity of cattle breeders in choosing their sires and dams. Reproductive performance, in this world, focused more on the end product than on the act of reproducing.

But PRI's reliance on performance testing was made possible by advances in artificial insemination (AI) technology that root in the middle 1950s. As the name suggests, AI describes a technique wherein semen is collected from a male and then deposited into a female absent a sexual encounter between them. While AI had been around in human and animal medicine in some form since the late nineteenth century, the technique was often problematic because the implantation of semen often carried the risk of bacterial transmission, which could result in embryonic termination and serious uterine infection. Only after World War II did antibacterial technologies become sophisticated enough to ensure the sterility of semen without harming its fertilization abilities, thus reducing the risk for contamination without compromising fertility.[213] Related breakthroughs in storing, freezing, and transporting semen all supported the increasing viability of successful AI by the early 1960s. The use of AI became integral to PRI's intensive accounting for genetic traits from calf to carcass, and animated the BIF's shift in laboratory research priorities from nutrition, range, and disease management, to reproduction.

[213] Agricultural scientist John O. Almquist of Penn State University is credited with perfecting modern artificial insemination techniques, starting his work in 1946. In 1981, he was awarded the Wolf Foundation Prize in Agriculture for his incredibly influential contributions to livestock reproduction.

By 1972, AI-inflected reproductive research dominated the BIF's Annual Research Symposium in Omaha, Nebraska. In the aggregate, these research presentations show how USDA and university scientists were assuming that artificial insemination would be the norm moving forward for commercial herds. They also show that AI changed the orientation of research to a genetic-efficiency model rather than a nutrition-efficiency model. For example, J.S. Brinks, an animal scientist at Colorado State University, presented a paper entitled "Heritability of Fertility Components in Beef Bulls," in which he investigated "specific measures of semen evaluation in young beef bulls."[214] Dr. D. D. Dearborn addressed the "less than optimum reproductive efficiency which is prevalent in the beef cattle industry," which he estimated to be at about 70% in his paper "Heritability and Relative Influence of Fertility Components on Reproduction.[215]" USDA Meat Animal Researcher D. B. Laster examined the heritability of dystocia, in which cows were unable to birth a too-large calf, usually ending in death for both. He concluded that the youth of a cow was the single most important factor predicting dystocia, arguing that researchers should find a way to make younger cows more able to safely deliver (not wait longer to breed them!). Laster was followed by USDA Investigations Leader W. T. Butts, whose "Relationships Between Size and

[214] J.S. Brinks, Colorado State University, "Heritability of Fertility Components in Beef Bulls," Proceedings of the first BIF Annual Research Symposium, April 26-28, 1972, Box 2, Folder 13, Beef Improvement Federation Papers, Iowa State University Special Collections.
[215] D. D. Dearborn, "Heritability and Relative Influence of Fertility Components on Reproduction." Proceedings of the first BIF Annual Research Symposium, April 26-28,1972, Box 2, Folder 13, Beef Improvement Federation Papers, Iowa State University Special Collections.

Reproduction" elaborated on the potential heritability of calving difficulty.[216] In the aggregate, these research presentations show how USDA and university scientists were assuming that artificial insemination would be the norm moving forward.

AI's effect on the concept of reproductive performance dramatically altered the ways in which scientists and ranchers approached the biology of cattle. AI and performance testing effectively took away any shred of sexual choice that male and female cattle had historically exercised. While bulls had long been chosen individually by cattlemen, they had also been turned out to pasture with cows to breed, largely unsupervised and unscheduled. Cows who were not receptive to his advances could refuse. For the commercial herds that adopted AI, this shift excised the sexual encounter from the process of creating calves, and put the choice of mate and timing squarely in the rancher's hands. Additionally, because the technique required special equipment and heavy animal restraints for both semen collection and uterine implantation, it brought the veterinarian into the breeding shed as a routine presence, not just someone who could intervene in a medical emergency. Cow fertility became the most closely monitored biological process on the ranch, while simultaneously, sex disappeared from the pasture and became the realm of scientific human intervention.

This uneasy mixture of a near-obsession with cattle bodies in terms of fertility and genitalia with the concurrent denial of those bodies' sexualities had lopsided, unbalanced

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[216] D.B. Laster, "Factors Affecting Dystocia and Effects of Dystocia on Subsequent Reproduction in Beef Cattle"; W.T. Butts, USDA Investigations Leader, "Relationships Between Size and Reproduction," Proceedings of the first BIF Annual Research Symposium, April 26-28, 1972, Box 2, Folder 13, Beef Improvement Federation Papers, Iowa State University Special Collections. Butts is not to be confused with the Secretary of Agriculture from 1971-1976, Earl Butz.

effects on female and male cattle. The bodies of females became valued for reproductive efficiency, while the bodies of bulls would become less important than their semen and genitals. Cows, then, bore the burden of the BIF's redefinition of beef cattle standards as the commercial industry moved away from traditional breed standards and towards standards determined by performance, which eventually resulted in calves of different sizes, with increased demands on the cow's nursing body. On the other side, bull research focused on the heritability of male fertility traits, a trend that yielded more attention as the years went on, and focused nearly entirely on his sexual organs. The split between sexes suggests that "performance" was being measured in two registers: for bulls, it referred to the potency of an individual's semen and his ability to transmit greater size and gaining efficiency to calves, and greater fertility to the next generation of cows – in short, to be more genetically powerful. Bulls became the main focus of reproductive research, in part because of their ability to influence herds in fewer generations than cows. Practical considerations are important here too: the extant qualities of bulls' reproductive systems were easier to examine, and their semen easier to transport and evaluate in a laboratory, than the internal reproductive organs of cows. The intensity of the focus on bulls' reproductive organs, with the concomitant proliferation of bull-specific Sire Evaluation stations at research facilities and the formation of the Sire Evaluation Committee of the BIF, supported a retrenchment of masculine control over livestock medicine. Even as more women entered veterinary programs in the 1970s, they were denied access to large animal and industrial specializations, in part because work with bulls was deemed too dangerous, and women were seen as not strong enough to

meet the physical demands of AI techniques. But beyond the sexism based on perceived differences in strength, this exclusion of women has much to do with the kind of sexism that serves to bolster a masculine alignment between men and bulls.

As new veterinary schools opened in the late 1960s and early 1970s, a profession that had been 98% male in 1960 began to see increasing numbers of women among the veterinary school ranks.[217] However, the influx of women into veterinary programs did not reduce sexism in veterinary schools, nor change the overarching insular assumptions about what kind of work women could do, even as veterinarians. Their presence was not uniformly – or even minimally –welcomed, especially in large animal departments. Sociologist Gretchen Klein documented the experiences of women veterinarians in this period of growth, and found widespread overt sexism at every stage of veterinary education, from the interviews in the application process to the veterinary specialties women were encouraged to pursue or avoid. One veterinarian who matriculated in the early 1970s recounted blatantly confrontational questions in her interview. "'The admissions committee were retired military *men* [emphasis hers]...They asked me how I felt about abortion. What did I plan to do with my child if I were accepted to veterinary school?'"[218] Another, who graduated in 1980, recalled that her interviewer asked, "'Have you thought that there are people [who] don't want women in veterinary medicine?'"[219]

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[217] Anne E. Lincoln, 2004. *A Supply-Side Approach to Occupational Feminization: Veterinary Medicine in the United States, 1976-1995*. PhD Dissertation, Washington State University. Ann Arbor: ProQuest/UMI (Publication No. 3145790): 4. Lincoln further notes that despite the tripling in size of the veterinary profession from 1960 to 1998, the number of male applicants to veterinary programs dropped 83% between 1976 and 1990.
[218] Klein, 96.
[219] Ibid.

As Klein observes, once in school, "these female veterinarians, as students, experienced and/or observed an impressive array of verbal and nonverbal barbs about the unsuitability of women for the practice of veterinary medicine and their suitability as sex objects."[220] Some of this harassment stemmed from women being seen as "'crashers of the male earning world...[w]e were made to feel that we were taking the job of some man who was going to be supporting a family.'"[221] Yet women also experienced harassment about certain kinds of veterinary work: "'The large animal practitioners didn't think that women should be [doing the] more physical job that was involved in large animal work...this was a man's work.'"[222] A veterinarian who graduated in the early 1980s recalled, "'certainly, no one in our class was encouraged by the faculty to go into food animal practice...I guess we were...not pushed, but we felt that there was more openness in small animal or even equine medicine.'"[223] Despite the rapid influx of women into veterinary schools in the 1970s and 1980s, they were funneled away from large animal and agricultural practice. Even though the large animal veterinary sector grew by 41% over the 1980s, in 1990 only 10% of its practitioners were women, up from 4% in 1980.[224]

The growth of large animal medicine had much to do with the necessary intervention of veterinarians in the AI process. The entrance of the veterinarian into the intimate encounters between cattle did increase the amount of dangerous physical work expected of large animal veterinarians, whose equipment and expertise were now

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[220] Ibid., 107.
[221] Ibid., 109.
[222] Ibid.
[223] Ibid.
[224] Ibid., 31.

necessary to collect, transport, and implant semen. Collecting semen from a reproductively mature bull is a risky process. In most cases, the bull to be collected is aroused by bringing a sexually receptive cow within smelling distance, which causes the bull to drop his penis and become erect. Bulls, when aroused, are liable to make quick, aggressive movements with their head and legs, making them more dangerous to handle. Nevertheless, once the bull has been aroused, he is directed towards a "phantom," or a sturdy, stationary mount made specifically to simulate the act of mounting a live cow. Once the bull has successfully mounted, the veterinarian stoops under his body with a mechanism called, fittingly, an artificial vagina – roughly 2 feet long and about 25 pounds – and proceeds to guide the bull's erection into the device. If successful, the veterinarian holds the artificial vagina, receiving the full weight of the bull's thrusts, while trying to dodge any kicks, strikes, unplanned slides off the phantom, or whacks from a violently swishing tail, until ejaculation, which can take anywhere from one to three minutes. Multiple attempts per collection are common, as this artificial method (predictably) reduces libido. If the collection is successful, bulls typically fall quickly into an exhausted stupor after ejaculation, making it imperative for the veterinarian to rapidly, but carefully, disengage the artificial vagina and move from under the bull before he slides off the phantom. This work is physically taxing. However, the defining feature of this work is less its physicality than its intimate proximity to male genitalia. In the 1970s, systemic sexism turned many potential female livestock veterinarians towards other specializations. The turn towards reproductive research, even at a time when the veterinary profession began to expand and educate thousands of women, effectively

closed the door to the possibility of women entering agricultural practice where cows were concerned.

The exclusion of women from large animal and food animal veterinary specialization mirrored the exclusion of women from professional rodeo during the same period – a time at which both the beef industry and professional rodeo were in transition from being a "way of life" to a "business," in the words of PRI's Ferry Carpenter. For both livestock science and livestock entertainment, the concept of "performance" was at the center of a profit-making mission, and the bull was the main performer. If the beef industry, as ANCA's Burton Eller suggested, was the country's "agricultural skyscraper," then that moniker might as well refer to the reproductive power of the bull. In essence, the masculine ideal of the individualistic rancher – the man whom USDA's Dr. Bell warned the BIF could not ignore as science transformed the industry – became secondary to the new focus on the influence of bulls through artificial insemination. The animal masculinity enforced by science policy and the veterinary exclusion of women translated into both the beef industry and the rodeo arena, as cowboys, in order to be "real men," increasingly turned to the bull as their proving ground. As the 1980s progressed, these connections between cowboy masculinity, bull riding, and reproductive technologies not only kept the beef industry afloat and made bull-riding cowboys rich, but also played into certain political realignments of the Reagan administration. In particular, the widespread deregulation of the food animal industry brought rodeo and the beef industry together, as they jointly faced the challenges that deregulation caused in terms of labor, western land

use, and animal use. These two profit-making enterprises leaned heavily on their shared sense of manliness to confront these challenges.

A NEW KIND OF DOMESTIC ANIMAL

In early December 1980, Tom Cook, the Staff Director of the ANCA Beef Cattle Research Committee, received a cryptic letter from James Mitchell Smith in Indiana. "I have an idea for a new kind of domestic animal," the letter began. "I hope to present this idea to some interested group with the hope of reward."[225] Cook responded in January 1981, asking for more details on what this new domestic animal might be. Smith replied immediately, though with confusing punctuation:

> The Yak crosses freely with domestic cattle...I suggest that these crossbred animals be used as females and that the male animal be (for Northern climates such as northern Canada the Yak) (for southern climates such as Mexico and Central America the male animal to be America type Brahman)...Now I would add to this thought that under certain conditions that female cows be bred with female producing (I'm sure that you are acquainted with this process, gives better than 90% sex selection) sperm from a male Yak. This female animal half Yak and half cattle would then be bred either to a Yak or to a cattle bull.

Smith called his new domestic animal a YAKROSS, and asserted "these animals will play an important part in future agriculture of this planet." He also informed Cook that "I

[225] Letter from James Mitchell Smith to Dr. W.T. Berry, ANCA Executive Vice President, forwarded to Tom Berry, ANCA Beef Cattle Research Committee Staff Director, December 8, 1980, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

have two other ideas that relate to food production. Like the YAKROSS idea, I hope to be rewarded (yes a large reward) for these ideas."[226] Cook did not respond to Smith's further letters.

The YAKROSS was not to be, but Smith's idea of a "new kind of domestic animal" was not as far-fetched as one might imagine. The 1980s did indeed see cattle turn into a new kind of domestic animal as the industry's use of artificial insemination allowed for the tailoring of cattle bodies to meet consumer demands for lean meat, and as the process of turning a carcass into a product became increasingly technologized in a newly deregulated packing landscape. The transformation of beef responded to widespread changes in western land use politics that changed the face of ranching and packing labor. This transformation of beef was matched by a revamping of bucking bulls into larger, more powerful animals bred for their "rank" qualities. Reproductive technology and rodeo masculinity worked together to make the cows of the future ANCA President Gordon Van Vleck had promised his audience in 1975.

Yet as the beef crisis became the industry's "new normal," cattle were also transformed by consumers themselves, who became increasingly concerned with the price and health impacts of beef. Market research conducted by the Beef Industry Council in the early 1980s confirmed that consumers' perception of beef as a healthy food, and their willingness to pay higher prices for it, had changed dramatically from the heady days of the early 1970s. In 1977, a government report called *Dietary Goals for the*

[226] Letter from James Mitchell Smith to Tom Cook, January 9, 1981, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

United States signaled a shift in how Americans perceived nutrition. Throughout the twentieth century, federal health and nutrition guidelines had made dietary recommendations that emphasized the necessity of obtaining enough nutrients, such as vitamins and minerals. This approach suited an era of relative food scarcity and early research that identified the existence of essential nutrients in certain foods.[227] The 1977 *Goals* departed from this strategy. Instead of focusing on how to get enough nutrients from food, the guidelines warned consumers to avoid unhealthful foods, in particular citing chronic health risks from the overconsumption of fats, especially saturated fats, cholesterol, and sodium, and sugars.[228] Red meat was found to be high in both saturated fats and cholesterol, and for the first time, moderation in beef consumption was recommended to consumers for health reasons. In 1979, a study conducted by the American Society for Clinical Nutrition supported the thrust of the 1977 *Goals*, and "suggested that people reduce their consumption of excess calories, fat and cholesterol, salt, and sugar to lower disease rates."[229] In response to this new research, the USDA, in conjunction with the Department of Health and Human Services, released the first edition of *Nutrition and Your Health: Dietary Guidelines for Americans* in 1980.[230] The *Guidelines* struck a balance between obtaining enough nutrients from food and avoiding unhealthful fats and sweets, and changed the composition of food groups. Where the

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[227] Carole Davis and Etta Saltos, "Dietary Recommendations and How They Have Changed Over Time," USDA ERS, n.d. Available online at http://www.ers.gov/media/91022/aib750b_1_.pdf.
[228] Ibid. The 1977 publication was put together by the Senate Select Committee on Nutrition and Human Needs.
[229] Ibid.
[230] Ibid. This publication would become a mainstay of food guidance. The USDA still publishes an updated *Guidelines* every five years.

"Basic Four" formulation of the 1950s-1970s lumped proteins into a "Meat Group" and advocated "2 or more" servings from the Meat Group per day, the 1980 *Guidelines* variegated its proteins significantly while decreasing daily recommended intake. Now, Americans were encouraged to limit themselves to 2 servings of "meat, poultry, fish, and beans."[231]

The impact of the *Guidelines* on the beef industry was a serious topic of discussion at the 1981 annual meeting of the NCA's Beef Cattle Research and Improvement Committee, held in Phoenix, Arizona on February 3.[232] The Research Committee, tasked with "obtaining research funds for federally funded research projects through many agencies of the federal government," was interested in how the new *Guidelines* might impact its research agendas. Anne Anderson, Director of Human Nutrition for the state-level cattle feeder advocacy group Texas Cattle Feeders Association, "appeared before the committee to discuss the dangers inherent in the U.S.D.A. Dietary Guidelines," which, her report suggested, could be potentially catastrophic. A summary of her presentation fretted,

> a preliminary economic study has estimated that the adoption of the Dietary Guidelines would reduce the consumption of Red Meat in the United States from 23 Billion pounds per year to 12 Billion pounds, approximately 50%. It was also noted that 13% of the meals eaten in the nation are prepared under the influence

[231] Ibid. This would become the "meat, poultry, fish, eggs, dry beans, and nuts" group in 1984's Food Guide Pyramid.
[232] The ANCA became the NCA in 1980.

of the Dietary Guidelines under such programs as the school lunch programs, the V.A. hospitals, etc.[233]

Her presentation highlighted the importance of institutional meals, which were required to conform to government dietary guidelines, and remained separate from regular consumer choices. Facing the mandatory decrease in beef products within the huge apparatus of institutional meal preparation, the beef industry turned to the individual consumer, creating unprecedented marketing campaigns to keep beef on the American table.

Americans, while not forced to follow government food guidelines, certainly heard the messages put out by the USDA and DHHS. In May 1983, The National Live Stock and Meat Board presented a summary of recent corporate market research conducted on beef consumers to the NCA's Beef Grading Subcommittee. The studies found significant change in consumer attitude towards beef between 1981-1983. In 1981, for instance, a joint study conducted by the American Meat Institute and the marketing firm Yankelovich found that "consumer attitudes towards beef were positive....Only 9% of consumers reported decreased usage based on health reasons." Price, instead, was "the major reason for reduced fresh meat consumption...Consumers reported purchasing favorite cuts less frequently and substitution of lower priced protein foods."[234] Still, "most of the consumers in the focus groups have changed their beef consumption habits -

[233] Minutes of NCA Beef Cattle Research and Improvement Committee, Phoenix, AZ, February 3, 1981, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

[234] Jay Wardell, Vice President, Beef Program, National Live Stock and Meat Board, "Market Research: A Presentation to National Cattlemen's Association Beef Grading Subcommittee," May 13, 1983, Box 54, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

- either by cutting back the number of times they consume beef or by reverting to cheaper cuts of beef."[235] By contrast, in 1983, a Walker benchmark study revealed that "only two-thirds of consumers believe beef is high in nutrition," "only two-thirds believe beef is part of a well-balanced meal," "less than half (48%) agreed that beef is a good source of minerals," and "less than half (47%) believed that beef offered a good value for the dollar paid."[236] Those who remained loyal to beef, and who were not swayed by the price, were identified as the primary target for high-impact advertising campaigns that the beef industry rolled out in 1982-83. "Heavier usage," the studies proved, "tended to be among those who held closer to the traditional American values."[237]

This kind of market research was new for the beef industry, which had, until the crisis, focused primarily on providing a product that consumers wanted to buy, not on producing consumers that wanted to buy beef. But in the early 1980s, making a product was no longer sufficient for industry survival. As one feedlot association put it, "It is now apparent to everyone connected with the cattle business that we can no longer rely on the supply side of the supply and demand equation to make the American cattle business a profitable venture."[238] The market research results that proved customers' increasing wariness towards beef were instructive, and the industry quickly mobilized by turning those results into advertising campaigns.

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[235] Ibid.
[236] Ibid.
[237] Ibid.
[238] "If not us, who? If not now, when?" Memo from the Idaho Cattle Feeders Association to the National Cattlemen's Association, November 1, 1981, Box 54, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

The first of these was "Make Ends Meat," a 1981 grocery-store-level test promotion underwritten by the National Live Stock and Meat Board designed to appeal to consumers at the point of sale. Its success in getting beef off the shelves – retailers reported increased beef sales at rates from 2% to 24% – combined with continued data proving that consumers were moving away from beef in their diets, was the impetus for a nationwide multimedia advertising campaign that launched in April 1982. The campaign, organized by the Beef Industry Council (BIC) and participating state beef councils, was touted as "the largest beef advertising campaign in history." Costing over $7 million, the campaign included television spots, consumer magazine ads, radio commercials, and billboards.[239] The press release from the BIC announcing the campaign highlighted the tag line: "The theme of the campaign is, 'Somehow, nothing satisfies like beef.' It is intended to convince consumers that beef is worth *more* than the price they have to pay for it."[240]

Getting the campaign off the ground was a challenge, as the beef industry had no structure in place for funding major advertising. In 1980, a national effort to increase the "head tax" on cattle at the point of slaughter failed to gain traction among cattle raisers, who feared for their revenues. The "Beeferendum," as it was called, would have increased the existing tax from $0.25 to $1.00 per head. This money would have been

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[239] BIC Press Release, "Beef Industry Launches Largest-Ever Consumer Campaign," January 8, 1982, Box 54, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming. Television spots were purchased for "prime time programs, daytime soap operas, talk shows, and the news...The magazine ads will appear throughout the year in several publications, including *Better Homes and Gardens*, *Parents, McCall's, Bon Appetit, Sunset*, and *Southern Living*."

[240] BIC Press Release, "Beef Industry Launches Largest-Ever Consumer Campaign," January 8, 1982, Box 54, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

paid by the owner of the cattle – most likely feedlot owners, but possible cattle raisers – and funneled into a nationwide fund used for meat marketing.[241] The failure of the Beeferendum forced the industry to work at a state, not national, level, since the "overwhelming majority" of cattlemen were "willing to invest 50 [cents] per head more in market development programs," but were unwilling to nationalize this program.[242] Instead, the BIC instituted a state-level "checkoff" program in which each state could approve the amount of the head tax and control the fund, sending no more than 40% of money raised to national, instead of local, advertising. By 1982, cattlemen in several states had approved this method of taxation, in amounts ranging from $0.10 to $1.00 per head. Even packers could participate, with some contributing an extra $0.03 per animal slaughtered. This checkoff program funded the "Somehow, Nothing Satisfies Like Beef" campaign.[243]

The success of this funding campaign led the beef industry to reconsider a "uniform method for funding beef promotion" in 1982. The NCA[244] played a key role in coordinating the various state funding bodies, and lobbied for amendments to the Beef Research and Information Act which would mandate equal participation among the states.[245] The NCA served as a powerful broker between cattlemen, consumers, and government appropriations. It had developed a media function from the beginning of the

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[241] "California Cattlemen Seek to Beef-up Sagging Sales," *Vegetarian Times*, September 1981, pg. 7.
[242] BIC Press Release, "Beef Industry Launches Largest-Ever Consumer Campaign," January 8, 1982, Box 54, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[243] Ibid.
[244] The association dropped the "American" prefix in 1980.
[245] State Resolutions, NCA Beef Promotion and Consumer Relations Committee, February 1, 1982, Box 54, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

beef crisis, setting up a "news bureau" and "part time p.r. counsel" in the heart of Washington, D.C., which directly connected the organization to major media outlets.[246] Its "public information program – including interviews, news releases, radio service, a Digest newsletter, background information, and its monthly beef price survey," ensured that beef advocacy became a regular part of public media.[247] The NCA aggressively deployed these media connections during the consumer price uproar, later taking credit as being "more responsible than any single group for the media and government understanding which helped prevent calls for boycotts and controls when prices rose rapidly in 1978 and 1979."[248] As a boon to cattlemen, the NCA helped keep the federal government out of cattle pricing. Furthermore, when the industry turned to the NCA to help coordinate its marketing funding, the NCA connected the scientific research being done on consumers with the scientific research being done on cows, and helped organize the industry into producing a product that consumers wanted to purchase.

Advertisements for beef, especially steaks, often used typefaces and images easily associated with the West or westerns, such as blocky, "Tombstone"- like fonts, smoking brand marks on the meat, and lassos corralling slogans or information about price and quality. This association of beef with traditional western and rodeo images aligned with the "traditional American values" identified by market researchers, and stood in contrast to the modernity of the product, which was undergoing a rapid transformation based on consumer preferences for lean meat. The project of producing leaner beef reversed the

[246] Internal correspondence, "Working With Meat Board/BIC," January 11, 1982, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[247] Ibid.
[248] Ibid.

previous century of American beef production which focused on breeding small, quick-growing cattle that could be "finished" at feedlots until their carcass was fatty, and to which Herefords, Angus, and other English breeds were best suited. In order to produce leaner beef, breeders were encouraged to turn to rangier, "exotic" breeds of cattle to crossbreed with their existing herds.[249] At the 1983 BIF Annual Symposium, Dr. Larry Cundiff of the USDA and U.S. Meat Animal Research Center gave a talk entitled "Are We Making All Breeds the Same?", in which he addressed widespread rancher concerns that crossbreeding, or heterosis, would "dilute" the breeds many ranchers, cattle associations, and BCIAs had worked hard to standardize and preserve over the course of a century. Cundiff rebutted this concern with the new requirements of production: "if we wish to preserve the opportunity to match breeds to different climactic environments, to diverse feed resource situations, and to shifts in market requirements," then heterosis was a necessary component.[250] Faced with the need to make a new kind of animal, commercial producers latched on to the concept of "systems management," and brought the previous decade of reproductive and genetic research to bear on the consumer-dictated cow.

In 1988, the BIF held a Genetic Prediction Workshop that disseminated the findings from various experiments undertaken in the mid 1980s. G. C. Smith, a researcher from Texas A&M University, presented a paper entitled "What is Being Done

[249] Judy Putnam and Shirley Gerrior, "Trends in the U.S. Food Supply, 1970-97," in USDA/ERS overview, n.d. Available online at http://www.ers.usda.gov/media/91042/aib750g_1_.pdf.
[250] Larry Cundiff, "Are We Making All Breeds the Same?", BIF Annual Symposium, Sacramento, CA, May 5-6, 1983, Box 9, Folder 10, Beef Improvement Federation Papers, Iowa State University Special Collections.

and What is Needed in Specification Programs." Specification programs were, essentially, heterosis programs that aimed to design cattle to fit the desired "targets" that consumers had identified – leanness, flavor, and price – in the studies conducted by the NCA and BIC in 1982-3. In 1987, the USDA established a fat-based labeling system for grading beef in the consumer market. The terms are those consumers recognize today: Prime, Select, and Lean, with high, low, and medium gradients corresponding with levels of fattiness. These became "sets of production and/or carcass targets" intended "for cattle producers to strive for."[251] Smith argued that target specification breeding marked a new era of commercial cattle production, where consumers' aversion to fat dictated "a 'new kind' of beef for health-conscious consumers." The practice of trimming fat from a cut of beef, whether by a butcher or consumer, would no longer satisfy the demand for lean meat. "The new way," Smith argued, "must be to breed it or feed it away (that is, don't put it on in the first place)."[252]

Smith was certain that breeding fat away could be accomplished, but, in his words, "bull power will be needed." Smith warned that recent research conducted at the U.S. Meat Animal Research Center showed that "within a breed, to improve tenderness...though selection for marbling would require *78 years* of single-trait selection," casting doubt on the possibility that single-trait selection for leanness would be any faster. Instead, "a shorter-term solution might rest in careful capitalization on

[251] G. C. Smith, "What Has Been Done and What is Needed in Specification Programs," Proceedings, BIF Research Symposium and Annual Meeting, May 12-14, 1998, Box 20 Folder 1, Beef Improvement Federation Papers, Iowa State University Special Collections.
[252] Ibid.

crossbreeding."[253] These crosses should be chosen with care based on the fat target the producer aimed for, which is where "bull power" comes into the picture. In order to make the greatest change in a producer's existing herd of purebred fatty-meat-producing cows, the sire of the next calf crop needed to complement that breed with leanness. These leaner bulls – primarily "exotic" breeds such as Charolais, Limousin, and Brahman – were widely bred to existing fatty herds of Angus, Hereford, and other shorthorn breeds. The females of an existing herd were important in choosing which kind of bull to crossbreed to, but changing the herd to meet new target specifications was all "bull power."

The infusion of exotic breeds with more traditional English-derived stock became visible most quickly in the rodeo arena. Brahma-Hereford mixed bulls were excellent buckers: their bodies were larger than the short, stocky English breeds, but beefier than rangy longhorns or Brahmas. Many had a good-sized shoulder hump, perfect for providing a snug place to secure a bull rope and to provide a "seat" for a cowboy. These crossbred cattle were used for bucking in professional rodeo from the 1950s to the 1970s – the idea of "hybrid vigor" was not new to rodeo stock contractors, who scouted crossbred bulls from stock producers who either bred buckers on the side and/or used crossbred genetics to diversify their herds – and purchased "rank" animals for rodeo use.[254] The turn to Brahma crosses in the meat-producing side, and the wider access to

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[253] Ibid.

[254] Lawrence attributes the preference to cross-bred bulls to cultural influence as well: "It is significant that rodeo informants believe pure-bred Brahma bulls are 'gentle, not strong-hearted, and won't buck much'...One informant explained the extra spirit and bucking potential of the cross-bred animals on the basis of 'hybrid vigor.' In this I see again the propensity of rodeo people to impute the quality of crudeness

Brahma semen through artificial insemination, spurred a bucking bull breeding bonanza among cattle breeders in the late 1980s. As demand for beef "bull power" grew, the number of bulls suitable for bucking increased, and stock contractors had much more choice in picking top stock for professional rodeos. In the late 1980s and early 1990s, the number of these large, athletic, powerhouse bulls grew, feeding the intensity and popularity of bull riding within the PRCA.

This intensity came at a steep price for top bull riding competitors in terms of injury, but the pain suffered by bull riders was yet another way of defining their masculinity. When bull riding became the most popular sport in professional rodeos in the late 1980s and early 1990s, catastrophic injuries became more visible as top competitors suffered them in front of packed arenas and television audiences. Lane Frost, a handsome, personable, young PRCA World Champion bull rider who was part of the first cohort of specialist bull riders, was killed in the arena on the final day of the 1989 Cheyenne Frontier Days. Frost rode an electrifying full eight seconds on the Brahman bull Takin' Care of Business and dismounted with a flourish, in the lead to win the event. But the bull turned quickly towards him and butted him with a horn for several seconds before the arena bullfighter could deflect him from Frost. The blows broke several of Frost's ribs, which doctors later determined punctured his heart and lungs when he tried to get up and fellow competitors pulled him from the arena.[255]

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to the bull. For 'pure-bred' implies refinement resulting from a long period of deliberate breeding - the influence of culture - which is felt to be incompatible with the nature of a bucking bull...a rodeo bull's heredity is believed to make it necessarily 'rank'" (197).

[255] "Cheyenne 1989: The Last Ride," The Lane Frost Official Site, http://www.lanefrost.com/Cheyenne.htm. Last accessed February 6, 2015.

For full-time professionals, returning to the arena as quickly as possible became key to their earnings and to their identities. After Frost's death, his friends and contemporaries eventually adopted protective vests. But despite suffering life-threatening injuries themselves, they continually returned to high-level bull riding before their bodies healed. In June 1995, top competitor Ty Murray blew out both knees when he fell awkwardly from a bull. While the injury and subsequent surgeries ended his season, Murray was determined to come back the first day of competition for the 1996 season.[256] Another of Frost's and Murray's contemporaries, Tuff Hedeman, received two gruesome injuries in the mid 1990s. In 1993, he was paralyzed by a ruptured disc in his neck suffered in the late rounds of the National Finals Rodeo in Las Vegas. The paralysis subsided after surgery, and he returned to competition thirteen months later. But in October of 1995, just two years after his near-miss with quadriplegia, Hedeman was once again rushed from the arena with a life-threatening head injury, described in the rodeo press as "a bashing that would have killed the average human."[257] In the middle of a ride on a notoriously agile bull named Bodacious, the bull swung his head upwards as Hedeman tipped forwards, smashing his face against the bull's massive and fast-moving skull. The scene "stunned everyone who watched Hedeman stagger to his feet and walk out of the arena," where he was once again rushed to surgery to repair his broken face

[256] Clipping, Series II, Bio Files, Tuff Hedeman, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University. Kendra Santos, "Turning Casualty into Comeback." *American Cowboy*, January/February 1996, pg 70-71.
[257] Clipping, Series II, Bio Files, Tuff Hedeman, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University. Kendra Santos, "Tuff Enough." *American Cowboy* November/December 1996, pg 38-42.

with steel plates and the skin from cadavers.[258] Permanently disfigured but undeterred, he returned once again to professional rodeo in early 1996.

Hedeman's justifications for returning to the arena after two catastrophic injuries highlight the relationship between pain that undergirds bull riding and rodeo culture. He briefly considered retirement after his spinal surgery, but not for fear of getting hurt again: "What scared me most about coming back was not being able to ride like I always had...My fear had nothing to do with my health. I was afraid of just being another guy."[259] He added, "the threat of death is always there. If it gets to a point where I focus on it instead of on riding, then I probably won't ride. Because if I'm worrying about dying then I'm not concentrating on the ride, and I can't ride well."[260] Murray concurred: "People who aren't thrill seekers can't understand it. Accepting the risk is what makes up the sport."[261] Bull riders, from the rank and file to the highest levels, spend their entire careers teetering on the edge of physical breakdown as a necessary component of the sport.

"Bull power," then, was at the heart of both beef and rodeo in the 1980s. In this context, I want to revisit the conclusion drawn from the NCA/BIC consumer market

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[258] Ibid. In an interview with Dr. Frosty Moore, a member of the Justin Sportsmedicine Team attached to the PRCA, he explained why cadavers were necessary. To repair ligaments, surgeons usually will take tissues from a patient's hamstrings, which have plenty of tissue to give. But for rodeo competitors, compromising a hamstring could lead to further injury and a degradation of trust, because that muscle is so critical to riding: "if you use hamstring tissue to repair an injury like you would with a normal patient, you'd compromise the rodeo guy's ability to stick to the bull." So injuries like Murray's instead are repaired with ligament tissues from cadavers in order to protect healthy parts of their bodies. Interview with Dr. Frosty Moore, February 13, 2013, Austin, TX.

[259] Ibid.

[260] Clipping, Series II, Bio Files, Tuff Hedeman, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University. Kendra Santos, "Turning Casualty into Comeback." *American Cowboy*, January/February 1996, pg 70-71.

[261] Ibid.

studies from early in the decade: those who wanted to consume beef were people who "held closer to the traditional American values." The tie between beef and tradition is a tricky one: cows and their carcasses become cyphers for "traditional" America in the 1980s and 1990s; but in the context of the beef crisis, they were also becoming as technological as they were biological. The existence of beef in the marketplace was increasingly dependent on reproductive technologies that sterilized the sexual process and introduced human intervention at every stag, from choosing the partners, in the case of the rancher, to collecting semen and creating an embryo, in the case of the veterinarian performing artificial insemination. A technological apparatus, invisible to the consumer, became paradoxically necessary to support the "traditional" consumption of beef. Rodeo also appealed to "traditional" American values at a time when rural areas in western states tried to withstand cataclysmic economic pressures of urbanization and corporate consolidation. The centrality of the bull to this apparatus is arresting in the context of rodeo's turn to bull riding as its signature event during the same period of time. "Bull power" described much more than reproductive control over beef herds: it masculinized and traditionalized beef at a time when western political "muscle" was riding high in the saddle.

The NCA's status as a power broker and effective Washington lobbying group grew during the Reagan administration, when the ranching president and his rodeoing Secretary of Commerce shared the advocacy group's interpretation of conservative politics. Even beforehand, the NCA was no small part of getting Reagan elected. During the Carter years, as the beef crisis first hit, the NCA successfully worked to counter the

government's attempt to control beef prices amidst consumer panic. Late in Carter's administration, W. J. "Dub" Waldrip, the chair of NCA's Beef Cattle Research and Improvement Committee and general manager of a large feedlot, lobbied aggressively against proposed budget cuts that would slash beef research budgets. Writing to his committee in April, 1979, Waldrip recounted,

> In mid-March, I went to Washington and visited with several key officials in Congress and at USDA regarding appropriations for animal research for the budget of fiscal year 1980. President Carter's "austerity" budget is affecting everyone and we're no exception. In fact, I believe our ox is being gored more than most other interests...We may ask you to write your Senator or Representative at some time during the whole [appropriations] process.[262]

The NCA's role in martialing the support of western Congressmen and Senators dovetailed with a political movement growing in the western states called the Sagebrush Rebellion. The movement officially got underway in 1978, when Nevada brought a case against the federal government which sought to "end perpetual retention of public lands," that is, to liquidate land owned by the federal government to the state, or private entities. Nevada also passed a bill through its state legislature "under which it assumes management of the unappropriated federal lands within its borders." This case incited a slew of land policy cases across the western states in the final years of the Carter

[262] Letter from W. J. "Dub" Waldrip to NCA Beef Cattle Research and Improvement Committee, April 11, 1979, Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

administration.[263] Broadly speaking, Sagebrush Rebels contended that federal land ownership and wilderness protection policies unfairly affected the western states, which had less population and developed land than eastern states, and prevented them from growing economically in a way the eastern states had had the opportunity to grow. But Sagebrush Rebels tended to add a tart anti-regulation and anti-government flavor to their grievances. An April 1979 article in the *Washington Post* quoted Nevada state Senator and cattle rancher Normal Glaser, whose sentiments could not be clearer: "We're tired of being pistol-whipped by the bureaucrats and ambushed and dry-gulched by federal regulations."[264]

Yet who was this "we" that Glaser referred to? Critics of the Sagebrush Rebellion concurred that the movement was spearheaded by "wealthy ranchers, miners, and developers" who were either paying the government to graze cattle on federal land, or who were being barred from extending their resource extraction and urban development projects.[265] As the domestic energy and agricultural bust spread throughout the West in the late 1970s, the perception that the government was dampening the potential for development was widespread. Sagebrush Rebels "envisioned a new resource boom in the West" by "reducing restrictions on development, and by opening the public lands to rapid

[263] Joseph M. Chomski and Constance E. Brooks, "A Concise Analysis of the History, the Law and Politics of Public Land in the United States," January 28, 1980. Prepared for the State of Alaska Legislative Affairs Agency.
[264] Lou Cannon, "Sagebrush Rebellion Challenges U.S. Grip on Western Land," *The Washington Post*, April 9, 1979.
[265] Ladd Hamilton, "Sagebrush Rebellion? High Noon? Sez Who?", *The New York Times*, October 22, 1979.

exploitation and sale."[266] Yet most support for the Sagebrush Rebellion came from the Rocky Mountain states and rural westerners, enjoying "far less support" from most western governors whose election depended on metropolitan voters – where most westerners lived.[267]

The mobilization of rural westerners, however, was a key goal for the NCA and for Ronald Reagan, whose presidential candidacy made a strong show of aligning with a free market and deregulatory impulse. In the middle of his 1980 campaign, Reagan announced in Utah, "'I happen to be one who cheers on and supports the Sagebrush Rebellion...Count me in as a rebel.'"[268] This was welcome news to the NCA, which had "taken the lead role" in urging cattle producers across the West to support Sagebrush initiatives.[269] In a 1980 campaign-timed letter to the staffs of "NCA Affiliates" – namely, cattle breed associations, BCIAs, the BIF, PRI, meatpackers, and feedlot owners – NCA President Merlyn Carlson provided several questions for representatives of NCA interests to ask Congressional and Senatorial candidates. He wrote, "We think such questions have real value in encouraging the various candidates to take a specific position – pro or con – on issues having a major impact on the beef cattle industry. Should you be successful in receiving replies from the candidates, NCA suggests that you disseminate the responses to your members [cattlemen] so that they will have a good 'feel' of how to

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[266] Richard White, *It's Your Misfortune and None of My Own: A History of the American West* (Norman: University of Oklahoma Press, 1991): 567.
[267] Ibid., 567-8.
[268] Howell Raines, "'Sagebrush Rebellion' Gets Reagan's Strong Support," *The Dispatch*, July 7, 1980.
[269] Memorandum from Ron Michieli to Burton Eller regarding the National Associate Legislative Program (Lobbying Agenda), July 20, 1982, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

vote come election day."[270] The long list of questions focused government power, deregulation, free enterprise, and the promotion of scientific research.[271] This kind of direct lobbying connected cattlemen directly to the policy aims of state representatives, and focused the "cattle vote" on conservative platforms. While the NCA did not directly come out in support of specific candidates for legislative or executive races, the conservative bent implicit in these questions ensured that, for cattlemen, voting for conservative candidates was in the interest of their business.

The NCA immediately established friendly relations with the White House once Reagan was in office. Burton Eller visited with several members of the new administration during the first week of January 1981. "They all feel a growing support for animal agriculture," he reported back, signaling a shift in attitude from previous meetings with the Carter White House in which "austerity" frustrated cattle interests. In 1982, an internal document within the NCA expressed satisfaction with Reagan's plan to sell "surplus" federal western land. "NCA will actively work to protect the economic interests of the industry while diligently pursuing a course of eliminating unnecessary red

[270] Letter from Merlyn Carlson to Staff Executives of NCA Affiliates, September 9, 1980, Box 441, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[271] Ibid. Examples include: "If elected, what will you do to see that agricultural research funding is re-established at a level to meet the needs of the country to assure ample food supplies at a reasonable price?; Will you support legislation to enhance continued grazing, improve public rangeland and eliminate regulatory restrictions?; If elected, will you take a leadership role in developing and supporting the passage of significant tax cuts?; If elected, will you take an active role in lifting the regulatory burden from the backs of the railroads, truckers, and other transporters...and in expanding the list of exempted commodities to include food and farm input items?; If elected, will you take an active leadership role in reversing this detrimental trend of expanding Government involvement in the area of energy development?; If elected, would you support or oppose moves to increase the presence of and control by government in this free marketing system?"

tape and regulations," the document concluded.[272] The NCA's favored policies of deregulation, privatization, and free market economic values met receptive ears within the Reagan administration, which aligned conservatism with these western interests. Reagan's own ranching interests, along with his carefully constructed cowboy image, brought the West into the White House more than any previous administration had, both in policy and in style.[273] The rodeoing Secretary of Commerce Baldrige was an outer manifestation of the connection between "traditional" westernness and modern conservatism that, as documentation of NCA lobbying reveals, was central to the administration's identity.

In this context, the bigger, more athletic bucking bulls of the 1980s and 1990s, despite being products of new reproductive technologies and corporate agriculture, also embody a rural politics. These bulls in part exemplify the "Angry West," those mobilized by a sense of encroachment and loss of power in the face of federal power on the one hand, and "free market" western urbanization on the other. Professional rodeo, as it became centered on the appeal of the bull, dramatized the central paradox of the rural West in the 1970s and 1980s: growth was good, but growth came at a cost to rural, "traditional" ways of western life. The free-market, pro-development, deregulatory policies of the Reagan administration continued to urbanize and suburbanize the West at the expense of rural communities. The bull's increasing appeal as a form of spectacular

[272] Memorandum from Ron Michieli to Burton Eller, July 20, 1982, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[273] Reagan had purchased Rancho del Cielo, a nearly 700-acre spread in Santa Barbara, CA, in 1974, and used it as the "Western White House" while in office. The property is now called the Reagan Ranch as part of the Young America Foundation, which uses the ranch, according to its website, "as a campus to teach young people about individual freedom, a strong national defense, free enterprise, and traditional values."

livestock owed his dazzling power to scientific advancements in reproductive technologies that divorced sexual power from a sexual encounter, focused research and herd genetics on the power of a bull's sexual organs and emissions, and turned cattle from whole bodies into living carcass "targets" that were more and more the domain of a corporate cattle industry, not individual ranchers. In the arena, however, the bull's whole body was the center of the cowboy's focus and the spectator's gaze: bulls were explosive from head to toe, and, in every sense, fully intact. Their inescapable masculine power transferred to rodeo cowboys, whose uncompromising individualism defied both nature and governmental constraints. Here, in an eight-second contest between one man and one bull, were the "traditional American values" writ large.

However, this narrative is belied by the modernity of these bulls, which was hidden in plain sight by their size, their "rankness," and their increasing numbers due to increased artificial insemination and acceptance of heterosis. The need to satisfy the beef-loyal consumers identified by the NCA as those adhering to "traditional American values" was a modern one, best answered by scientizing American cattle through reproductive technologies, which the BIF was so heavily invested in doing. The notion of performance, whether in the reproductive sense dictated by AI, or in the spectacular sense of the bull ride, inscribed hypermasculinity deeply into beef, whether on the plate or on the hoof. With this view, the beef crisis becomes a crisis of American masculinity in which the sexual and spectacular performance of the bull could serve as a corrective to a lost sense of American identity rooted in "tradition." Cutting-edge science, though narratively invisible in rodeo, made this resurgent vision of tradition possible.

Chapter 3: Regimes of Care: Gender, Wildness, and Horses in the American West

INTRODUCTION

Behind the chutes of PRCA rodeos, a team of medical and veterinary professionals stands by, watching the events in the arena and ready to spring to action if a contestant or an animal gets hurt. Today, most animals in professional rodeos spend most of their time resting, traveling, or training, punctuated by, on average, fifteen seconds of intense physical effort in the arena depending on which event the animal performs. The main exception is calves used in roping and bulldogging events, who often figure in animal activism campaigns against rodeo – a 1982 HSUS mailing had the image of a calf strangled in a roper's loop emblazoned on its envelope – and who, if injured, are put down within minutes of the injury. Dr. Frosty Moore, an orthopedic surgeon who heads up a Texas branch of the Justin SportsMedicine Team (JMST), shares his position backstage with a veterinary team, and observed that "anything bad happens to animals, like calves getting hurt, the audience doesn't perceive it. Those calves are dead before they leave the arena; the vets get animals out so quickly."[274] These calves are the most potent physical reminders of rodeo's connection to industrial beef production, as roping events are most closely related to actual historical ranch work. Unlike horses and bucking bulls, calves do not travel from rodeo to rodeo. Instead, they are often provided by cattle raisers near individual rodeos who contracts with rodeos through a stock agent who pays the cattleman for the use of his calves. The calves who survive the rodeo

[274] Dr. Frosty Moore, Interview with author, February 13, 2013.

unscathed return to the cattleman, eventually to end up at a feedlot and eventual slaughter plant. Those who die are no loss to the raiser, who was already paid for their use. Despite the expandability of roping calves, however, the mature animals used in rodeo are carefully managed with highly developed veterinary care.

Dr. Moore, the JSMT, and rodeo veterinarians share close working quarters at professional rodeos, sometimes sharing medications and working together on human and animal patients when more hands are needed.[275] The animals, he explains, are much better cared for than human competitors because they have no choice whether to compete: "When they get hurt they get the best care there is...if they get hurt in the chutes, with spurs, or with use," they are "immediately cared for." The competitors who depend on their own animals for timed events or the rough stock they draw to buck "expect [them] to be in much better shape than the cowboys themselves," since good scores depend on a fit, healthy animal.[276] Dr. Steven Golla, an experienced rodeo veterinarian, concurs. Standing behind the chutes with Dr. Moore, Dr. Golla gets a steadier stream of work than the JSMT, because animals are far more likely to be brought over for treatment than competitors are to seek it for themselves. "The most common animal injuries in rodeo are bumps and bruises...Rodeo animals are more likely to get 'over the top' treatments for minor/common injuries – they get the best of the best because the difference between winning and losing can be less than one second."[277] He gave an example of the gap between "regular" veterinary care and "rodeo" veterinary care: "say a

[275] Ibid.
[276] Ibid.
[277] Dr. Steven Golla, DVM, MS, Interview with author, May 20, 2013.

barrel horse gets a minor skin abrasion – normally it would get nothing, or a little topical cream or some sort of thing. Rodeo folks might do laser therapy, heavy-duty anti-inflammatory cream, bandaging – aggressive healing treatments." On the bull side, he pointed to the growing number of veterinary practices that specialize in bucking bull medicine. "If [rodeo bulls] have an issue, there's a huge technological apparatus that goes into treating it. For some vets...their major source of income comes only from rodeo bulls."[278]

In contemporary professional rodeo, injured animals are liabilities, not necessities as they were in the historical antecedent of cattle ranching. In the stead of animal injury, men, bull riders in particular, have assumed the burden of pain in an entertainment context. Their performance and identity as rodeo competitors are predicated on their ability to endure tremendous pain, while pain-free animals are held up as an image of the sport's compassion, morality, and modernity. For Dr. Golla, one of the main reasons he gives for the importance of his job is that it helps the public understand that rodeo is a "champion of animal welfare" for both the agricultural and entertainment uses of animals. "Rodeo and agricultural medicine are hand-in-hand, totally aligned," he argues. But for both the sport and the industry, "it's an uphill battle to educate the public about the science and technology used to feed the world – that's what we do...This is why rodeo is so important – it shows how food is made, where it's from, and connects it to entertainment so people can access it."[279] For him, the technologized care of rodeo

[278] Ibid.
[279] Ibid.

animals is a layperson's portal into the way industrial animal producers value their food animals, conflating the welfare of an entertainment animal with one who will eventually be eaten.

Rodeo and agricultural medicine diverge on an important point: the ability to manage animal pain with analgesics. The veterinary technologies used to "feed the world" do not emphasize pharmaceutical pain relief or injury treatment, unlike those used for animals whose bodies suffer from the rigors of competition, because the residues from pain relieving drugs contaminate the food supply. Yet if Dr. Golla's logic holds that rodeo spectators use the sport to learn about industrial cattle agriculture, then the rodeo arena effectively obscures this key difference. By shifting the emphasis on care to the treatment and prevention of animal pain in rodeo, spectators see skewed picture of "how food is made" that does not account for the devaluation of pain in animals bound for slaughter. Rodeo bulls, whose care can form the entirety of a veterinarian's practice, obscure the thousands of beef cattle whose pain is considered unimportant.

Dr. Golla's explanation of why the veterinary role is so important in rodeo is emblematic of his genuine desire to care for animals and improve their lives. It is also emblematic of rodeo's shaky historical storytelling. The tangled contradictions that professional rodeo navigates as it fuses a version of western history to contemporary consumer entertainment percolate up through its performative paradoxes. The concrete and symbolic values of both horses and bulls weave their treatment with sophisticated veterinary technologies into a narrative structure, like the one Dr. Golla describes, where their bodies perform a re-writing of history. For Dr. Golla, bucking bulls re-write the

history of industrial beef to make it humane for popular audiences. In the case of horses, I argue that rodeo touts the "wildness" of its bucking horses as a crucial part of conservative American individualism and the western landscape, something under threat that should be preserved. Their use in rodeo simplifies the place of mustangs – geographically, politically, and psychically – in the United States, which in actuality is complex and fraught with conflict. In rodeo, bucking horses, as facsimiles of mustangs, embody a contradictory narrative that privileges the power and appeal of a fiercely spirited sense of self *and* the seductive potential to be tamed. In reality, mustangs embody the deeply oceanic transnational histories of the Americas in genetics as well as semiotics. Yet because they tend to be understood within a narrower narrative of frontier conquest, much of this complexity is erased.

In this chapter, my aim is to unearth how rodeo uses domestic horses as cyphers of their wild counterparts to reconcile two very different ideas of the horse in American culture. The role that horses played in the historical west was one of submission and forced labor; more current ideas about horses hold these animals in high regard, as animals worthy even of love. Horses, both wild and domestic, draw an oblique trajectory across rodeo, and intersect with its hierarchies of gender, biodiversity, and agriculture at odd angles. As animals with both capital and symbolic value, horses that compete in rodeo are subject to an array of techno-veterinary methods of preventive medicine and injury treatment, both to preserve their monetary value as athletes *and* to justify their use in rodeo to skeptics and activists concerned that rodeo competition is animal abuse. Cows, as we saw in the last chapter, also embody advancements in agricultural science in

the context of rodeo, but their purpose both inside and outside the arena is more market-driven: their scientized bodies have been put to use as beef or as rodeo bucks, but in both cases cow capital is concretized. Equine capital in rodeo, however, has two registers: as money, in the sense of prize money and the value attributed to horses who compete well, but a horse's value is also determined by the special status the animal has gained in American culture over the past fifty years.

In order to parse these different layers of historical value, I turn to anthropologist Kaushik Sunder Rajan, who writes about the role the life sciences play in parsing the value of bodies. He introduces the concept of "lively capital" to describe the slippery affects of the life sciences "at play when technologies and research impinge on experiences of embodiment, kinship, identity, disability, citizenship, accumulation, or dispossession."[280] In doing so, he borrows the term from Donna Haraway, whose definition of "lively capital" hinges on reckoning with the biological unruliness of living commodities at a time of the rapid commercialization of body parts, especially the littlest ones found in molecular genetics.[281] Rajan's use of "lively capital" pays close attention to the ways in which cultural value and monetary value are bound up together, even if those two kinds of valuation are at odds. Horses in rodeo exemplify these tensions, as

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[280] Kaushik Sunder Rajan, ed., *Experimental Futures: Lively Capital: Biotechnologies, Ethics, and Governance in Global Markets* (Durham: Duke University Press, 2012): 16.

[281] Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008): 45-6. "But what happens," she asks, "when the undead buy always generative commodity becomes the living, breathing, rights-endowed, doggish bit of property sleeping on my bed, or giving cheek swabs for your genome project, or getting a computer-readable ID chip injected under the neck skin before the local dog shelter lets my neighbor adopt her new family member? *Canis lupus familiaris*, indeed; the familiar is always where the uncanny lurks. Further, the uncanny is where value becomes flesh again, in spite of all the dematerializations and objectifications inherent in market valuation."

scientific advancements in veterinary care have paralleled a change in the way Americans value horses culturally. Since the 1960s, horses have gained tremendous cultural capital. This affinity has made them deserving of more advanced veterinary care, from preventive medicine to pain management, even if a horse is not a major prize winner or does not carry valuable bloodlines. These affective properties are all hailed in rodeo's main events, as well as in such casually scripted moments as the one opening this chapter. Rajan further observes, "historical contingency...arises at the level of particular strategies and tactics adopted as the life sciences have been incorporated within systems and regimes of capital."[282] Rodeo has made just such adjustments, narrating itself as a pageant of history while incorporating contemporary scientific innovations and new definitions of "wildness" to satisfy changing attitudes towards the value of horses.

In this chapter, I wish to suggest that horses in rodeo have also been incorporated into a regime of care. This chapter pivots methodologically from the archival to the ethnographic and biocultural. I weave my fieldwork and interviews at rodeos into an analysis of public opinion of the value of American horses both inside and outside of the rodeo arena. Consequently, I investigate the role of horses in rodeo, but also relate them to American practices of horse slaughter, horse eating, and wild horse-related activism. Pain is the connecting thread that unites horses across these fields of consumption and care. Rodeo dramatizes the rise of emotional investment in equine pain, weaving it into a nationalistic narrative of horse care, and using veterinary treatment to protect horses' cultural, as well as corporeal, value. But the equine experience of pain is historically

[282] Rajan., 7.

contingent, and managing equine pain, whether in relation to competition or slaughter, dominates the transition of horses from a regime of capital to one of care over the past fifty years.

Both inside and outside the rodeo arena, American horses and horse flesh opens a space to investigate this embodied historical shift, helping to parse the bioscientific complexity of "lively capital" under a regime of care. This chapter traces the centrality of horseflesh to western economies, charting key moments of their redefinition as bodies with feelings as well as monetary values. Encountering what anthropologist Tamar McKee calls the "paradox of sentience," activists working on behalf of wild horses, rodeo horses, and against horse slaughter have continually negotiated the "ongoing tension of sentience versus sustenance when it comes to the cultural role and power of horses."[283] Yet while these activists have succeeded in making equine pain less acceptable to various human audiences over time, the animal love that undergirds their work has, in some senses, made caring into a regime as oppressive as capital. This chapter first charts the historical change in the value of wild horses in the American west, analyzing how Velma Johnston, a Reno bank secretary, successfully nationalized wild horse identity and fought for their protection as government-sanctioned living national monuments from the late 1950s to the early 1970s. The second section looks to the current horse slaughter debate, showing how this updated version of Johnston's crusade to protect horses from slaughter conflate equine pain – and the veterinary pain medications embroiled in related hippophagy scandals – with broader anxieties over class, region, and capital. The chapter

[283] Tamar V. S. McKee, email to author, December 9, 2014.

returns to the rodeo arena to conclude with an exploration of shifting dynamics of human and animal pain in the context of animal care, paying particular attention to the gendered expectations of pain for male competitors in contrast to their animals. Throughout these sections, the importance of women to the horse protection movement forms a central thread, as does the re-inscription of gendered hierarchies under rodeo's regime of care. Contemporary iterations of caring for horses complicate Johnston's legacy, and compromise both human and animal bodies in unexpected ways.

FROM REGIME OF CAPITAL TO REGIME OF CARE

The contemporary importance of the mustang to western American imaginations is both powerful and absurd, embodied in the horses' slippage between wildness and domestication. Rodeo broncs' standing in for wild horses is both believable and entirely artificial. This paradox is a necessary and unavoidable consequence of moving from a regime of capital to one of care, wherein the historical use of horses as monetizable flesh was made taboo. In place of money, love now stands as the main determiner of their value – a personal, cultural, and national love for the idea of their wildness. The bronc riding event in rodeo dramatizes this paradox, using specially bred domestic horses to stand in for wild ones. In rodeo, the horses acting out the conflict involved in turning a wild horse into a riding horse through an emphasis on spectacular bucks are never expected to be "tamed," or to stop bucking. Instead, good bucking horses play out the moment of conflict over and over: they are domestic horses acting wild, not wild horses becoming domesticated.

Even the words by which we call undomesticated horses – mustangs, wild horses, free-roaming horses – are resonant with deeply fractured colonial legacies of various origins and states of human-animal interaction. Texas historian, folklorist, and great lover of mustangs, J. Frank Dobie recognized the need to qualify the wildness of horses living in the western states as being "not wild in the sense of being aboriginal...with an unbroken line of wild ancestors." He continues, "in precise language they should be called *feral*, but usage justifies *wild*."[284] The slippage between precision and usage also inflects the term "mustang," derived from Spanish colonial-era laws determining the ownership of sheep who had wandered off, who were automatically considered part of the "Mesta," or state-run sheep organization. By the sixteenth century, the Mesta governed many kinds of livestock in New Spain, and "mesteña" was popularly used to describe various wandering animals who had strayed from human hands, including those who famously swam to shore from shipwrecked Spanish galleons. Dobie found evidence that such animals were also known as "cimarrones," or "marons," a term used to describe runaway slaves (a term again originally about sheep, this time wild ones indigenous to the same mountains along the Cimarron River where fugitive slaves fled to). The attachment of the term mesteña, and soon mustang, to horses was a nineteenth-century Americanism, part of the informal negotiations brought about by the mingling of old and new empires.[285]

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[284] J. Frank Dobie. *The Mustangs* (Austin, TX: University of Texas Press, 1934), 3. Italics his.
[285] Ibid., pgs 93-5.

Like Dobie, in this chapter I have struggled with the unstable terminology used to describe these western horses living outside of daily human interactions. "Wild" is an optimistic term that carries more cultural than biological freight. "Feral" is more accurate, as these horses all descended from domesticated stock – the element of escape is a key part of their identity. However, feral is most often used to describe predators and omnivores who scavenge at the fringes of human habitation, such as dogs, cats, and pigs. The term may be an accurate one to describe undomesticated horses, but because they are herbivorous prey animals who seek to avoid human contact and do not derive sustenance from human wastes, it does not jive with common parlance. "Mustang," with its multispecies entanglements in various geographies of slavery and colonialism, is perhaps the most honest in historical terms, and I use the term in line with my sources to describe horses captured by Americans in the late nineteenth and first half of the twentieth centuries. But in the process of researching this chapter, the ways in which the contemporary use of the word "mustang" erase embodied historical legacies into in the service of creating care from capital makes it problematic. Today, "mustang" tends to refer specifically to horses in the past who were captured by white American men, and "tamed" in the way that rodeo re-enacts. Or, "mustang" refers to horses in the present who inhabit protected public lands as living monuments to an understanding of American frontier history that celebrates Manifest Destiny and the "freedom" that arises from a flattening of American imperial actions. As a result, I have settled on the inelegant term "wild-living" to describe these herds from a perspective which nods to the ways in which their wildness is culturally desired but biologically and historically compromised. In

doing so, I join a long line of horse people, historians, and Americans who have failed to corral these horses into a convenient lexical frame.

Corralling these horses in physical frames, however, has been less of a problem. Over the nineteenth century, the descendants of equine escapees were far more likely to be swept back into human control than to leave it. Like other livestock, the primary relationship between humans and mustangs in the Americas was one of money and expanding state power. Their flesh was incorporated into the growing regime of western capital as early as the 1840s, when ranchers could claim tax breaks for any mustang taken from the range.[286] They were conscripted in war, their bodies critical to the systematic dispossession of Native tribes, and widely used to supplement Union and Confederate cavalries during the Civil War.[287] In the late nineteenth century, demand for wild horses grew further. When the British cattle bubble increased the number of cows and their mobility from Texas north through the mountain west, wild horse bands that had been dispersed across several states retreated from such traffic, and ultimately became concentrated in little-traversed Nevada by the 1880s.[288] Deanne Stillman points out that

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[286] Ibid., 94.

[287] One famous and haunting episode is Colonel George Wright's horse massacre at Spokane Bridge in 1858. Wright predated General Sherman's burn--and-plunder approach as he pursued Native tribes throughout the Spokane Valley, burning supplies and food stores. In early September 1858, men under his command shot a hidden group of 700 horses belonging to the Spokane, Coeur d'Alene, and Palouse tribes, effectively disarming their ability to fight and to eat as the winter approached. Some accounts justified this massacre by saying that the horses were "unbroken" or "unusable," and too large a number for the US Army to absorb for either training or meat stores. Miners and packers traveling through the area a decade later describe how "the bone piles of 'Horse Slaughter Camp' were then very noticeable in those days." James W. Watt, "Experiences of a Packer in Washington Territory Mining Camps during the Sixties," *The Washington Historical Quarterly* 20:1 (January 1929), pp 36.

[288] Deanna Stillman, *Mustang: The Saga of the Wild Horse in the American West* (New York: Houghton Mifflin, 2009): 237; and Dobie, pg., 108-9. Stillman estimates that the total population of wild-living horses in 1880 was 2 million, spread from California to Missouri, Texas to Montana -- a large number, but

Nevada did not experience the crippling blizzards of states such as the Dakotas in the mid-1880s. As a result, many ranchers set their sights on the state after the cattle bubble burst, creating a new market for wild horse roundups to acquire equine labor for fledgling cattle operations. By 1897, Nevada was at the center of a multi-pronged "wild horse industry" that served local and global needs for horseflesh and capitalization. Wild horses replaced silver as the number one extractable resource for profit in the state.[289]

Some of these animals went to ranchmen. The "busting" process through which these horses transitioned from wild-living to ranch horse is the very scene that rodeo dramatizes, though ranching was not the only use these horses were "busted" for. Many others were shipped overseas to supply the British cavalry during the South African Boer War from 1899-1902. The United States shipped a recorded total of 109,878 animals overseas – as many has 6,000 horses per month – by the end of 1901, a number about equal to those provided by England, Ireland, Australia, and New Zealand combined.[290] This wartime trade in American horseflesh was a lucrative one, especially for animal dealers like William P. Hall, who entered the Boer War trade from his established business supplying horses to large-contract customers such as city streetcar companies, western stagecoach operators, and, in the late 1880s, American Express.[291] In 1897, Nevada passed a law legalizing the commercial killing of wild horses, resulting in the

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as Dobie notes, nothing like the "tens of millions of buffaloes" that shared their grazing lands before being hunted to near-extinction. The mustangs, however, "ranged more widely," perhaps contributing to over-inflated estimates of their actual numbers.

[289] Stillman, pg. 237-240.

[290] Sandra Swart, *Riding High: Horses, Humans, and History in South Africa* (Johannesburg: Wits University Press, 2010): 111.

[291] Fred D. Pfening, III, "William P. Hall," *Bandwagon* 10:6 (Nov-Dec 1966), http://www.circushistory.org/Bandwagon/bw-1966Nov.htm. Accessed February 1, 2015.

opening of the horse rendering industry where horse carcasses were turned into products – "fertilizers, glue, hog food" – to serve the needs of growing industrial and agricultural apparatus. As the twentieth century progressed, this market expanded, and wild horses were turned into canned meat exported to Europe, and conscripted once again to serve in Allied cavalries in World War I.[292] The greatest number of mustangs were removed from Nevada between 1920 and 1935, when they became widely used as processed chicken feed, and later as cat and dog food.[293] In 1925, Montana entered the processed-horse market, sending "about four hundred thousand mustangs" to processors from 1925-29 alone.[294] During the Great Depression, the disposability of mustangs was written into U.S. agricultural policy. The Taylor Grazing Act was modified in 1939 to grant primacy of grazing rights to cattle on public ranges: "A wild horse consumes forage needed by domestic livestock, brings in no return, and serves no useful purpose." Underneath this language lurked the horses' definition as escapees: they were historical fugitives who needed to be brought back under human control, having wrested their freedom only to trample on the "useful purpose" of domesticated cattle. The Act used this logic to codify an individual's unlimited right to remove mustangs from private and public lands.[295]

During this period of mustang removal from the 1890s until 1950, there was no such thing as a "slaughter debate" among westerners in regards to horseflesh. While

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[292] Stillman, pg. 237.
[293] Stillman, pg. 240. Stillman quotes historian Walker D. Wyman, who astutely notes that "When the country was agricultural, food for the dog was not a problem – scraps, leftovers, and rodents constituted their diet. But as the urban population increased, the delicatessen came into its own...The dog then entered the discussion."
[294] Ibid., 242.
[295] Ibid., 245.

western interests in resource extraction, ranching, conservation, and government had much to disagree about, they were united in their understanding that wild-living horses were detrimental to western land and could best be put to use as flesh profit, whether for war, animal feed, or industrial products. At no point was their status as a physical resource conflicted by their "freedom," "wildness," or by a debt of service to the United States. Flesh and freedom were not at odds. A wild-living horse had no abstract value. Its flesh was translated into labor or money, like any other livestock, though its wildness served to make initial capital investment in horses more attractive: there was none, other than the effort required to capture them.

In 1950, this narrative began to change when Nevada ranchwoman Velma Johnston, later known as Wild Horse Annie, began to document the bodily condition of wild horses between roundup and slaughter. During World War II, roundups were increasingly conducted by air, as pilots in crop dusters chased horses into natural or man-made corrals. This method of capture radically altered the stress put on wild horses, as the limits to how hard and far they could be pushed while still retaining good condition disappeared. Previous methods of roundup – by horseback or by truck – had built-in limitations: the former, the speed and endurance of riding horses, and the latter, the kind of territory it could drive over. Planes did not tire and could cover any kind of territory. The ready supply of pilots and crop planes were an extension of both the technological militarization of the western states starting in WWII, and the rise of industrial agriculture. Crop dusters sprayed industrial fertilizers made in laboratories, initially conceived as biological warfare tools, thus making horseflesh less necessary for fertilizer, and also

subjecting them to mechanized roundup.[296] As the bodies of these horses lost economic value, the "liveliness" of their bodily capital became less and less necessary to slaughterhouse buyers whose contracts with roundup pilots stipulated only that the horses be breathing.[297]

At this point, wild-living horses reached a nadir: even in previous decades of brutality, their ability to function as war or work horses was key to their capitalization: they could be terrorized, for sure, but their bodies could not be so broken as to be useless. The historical purpose of "busting" broncs that rodeo refers to, for example, was to create a usable animal, one ready for work. In the age of pet food and industrial fertilizer, however, the state of their bodies mattered little when the next phase of their existence was to be ground, melted, and reconstituted into industrial products. Previous roundup methods were designed to maximize the usefulness of captured horses. Aerial roundups, by contrast, commonly tore horses' bodies apart because of their speed and duration in comparison to previous methods of capture, leaving them barely alive, their wind broken, and often riddled with bullets and broken bones to make the journey to the slaughterhouse. Into this trough of value stepped Johnston, who made it her mission to

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[296] "Postwar Fertilizer Explodes." Wessel Living History Farm, "Farming in the 1940s," http://www.livinghistoryfarm.org/farminginthe40s/crops_04.html. Accessed February 1, 2015. Environmental historians widely document that the wartime plants designed to produce nitrogen for TNT and other explosives were widely re-purposed in the late 1940s into fertilizer plants. As one public history site explains, "Fertilizer use exploded, in part because the supply was there and in part because farmers and scientists understood how important nutrients were to crops." At the same time, the beginning of high-yield one- or two-crop agriculture removed crop rotation from large-scale farming practices, necessitating artificial means of replenishing soil nutrients. "Nitrogen fertilizer," one historian notes, "was a huge factor in the yield increases that began." Sandra Steingraber traces the environmental and medical legacies of this shift in *Living Downstream: An Ecologist's Personal Investigation of Cancer and the Environment* (New York: Da Capo Press, 2010).

[297] Stillman, 253.

re-enliven the value of wild-living horses. In Haraway and Rajan's terms, "lively" capital does not just refer to a living body that can be turned into money, but one whose life is imbued with meaning, which can be constructed, or enhanced, through biocultural means. Johnston's work was to find this meaning, and weave it back into the valuation of wild-living horses.

Famously, on her way to work one day in 1950, Johnston followed a livestock truck trailing blood to a slaughterhouse, where she discovered the truck full of horses who had been "flown in" from an aerial roundup. She found their bodies peppered with buckshot, their eyes shot out and their feet nearly destroyed from running over rocks, some with broken limbs and faces from being trampled in the extended stampede. Johnson's horror spurred her to look into the legality and extent of aerial horse roundups. As she later found out in her research into the public record of mustang capture, over 100,000 wild-living Nevada horses had been legally rounded up by air and sold to pet food manufacturers in the eight years after World War II.[298] She began to stake out roundups and slaughterhouses, quietly gathering photographic evidence of the condition of rounded-up horses. She published her findings in local papers, and began to gather tips and stories from others who corroborated her findings. Throughout these early actions, she did not express her outrage at the ravaged mustang bodies during aerial roundups in terms of technology, modernization, or even the long history of the mustang's status as cheap labor and easy capital. While she used her graphic photographs of bodily destruction to horrify her growing audience with proof of how little these horses

[298] Ibid., 250-252.

were valued, the main thrust of her argument for stopping their aerial torture was instead to posit that the animals had value beyond their flesh in the first place, which was being terribly violated – that they had a historical, emotional value, which made their pain unacceptable.

Johnston's view was new. It ascribed a new value to wild-living horses that was ignored by the long history of gathering, shipping, and slaughtering unclaimed horses for purposes of capital gain and war in the United States. Despite constituting a radical departure from prevailing attitudes, Johnston's position was enormously effective in pursuing legislation to protect wild-living herds in Nevada. Her first appearance in legal proceedings regarding the protection of wild-living horses was at a 1952 county-level hearing in front of county commissioners, who were to approve a routine bond for sheep ranchers to contract a pilot to round up mustangs near and on their property. Though she testified to the pilots' brutality and the horses' intense physical pain, her most powerful argument in the horses' favor was linked to the risk of forgetting the past: "I'm fighting to save a memory," she implored.[299] But what memory? No cultural memories of leaving wild-living horses to themselves, or considering them valuable in any way other than flesh, previously existed in the United States. Her view caught on, though, and the emotional capital of wild-living horses rose. Her courtroom appearances quickly scaled up from county decisions on bonds to state-wide aerial roundup bans in 1952 to the designation of wild-living herds as a "national heritage species" by President Nixon in 1971. The signing into law of the Wild Free-Roaming Horses and Burros Act legally

[299] Ibid., 255.

prevented any private interference with wild-living horses and placed them under federal protection through the Bureau of Land Management (BLM).[300]

In the space of twenty years, Johnston created a "memory" for the horses to inhabit that they had never previously enjoyed: exemption from commodity status. The key factors leading to this change in value from money to "memory" were technology and rhetoric. The transition to aerial roundups increased the extent of bodily brutality of the process to a point that was no longer acceptable, despite the widely accepted historical violence inherent in gathering and taming wild-living horses in western American culture. The planes crossed a line of bodily destruction, dissolving horses' worth into the barest of margins between life and death. But not only were aerial roundups too much for the horses: the rhetoric of memory, heritage, and preservation that gained traction through Johnston's activism showed a deep anxiety about western urbanization and the dwindling of rural life in the postwar years, one that rodeo already shared. Despite the fact that rodeo enacted a history of brutal taming in the figure of the bronc, its dramatization of bronc busting did not reinforce the idea of total equine destruction aided by modern mechanical technologies, and Johnston borrowed this key element from rodeo to bolster her argument. Johnston's wild-living horses became more like rodeo broncs: living embodiments of a constructed memory of a "wild," preindustrial west.[301] A 1952 editorial in the Virginia City, Nevada *Territorial Enterprise* supported

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[300] Stillman traces this legislative history in detail from page 255- 264.

[301] There is a parallel story here to be told about how Johnston martialled support and strategies from environmentalists in making these horses "natural," narrating them as part of the western wilderness instead of fugitives, or a as feral invasive species -- both more historically accurate interpretations. Her work was part of the wider wilderness protection movement that successfully worked to legislate the Environmental

her first legal testimony and expresses the rhetoric Johnston found so effective in enacting protective legislation: "The wild horses, harmless and picturesque as they are, are a pleasant reminder of a time when all the West was wilder and more free."[302]

Wildness and freedom notwithstanding, historically, that "pleasant reminder" could not possibly refer to a time when horses were safe from becoming flesh – there was no such time. What had been an acceptable practice was now monstrous, beyond the pale of human decency. As Johnston moved from state to federal courts, she started to characterize those who rounded up wild-living horses as diseased, infected with "mustang fever," a debilitating ailment that, she testified to the House of Representatives in 1959, drove men to brutal acts bordering on insanity. "Once having contracted it, there is no known cure. But our reputation as a great humanitarian nation becomes a bit less enviable as people of other countries read about the mustang hunters, and they write and express their surprise and disgust."[303] For Johnston, consuming wild horses inappropriately – chasing and injuring them, and then serving them to dogs – made people sick. Her use of illness, inappropriateness, and disgust were key to making the capital consumption of wild-living horses a taboo.

The creation of memory from thin air necessitated a wholesale revision of the language used to define these horses – already slippery through competing legacies of property and empire. It necessitated the virtual invention of a new animal, with new needs, including the need for legal protection. Johnston's unwavering twenty-year

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Protection Act in 1973, which had widespread and long-running consequences for western public lands, resource extractors, cattle ranchers, and wild horse protectionists over the last several decades.

[302] Quoted in Stillman, 254.

[303] Ibid., 257.

campaign to protect wild-living horses resulted in exactly this effect. The 1971 Wild Free-Roaming Horses and Burros Act, legislated two wild-living equid species into icons, making Johnston's invented memory a legal fact.[304] The introductory paragraph of the Act is steeped in lexical flourish, demonstrating the labored effort of writing a newly acquired symbolic value – as opposed to a much more easily described economic value – into law:

> To require the protection, management, and control of wild free-roaming horses and burros on public lands. Be it enacted...in Congress assembled, that Congress finds and declares that wild free-roaming horses and burros are living symbols of the historic and pioneer spirit of the West; that they contribute to the diversity of life forms within the Nation and enrich the lives of the American people; and that these horses and burros shall be protected from capture, branding, harassment, or death; and to accomplish this they are to be considered in the area where presently found, as an integral part of the natural system of the public lands.[305]

The inclusion of the oft-maligned burro in this legislation defines heritage in terms of service or labor. By eschewing the word "mustang" but adding burros into the umbrella of protection, the Act nods to colonial legacies but makes the horses entirely American, dropping their foreign-sounding moniker. But the writers of the Act clearly struggled with the familiar problem of clearly defining the horses it protected, even in the context

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[304] In fact, this is the second and more expansive version of the first federal law Johnston successfully lobbied for, HR 2725, the "Wild Horse Annie" Act, passed in 1959. This legislation banned the mechanized hunting of wild-living horses for sale to pet food manufacturers. David Cruise and Alison Griffiths, *Wild Horse Annie and the Last of the Mustangs* (New York: Scribner, 2010).

[305] The Wild Free-Roaming Horses and Burros Act of 1971, P.L. No. 92-195.

of their new cultural meaning: they are designated both "wild" and "free-roaming," emphasizing that, unlike for other wild species, the latter does not necessarily fall under the former.

These lexical contortions signaled a change in the relationship of wild-living horses to the regime of capital that had previously dictated their value. Becoming "living symbols of the historic and pioneer spirit of the West" transferred these horses from a regime of capital to a regime of care. Their embodied capital successfully became more than monetary. From the nadir of Johnston's 1950 discovery of horses who had nearly been destroyed, the lives of those still on public lands had been given meaning beyond their flesh: their capital had become "lively." Their previous fleshly accounting as pet food was usurped by a ghostly "spirit" as difficult to define as these newly cared-for animals. Ironically, the regime of care extended to these horses in 1971 was one already enjoyed by the pets these horses had previously been hunted in order to feed. Animal studies scholar Robert McKay underscores this relationship, noting that the demand for horseflesh and corresponding "mechanization and commercialization of [mustang] hunting" served "a recognizably new consumer market (the post-war explosion in pet keeping)."[306] The Wild Free-Roaming Horse and Burro Act did not bring wild-living horses into the fold of pets, but it certainly legislated them out of eligibility to become pet food.

[306] Robert McKay, "Animal Life and Moral Agency in Post-War Cinema: Velma Johnston, Marilyn Monroe, Arthur Miller and John Huston's *The Misfits*." In Michael Lawrence and Laura McMahon, *Animals and the Moving Image* (New York: Columbia University Press, forthcoming): 4.

The Act also codified a change in the relationship of these horses to the state, wherein legislating care for them on a federal level could accrue more power than allowing private citizens or corporations to expand their capital accumulation through the use of animal bodies. In 1971, their representation of cultural values supplanted their commercial value for the first time in American history; their actual value as price per pound was transformed into abstract values, written into law as symbols and spirits of a history that did not exist, as far as these horses were concerned. Yet there is one continuity that helps explain their transference from a regime of capital to a regime of care: the regime itself. Whether as monetized flesh or symbolic spirit, these horses were used to enforce and enshrine American dominance over the western states. What seems to be a new entanglement between flesh and freedom in Johnston's activism is actually a renegotiation of existing structures that serve to whiten western history and support romantic interpretations of conquest. Rodeo, with its concern for preserving a pre-modern idea of the west already established, provided a useful rhetoric for Johnston to borrow from to make her case for equine protection based on their vulnerability to modern, mechanized technologies. Where wild-living horses across the west once helped guarantee American "freedom" through their capture, labor, or death – the story that rodeo tells through its bucking broncs – in 1971, they guaranteed an idea of it through an unmolested life.

This strange revision of the story of wild-living horses from one of capital to one of care brings me back to the rodeo arena to consider the ease with which the domestic and the wild can be substituted for each other depending on the narrative of freedom best

served. Despite the historical use of equine bodies as a method of capital accumulation, preserving them as a symbolic resource is a necessary psychic component to western identity today. In rodeo, this transition from regime of capital to one of care is reenacted in the bronc riding event, where the violent process of horse-taming is perpetually reenacted, but stuck in an abrupt eight-second loop, and where the horse can get some points in, too. Ultimately, the contemporary rodeo horse is expected to buck the cowboy off, and to go on bucking for his or her entire career, despite the roots of the event in long, brutal contests between horses and men meant to wear the horse down until they submitted to human dominance.[307] Johnston's re-valuing of wild-living horses made the modern technological practices of breaking them taboo, and the masculine power derived from it a sickness, while nevertheless aligning with rodeo's dramatization of pre-modern bronc busting. Her work marked the beginning of a long arc of women aligning themselves with wild-living horse activism in opposition to men infected with "mustang fever," and altered the mechanisms by which animal pain bolstered western gender identities. Yet these thorny debates about wildness, symbolic value, and animal care expose the longer gendered histories of capital, care, and masculine mastery that prove difficult to disentangle in animal activism.

[307] In the contemporary horse world, debates about historical horse breaking techniques fall into two camps: those who believe that violent "cowboying" was the norm, and those who believe that most good horse breakers used gentle, "whisperer"-type methods. The truth lies, as always, somewhere in the middle, and most of these discussions today center on contemporary western training methods espoused by people making money by selling their "unique" techniques, such as the John Lyons method, the Parelli method, the Clinton Anderson method, or the Buck Brannaman method, all of which try to mix the principle that a horse should obey its rider with the idea the horse and rider should also be friends.

FLESH PREJUDICE

"Murderers! You liars!," Marilyn Monroe howls, her body bent akimbo from the force of her scream. "All of you lie! You're only happy when you can see something die! Why don't you kill yourselves and be happy? You and your God's country! Freedom! I pity you!" Monroe, playing the character Roslyn in the 1961 Arthur Miller/John Huston film *The Misfits*, reached this moment of vocal apotheosis, her words tumbling into indeterminable screams of anguish, during the film's mustang hunt, during which three malnourished horses struggle for their lives against the airplane, truck, and ropes used by the three men with Roslyn out in the Nevada desert. After the horses finally submit – a stallion, a mare, and her nursing foal – Roslyn is unable to contain her horror at what she has just witnessed. Her scream exposes fissures between wildness, gender, and mastery, instantly nullifying the justifications offered by the men for going mustanging. But her breaking voice and the breakdown in language also points to the impossibility of bridging these gaps, of reconciling empathy with reason in the context of western masculinity.

The film was preceded by Miller's short story of the same name, which ran in *Esquire* in 1957, and was inspired in part by Velma Johnston's campaign to save wild horses from slaughter. Miller first came to Reno to get divorced in 1956 so he could marry Monroe. While there, he became aware of Johnston's ongoing story, and also met "two rodeo men turned mustang hunters" – a pilot and a roper – on whom he based two of his characters in *The Misfits*.[308] The ties between Miller's short story and Johnston's

[308] McKay,10.

success in getting Congress to pass the 1959 Wild Horse Annie Act banning aerial roundups of mustangs may be tenuous; however, Johnston used secretly-obtained photos of a hunt run by these same two men, Hugh Marchbank and Bill Garaventa, to convince Congress of the cruelty of aerial roundups.[309] Marchbank and Garaventa represent an uneasy mixture of rodeo's negotiation of modernity and tradition in the context of Johnston's activism. As "rodeo men," Marchbank and Garaventa participated in performances of pre-modern westernness. As mustang hunters, they turned readily to technologies available in the postwar years to capitalize on horseflesh. In the 1950s, western men could do both at once: rodeo and mustanging were two sides of the same industrial economy that subjected horseflesh to masculine mastery. Johnston partially based her arguments against technologized mustang hunting on creating an incommensurability between the two identities embodied by these "rodeo men."

By the time the film came out in 1961, the American attitude towards mustang hunting had turned from indifference to disgust, especially in the use of horses for pet food. Velma Johnston was able to martial this change, spurring not only the enactment of aerial hunting bans in 1959 but, in 1971, the full protection of wild horses from private roundups and slaughter. This protection put all horses living on public lands under the care of the United States Department of the Interior's Bureau of Land Management (BLM), which was charged with rangeland care, population control, and facilitating the adoptions of horses humanely culled from the land. According to the law, the horses were to be kept out of slaughterhouses, never to be turned into pet food again. The law

[309] Ibid., 11.

went through several small amendments until 1978, and then stood unchallenged (if not unilaterally followed or enforced) for nearly thirty years.[310] During this time, the horse slaughter industry in the United States slowly declined from its peak in the early 1960s, when 35 plants across the country rendered horses into pet food. The 1966 Fair Packaging and Labeling Act "showed consumers the amount of horsemeat their pets were eating," which, combined with the legislative exclusion of mustangs from the pet food supply, constricted both supply and demand.[311] Johnston's legislation and Monroe's scream together convinced American consumers that feeding wild horses to their pets was no longer acceptable.

This change in attitude had a long-term detrimental effect on the overall horse slaughter industry. Domestic horse slaughter continued, though without a supply of wild-living horses, American-owned slaughterhouses dwindled. In 1990, nearly 350,000 horses of American origin were slaughtered in plants on US soil, with just over 50,000 shipped to processors in Canada and Mexico.[312] These figures fell steadily through that decade as the number of U.S.-based plants declined from 16 at the end of the 1980s to seven in 1994; in 2002, only 75,000 American horses were slaughtered, just over half of them in the United States and the majority of the rest in Mexican plants. While the total

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[310] Ronald B. Taylor, "Adopted Mustangs are Slaughtered, Critics Say," *Los Angeles Times*, February 1, 1988. Taylor reports that the BLM granted special expedited ownership to ranchers who adopted large numbers of horses (100+) from the BLM, granting title to them in the accelerated timeframe of one year. This incentive was justified by the argument that many ranchers were getting out of the cattle business, but wanted to maintain their agricultural land-use tax exemptions, which they could by keeping horses on their land. However, after the year-long hold period, ranchers were not prevented from selling these BLM horses to slaughter, thereby making a profit on top of their tax break.

[311] Lisa Slade, "Part 1: The State of U.S. Horse Slaughter: Closing the Doors, Opening the Borders," *The Chronicle of the Horse* October 4, 2011. Web.

[312] Jack Rodolico, "The Shady Trade in American Horsemeat," *Latitude News*, December 11, 2012. Web.

number of slaughtered horses rose again to about 150,000 by the mid-2000s, only three horse slaughter plants were operational in the United States, and they were owned by European companies.[313] As horse meat was phased out of pet food, it was processed primarily for export for human consumption abroad, as well as being used as food for zoo animals and racing greyhounds.[314] Once mustangs were pulled from the supply chain, the horses sent to slaughter were most often horses that had failed to sell at auction, and were left for the "kill buyers" at the end of the sale. This group was diverse: some horses were too old to be of service, others lame, others were healthy but their owners had fallen on hard economic times. Because of sanctioned breeding practices designed to facilitate individual quality by breeding in quantity, the vast majority of US horses bound for slaughter are Quarter Horses – one estimate claims these make up 7 of 10 slaughter-bound horses – and a significant minority are Thoroughbred racehorses.[315]

Though the market for horse meat contracted severely in the wake of the Wild Free-Roaming Horses and Burros Act and the removal of horse meat from American pet food products, the domestic horse slaughter business went on without comment. This state of quiet was shattered in 2004, when once again mustangs were brought into the horse slaughter equation by Montana Senator Conrad Burns, who attached a one-page rider to an annual federal spending bill that would have permitted the sale of animals

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[313] Ibid.
[314] Barry Schlacter, "Killer Consequences," *Western Horseman Magazine*, August 2007, pg 34-40.
[315] McKee, email with author, December 9, 2014. As McKee notes, "While in the field, the prevalence of Quarter Horses going to slaughter was explained to me as being a result of the breeding practices sanctioned by the American Quarter Horse Association (AQHA). Not only was Artificial Insemination (AI) allowed, where it was not for Thoroughbreds ... but the semen of one stallion could be used to impregnate a plethora of mares in order to increase a breeder's chances to creating the ideal foal; the rest of the foals could be culled through slaughter."

under the care of the BLM to be sold to slaughter buyers.[316] This rider was intended to relieve the budgetary ballooning of the BLM's horse care program, which keeps rounded-up horses in holding pens until they are adopted or until the end of their natural lives. Adoptions "kept pace with roundups" until the early 1990s, when investigations revealed that thousands of mustangs had been "adopted" by ranchers who sent them to slaughter. Then-BLM director Robert Burford claimed the number of horses on public land had doubled since the 1971 Act was passed and the BLM budget for caring for penned horses had ballooned to over $17 million per year.[317] Despite his concerns, additional restrictions were put in place to prevent adopted horses from going directly to the slaughterhouse. By 2004, the number of horses in holding pens had skyrocketed from 1,600 in 1989 to nearly 20,000.[318]

This brief history shows that from 1971-2004, as far as mustangs were concerned, everything changed and nothing changed. Velma Johnston had succeeded at defining their symbolic value to the American public, but economics continued to define the horses' experience, which still ended quite often at American slaughterhouses in the West as they had since the nineteenth century. Velma Johnston's use of the idea that turning horses into pet food was unacceptable exposed uncomfortable contradictions that underlay otherwise positive developments in animal health, like the wide availability of nutritionally dense, commercially-produced pet food that standardized pet diets for the

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[316] Charles Hurt, "Provision Targets Wild Horses for Slaughter" *The Washington Times* (November 30, 2004): A5.
[317] Taylor, "Adopted Mustangs are Slaughtered, Critics Say."
[318] Dave Phillips, "All the Missing Horses: What Happened to the Wild Horses Tom Davis Bought From the Government?", *ProPublica*, September 28, 2012, web.

first time. In order to produce this new, desirable food, manufacturers needed a cheap meat base to enhance with nutrient-rich ingredients: horse meat. Johnston's re-definition of horses as animals with symbolic value made their use in pet food suddenly repulsive, and exposed the vulnerability of the horses who were compromised in what many thought of as a positive turn for domestic pets.

As Robert McKay explains, in post-World War II America, "the pet food economy was itself driven by vigorous commercial investment that linked technological development with the recruitment of health professionals (veterinary dieticians) actively to promote commercially produced meat products as the best route to the ideal of 'animal health.'"[319] Improved nutrition, cheaply delivered and conveniently canned for pet owners, certainly aided the health of countless dogs and cats over time. However, Johnston asked Americans to consider whether sacrificing one animal's life for another's health – importantly, via the technologized process of industrial food production – was ethical. For pet dogs to eat hunted and canned mustangs, she successfully argued, was wrong. Caring for our pets enough for them to eat well also entailed caring for animals with symbolic value. Velma Johnston convinced Americans that the health of one animal – wild-living horses – should not be sacrificed for the health of another, domestic pets. This logic updates the zoonotic disease connection between humans and animals to consider the potential for a person's, or a culture's, *moral* health to be compromised by the mistreatment of animals.

[319] McKay, 5.

When the horse slaughter debate started in 2004, it drew quickly from Johnston's link between abstract value and eating, but this time anti-slaughter activists linked their flesh prejudice to hippophagy and disgust at those who eat horsemeat exported from the United States.[320] The federal government moved swiftly to address a quickly-developing horse slaughter uproar. In 2005, both the House of Representatives and the Senate passed amendments to the 2006 appropriations bill that pulled funding for the veterinary inspection of horse meat, effectively removing horse meat from compliance with the USDA-enforced Federal Meat Inspection Act.[321] The USDA made an end-run around the new law in early 2006, enacting a new regulation allowing existing slaughterhouses to keep producing horse meat if the companies paid inspectors themselves. However, the two states in which horse slaughter plants operated, Texas and Illinois, both passed state-level bans on slaughtering horses for human consumption in 2006 and 2007.[322]

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[320] Editorials in local and national newspapers were also quick to conflate the wild horses lying at the center of the new controversy with domestic horses, who until 2004 had not been considered part of the horse slaughter debate first waged by Johnston. These first protests ooze nativism, class consciousness, and a firm entrenchment of the symbolic value not only of wild horses to the United States, but of horses in general. Typical language touted how "most Americans...think of horses as companions or even patriots who helped settle this land;"[1] or "we regard this animal as a companion, co-worker, and patriotic symbol,"[2] though one reader held no punches: "As for horse meat, I remember [my mother] once saying that it might be fine for the decadent French, but 'I'd feel like a cannibal.'"[3]
[1] Burt Constable, "We don't eat horses, do we? But will we slaughter 'em?" *The Chicago Daily Herald* (June 14, 2007): 17.
[2] Christa Weil, "We Eat Horses, Don't We?" *The New York Times* (March 5, 2007): A19.
[3] Ed Quillen, "They Eat Horses, Don't They?" *The Denver Post* (May 13, 2007): E4.
[321] Leslie Potter, "A Timeline of Horse Slaughter Legislation in the United States," March 2012, HorseChannel.com. web. http://www.horsechannel.com/horse-resources/horse-slaughter-timeline.aspx
[322] Barry Schlacter, "Killer Consequences," August 2007, *Western Horseman Magazine,* 34-40. The legality of slaughter went back and forth several times in 2006-7, as the plants, the USDA, the state governments, and the federal government all tried various points of legal wrangling on the pro and con sides of slaughter. After the USDA's loophole opened in 2006, a lawsuit in Texas proved that selling horsemeat had actually been illegal in Texas since 1949, but the law had never been enforced. The 2007 suit upheld the provision in the 1949 Texas Agriculture Code that banned horsemeat for human consumption and the two plants in Texas closed in March. Also in March of 2007, the U.S. District Court for Washington, D.C., nullified the USDA's emergency regulation allowing plants to pay for their own

The strident cultural protests playing out in editorial pages and across the internet conflicted with vocal concerns from the veterinary community and also from prominent equine breed registries. These groups feared that the rapid ban of horse slaughter contained no provisions to deal with the economic and physical fallout of a sudden glut of the over 150,000 horses sent to slaughter each year. The American Veterinary Medical Association, the American Association of Equine Practitioners, and the large and influential American Quarter Horse Association (recall that Quarter Horses represent the largest number of slaughtered US horses) all released public statements as part of the newly-formed Horse Welfare Coalition in support of horse slaughter, citing economic, animal welfare, and environmental reasons.[323] Notably, the PRCA also supported the continuation of horse slaughter, reflecting the sport's alignment with the AQUA and Quarter Horse culture. Most of the horses who perform in PRCA rodeos are Quarter Horses, who earn monetary rewards for their owners through the AQHA by performing well. Therefore, the PRCA wanted to remain on the same turf as the AQHA in taking a stand for horse slaughter. Additionally, the practical concern that the PRCA and AQHA cite as their main reason for supporting horse slaughter – that there are too many horses to care for adequately – resonates with the pre-modern history rodeo reenacts, in which

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inspections. Meanwhile, Illinois Gov. Rod Blagojevich had already signed a law banning horse slaughter in Illinois that February. The last remaining plant, Cavel International in DeKalb, Illinois, appealed the US District Court decision and successfully gained an injunction against the Illinois law until July, maintaining its operations. Finally, in September, federal courts ruled that the Illinois ban on horse slaughter was constitutional and Cavel International closed. A detailed timeline of horse slaughter legislative wrangling can be found at http://www.horsechannel.com/horse-resources/horse-slaughter-timeline.aspx.

[323] The HWC statement as published on the AQHA website summarizes their position and reasoning: http://www.aqha.com/association/publicpolicy/AHSPABrief109thHWC.pdf. The AVMA website maintains its own independent statement in opposition to the legislation as well: http://www.avma.org/issues/animal_welfare/unwanted_horses_faq.asp

horses needed to be useful, whether as labor or capital. Caring for horses and being pro-slaughter at the same time meant that usefulness, not symbolism, needed to be at the center of definitions of value.

In this, rodeo found itself at odds with the wider American public. In 2007, Americans succeeded at securing a ban on horse slaughter by paying special attention to hippophagy, or horse eating. The first wave of protests that resulted in the legal closure of horse slaughter in 2007 centered on the foreign export market for horse meat destined for human consumption. These protests did not even peripherally address a significant corporeal problem with American-produced horse meat, which was widespread veterinary pharmaceutical and hormonal contamination in the domestic horse population. While this problem came to dominate horse slaughter and hippophagy debates later on in the controversy, the argument that resulted in the initial closure of horse slaughter plants had nothing to do with corporeal contamination, and everything to do with symbolic aversion, proving that Johnston's success in attaching symbolic value to American horses was still at work. When the contagion that spoils meat is the very idea of eating it, the meat is spoiled *a priori*, before it ever becomes a carcass; the fear of infection from ingesting it stems more from symbolic aversion than corporeal contamination. In these early years of the horse slaughter debate, the taboo of horse eating exerted more power than it had at other times in American history when horse meat became a political issue.[324]

[324] In the United States, consuming horse meat in times of scarcity has a more recent history. Horse meat was promoted to Americans during World War II, as it was exempted from rationing. Signs proclaiming

In 2009, another Nevada equine activist, Madeleine Pickens, proposed a plan to save wild-living horses from slaughter and the specter of hippophagy by turning to this strong sense of their symbolic value. The economic recession of 2008 had dire effects on the U.S. horse market, creating renewed anxieties for horse activists on both sides of the slaughter debate. The plight of wild horses in BLM holding pens during the downturn was also cause for concern. In 2009, *Western Horseman Magazine* extensively covered the interrelated factors that were compressing the western horse business. In February, *Western Horseman* published the piece "Horse Sale Uncertainty," which connected the economic recession and the end of horse slaughter to a severe drop in riding horse price forecasts.[325] That same month, the magazine published "BLM Bailout," a story about the dire circumstances of the BLM wild horse holding pens at the height of the recession. The BLM, charged with regularly rounding up wild horses from public land for them to be adopted, faced pressure from both ends: fewer people could afford to adopt the horses, and government budgets were being slashed. When the article went to press, over 30,000 mustangs and burros occupied BLM holding pens while annual adoption numbers

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"U.S. Government Inspected Horse Meat: Not Rationed" adorned butcher shops across the country. Shortly after WWII, President Harry Truman was embroiled in a meat scandal that played a part in compromising his reelection efforts. Truman found himself in the midst of labor strikes, product shortages, inflation, and wobbly price controls across various industries. Beef was no exception, and when price controls were reinstated after a brief and disastrous lift of restrictions, "stockmen refused to send their cattle to packinghouses; tens of thousands of butchers across America had to close down." This shutdown incited a meat riot across the country in 1946. Republicans running in that fall's midterm elections encouraged grocery shoppers to consider their circumstances while voting: "Ladies, if you want meat, vote Republican." Republican campaigners dubbed Democrat Truman "Horsemeat Harry," a moniker that rang familiar and unpleasant among consumers who were so recently encouraged to buy horse meat during the lean years of the war.[1]
[1] William E. Leuchtenburg, "New Face of 1946," *Smithsonian Magazine*, November 2006. web.

[325] "Horse Sale Uncertainty." *Western Horseman Magazine*, February 2009, pg. 17-18.

plummeted from an already-small average of 6,300 in 2006 to 4,700 in 2007. The BLM was stretched much too thin, as the recession crunched its feed and care resources at the same time that the ability of most horse owners to take on more horses dwindled. In order to ensure adequate care for its penned horses and maximize adoption potential, the BLM proposed humanely euthanizing the old, injured, and unadoptable horses among its swollen ranks of penned mustangs. Pickens reacted to this proposal with a large-scale rescue plan.

Pickens, then wife of oilman and financier T. Boone Pickens, revealed to the readers of *Western Horseman* her exploration of funding opportunities to "create a massive wild-horse sanctuary, and adopt all wild horses currently occupying BLM corrals."[326] Pickens outlined a loosely conceived plan to eventually transfer all wild horses rounded up by the BLM – not just the current 30,000, but those collected in future roundups as well – onto a privately-owned nonprofit estate, effectively creating two wild-living horse zones in the United States: the existing public rangeland, and her privately managed sanctuary, which in her view would eliminate the existing holding pens for rounded-up horses. "Instead of going in holding pens, they can roam freely," Pickens asserted. In response to a question about how these horses would receive veterinary care, she responded, "Vets – top vets in the country – have said, 'Madeleine, I want to come and help.' America has a love affair with this. I have thousands of volunteers lined up."[327]

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[326] Melissa Cassutt, "BLM Bailout." *Western Horseman Magazine*, February 2009, pg. 29-30.
[327] Melissa Cassutt, "BLM Bailout." *Western Horseman Magazine*, February 2009, pg. 29-30. Pickens herself is a fascinating stakeholder: an Iraqi immigrant and independent businesswoman, Pickens first came into the horse business through her first husband, private jet magnate Allen E. Paulsen, who owned several top-flight Thoroughbred racehorses, including the famous (and famously impotent) Cigar. By 2009, she

Pickens, like Johnson, explicitly appealed to emotion towards these animals in order to lobby for their protection, this time not from violent capture, but from the deteriorating conditions of BLM captivity.

Responses to the "BLM Bailout" and Madeleine Pickens' plan were skeptical in the pages of *Western Horseman*. Reader Victoria Palen wrote, "Madeleine Pickens is probably right when she says Americans have a 'love affair' with her plan...Unfortunately, in this case it appears the old adage 'love is blind' applies not only to the Americans she's referring to, but also to this plan." She continued, seamlessly exposing the emotional assumptions undergirding wildness and worth: "Just because the mustangs once ran wild, why is euthanasia such a bad end if they're otherwise unwanted?[328]" Others connected the issue of wild horse protection to the issue of domestic horse slaughter. Jill Johnson took a firm stand against emotions, frustrated at how preventing the slaughter of horses for meat "has handcuffed us all to the wishes of 'feel-good' people that don't take into consideration the ramifications of not having slaughter plants: horses being dumped, jobs being lost, and millions of dollars leaving the country...we have enough laws. We don't need one telling me I can't sell my horse for meat."[329]

Pickens' own "feel good" plan was not to be. While any public details of her attempts to find funding, real estate, and permits to build and buy her proposed sanctuary for 30,000+ horses are largely obscured, we do know how the plan ended up: in 2009, she

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already had a record of animal sanctuary sponsorship. She spearheaded the foundation of several Thoroughbred racehorse retirement sanctuaries in the early 2000s, was instrumental in evacuating and re-homing hundreds of dogs displaced by Hurricane Katrina in 2005, and with her second husband, oil tycoon T. Boone Pickens, lobbied for the closure of horse slaughter plants in 2007.

[328] Letters, *Western Horseman Magazine*, May 2009, pg 14.

[329] Ibid.

founded a 501(c)(3) nonprofit organization called Save America's Mustangs (SAM), which collects donations, runs websites devoted to promoting wild horse issues and stirring up political action. SAM opened an "eco-resort" in 2010. The resort, Mustang Monument Eco-Resort and Preserve, took in 600 wild-living horses – a far cry from the 30,000 Pickens had originally planned. The resort operates today as a fundraising venture, advertised on her website as a wellspring of equine cultural capital: "Madeleine is proud to develop a property that will protect the wild horse, educate the public on their inclusion in American history and ensure their protection for years to come."[330] At rates upward of $1000 per night for a stay in one of the resort's "Luxury Tipis" or "Safari Cottages," Mustang Monument caters to a well-heeled "feel good" crowd.

Johnston, Monroe, and Pickens formed an odd and striking triumvirate stretching from the 1950s to the 2010. Pickens' plan and its ultimate outcome are a twisted legacy of Velma Johnston's efforts, which sought to make horses a public, not private, good, and worked through legislative, not capitalistic, channels. Johnston's work was focused on taking mustangs out of a regime of capital by establishing their value within one of care; Mustang Monument exposes the tiny margin by which a regime of care can be wrapped right back up into one of capital by making it seem as if they are one and the same. Marilyn Monroe, of course, was playing a role in a film, not actively working to protect wild herds. Still, Roslyn's scream reverberates through the contemporary debates about horse slaughter and hippophagy, revealing the compromises involved in horse-related

[330] "Madeleine Pickens." http://mustangmonument.com/about-mustang-monument/madeleine-pickens/. Last accessed February 3, 2015.

gender politics. The breakdown of her ability to articulate her reaction to mustanging with language, speaks to the impossible position that horse activists, and women in particular, face when trying to navigate the complexities of caring for and profiting from equine bodies. Johnston's work of transforming wild horses from flesh that men used to make money to symbols that deserved protection – essentially, taking them out of the capital economy – entailed erasing the entire history of these horses. That erasure obscures the imperial and capitalist imperatives of making the West American, and with them the deeply entangled legacies of racial oppression, Native American removal and genocide, and the making of an industrial Sunbelt West at the expense of the rural working class. Johnston instead, in order to save the horses themselves from further conquest, made them stand as a symbol for the success of American western imperialism in all its whiteness and capitalist-patriarchal glory.

Roslyn's scream also echoes through the voices of women in the pages of *Western Horseman* who skeptically view Pickens' "love affair" with wild horses and criticize the actions of the "feel good" people who halted horse slaughter. These women, sensitive to destructive alignments with nature, emotion and irrationality, suggest that "loving" wild-living horses comes at the expense of their own independence. They carve out a distinctive space where slaughter or euthanasia becomes a practical part of caring for all horses, whether wild or domestic. For these women, the regime of care for American horses is a dangerous proposition. If Johnson erased histories of oppression and subjection in order to save an oppressed animal, then Pickens is far more aligned with Johnson than was originally apparent. Johnston's willingness to place horses over history

makes it possible, more than 50 years later, for Pickens to profit – with her $1,000 per night "Luxury Tipis" for those wishing to see rescued wild horses – from the appropriation of imperially subjected cultures that Johnston obscured in the act of equine rescue.

Johnston effectively mobilized public horror at the pain inflicted on wild-living horses to create them anew, giving them an entirely new identity based on care, not capital. Yet, as Pickens' attempts to mitigate the disastrous recent consequences of wild horse overpopulation prove, narratives of care can create new forms of suffering, and can also function squarely within a regime of capital. Rodeo, in its bronc riding events specifically and its overall pageantry more generally, enacts a crucial moment of the history that Johnson sought to erase: the moment at which a presumably wild-living horse came under human control speaks to a wider celebration of the "taming" of the western territories that rodeo is invested in. Contemporary rodeo repeats this moment in eight-second bursts countless times in order for rodeo competitors to make a profit from the masculinization of wildness and mastery. Animal activism that has focused on rodeo animals shares a similar problem to what Johnston and Pickens faced: they seek to redress the immediate cause of an animal's suffering, whether it be from whipping, bucking straps, or performance injuries, and they have had good success in helping to change the public's attitude towards animal pain so that the animals who perform in rodeo receive better care.[331] However, in neither Johnston's nor Pickens' cases, nor in more

[331] Hal Herzog, *Some We Love, Some We Hate, Some We Eat: Why It's so Hard to Think Straight About Animals* (New York: Harper Perennial, 2010): 135-6). Female activists are the visibility majority regarding

recent rodeo animal activism, was the regime itself contested, leaving women and the horses they care for in a precarious position in relation to history.

FOR WHOM DO WE HURT?

Even though rodeo repeatedly enacts moments of mastery, the sport has also rewritten the harrowing history of horses in the West by removing intentional animal pain from its rough stock events. As profit-making shifted from the value of flesh to the value of performance, professional rodeo has grappled often with the complicated role that equine pain plays in valuing its competition horses. The prevention and treatment of animal pain is a key determiner of an animal's ability to perform, both to protect their financial value and to satisfy public concerns over the welfare of rodeo animals. Rodeo veterinarian Dr. Golla is a good example of how public concerns with animal pain are addressed with veterinary expertise: at least one person is present at rodeos for the specific purpose of protecting animals from harm. The dynamics of pain in rodeo, especially in rough stock events, invert the historical use of pain to subdue dangerous animals: instead, the rodeo narrative depends on the pain that competitors endure to compete while the animals are protected from injury. Velma Johnston's work in making

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equine slaughter and wild horse protection. In this, equine-related activism is aligned with other forms of animal activism since the 1970s, which Hal Herzog's research supports, in which "three to four times as many women as men boycott circuses, march against animal experimentation, and drive cars plastered with 'Meat is Murder' bumper stickers." However, as Herzog noted in "Power, Money, and Gender: Status hierarchies and the animal protection movement in the United States." *International Society of Anthrozoology Newsletter*, November 1999: 2-5, in other animal rights arenas, the leaders of activist groups are much more likely to be men. Herzog's research corroborates the findings of earlier studies, such as S. Plous, "An Attitude Survey of Animal Rights Activists," *Psychological Science* 2:3 (May 1991), which concluded that members of various animal rights movements were not homogenous, but were predominantly female (nearly 80% in his survey). Other studies also touted animal activists as a diverse group, but pointed to its overwhelming Caucasian makeup (93% of one survey's respondents were white) and high level of education (79% had received at least some college training).

the protection of its wild-living horses from pain an American duty is most vibrantly relevant to the rodeo arena, where men have come to bear the burden of pain as a necessary component to their masculine identity in the rodeo world. This trend developed in tandem with the rise in popularity of bull riding and the concurrent exclusion of women from the professional rodeo arena, along with the increased availability of veterinary pharmaceuticals and injury treatments focused on animal pain relief. The way human and animal pain is experienced, managed, and talked about in rodeo clarifies the contemporary complexities of rewriting history with the scientific management of animal bodies. The transference of the burden of pain from animal to human in rodeo compromises Johnston's work of making the prevention of equine pain a defining characteristic of American identity: even when the dynamic of pain is inverted, and a man feels more pain in the exaggerated performance of a historical agricultural technique than the animal he would have subdued through painful means, the pain he feels still serves to support, not dismantle, the masculine power of the historical act and its contemporary homage to it.

Rodeo dramatizes a sophisticated multi-species argument about the relationship between agricultural animals and pain. Rodeo has had to navigate this tension with the added complexity of animal entertainment and a deep historical connection to agricultural practices. Since the 1980s, when professional rodeo faced a wave of serious protests from animal activists, the sport has made a concerted effort to promote the welfare of its animals by enforcing two narratives of care: first, that animal agriculture, specifically beef raising, is an act of love – that people who raise cattle love their animals as a

necessary precondition of their livelihood. Second, professional rodeo advances a veterinary-scientific narrative of care in which the animals used in rodeos receive top-notch veterinary treatment at all levels – nutritionally and reproductively as well as in case of injury.

Professional rodeo came under direct fire from the Humane Society of the United States in 1982, but rodeo had already been alerted to animal activism indirectly through the cattle industry for a good two years prior. The National Cattlemen's Association sent a memo to its members in September 1980 entitled "New Public Issue: 'Animal Welfare' and 'Animal Rights."[332] The memo served largely to alert NCA members to this new development that could affect their industry. While "most of the attention in the U.S. has been on veal calves, caged layer chickens and chicken broilers," the memo warned, "feedlot feeding has also been criticized." The NCA advocated caution, stating that for the moment the issue was "mostly a public relations problem," but also noted, "it appears that development of policy and evidence of humane treatment of animals will become more important."[333] In private correspondence, NCA representatives took a less moderated tone, but the message was essentially the same. Responding to Cornelia Swayze, a breed association president who had shared some local news clippings regarding animal rights agitation in May of 1980, NCA's Director of Government Affairs shared his opinion that "The situation will move from the ridiculous to reality in the next

[332] "New Public Issue: 'Animal Welfare' vs 'Animal Rights," NCA memo to members, September 1980. Box 113, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[333] Ibid.

couple of years."[334] The NCA and other livestock industry organizations shared various articles from their respective industry periodicals as animal welfare became a prominent feature of agricultural discourse. A 1982 issue of *Farm Journal* contained a warning from Livestock Conservation Institute titled, "LCI head urges stockmen, 'Get to know welfarists'"; an article in *Calf News*, "Turning Animal Rights Into Animal Welfare" similarly advised its readers, "Don't underestimate the potential of the animal welfare movement." Articles chronicling animal welfare developments and their relation to agriculture appeared in the USDA publications *Feedstuffs* and *Food Chemical News*.[335] The dialogue concerning animal care was well informed and took place across various branches of industrial agriculture.

In order to keep abreast of the "ridiculous" situation and to combat pending animal welfare legislation in Congress that would restrict the function of food animal producers, the NCA formed an Animal Care Task Force. This group lobbied against legislation that would restrict cattle raisers. In 1982, this task force received a letter from the American Livestock Show and Rodeo Managers' Association. "Our organization," the letter reads, "representing ...livestock shows, fairs and rodeo producers, would like to go on record supporting the National Cattlemen's Association animal care task force." Among the rodeo producers listed were several stock contractors who provided roping

[334] Letter from Ronald A. Michieli to Cornelia Swayze, May 30, 1980, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.
[335] Clippings, 1980-1982, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

and rough stock animals to PRCA rodeos, including the famous Harry Vold.[336] "We all realize that should legislation be passed in support of the animals [sic] rights movement, we would all be adversely affected."[337] The NCA responded with encouragement, reassuring the rodeo organization that "When the next Congress convenes in 1983 we will work to prevent any activity on this subject."[338]

Rodeo associations had reason to be concerned. In September 1982, the HSUS, in partnership with the American Humane Association, conducted a mail campaign against rodeo. The slogan "Say Whoa to Rodeo" sprawled across the front page of a large pamphlet. "Help the Humane Society of the U.S. end this shameful animal abuse called sport." Readers found inside dramatic photos accompanied by volumes of text breaking down the cruel practices of rodeo event by event, taking stock of death, injury, and "harassment" of cattle and horses. The mailer also included a "Boycott Rodeo: Cruelty - Not Sport" bumper sticker and an envelope to send back donations. "Rodeo is

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[336] Tracye Feist, "Harry Vold: Taking Stock." *American Cowboy,* February/March 2010, 79-82; 92. The legendary Harry Vold has been a stock contractor for the PRCA and its various predecessors since 1959, and still provides stock for PRCA rodeos in 2015. He is one of only two stock contractors "who have supplied stock for the NFR's [National Finals Rodeo] 50-year history," and he gets paid $2,500 for each animal that bucks in an NFR arena (with more if the animal provides a winning ride). Vold has held the exclusive contract for the Cheyenne Frontier Days since 1976, and he provides upwards of 1900 animals for that rodeo alone. Vold has bred his own stock for much of his career, and is on the forefront of the equine bucking horse cloning trend I detail in Chapter 4. Vold was inducted into the Rodeo Hall of Fame in 2009, the only stock contractor to be honored in this way.

[337] Letter from Robert B. Tate to W. T. "Dub" Berry, August 5, 1982, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

[338] Letter from Tom Cook to Robert B. Tate, September 16, 1982, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

everywhere," the pamphlet concluded. "Together we can relegate this brutal 'sport' to the history books where it belongs."[339]

This turn to the history books is prescient in the context of rodeo and animal pain. Most rodeo events, such as roping and bucking, are based on ranching practices that served a practical purpose – subduing large, dangerous animals. These practices were meant to cause pain, and were justified by the necessity of gaining enough control over the animal to prepare it for entry into the industrial food supply. Routine preparations themselves were also painful, such as castration, dehorning, branding, and later, ear tagging. In order to accomplish these tasks without losing one's teeth required a good rope, a good toss, and an unassailable knot to immobilize a cow long enough to get the job done. Horses were subject to this logic as well: they needed to be unresponsive to their larger environment and absolutely responsive to their riders in order to be efficient and reliable laborers. The quickest way to accomplish that relationship was to "break" them in one traumatic encounter, painful and frightening enough to making a lifelong impression. Animal pain was a necessary component of cattle ranching, built into its very infrastructure to ensure its efficiency. The pain that lies at the center of industrial beef is the same pain that lies at the center of professional rodeo.

Rodeo, however, has cleverly navigated the changing expectations of its audiences by inverting this dynamic of pain. After coming under fire in the 1980s for inhumane treatment of animals, professional rodeo has responded to increasingly

[339] Pamphlet, postmarked September 22, 1982, Box 198, National Cattlemen's Association Papers, coll. 01713, American Heritage Center, University of Wyoming.

attentive public scrutiny towards animal pain, and thereby stayed relevant to contemporary audiences, by substituting human pain for animal subjection. Dr. Frosty Moore, an orthopedic surgeon based in Austin, Texas, is involved with a medical team that deals specifically with human injuries at PRCA rodeos. The Justin SportsMedicine Team (JSMT) was started in the mid 1980s by J. Pat Evans, then a team doctor for the Dallas Cowboys and a rodeo fan. Evans was inspired to start the JSMT when, as a Dallas Cowboys doctor, he attended professional rodeos and saw how many injuries were occurring, and then worsened by the lack of medical expertise at rodeos, and how impossible it was for competitors "living rodeo to rodeo" – with little savings and a dire need to get to the next competition – to gain access to medical care. In this regard, the spirit of the JSMT is not to provide the best, most advanced medical care: instead, it is to provide only enough care that a competitor will accept, and only so that he can make it to the next rodeo and compete with lessened risk of aggravating the existing injury. "The job of the JSTM team is to guide cowboys the best we can to prevent further injury," Moore explained. If a competitor gets injured, "you've got to take care of it on site or not at all," and then train the family members to give supportive care.

Moore, a college athlete and amateur bull rider who quit after sustaining a serious concussion during his orthopedic training, joined the team in 1991. The Texas-based JSMT quickly caught on, and teams composed of local physicians and surgeons developed across the country to serve the entire range of the PRCA circuit. The teams travel to professional rodeos towing high-tech emergency medical facilities in converted horse trailers. Emergency Medical Technicians (EMTs) are also present at every

professional rodeo, and can quickly transport rodeo cowboys to the hospital, but most competitors refuse hospital treatment, opting instead for the JSMT trailer. Dr. Moore describes this choice as part of the rodeo "code": going to the hospital is the absolute last resort for many of these competitors, whose livelihood and identity are wrapped into making it to the next rodeo. This "code" creates a challenging medical environment, where those who need medical treatment actively resist admitting pain, getting treatment, or agreeing with any medical advice they are given.[340] Moore describes this aversion to doctors as a central part of masculine rodeo identity:

> Cowboys don't need your permission to ride [unlike other professional athletes whose teams decide their ability to play], so you must protect them the best way you can. They expect to and are expected to compete in pain and go till they can't go, and then go some more. No other athletes compete with the kinds of injuries that rodeo guys compete with. As a doctor if you don't respect their codes, then you have no business being out there at the rodeo. It's rare though to find a doctor and cowboy that have mutual respect for each other.

For Moore, rodeo medicine is predicated on this antipathy, and doctors have to adapt to the conditions of care instead of cure. Rodeo doctors have to walk a fine line between treating a competitor and alienating him, and they have to be ready to mobilize the competitor's insular support system with the knowledge that he will not seek care down the road unless he is forced to. According to Moore, "doctors encounter resistance

[340] Dr. Frosty Moore, Interview with author, February 13, 2013.

every day – 'can't you just shoot it up?'"[341] But once a competitor has gained a certain amount of trust in the JMST concept, he is more likely to continue his treatment with another JMST doctor down the line instead of eschewing treatment from a doctor unfamiliar with the "code." When top competitor Ty Murray blew out both his knees falling from a bull in June 1995, he received his diagnosis from a "trusted friend," JMST surgeon Dr. Tandy Freeman, with whom Murray had developed a trust in the early years of the mobile medical program. Murray explained his trust not just in medical terms but as part of a shared culture: "he likes rodeo and is knowledgable about rodeo. He knew what my knees had to do after the surgery and that makes him even more valuable."[342] JSMT doctors earn trust from competitors by turning the purpose of treatment from "what is the best way to heal this injury" to "can he compete with this treatment option?"

For Murray, the most important quality of the JMST is "to offer sound medical advice aimed at returning him to the arena as quickly yet safely as possible."[343] Dr. Moore corroborated this philosophy. "For a 16 day rodeo (like the one in Austin)," he explained, "there are 200 injuries. Nobody [spectators] really knows how much pain is there. Cowboys have to get through an 8 second ride. It's like being in a car wreck every other night. The shows go on no matter what is happening back stage." The nature of that pounding and the determination of competitors to return to the arena has necessitated

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[341] Ibid.
[342] Clipping, Series II, Bio Files, Tuff Hedeman, Sul Ross State University Collection, Archives Of the Big Bend, Sul Ross State University. Kendra Santos, "Turning Casualty into Comeback." *American Cowboy*, January/February 1996, pg 70-71.
[343] Clipping, Series II, Bio Files, Tuff Hedeman, Sul Ross State University Collection, Archives Of the Big Bend, Sul Ross State University. Kendra Santos, "Turning Casualty into Comeback." *American Cowboy*, January/February 1996, pg 70-71.

surgeries and supportive therapies designed specifically for rodeo contestants: "The JSMT builds specific braces that are different from those used on the general population, built for riders. For a guy with a broken foot, they put a metal foot plate in the boot to ride a bull since you can't use a cast – that way the foot doesn't disintegrate on dismount and the guy can still ride (because he will)."

Moore is adamant is that professional rodeo is more dangerous now than it has been in the past. Because the bulls are bigger and the stakes are higher, he feels the sport itself has gotten more dangerous in the past twenty-five years, and says that without the development of the JSMT, professional rodeo would have died off because the danger was so high. "Rodeo is the highest injury sport," he reminded me. "A few years back, it looked like it was a dying sport due to high danger; now it is more organized with medical coverage of events – much safer than it used to be. Many people enjoy the sport. Rodeos have grown tremendously big now." But unlike other high-impact sports like professional football, which adjusted its rules as the speed and intensity of the game increased, the governing structures of rodeo have not changed over time: "It's the same rodeo it used to be without many regulations in contrast to the changes in football (can't hit head to head, can't hit the quarterback, etc etc). Those rules in rodeo just aren't there. So, it's still very dangerous but the care of cowboys has dramatically improved." He added, "it's hard to regulate a bull."

Bulls are hard to regulate, perhaps, but it is less hard to manage his pain and injury than it is for the man who rides him. Pain mitigation is paramount for animal athletes in rodeo, as Dr. Golla and Dr. Moore both strongly attest, but standing in stark

contrast are their human counterparts, who are expected to be in constant and severe pain as a necessity of professional rodeo life. In assuming the burden of pain, rodeo competitors have turned the historical tables of industrial cattle raising, in which animal pain was necessary to protect the people working with them. Now, animal bodies are meant to be protected, while men are required to hurt. Symbolic and corporeal animal value are retooled in the rodeo arena, combining the narratives of wild-living horses, industrial beef, veterinary pharmaceuticals, and western masculinity into a strange and compelling cultural tableau that unsettles easy distinctions between animal love and animal use, and slips any easy binary of humaneness versus cruelty.

Dr. Golla's insistence that "Rodeo and agricultural medicine are hand-in-hand, totally aligned" neglects one very important detail: that agricultural animals do not receive pain-relieving medication, as veterinary pharmaceutical pain relievers are not approved for human consumption. Therefore, any animal intended to be eaten does not receive treatment for pain, unlike the rodeo animals who stand in for historical agricultural animals in their performances. However, the use of pain relieving medications is widespread among the equine population, where horse owners generally assume that their horses are not part of the industrial food supply -- thanks in part to Velma Johnston. But this very basic component of care, pain mitigation, became a confusing and troubling issue as the horse slaughter debate continued into the 2010s, when the use of pain relieving pharmaceuticals in horses – corporeal, not symbolic, contamination – became a central component to the anti-slaughter argument.

Equine welfare was the top concern of both pro- and anti-slaughter activists. Veterinarian Tom Lenz, a former president of the American Association of Equine Practitioners (AAEP) chair of the Unwanted Horse Coalition, remained steadfast supporters of keeping horse slaughter operational in the U.S. In their view, the long journey to processing plants is the bigger welfare issue than the slaughter process itself.[344] "That said," the AVMA's official statement on horse slaughter reads, "the humane slaughter of horses is preferable to a life in discomfort and pain, inadequate care, or abandonment."[345] Yet the veterinary community's support of slaughter in this debate is about more than taking a stand on animal welfare. Because horse slaughter was halted through the defunding of veterinary inspections – not technically a unilateral ban – the end of horse slaughter in the U.S. was, legally speaking, a veterinary public health issue, not one of animal protection. Slaughter could not continue because the salaries of USDA veterinarians serving as animal health and meat inspectors at horse slaughter plants would no longer be paid, their jobs essentially eliminated.

Nevertheless, these veterinary associations mobilized the prevention of pain as a key tenet of their pro-slaughter stance. When slaughter first ended, the opinions and expertise of veterinarians and animal scientists were barely registered against a backdrop of moral outrage at foreign hippophagy. Hippophagy, which first deflected real

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[344] Lisa Slade, "Part 2: The State of U.S. Horse Slaughter: The Long Bridge to Nowhere," *The Chronicle of the Horse*, October 11, 2011. Maureen Ogle's *In Meat We Trust* details the historical context of this argument, which dates back to the nation's first federal food animal welfare law in 1873. The law, known as the "28 hour law," mandated that operators of livestock transport vehicles give food, water, and rest to the animals no less than once every 28 hours.

[345] "Joint AVMA-CVMA-FedMVZ statement on Horse Slaughter," accessed January 1, 2015. https://www.avma.org/KB/Policies/Pages/Joint-Statement-Horse-Slaughter.aspx

veterinary concerns, remained at the center of veterinary and scientific debates about the appropriateness of eating horses, but arguments against it increasingly involved the health dangers of eating *domestic* horses, not the moral wrongness of eating wild ones. The contamination of horse meat with phenylbutazone (PBZ), a very common pain relief medication used in horses, turned the hippophagy debate away from wild horses and towards the potential human health risks of consuming PBZ-treated horse meat. Veterinary treatment for pain overtook the inspection issue, and complicated the definition of care used to justify the symbolic protection of wild-living horses, who do not receive pain-relieving medications. The PBZ controversy exposed the limits of the symbolic regime of care in contrast to the day-to-day management of domestic and performance horses, and complicates the inversion of the dynamic of pain that occurs in the rodeo arena.

Domestic horses, which after 1971 made up the majority of horses slaughtered in the United States, are often treated with an array of pharmaceuticals to enhance their health and comfort.[346] While national veterinary associations supported slaughter from the outset for environmental reasons, they were also careful not to endorse human consumption of domestic horse meat because of pharmaceutical drug residues.[347] However, the particular concern of drug residues in the horse meat supply was overshadowed by fears about inhumane transport and killing methods for the anti-

[346] During the years I worked as an equine veterinary technician in Virginia's horse country, the horses I encountered were diverse, but every last one of the horses who needed treatment for lameness, illness, or preventive health care received at least one drug or vaccine from a bottle labeled "Not Intended For Use in Animals Intended For Food."
[347] Schlacter, "Killer Consequences," 37.

slaughter crowd, and of mass abandonment and neglect on the pro-slaughter side. Drug residues did not become a salient feature of the horse slaughter debate in this country for several years into the controversy.

Public concern with drug residues in horse meat began to appear in 2011, after a study published in *Food and Chemical Toxicology* in 2010 revealed the potential extent of residues of the drug phenylbutazone, or PBZ, in American-derived horse meat. PBZ is an NSAID most commonly used to treat pain and inflammation in horses, like a horse version of ibuprofen. The study claimed that "sixty-seven million pounds of horsemeat derived from American horses were sent abroad for human consumption" in 2009, and that because horses are not raised as food animals in this country, "there appears to be inadequate testing" to prevent harmful drugs from entering the equine meat market.[348] The authors conducted their study on racing Thoroughbreds, in part because they form a significant part of American supply of slaughtered horses, and also because they could obtain veterinary records proving that these horses had been given PBZ on race days, making a verified connection between PBZ and slaughtered meat.[349] The authors noted PBZ's particular qualities, noting that the drug remains in a horse's body for "a very long and as yet undetermined period of time," and creates bone marrow toxicity in humans.[350]

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[348] Nicholas Dodman, Nicolas Blondeau, and Ann M. Marini, "Association of phenylbutazone usage with horses bought for slaughter: A public health risk." *Food and Chemical Toxicology* 48 (2010), 1270-1274.
[349] Ibid., 1270-71. "Over 91,000 TB race horses were sent to slaughter over the five years we examined the data," the authors note, roughly 7% of the total number of horses bound for slaughter. They also noted that "approximately one-half of all TBs that are born are slaughtered for human consumption."
[350] Ibid. The authors note that PBZ was prescribed for rheumatoid arthritis in humans in the 1950s, but adverse affects were so dire and immediate that the drug was pulled from the medical market. The FDA "has set no safe levels of PBZ in animals intended for food."

They concluded that 100% of the horses in their study were positive for PBZ residue at the time of slaughter, guaranteeing its presence in American horse meat exports.

Oddly, the scientific evidence of residue contamination turns the previous logic of horse slaughter activism on its head: where at first, the inclusion of wild horses symbolically contaminated the domestic slaughter industry for the American public, this study proved that in fact, it was the corporeal contamination of domestic animals that posed a greater threat. Yet the campaign to end horse slaughter in the United States had been so successful at melding together the domestic and wild horse that once drug residues started to enter the discussion, they simply contributed to an argument that U.S. horses in general were valued too much to be eaten. Veterinary care and treatment of pain supported the symbolic valuation of horses. Once the drug residue issue came to light, the symbolic value of legal protection for wild horses joined the logic of care that undergirded the common practice of treating domestic horses for pain, making them all too well-regarded to be slaughtered and consumed overseas.

These multiple dimensions of horse slaughter – global, local, wild, or domestic – reveal a critical difference between animals we should eat and those to whom we should show love: pain management. Rodeo rewrites an entire history of intentionally using animal pain to further the interests of industrial beef agriculture, instead showing its audiences how serious the sport is about alleviating the pain of performance animals and touting the damage these animals do to men as a marker of stellar animal entertainment. Lost to this visual spectacle are the millions of cattle in the contemporary industrial beef world whose everyday experience of pain, major or minor, is of no consequence to most

consumers. But bronc riding provides a much more complex historical sleight of hand. The eight seconds it takes to ride a bucking horse are shorthand for the long process of chasing, capturing, and breaking wild-living horses for use on ranches; they dramatize the moment of control, not of capture. In doing so, these eight seconds also hide the fact that the wild-living horses who were conscripted to this service represented a small number of the total numbers of horses who instead went straight to the slaughterhouse, as Deanna Stillman and Velma Johnston remind us. In privileging human pain over animal pain, bronc riding and bull riding retool the violence of industrial agriculture so that it is enacted on men, but it does not redress the structures that still support institutionalized pain in agricultural animals, or the way in which pain supports masculine power at the expense of animals and others who have been vulnerable to white masculine imperial imperatives throughout western history.

Rodeo highlights the historical contingency of animal pain in sharp relief. Yet, as the contemporary debates over horse slaughter and hippophagy show, the human desire to manage animal pain creates tricky slippages in definitions of care. Velma Johnston was able to convince the public that the pain inflicted on mustangs in the process of slaughter was a brutality that Americans could not support in good conscience, but this protection did not apply to domestic horses, who were sent to slaughter in large numbers despite their contamination with common pain medication, until very recently, when the extent of that contamination showed that the care given to domestic horses in the form of PBZ was toxic. Roslyn's scream echoes through these debates in the near-impossibility of being able to parse the wild from the domestic, the cared for versus the

abused, proving that professing love for an animal by wanting to relieve its pain does not liberate humans or animals from the regimes of capital, however hidden they may be.

Chapter 4: Rodeo Clones

INTRODUCTION

In August 2006, Charmayne James welcomed a remarkable addition to her stable of Quarter Horses: Clayton, a colt cloned from the genes of her exceptional barrel racing horse, Scamper. James and Scamper had won 10 consecutive World Champion barrel racing titles together from 1984 to 1993, utterly dominating the WPRA for a decade. Into the early 2000s, Scamper was an equine celebrity in rodeo and barrel racing circles, garnering sponsorships and being "hired" to endorse marketable horse products with his name recognition. A major horse feed manufacturer even formulated a feed blend called "Scamper's Choice," purportedly derived from a recipe James had personally made for him.[351] The partnership between Scamper and James propelled James to several career highlights: she was the first $1 million barrel racer (she went on to win over $2 million in the arena in her 20-year career); she qualified for the National Finals Rodeo (NFR) more times than any professional rodeo competitor, male or female; and she was the only woman ever to hold the #1 seed at an NFR, which she and Scamper successfully defended in 1987, when she was just 17 years old; and, continuing her success after Scamper's retirement in 1993, James earned more individual World Championship titles than any other woman in any professional sport.[352]

James retired in 2003 to focus on breeding Quarter Horses for rodeo and to take advantage of the lucrative opportunities outside of the arena. Proven competitors make

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[351] "New Scamper's Choice is Better Than Ever," n.d. Equestrian Mag.com, http://www.equestrianmag.com/news/scampers-choice-08-08.html. Accessed February 28, 2015.
[352] "History," n.d. charmaynejames.com/about-charmayne/history.html. Accessed January 22, 2015.

the majority of their income in training fees, horse sales, endorsements, and by breeding successful horses. However, Scamper, her most successful horse, had been gelded as a colt before coming into James' hands. He was what was known as a "grade" horse, which in Quarter Horse terms means his pedigree was "unknown, unidentifiable, or of significantly mixed breeding" with non-Quarter Horse individuals.[353] Grade horses typically are not used for breeding because their questionable lineage reduces the price of their breeding fees, as well as that of their offspring. Grade colts are often gelded shortly after weaning to sell as tractable and affordable riding horses for amateurs. Part of Scamper's appeal, however, was the rags-to-riches narrative told about his life. As James tells it, she first met Scamper when she was an 11-year-old girl. Her father had taken her to see the 4-year-old horse, who had ended up on her family's New Mexico feedlot after going through a series of dissatisfied owners. The two bonded instantly, and Scamper was saved from the slaughter pipeline, transforming from a dangerous ill-bred horse into a celebrity champion through his friendship with the gritty blond James. "He loved me right from the get-go," she remembers.[354] Despite his muddled genetics, Scamper's celebrity, performance record, and backstory made him desirable; but as a castrated horse, he had no potential as a sire.

No potential, that is, until cloning technologies reached the horse world. Veterinarians at Texas A & M University successfully cloned the first horse in the United States in 2005. Shortly thereafter, the University partnered with techno-venture capital

[353] "Grade Horse," Wikipedia. Accessed January 22, 2015.
[354] Vincent T. Davis, "Legendary horse, once a barrel racing champ, dies at 35." July 10, 2012, MySanAntonio.com. Accessed January 22, 2015.

firm ViaGen, based in Austin, Texas to produce more. James was one of the first investors in this initial wave of commercial-university horse cloning, and Clayton was one of the first 12 foals conceived via this partnership. Clayton, named after James' small home town in New Mexico, represented James' effort to rebrand her and Scamper's image. As her website claims, "Her name defines an industry."[355] With the arrival of Clayton, however, James was changing the industry she wanted to define. She and Scamper had together weathered the transformation of women's professional rodeo as it was deliberately marginalized from mainstream rodeo, and the pair's celebrity and success over the 1980s had been instrumental in whittling women's rodeo down to the single event of barrel racing. James and Scamper, through their single-event success, defined the landscape for women rodeo competitors under the championship structure set by PRCA's inclusion of WPRA barrel racing in the early 1980s. Twenty years later, the pair redefined the contours of equine genetics, parlaying their performance record and the story of Scamper's exceptional qualities into a new narrative of technological redemption: through the promise of cloning, Scamper the grade gelding could not only reproduce; he could become immortal.

The professional rodeo world cautiously accepted animal cloning as several high-profile competitors like James adopted the new technology. The PRCA does not have breed restrictions on the horses or cattle that can compete in rodeo; nor does it restrict animals based on how they were conceived. In this, it is unlike the Jockey Club for racing Thoroughbreds, which only allows horses who have been conceived through a live

[355] "Charmayne's Journey," n.d. http://www.charmaynejames11.com/history. Accessed January 22, 2015.

sexual encounter to race. In order to compete at the highest levels of rodeo, your animal co-competitor does not need a verified pedigree, it just needs to be present. Cloned animals were welcomed into the arena in under these loose criteria. However, the subject of horse cloning sparked a contentious ongoing debate about the place of cloning in a sport so heavily invested in remaining connected to western cultural traditions. To some rodeo fans, the dubious "naturalness" of the technology was cause for concern, as the procedure seemed to push beyond the acceptable boundaries of assisted reproduction and into a "science fiction" territory inappropriate for the sport of rodeo. For others, such as the American Quarter Horse Association (AQHA) – the largest breed registry in the United States with deep connections to professional rodeo – cloning endangered two-parent breed standards, threatening to dismantle the structure of selective breeding that favored breeders of top-quality horses.

Cloning poses another challenge, as well. This dissertation has argued that rodeo effectively creates both new animals and new histories in order to incorporate scientific innovation into its modern spectacles of western traditions, which keeps rodeo popular and current despite its celebration of nostalgia and tradition. Cloning presents complex challenges to rodeo's capacity to reinvent itself in response to changing attitudes towards animals: the technology pushes against established definitions of sex, gender, and animality that disrupt easy attempts to enfold it into a pageant of conservative gender identities and masculine mastery. Despite the fact that in the United States, the success of animal cloning technologies springs from the same western network of agricultural scientists, businessmen, veterinarians, and rodeo competitors that modernized the beef

industry and turned rodeo into a modern professional sport, this chapter considers the possibility that cloning threatens to destabilize the alignments that rodeo and the beef industry have shared over the course of this dissertation.

In making this argument, this chapter integrates archival sources with contemporary discourse analysis, tracing connections between historical actors and present-day commentators. It also sometimes strays from the rodeo arena itself to consider cloning's connections to wider western technological histories that rodeo is inseparable from, but strategically obscures. In telling this story, I draw heavily from anthropologist Sarah Franklin, whose 2007 book *Dolly Mixtures: The Remaking of Genealogy* argues for the importance of situating the "novel" technology of cloning within historical and cultural frames, which decenters the popular perception of clones as futuristic unnatural reproductions and preserves their "mixed" heritage. Dolly was one of the first famous cloned animals, born in Scotland in 1997 to great fanfare, but also a sinister harbinger for many of an age of futuristic laboratory-based agriculture. Franklin, in taking a long view of the agricultural and scientific histories leading to Dolly's successful birth, counteracts both overly celebratory and overly pessimistic interpretations of Dolly and of cloning more generally. "From this perspective," she contends, "Dolly [the sheep] is a mixture not only because she embodies a novel technique for combining genes and cells but because she constitutes the outcome of a lengthy and complex historical and biological genealogy as an experimentally bred sheep."[356] Dolly shares her identity as a clone with several of the horses and cows in this chapter, but she also shares with them connections to

[356] Sarah Franklin, *Dolly Mixtures: The Remaking of Genealogy* (Durham: Duke University Press, 2007): 2.

agricultural histories that used the scientific improvement of animal flesh for human capital accumulation and nation making. Reconstituting these connections is paramount to understanding rodeo's challenge in reconciling cloning with tradition, as it has other forms of reproductive and veterinary technologies. From Franklin's analysis I also draw on the term "biocultural," which she describes as a "conflation" to "emphasize the inseparability of new biologies from the meaning systems they both reproduce and depend upon, such as beliefs about nature, reproduction, scientific progress, or categories such as gender, sex, and species."[357] The biocultural context of cloning makes it impossible to reconcile its newness as a technology with a "traditional" narrative of reproduction, which forms the core of its challenge to the meaning systems of rodeo.

Interestingly, however, while rodeo struggles to make sense of cloning in a competitive context, the industrial agricultural world has quietly adopted the technology without much fanfare. In this respect, the rodeo cloning controversy has reproduced the modern role of rodeo as the public arm of the beef industry, deflecting public attention away from the continued scientization of animal agriculture by strategically highlighting animal technologies that improve performance animal welfare. The rub here is that cloning is not easily accepted as a welfare-supporting technology in the context of a regime of care, in which animals have historically moved away from being strictly valued as flesh, but carry affective value as well. The first section of this chapter investigates this tension, chronicling the contentious and public refusal of the AQHA to register cloned animals against a backdrop of the ready acceptance of cloning in the much less

[357] Ibid., 3.

visible world of commercial cattle production. The breed association defines clones as unnatural and illegitimate, reifying cultural perceptions of cloning as a dangerous and out-of-control abuse of technological power. This loud public debate centered on animals used in rodeo obscures the fact that meanwhile, a large and growing number of cloned animals and their offspring are contributing meat and milk to American consumers every day. The second section situates the cloning debate within the entangled histories of horse slaughter and horse cloning, showing how cloning horses in the United States develops from longer scientific, agricultural, and exploitative western histories. Cloning rodeo animals is also a predictable development of the long relationship between western land grant universities and rodeo participants. Finally, the chapter turns specifically to Scamper and Clayton and the complicated role of love in James' justifications for cloning her champion gelding. This animal love, in the historical and biocultural context of rodeo, does not fully succeed at integrating cloning into rodeo's preferred narrative of traditional western values. Instead, it exposes the contradictions and exploitations that undergird rodeo's romanticization of the past.

UNNATURAL REPRODUCTION

Ian Wilmut, lead scientist in the development of the technique that led to Dolly's birth, saw cloning technologies as a kind of interdisciplinary method of reproduction that combined different forms of existing knowledge – "genetic engineering, genomics, and our [his team's] method of cloning from cultured cells" – to do something new. The technology, he asserted, "makes it possible in principle to build new organisms at will, a

potential that "will take humanity into the age of biological control."[358] In this view, animal clones such as Clayton and his ovine predecessor Dolly are in some sense stopovers on a longer journey into the biological anthropocene. They are also, as Franklin points out, products of centuries worth of purposeful –sometimes scientific – agricultural research leading to cloning's emergence in the late twentieth century. Of Dolly, Franklin reminds us that she is "typically agricultural in that the project of her creation combined basic questions of genetics, or selective breeding, with commercial and industrial applications."[359] Dolly, Clayton, and their cloned contemporaries inhabit the longstanding tension between the pastoral and industrial economies.

Horse cloning in the United States is likewise typical of the complex agricultural, industrial, and symbolic identities that horses have embodied over the course of the last century and a half. While SCNT was perfected in Britain, Texas became the U.S. center of cloning shortly thereafter. It is significant that Scamper gained his clonability by being a rodeo champion, that several of the United States' first horse clones were from the rodeo world, and that the first U.S. hub of successful animal cloning was in the West, housed at Texas A&M University (TAMU). Cloning strengthened the longstanding connection between agricultural science, especially reproductive science, and professional rodeo, cementing old ties between private profit-makers and public research ventures. While on its surface cloning is scientifically revolutionary and unencumbered

[358] Quoted in Franklin, *Dolly Mixtures*, 21.
[359] Ibid.

by geographical loyalties, it in fact extends a chain of agricultural reproductive innovations that bind horses, cattle, industry, and rodeo in the western states.

Before it successfully cloned horses in the early 2000s, TAMU had been working on cloning other companion and agricultural animals since the mid 1990s, and had significantly invested in the promise of cloning through its association with Project Noah's Ark – an international gene bank for the genomes of endangered species.[360] In 1998, TAMU housed a major cloning research endeavor marketed as "The Missyplicity Project," which sought to successfully clone a privately-owned pet mutt bitch named Missy – whose anonymous owner footed a significant portion of the research bill.[361] The project was aggressively promoted to the public through the internet, creating not only a public university/private funded relationship, but cultivating a wide public audience as well. TAMU's cloning projects were aided by a corporate partner, Genetic Savings & Clone, a cryopreservation bank located just down the road in College Station, Texas, and the first of its kind to be "directly associated with cloning research."[362] Let no one say that clone enthusiasts lack a sense of humor, despite the seriousness with which TAMU incorporated, literally, cloning into its potential as the future epicenter of transgenic animal research.

TAMU's first successful cloned horse was a genetic copy of a European international-level jumping horse named Quidam de Revel, entirely funded by his Danish owner, who named the clone-foal Paris Texas in a playful nod to the Euro-Texan

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[360] Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press: 2008): 153.
[361] Susan McHugh, "Bitches from Brazil: Cloning and Owning Dogs Through the Missyplicity Project," in Nigel Rothfels, ed., *Representing Animals* (Bloomington: Indiana University Press, 2002).
[362] Ibid., 152.

collaboration.[363] News of the success, however, attracted an entirely different equine clientele in its immediate aftermath: rodeo competitors. Charmayne James was a member of a small group of western horse breeders to partner with TAMU and a private company called ViaGen, based in Austin, Texas, to produce a string of 12 cloned Quarter Horses in 2006-7.[364] TAMU provided the laboratories and genetic scientific expertise; ViaGen provided the gene banking, keeping the raw material from horses to be cloned safe and privately managed; the horse owners provided the money. During this two-year horse cloning boom in Texas, Scamper was cloned into Clayton, but several other top rodeo horses – either champions in the arena or the sires and dams of top arena champions – were cloned as well. The first connection made between TAMU cloning scientists and the rodeo world was through a veterinarian who graduated from TAMU who was employed by the Smart Little Lena Syndicate.[365] Smart Little Lena was a top-producing stallion of champion cutting horses, which are used for the specific competitive activity of separating a single cow from a herd in a timed format. Smart Little Lena had an excellent breeding history, and carried valuable bloodlines proven to transfer athletic quality to his offspring.[366] The veterinarian put the Syndicate and TAMU in touch, offering to perform the veterinary part of the cloning procedure (where successfully cloned embryos are implanted into surrogate mares for gestation, a well-

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[363] Rebecca Overton, "Cloning Update: The Whole Story," 2008. *Quarter Horse News*, http://quarterhorsenews.com/index.php?option=com_content&task=view&id=69&Itemid=1. Accessed November 2, 2011. The first successful cloning of a horse occurred in Italy in 2003.
[364] Ibid.
[365] Ibid.
[366] "Smart Litte Lena Euthanized," n.d. http://www.quarterhorsenews.com/index.php/cutting/cutting-outside-the-pen/9797-smart-little-lena-euthanized.html. Accessed December 27, 2014.

established veterinary technique called embryo-transfer). While this partnership was successful, it was only possible because of the personal connections and resources that could be shared between the wealthy Syndicate, their home veterinarian, and TAMU. In order for the reach of horse cloning to expand commercially, those resources needed to be made more accessible. ViaGen quickly stepped into that role, serving as a coordinator between horse owners and TAMU.

The initial horse cloning boom in 2006-7 at TAMU is also the result of longstanding collaborations stemming from TAMU's location near a major professional rodeo population, as well as its strong veterinary and animal science programs. Between TAMU's initial work with the Smart Little Lena Syndicate and its broader partnership with ViaGen through James and other Quarter Horse owners, the first 12 horse clones after Quidam de Revel were rodeo champions.[367] While Olympic-type sporthorses like Quidam de Revel were the first successful equine clones, top rodeo horses quickly overtook them in cloning popularity in the United States. Horses that travel internationally to professional sporthorse competitions sanctioned by the French-based Federation Equèstre International (FEI), no matter their country of origin, must carry an FEI passport, which is guaranteed only through certification of their breeding. When horse cloning first burst onto the scene, these associations did not have any protocol in place to register clones, and the possibility of these horses or their offspring gaining passports was uncertain. Horses used in professional rodeo, however, rarely travel outside of North America, and do not require FEI passports to compete at the highest

[367] Overton, "Cloning Update."

level. Additionally, while all of the first equine clones at TAMU, save Scamper, were impeccably bred Quarter Horses with unassailably valuable pedigrees, the PRCA does not require any horse to be registered with a breed association in order to compete at the highest level. There was no risk of the clones and their offspring being barred from competition, though the American Quarter Horse Association (AQHA) struggled for years over the dilemma of clone registration. While the AQHA deliberated, professional rodeo became the American proving ground for animal cloning.

Rodeo remains at the center of debates surrounding horse cloning, despite the practice becoming more widespread among other equine sporthorse competitions along with the widespread adoption of cloning in industrial agriculture in the United States in the years since Clayton was born. While rodeo provided an early clientele for horse cloning because its governing bodies did not require horses to be registered with any association in order to compete, the ongoing battle with the AQHA over registration has dampened some of the initial enthusiasm for Quarter Horse cloners. Quarter Horses make up the vast majority of equine competitors in rodeo, especially in timed events, because of their speed, agility, and association with western riding more generally. Professional rodeo has long been an arena where Quarter Horses can earn points with the AQHA to win breed-specific prizes, add to bloodline performance statistics data, and add to their breeding value. Yet despite the openness of rodeo to clones, the AQHA has considered clones ineligible for registry since the Smart Little Lena syndicate first approached TAMU in the early 2000s, maintaining this position despite years of legal wrangling. The AQHA drew a hard line in the sand, excluding cloning from its otherwise

liberal list of acceptable technologically-assisted reproduction techniques based on its requirement of only one parent to create an offspring. Legitimacy, it appears, is still important.

The AQHA balked at cloning far longer than its European breed registry counterparts, who have all dropped the injunction against cloning from their sporthorse registries. Any horse cloned from a horse registered with the major European Olympic-type sporthorse breed associations – the Hanoverian Verband, the Dutch Royal Studbook, the Swedish Warmblood Studbook, and so on – can be registered, obtain an FEI passport, and travel around the world competing internationally. Any offspring of that clone would also be considered eligible for the same acceptance. In 2014, Blake Russell, President of ViaGen, reported that European sporthorses now make up the "biggest part of the horse market," adding, "that industry shifted about 5 or 6 years ago [2008-2009[368]]." The shift he describes was from rodeo horses to European sporthorses as the dominant part of ViaGen's equine business.[369] While it is hard to determine the breadth of the impact the AQHA has had on cooling the cloning boom in rodeo, it is clear that its stance against the legitimacy of cloning has added an important complication for Quarter Horse breeders to navigate when marketing their animals for breeding. Like James, many breeders are looking for a commercial animal to represent a horse that has *already* been proven in the

[368] Blake Russell, Interview with author, June 26, 2014.
[369] "Controversy of Cloning," *Equestrian Quarterly*, March 22, 2014. http://equestrianquarterly.com/controversy-of-cloning/. Accessed December 27, 2014. For example, the FEI and IOC will allow clones to compete in the 2016 Olympics -- the pinnacle of European equine competition.

arena, not necessarily to compete itself. Cloners are breeders, and without the support of the AQHA as far as their horses are concerned, these breeders face a tough challenge.

In an attempt to preempt the potential for a lawsuit over its reproductive policies, the recently-embattled AQHA took a stand against cloning in 2004, before it became publicly available. When cloning showed promise at TAMU's labs, the association added a rule to its Official Handbook stating, "American Quarter Horses produced by any cloning process are not eligible for registration." This rule updated an old and more general rule that reads like an endorsement of heterosexual marriage: "only horses resulting from the breeding of a sire and dam are eligible for registration."[370] The organization had accepted Artificial Insemination (AI) early on; even though the technique removed the sexual act between two horses, the insertion of semen into a fertile mare who gestated and birthed the foal did not spark much controversy. However, the organization had just settled a lawsuit out of court regarding embryo transfer (ET) in 2002, which the AQHA also had tried to block from its registries. The result of the settlement was that the association "eliminated all restriction regarding the registration of foals produced through embryo transfer."[371] The lawsuit made ET count as a "breeding of a sire and dam," despite the AQHA's protest that the procedure, because the biological dam did not gestate and birth the foal herself, could compromise the genetics of the foal. The sire-dam stipulation was therefore legally flexible enough to describe horses

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[370] "AQHA Cloning Timeline," n.d. http://www.aqha.com/AQHA-Cloning-Lawsuit-Resources/AQHA-Cloning-Timeline.aspx. Accessed January 15, 2015.
[371] "AQHA on Cloning: Wait Another Year," n.d. *Quarter Horse News*, http://quarterhorsenews.com/index.php/news/industry-news/7241-aqha-on-cloning-wait-another-year.html. Accessed November 2, 2011.

conceived through assisted reproductive technologies like AI and ET, since both semen and eggs from two individual male and female horses are required for these procedures to work despite the fact that no actual sexual intercourse takes place.[372]

Cloning, in requiring only one genetic parent, broke from the sire-dam definition, and the AQHA reinforced the primacy of its equine gender normativity to ban it before TAMU's cloning laboratory became commercially viable. These sexual stipulations reflect a conservative understanding of reproduction that bend to breeders' desires to profit from their top horses through technological assistance, but still fit within a fundamentally conservative worldview of what counts as appropriate, legitimate, forms of reproduction. The AQHA's long fight against ET was ultimately unsuccessful because breeders could profit from both the reproductive and the performance aspects of their mares, who never had to lose competition time to pregnancy and nursing. Breeders could also disseminate more foals with a particular mare's genes than the mare could produce alone, as multiple mares could gestate the embryos of a particular stallion-mare match at the same time. Cloning, however, explodes the notion of parenthood altogether at the embryonic level. Having only one parent, according to the AQHA, is too radical a departure from the one stallion-one mare requirement for a Quarter Horse foal to be legitimated by the registry.

The AQHA's new rule did not scare off those like the Smart Little Lena Syndicate or Charmayne James. Once the cloning of rodeo horses became possible, controversy with the AQHA followed quickly. In 2006, the same year Scamper was cloned,

[372] Ibid.

supporters of horse clones proposed changing the 2004 rule to allow cloned horses to be registered, provided "its DNA matches that of a registered American Quarter Horse." The AQHA's Stud Book and Registration Committee (SBRC) convened a "cloning task force" in 2008 to investigate whether or not cloning was a threat to the AQHA's breeding standards, and present its results at the annual AQHA convention later that year. The task force "examined numerous issues involved with cloning," but by the time of the convention, the group did not feel it had enough information to rule on the proposed change, and asked for more time.[373] Part of this reluctance to resolve the issue immediately was due to a cloning seminar held at the convention, in which scientists (some from the TAMU cloning program) and ViaGen (represented by Blake Russell) presented the case for cloning and then took questions from the audience. Based on testy questions from the audience, the task force worried that the AQHA was courting more litigation.[374]

In the wake of the AQHA's request for more time, *Western Horseman Magazine*, one of the most popular independent western riding and rodeo publications, published a feature article on rodeo clones. The article, "Carbon Copies," appeared in the December 2008 issue, shortly after the AQHA convention, and it revealed the widespread use of cloning in the rodeo world. While prestige breeders such as the Smart Little Lena Syndicate and celebrities like Charmayne James were cloning their slick cutting and racing horses, another group of rodeo equestrians was also getting into the clone

[373] "AQHA Cloning Timeline."
[374] "AQHA on Cloning: Wait Another Year."

business: bucking horse breeders. Shane Franklin, owner of a rough stock contractor, set up a cloning partnership with two bull riding competitors, called Best Buckin Clones Inc., "with the intention of standing cloned stallions to select mares." Like James, Franklin and his partners intended to send these horses directly to stud instead of into the chutes. "'I truly believe DNA is far more powerful than we were ever told it is,'" Franklin asserts. "'I think it controls behavior and everything else...I will probably never buck these horses because the chance of them getting hurt is too high...Airwolf and Kingsway [two champion bucking horses, who were geldings] don't need to prove themselves. That's why we cloned them. I need them to breed to mares to get better offspring for professional rodeo as a whole.'"

The article also revealed a split between competitors and breeders regarding the promise of cloning. Elite Quarter Horse breeders were fiercely opposed to sending cloned horses straight to the breeding shed. Brenda Pieper, owner of top AQHA stallion Playgun, was "'very much opposed to doing it [cloning] just for the sake of putting that animal into the breeding herd.'" Like many skeptical breeders, she viewed cloning as a "step backward," a shrinking of the gene pool instead of an expansion of it. Another elite breeder, Susie Reed, argued that cloning was a passing trend. "Because of the price of cloning and 'negative opinion about it,'" she "'doesn't see cloning changing the breeding industry." Reed thought that cloning should not even be considered a serious

development because breeders would balk at the very high cost of cloning and be wary of the demand for their cloned horses.[375]

The AQHA agreed with its breeders. The organization's lead attorney, Chad Pierce, argued at the 2008 convention that cloning was such a radical departure from previous assisted reproduction technologies that "the AQHA thought it worthwhile to put in significant effort to try to understand cloning and whether this breeding technology is really consistent with AQHA's purpose to advance the breed and serve its members."[376] In 2010, the task force had finally gathered enough information to decide whether or not to change the 2004 rule prohibiting the registration of clones. The most important information it had gathered in the interim, however, was not about the science of cloning or about the quality of the first generation of cloned horses who were coming into maturity. Instead, it came in the form of an AQHA member survey. The form, which was sent to 3,000 randomly selected members with a response rate over 30%, found that 86.02% of the respondents did not approve of horse cloning.[377] The sample size was minuscule, but the response was a consistent and resounding "no" to registering Quarter Horse clones. Based on this survey, the task force finally came to the conclusion that it would not revise the clone ban.

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[375] Rebecca Overton, "Carbon Copies." *Western Horseman,* Dec 2008, http://www.westernhorseman.com/to-categorize/1532-carbon-copies. Accessed January 15, 2015.
[376] "AQHA on Cloning: Wait Another Year."
[377] "AQHA Cloning Timeline." 3,000 represents roughly .02% of the total US-based membership of the AQHA in 2010, which was approximately 144.000, according to Emily R. Kilby, "The Demographics of the U.S. Equine Population," in Deborah Salem and Andrew Rowan, eds., *The State of the Animals IV: 2007* (Humane Society Press, 2007): 181-2.

Unfortunately for the AQHA, its 2004 attempt to circumvent litigation by preemptively deciding against registering clones – and its lengthy process of standing by that original decision – still resulted in a lawsuit. In 2012, a group of plaintiffs including a Texas-based breeder and a veterinarian, sued the AQHA, alleging that "the association was operating a monopoly by excluding clones."[378] The case went to trial in federal court in Amarillo in July 2013, where the AQHA was found guilty of "violating state and federal antitrust laws by banning cloned horses from its prestigious registry."[379] The AQHA made a speedy appeal, which wound through various legal labyrinths for over a year until January 2015, when a federal panel in New Orleans overturned the Amarillo ruling.[380] While the plaintiffs promised an appeal, the AQHA can continue to keep clones out of its registry, as it has since 2004.

While rodeo horses made up the first wave of horses entering commercial cloning in the United States because registration was not necessary for competition, the FEI and European sport horse breed registries' quick acceptance of cloned horses opened up the market for horses who travel internationally. One Texas-based polo player, for example, stocked his stable with over 56 clones from 2007-2014. Famous show jumper Gem Twist has two clones standing at stud in his stead, and a recently famous Olympic gold medal winner in dressage, Rusty 47, also has two stud clones. The FEI defines clones as identical twins of their parent: "just as identical twins aren't totally identical, there is no

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[378] Associated Press, "Jury: Horse group's ban on clones violates laws." *Austin-American Statesman*, July 30, 2013.
[379] Ibid.
[380] Associated Press, "Appeals Court: Quarter Horse Group May Reject Clones." January 14, 2015, *The New York Times*.

such thing as an exact clone either." As its veterinary director explains, "'we [the FEI] came to the conclusion that there were so many variables, there were no unfair advantages that were contrary to the spirit of sport.'"[381] Because ViaGen owns the patent on equine cloning, the international sporthorse has become its dominant equine business in recent years. The different interpretations of cloning's effect on individual horses between the FEI and the AQHA, therefore, do not result from inconsistent information, variable scientific techniques, or different commercial incentives: it all comes from the same source.

Instead, the divide between the FEI and AQHA proves that genetic legitimacy is culturally inflected. The AQHA's victory in disallowing clones to register plays into nativist ideas of American horses vis-a-vis Europe, with classist and sexualized undertones. AQHA's stance against clone registration was portrayed as protecting not only its breeders from the economic intrusions of cloning entrepreneurs, but also protecting the breed – "America's horse" – from the polluting effects of out-of-control reproductive licentiousness. Tellingly, the *New York Times* article announcing the AQHA's victory noted that "the lower court ruling" that had been overturned "would have set a precedent, as no American horse-breeding groups allow cloned horses to be registered."[382] The AQHA, representing the largest number of horse-owning Americans and its vast numbers of American horses, is deeply invested in defending cultural meaning of horses in the United States, and its line against cloning is a conservative one

[381] "Controversy of Cloning," *Equestrian Quarterly*, March 22, 2014, http://equestrianquarterly.com/controversy-of-cloning/. Accessed January 15, 2015.
[382] "Appeals Court: Quarter Horse Group May Reject Clones."

regarding reproduction. Consistent with its role in the concurrent horse slaughter debate in the United States in which the AQHA promoted the symbolic value of American horses to protect them from European hippophagists, the AQHA's role in the cloning debate has effectively separated America from Europe again, nationalizing American horseflesh and indirectly aligning Europe's acceptance of horse cloning as characteristically sexually libertine. This time, instead of insulating its most vulnerable horses from slaughter, however, it is protecting its most valuable horses from scientific care.[383] In fact, the AQHA is actively working to re-instate horse slaughter in the United States. A 2009 *Western Horseman* article reported that the "AQHA is actively lobbying Congress, using association resources, to get horse slaughter plants up and running" as a means to address chronic overpopulation.[384]

Given that, as previously established, more unregistered Quarter Horses are sent to slaughter in the United States than any other kind, it seems strange for AQHA to draw a firm line at the registration of clones – a reproductive technology limited to its most elite, moneyed, or high-profile breeders – rather than to limit the surplus number of grade horses being produced among its rank and file. While the rodeo world has long been on the vanguard of cutting-edge veterinary technologies, cloning has opened a rift between the governing bodies of rodeo competition, such as the PRCA, and its main supplier of horses and competitors, the AQHA. Throughout the long period of litigation, the PRCA

[383] There's also an interesting point to be made here about John Hoberman's term "sportive nationalism," which he uses in the context of human doping in Olympic sports. Detractors of cloning and doping share similar arguments based on "natural" athletes and the limits of mediating elite athletic performance. John Hoberman, *Testosterone Dreams: Rejuvenation, Aphrodisiac, Doping* (Berkeley: University of California Press, 2005): 246-260).
[384] Debbie Moors, "Enough Already," *Western Horseman Magazine*, December 2009: 56-65.

continued to allow clones to compete, whether in timed or rough stock events. AQHA's decision may have no bearing on the PRCA's position, but their opposing positions on this issue expose the limits of the scientific definitions of a regime of care, where the technological application to bodily problems no longer serves to help an animal, but to harm it. Where veterinary technology has been depended upon to prove the welfare of competition animals, this ethic does not seem to be able to encompass cloning.

To be fair, there are diverse opinions within the amateur and professional rodeo worlds regarding cloned animals. In one online forum, BarrelHorseWorld.com, the news of the AQHA's victory in 2015 elicited spirited commentary from a range of barrel racing enthusiasts. "Good for the AQHA," wrote one, "we have enough things evolving from test tubes." Several more posters contributed emoticons of clapping smiley faces, giving their approval to the ruling.[385] The test tube comment aligned with other cloning critics on the site. A February 2014 forum discussing the pros and cons of breeding to a horse who's own sire had recently been cloned became contentious. Cowgirl156 exclaimed, "I WILL NOT breed to anything with FG [Frenchmans Guy, the cloned horse] in the bloodlines anymore. I do not support cloning one bit! Shame on Meyers [owner of FG] for RUINING his legacy." Another poster, teebluesage, agreed: "I know I would never breed to a clone, I just don't think it's a good idea to mess with mother nature."[386] Even Charmayne James nodded to the general wariness surrounding cloning when Clayton was born. The colt's color and white markings differed from Scamper's, which is

[385] Thread "Cloning Lawsuit News," BarrelHorseWorld.com, original thread January 15, 2015, accessed January 15, 2015.
[386] Thread "Why Not Frenchmans Guy", BarrelHorseWorld.com, original thread February 13, 2014, accessed January 15, 2015.

commonplace in cloning. James viewed this visual difference positively, hopeful that it "will be helpful in distinguishing Clayton from Scamper, so people won't be 'thinking of the science fiction thing.'"[387]

That "science fiction thing" tends to attach to cloning regardless of its context. The negative perception of cloning as detrimental to animal health, reproductive capacity, and performance has been largely dispelled over time. Still, the association of cloning with something profoundly unnatural and unnerving is pervasive. Andrew Roush, a psychology student at Western Carolina University, conducted a survey in which he asked his respondents to "evaluate the 'naturalness' of animals of the same species in different circumstances," such as the naturalness of an "elephant in a jungle versus zoo." Roush tracked the percent decline in perceived "naturalness" caused by varying degrees of domestication, captivity, and scientific or genetic manipulation. The largest percentages of decline had to do with the last category, genetics – and of those, clones were by far the "least" natural. The percent decline in naturalness for a cow living on a farm to a cloned cow was a whopping 80%, a significantly steeper decline even than fish who had been genetically modified to glow in the dark.[388]

The study's example of a cloned cow is actually a timely one, as animal industries have quietly adopted cloning while much of the public focus and discussion has been occupied with more visible animals, like rodeo horses. However, the distinction between

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[387] Stephanie Church, "World Champion Barrel Horse Gelding Cloned," November 15, 2006, on ViaGen's "Viagen in the News" page, http://www.viagen.com/news/world-champion-barrel-horse-gelding-cloned/. Accessed November 2, 2011.

[388] Hal Herzog, Email with Author, August 20, 2014. Herzog attached a poster created by his undergraduate student, Andrew Roush, with preliminary research on how consumers defined "natural" and "unnatural" in relation to the scientific mediation of animal bodies.

"farm" and "cloning" is becoming blurrier, as animal agriculture has quietly turned to cloning in the past decade, especially pork and dairy. ViaGen is at the center of both performance animal and agricultural cloning, since it owns the patent on cloning technology in the United States. It licenses the technology to other companies across the globe, as Blake Russell explained, recently establishing a new joint venture with a company in China, which just bought the largest pork producing company in the United States. U.S. pork producers have widely used cloning technologies, which facilitates the goals of commercial production. Russell explains, "cloning is a tool to disseminate elite genetics. You need genetic diversity to make progress, but in commercial populations, you need standardization, so cloning multiplies the number of [top] AI boars."[389] Likewise, some dairy herds in the United States have also turned to cloning. "The genetic value of calves is identified at birth," Russell describes, nodding to the meticulous genetic record keeping employed in the dairy industry, as opposed to the much more loosely organized beef industry. "The ability to replicate those genetics early and produce multiple offspring from [a desirable] female early in life speeds up the rate of genetic progress." Russell had little in the way of numbers, however. When asked how many cloned dairy cows there were in the U.S., he only said it was a "small amount of the industry," and that ViaGen cloned "a few hundred dairy cattle per year. But millions of offspring are in the market," he added, noting that American consumers are currently

[389] Blake Russell, Interview with Author, June 26, 2014. Russell also told me about ViaGen's porcine genetic preservation program. "Hundreds of breeds of pigs go extinct every year," he argues – a trend that will likely increase as Asian countries turn to a standardized American model of pork production. "In the future, these animals may have value that we can't see now (disease resistance, efficiency, etc), so ViaGen is genetically preserving those breeds before they go extinct for potential future use."

drinking milk produces from the offspring of cloned cows. "It's a huge impact and increasing every day," he emphasized.[390]

In the beef industry, cloning has gone in a different direction, in part because of the continued reticence throughout the industry to keep meticulous genetic records. Instead of cloning animals based on genetic potential, beef cloners take cells from superior carcasses at the slaughterhouse, essentially cloning animals who have proven their genetic worth in death through the quality of their carcasses.[391] "Traditional" cloning in the beef industry is a growing practice, however, and Russell explains that cattle used for livestock shows have adopted the technology wholesale. "At all major livestock shows," he asserts, "the leading cattle are the offspring of clones." Another arena in which cloned cows appear is a familiar one: the rodeo arena. Following the historical trend of using scientific technologies to improve both beef and bucking bulls simultaneously, cloned bulls have been appearing in professional rodeo. Two cloned bulls performed well enough over the PRCA season in 2013 to qualify for competition in that year's National Finals Rodeo. Russell also asserts that there are far more rough stock clones than are visible in the arena: bucking bulls are increasingly bred from cloned females. Like in the dairy industry, using cloned females to rapidly increase the effect of a particular individual's valuable genes allows bucking programs to rapidly expand their breeding herds. The bulls in the arena themselves may not be clones, but nevertheless they were produced through cloning technologies.

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[390] Ibid. In personal correspondence with Robert Beausire, a dairy industry consultant, I faced the same difficulty of tracking down statistics for cloned animals.
[391] Ibid.

In an effort to avoid consumer rejection, the use of offspring from cloned animals rather than cloned animals themselves to produce milk and meat, obscures the actual impact that cloning is having on animal agricultural products. While the Food and Drug Administration technically "supports the conclusion that milk from cloned cows is no different than milk from conventionally bred cows," citing a "worldwide body of evidence" proving that food from cloned animals is not unsafe for human consumption, in 2007 it nevertheless placed a moratorium preventing any milk coming directly from cloned animals from entering the marketplace.[392] Robert Beausire, a dairy industry consultant, explained that the dairy industry, still "suffering from the fallout from the rBST issue" of added hormones in milk, does not want "milk's healthy aura to be tainted with a 'franken' animal label." Yet he also argues that "there is nothing to stop the cloning of animals...we're probably eating and drinking from the children of cloned animals."[393] Neither Russell nor Beausire, who agree that consumers are buying products derived from cloning technologies, could tell me the actual number of clones affecting the market, in part because it is obscured by the use of clones' offspring rather than clones. This careful management of agricultural cloning through the indirect use of its technologies has effectively obscured cloning from much of the general consumer public.

ONE POUND OF FLESH

Obfuscation is not only part of the public discourse about cloning, but it is also built into the scientific process of creating one individual from another. The most

[392] Dairy Management Inc. and National Milk Producers Federation, "Cloning Fact Sheet," January 2008.
[393] Robert Beausire, Email correspondence with author, January 12, 2015.

significant breakthrough to lead to successful cloning was a technique called somatic cell nuclear transfer (SCNT). Dolly the sheep was the first SCNT-conceived mammal, born in Scotland in 1997.[394] Somatic cells describe any cell of an organism that is not a reproductive cell, such as eggs or sperm. Skin, muscle, tissues – these are made of somatic cells that contain an individual's DNA but are not meant for reproductive purposes. SCNT is completely remarkable in that it requires no reproductive cells from prospective cloned individuals in order transfer genetic material. The use of somatic cells in nuclear transfer represents what is truly new about the technique in the context of other sexual and asexual reproduction, both assisted and otherwise. Once the nucleus of a somatic cell containing the genetic information of the hopeful clone has been harvested, it is transferred in full to a donor's reproductive cell, which, if all goes well, treats the somatic nucleus like a fertilized egg and starts the reproductive process, sans sex and all the attendant messiness and genetic unpredictability of fertilization. These nuclear-transferred eggs go through a number of "passages" in which cells grow in culture media – a critical stage of SNCT where "they can not only be multiplied but also modified through gene targeting."[395] Because SCNT merges two cells, it does not resemble asexual reproduction, or replication. It is a form of sexual reproduction. But because it requires

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[394] Satoshi Kishigami, Sayaka Wakayama, Yoshihiko Hosoi, Akira Iritani, and Teruhiko Wakyama, "Somatic cell nuclear transfer: Infinite reproduction of a unique diploid gene." *Experimental Cell Research* 3: 14 (2008): 1945-1950. The technique's success is unevenly distributed among mammal species, however. Some such as horses, cows, cats, mice, and famously, sheep, have all been successfully cloned. Others, to the ongoing disappointment of their advocates, have yet to yield a clone, such as dogs and a number of endangered species.

[395] Sarah Franklin gives a most succinct and understandable explanation of this process in her book *Dolly Mixtures: Remaking Genealogy* (Durham: Duke University Press, 2007): 19-25.

the genetic material from only one individual, from somatic cells no less, it isn't your typical sex, either.[396]

What typically gets lost in recounting the process of cloning is the donor egg cell. The donor egg is absolutely critical to cloning, which, as a sexual process, requires a reproductive cell to house and gestate the cloned embryo. But the identity of the donor is completely obscured, and her existence mostly forgotten in the focus on the cloned individual. While this second participant is absolutely necessary, she is the only invisible participant in this process. In commercial horse cloning, her invisibility stands in contrast to the surrogate mare who gestates the embryo into a fetus, who is hand-picked for the job based on her proven maternal qualities, and is given top-notch care as she grows the owner's investment. In SCNT, a laboratory technician removes the nucleus of the donor egg cell, which contains the donor's own genetic information, replacing it with the nucleus of the somatic cell of the desired horse. Instead of four strands of DNA re-combining to form a new individual, as with typical sexual reproduction, two strands are removed completely, leaving the existing individual's DNA intact despite the centrality of the egg to the "conception." SCNT may be about copying a single individual, but in practice it is a profoundly strange threesome, in which the prospective clone, an invisible donor, and the successfully produced clone are all present within a single egg cell.

Equine donor eggs are hard to come by from live mares, as harvesting a viable egg is a surgical procedure. Instead of shouldering the expense of maintaining a herd of mares as egg donors, TAMU's cloning program obtained eggs from the ovaries harvested

[396] Ibid.

from slaughtered mares.[397] In the first years of the horse cloning boom, TAMU's proximity to two horse slaughter facilities guaranteed a steady supply of these by-product ovaries: Dallas Crown was located just a short trip north from College Station in Kaufman, Texas, and Beltex Corporation, another equine plant, was just slightly farther west in Fort Worth. The centrality of slaughtered mares to the cloning process is so entrenched that, when horse slaughterhouses closed nationwide in 2007, ViaGen phased out their partnership with TAMU and set up a lab in Canada, where they could more easily access slaughterhouse ovaries. Blake Russell, president of Viagen, reported in 2014 that Canadian slaughter plants are "the number one source of commercially available oocytes."[398] Horse cloning, by virtue of its direct connection with horse slaughter, recapitulates a twisted version of the history of horse slaughter in the west, wherein the bodies of horses were valued primarily as the raw material for other products. Except now, instead of using horses to make pet food or industrial fertilizer, unwanted or excess horseflesh is used to make more horses. The economic value of the horses being cloned, and the laboratory spectacle of cloning itself, obfuscate the dependence of cloning on slaughter as completely as the SCNT technique obscures the genetic information from donor egg cells.

The worthlessness of slaughtered horses stands in direct contrast to the expense of having a horse cloned. When Charmayne James hired ViaGen, she paid them a reported

[397] Overton, "Cloning Update."
[398] Blake Russell, Interview with Author, June 26, 2014.

$150,000 for collecting, culturing, and banking Scamper's genes.[399] By the time Clayton was born in 2006, ViaGen, not TAMU researchers, had patented its SCNT cell-culturing process, becoming the sole holder of the "international patent for equine cloning."[400] While ViaGen's patent-holding status made it less dependent on TAMU over time, and made possible its separation from TAMU after nearby horse slaughterhouses closed, their early partnership was hardly unprecedented in terms of corporate investment in university science. Especially in the agricultural sector, the use of private or corporate funds to promote specific scientific outcomes has been a common feature since the 1970s, when public budgets for agricultural research began to fall as part of a larger economic downturn and budgetary crises within the USDA.[401] This shortfall was partially addressed by the Bayh-Dole Act of 1980, which "facilitated the transfer of technology between academe and industry." The timing of this piece of legislation was fortuitous, coming shortly after scientists gained the ability to manipulate DNA molecules through a technique called recombinant DNA technology (RDT).[402] Moreover, the Supreme Court ruled that biotechnologies were defined as property, and that patents could be granted "on a genetically engineered microorganism."[403] The agricultural sector took immediate note of both the potential for genetic research to improve animal and plant stock – and of the

[399] Church, "World Champion Barrel Horse Gelding Cloned."
[400] Overton, "Cloning Update."
[401] National Research Council Board on Agriculture, *Colleges of Agriculture at the Land Grant Universities: Public Service and Public Policies* (Washington, D.C.: National Academy Press, 1996): 81.
[402] Kaushik Sunder Rajan, "Introduction: The Capitalization of Life and the Liveliness of Capital," in Rajan (ed.), *Experimental Futures: Lively Capital: Biotechnologies, Ethics, and Governance in Global Markets* (Durham: Duke University Press, 2012): 3.
[403] Ibid., 2-3. Rajan's bigger point is the seeming "naturalization" of the "entrepreneurial university" and its implications for life sciences and the commercialization of life (hence, lively capital).

ability of private investment, incentivized through proprietary means – to overcome the growing shortfalls in public funding.

National Research Council studies on agricultural research taking place at land grant universities in the 1990s documented the shift from public to private funding, and located the most radical changes in the biological and life sciences. For example, one report showed that by 1992, TAMU already received roughly the same percentage of its research funding from private as well as public sources: 35 and 36%, respectively.[404] Another study agreed that this trend would take agricultural research into the twenty-first century, observing that "the increasing importance of biotechnology, coupled with patent protection for genetically engineered organisms, has significantly enhanced opportunities to engage in proprietary biological research."[405] In this context, ViaGen's partnership with TAMU and its near-immediate ownership of the patent for horse cloning technologies is one more step on a well-travelled pathway linking biotechnology, universities, and private capital.

TAMU and ViaGen's use of rodeo animals as a proving ground for cloning is also typical of its post-WWII developments as a western land grant veterinary school. TAMU and its smaller regional feeder schools around Texas have played central roles in agricultural and animal research while fostering close and long ties to the rodeo world. Sul Ross State University in Alpine, Texas, whose Range Animal Science program has historically been run by TAMU graduates and which sends many students to TAMU's

[404] National Research Council Board on Agriculture, *College of Agriculture at the Land Grant Universities: A Profile*. (Washington, D.C.: National Academy Press, 1995): 101.
[405] National Research Council Board on Agriculture, *Colleges of Agriculture at the Land Grant Universities: Public Service and Public Policies* (Washington, D.C.: National Academy Press, 1996): 30.

research and veterinary programs, has blended its rodeo and agricultural programs since 1950. When Sul Ross's Range Animal Husbandry Department formed in the years immediately after World War II, its primary donors of money and livestock were local "ranchers interested in seeing Sul Ross better equipped in this field."[406] In the same stroke, the Department also sponsored the college's Rodeo Association, which in 1950 boasted none other than the Range Animal Husbandry student and college rodeo champion Harley May, who later became the president of the Rodeo Cowboys Association and helped lay the foundation for making professional rodeo a modern sport.

In 1957, Sul Ross hired Alpine native and TAMU-trained veterinarian Paul Weyerts, who maintained a private veterinary practice in Alpine while teaching "agriculture and biology classes." He personally built the scientific profile of Sul Ross's Range Animal Husbandry Department, obtaining 3 additional academic degrees during his first decade at Sul Ross. Along with Dr. Everett Turner, his department chair, Weyerts was instrumental in changing the program's name to Range Animal Science (RAS) in the 1960s and securing funding for laboratory and research facilities for the department in the early 1970s, including a pre-vet program that funneled Sul Ross students into TAMU.[407] Turner, who had run RAS since 1947, emphasized the importance of the timing of the expansion: "The next 10 years will probably be the most

[406] This relationship was budding as early as the 1930s, when the first animal husbandry classes appeared, sponsored by TAMU and with support from local ranchers. Clippings, *Alpine Avalanche*, September 1931, Sul Ross State University Collection, Archives of the Big Bend, Sul Ross State University.
[407] "RAS expanding program, facilities," *Sul Ross Skyline*, October 19, 1972, Folder 1384, Clifford Casey Papers, Archives of the Big Bend, Sul Ross State University.

critical period for agriculture that we have faced in the United States."[408] Over the same period of time, Drs. Turner and Weyerts oversaw the Sul Ross Rodeo Club. Turner was the faculty sponsor who brought the club into existence in 1947, and Weyerts took it over from him as the RAS programs expanded through the 1980s.[409] RAS and Sul Ross Rodeo shared leadership, students, and animal agricultural connections during a time when both industrial agriculture and professional rodeo professionalized. Harley May and a cohort of his RAS contemporaries formed the National Intercollegiate Rodeo Association (NIRA), which formalized a vibrant rodeo community that had been thriving across the western land grant universities from as early as the 1920s and 1930s.[410] TAMU, Colorado State University, the University of Arizona, and the University of California-Davis all sponsored campus rodeos before World War II; after the war, college rodeos spread to New Mexico, Utah and Montana. Sylvia Gann Mahoney, a historian of college rodeo, describes the centrality of the combination of rodeo with a college education to the culture of the agricultural west. Rodeoing was simply built into the fabric of western life, as it was for Giles Lee, a New Mexico ranchman who was "typical of many early-day college rodeo cowboys who left the ranch, went to college, competed in college rodeos and other rodeos, earned a degree, returned to run the ranch, continued to rodeo in the area, and raised a family that went to rodeos for entertainment."[411] In traveling the country to compete, these college rodeoers knit the western land grants together into a

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[408] Ibid.
[409] "Dr. Weyerts named RAS director," *Alpine Avalanche* August 2, 1990, SRSU Collection Series II - Bio Files, Dr. Paul Weyerts, Archives of the Big Bend, Sul Ross State University.
[410] Sylvia Gann Mahoney, *College Rodeo: From Show to Sport* (College Station: Texas A&M University Press, 2004): 8-10.
[411] Ibid., 16.

tight community, making a social and cultural world out of their shared ranch backgrounds, agricultural educations, and rodeo skills. These were strong ties: Sul Ross established an annual RAS/Rodeo Reunion in 1976, which is still held every year (now called the Agricultural and Natural Resource Sciences - Rodeo Exes Reunion).

TAMU and rodeo, then, were situated perfectly to initiate horse cloning in the United States. Rodeo people trusted its veterinarians and its research, drawing from a long shared culture between rodeo and western university animal science programs. Texas boasted a high concentration of high-profile rodeo competitors, such as James and the Smart Little Lena Syndicate, who regularly used TAMU as their go-to animal hospital, but because of the NIRA's fostering of connections between land grant schools through rodeo, trust in TAMU is widespread throughout the west, not just in Texas. Moreover, because rodeo competitors' animals did not have to be registered with any particular breed association, they did not risk their cloned animals being barred from rodeo competition based on their strange method of conception. ViaGen's swift patenting of equine SCNT technologies ensured a secure and streamlined avenue for horse owners to invest in, bridging the corporate/academic divide with all red tape removed and ensuring that horse owners could personally profit from their successful clones. Rodeo cloning developed from within the well-worn network formed in the postwar years between federal and corporate investment in agricultural science at land grant universities, the business of animal industry and equine slaughter, and the growth of professional rodeo as a lucrative form of animal entertainment conferring celebrity and value to high performing animals. In the light of these entanglements, I contend that

horse cloning in the United States is a particularly western development, shaped by modern western sensibilities. While the science of cloning may not declare any singular citizenship, by the time ViaGen purchased the patent for an entire species, horse cloning was not only American – it was rodeo.

Yet ViaGen's patent and the commercialization of horse cloning, while a logical development of TAMU's broad contexts, nevertheless exacts a cost, a proverbial pound of flesh to pay the debts of what I earlier termed the biological anthropocene. While cloning developed quickly in rodeo, it also challenges distinctions between capital and caring, destabilizing the role of veterinary care in promoting animal health in the sport. Cloning, and molecular biotechnologies more broadly, are new developments but nevertheless, the use of this technology is blatantly capitalistic. This mix of biology and accounting forms the core of anthropologist Kaushik Sunder Rajan's analysis of the difficulties that molecular technologies pose:

> new life science commodities...require a reinvigorated analysis of capitalist practices and well as of the correlated kinds of citizen, corporate, and scientific subjectivities that are materializing along such activities. New capitalist practices see university and corporate biosciences becoming porous to one another, with the circulation of biomaterials between labs governed by novel regimes of buying and selling.[412]

[412] Quoted in Stefan Helmreich, "Species of Biocapital." *Science as Culture* 17:4 (2008): 464.

In light of the longstanding ties between research institutions and agricultural industries that have redefined relationships between bodies, reproduction, and profit-making for decades, the dilemmas posed by new molecular technologies do not seem so new. Debates surrounding the role of affect within the commercialization of laboratory reproduction frequently turn back to historically contingent definitions of personhood and citizenship. In gaining the "age of biological control," as Dolly's lead scientist predicted, whose pound of flesh is at stake in a world where the scientific management of cells and their futurities entails an uneven partnership between private, corporate, and university resources? James' cloning of Scamper makes clear that horse cloning blurs the lines between regimes of capital and regimes of care, where one horse's worthlessness is necessary to the genetic perpetuity of another, more valuable horse. This complication is especially evident in how James framed the cloning of Scamper around his exceptional qualities, both as a performer, which is significant, but also as a companion. The reasons James gives for bringing Scamper into the domain of the cloning laboratory are love stories, documents of their long and exceptional partnership. Because this affinity is deeply wound into the narrative of his transformation from feedlot reject to champion, from gelding to sire, his story pushes against the limits of a scientifically-defined definition of animal care. Cloning Scamper is about love, but it is also about making money. Despite the fact that the very possibility of cloning a rodeo horse develops from an existing history of using of veterinary research and treatment to bolster animal welfare, cloning re-capitalizes horseflesh in potentially disruptive ways. In this, and in the necessity of horse slaughter to the process of horse cloning, the story of his cloning

flouts Velma Johnston's work in protecting "America's horses" from being turned into capital investments. The love James uses to justify his cloning has complicated consequences for the unwanted horses invisible to the cloning process, as well as for the ability of rodeo to adapt this particular technology into its traditional storytelling.

LOVE IN A TIME OF TRANSGENESIS

James described the exceptional bond they shared from the day she met Scamper at a New Mexico feedlot as central to their competitive success. "I remembered seeing him there in the pen and thinking even then that he was a perfect looking little horse," she remembers. She tells the story of that day as the meeting of two kindred souls:

> My dad told me I could ride him, but warned me that he was cold backed. He said "do not lope him right off." My sisters and I were fearless kids and rode all the time, so I saddled him up and took him out behind the barn where no one could see me, and, of course, I kicked him into a lope because my dad had said not to. Scamper dropped his head and bucked a little, but I just kind of giggled because I didn't really know any better, and he looked at me, and right then, it was apparent that he loved little girls, and he loved me...Looking back, I probably should have been a little more fearful, but I knew that he would never hurt me.[413]

Their partnership continued as she trained him for barrels, his status as a grade horse with a checkered past not getting in the way of her high regard for his conformation and

[413] Charmayne James with Bonnie Wheatley, "Scamper's Stats with Charmayne James," n.d., *Barrel Horse News,* http://barrelhorsenews.com/articles/horse-rider-profiles/1306-scampers-stats-with-charmayne-james. Accessed January 14, 2015.

attitude. James describes how quickly he learned: "When I began taking him around the barrels, he was so broke and athletic that I could lope him around the barrels almost immediately. His conformation was so perfectly balanced and suited to it that he took right to the pattern." As a seasoned competition horse, "Scamper had great style coupled with great speed...He was so consistent run after run after run.[414]" These were the qualities that she later turned to when justifying her decision to clone him in his old age – he was 28 years old in 2005.

She pointed to his longevity in the professional competition arena: "For any horse to stay on top of their game for 10 years is absolutely amazing...Scamper's conformation was unbelievable...so balanced and great feet, great legs."[415] She also highlighted elements of his character beyond his physical attributes: "Scamper had such a strong will and high pain tolerance that we hope that these are things that will be carried through."[416] But this admiration for his capabilities was always tied to love that went beyond performance. In the preface to James' 2005 barrel racing training manual, *Charmayne James on Barrel Racing*, one of James' mentors, Cheryl Magoteaux, describes the relationship James and Scamper shared. "There's no question that Scamper was the best barrel horse, ever," Magoteaux begins, but she adds that "he didn't do it alone. From the start, Charmayne was his friend, his advocate, and his leader." The training regimen, shoeing, and nutrition program that James tailored to Scamper were all important,

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[414] Ibid.
[415] Church, "World Champion Barrel Horse Gelding Cloned."
[416] Church, "World Champion Barrel Horse Gelding Cloned." The desire to breed for high pain tolerance echoes emerging scientific breeding goals in the agricultural sector, which has experimented with breeding insentient or vegetative laboratory and farmed animals as a way of addressing animal welfare concerns.

Magoteaux adds, "but the one quality that made it come together in the beginning – and keeps [James] captivated now – is the love. She literally falls in love with her horses."[417] The story of James and Scamper wove love, performance, and money into a single narrative culminating in his entrance into transgenesis.

Within this framework, Scamper's status as a grade horse with exceptional physical qualities is not ancillary to his success, but forms the core of his rags-to-riches story. His checkered past turned to gold because of his innate talent and his relationship with James. James not only tells the story of their first meeting as love at first sight, but also emphasizes that he had already been discarded. After he put his first owner in the hospital, she recounts, "[H]e went through horse auctions in La Junta, [Colorado], Guyman [Oklahoma], Clovis and finally Clayton [New Mexico], ending up at our feedlot."[418] Scamper was still a very young horse, only four years old, but the number of auctions he'd been through painted a grim picture of how he'd gotten along with his various owners. The James' feedlot was not necessarily the next stop to slaughter: horses were part of the labor force of the feedlot, helping to separate and move cattle as part of its day-to-day operation. However, if Scamper had failed at this job, or had not found James, the likelihood that he could have been put on a trailer bound for the slaughterhouse was high. His life was precariously balanced between the feed lot and the bolt gun.

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[417] Cheryl Magoteaux, "Preface," in Charmayne James, *Charmayne James on Barrel Racing* (Colorado Springs: Western Horseman Books, 2005).
[418] Charmayne James and Bonnie Wheatley, "Scamper's Stats with Charmayne James." James' family owned a cattle feedlot in Clayton, NM -- yet another example of the close connections between rodeo and the cattle industry.

Scamper's proximity to slaughter highlights his alignment with the majority of horses that were slaughtered in the United States, and are now shipped to either Canada or Mexico. He, like the vast majority of American slaughter-bound horses, was a "grade" Quarter Horse, which I explained in the introduction as being a horse with indeterminable bloodlines. However, "grade" is a more specific term than "mixed." In common horse world parlance, it most often refers to a Quarter Horse that has fallen through the cracks of the registration process for the AQHA. The association serves as a gatekeeper of quality, legitimacy, and value, and also serves as the largest equine breed organization involved in rodeo. Quarter Horses are most often used for western riding, and Quarter Horse owners can earn AQUA rewards by competing in rodeos. "Grade" horses are horses you can't find in these records, but they are common mounts for amateurs because of their affordability in contrast to registered horses. In the case of males, grade horses are gelded at a young age, adding to their affordability and manageability. The AQHA's liberal breeding policies took full advantage of reproductive technologies as they developed in the 1980s and 1990s, which encouraged breeders to produce large numbers of foals and only register the best. Anthropologist Tamar McKee notes, "not only was Artificial Insemination (AI) allowed...but the semen of one stallion could be used to impregnate [an unlimited] number of mares in order to increase a breeder's chances of creating the ideal foal."[419] In this equation, only the best foals would be registered, and the rest, as McKee found, "could be culled through slaughter," or gelded and sold as grade horses. Scamper is likely a product of just this kind of logic: his conformation and

[419] Tamar V.S. McKee, Email correspondence with author, December 9, 2014.

talent suggest that he is not ill-bred, but, perhaps because of his fiery temperament, he was never legitimized by the AQHA.

Scamper and others like him form a cohort of unwanted and untended, and largely invisible, equine surplus. While many grade horses do find good homes, the overwhelming presence of grade Quarter Horses in the U.S. slaughter pipeline (they represent roughly 7 of 10 of the total horses slaughtered) reveals a startling excess of these horses.[420] This surplus runs counter to the AQHA's promotional identity, which instead publicizes the popularity of the breed in the United States. One of the AQHA's slogans is that it represents "America's horse." Its website touts the breed as native to the United States, and that Quarter Horses are owned and enjoyed by most horse enthusiast Americans.[421] In this, the AQHA is correct. Beginning in the 1980s, "[AQHA] registrations exceeded all others [ie, Thoroughbred, Arabian, etc] by tens of thousands."[422] A 2007 study of U.S. equine demographics found that Quarter Horses registered by the AQHA made up nearly 60% of the total horses registered in the United States.[423] By 2013, the Annual AQHA Membership Report tallied the number of U.S. members at 144,030, and the number of U.S. owners of registered Quarter Horses (who

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[420] Ibid.
[421] AQHA: Home, n.d. www.aqha.com. Accessed January 14, 2015.
[422] Emily R. Kilby, "The Demographics of the U.S. Equine Population," in Deborah Salem and Andrew Rowan, eds., *The State of the Animals IV: 2007* (Humane Society Press, 2007): 181-2. By various measures presented in this study, Quarter Horses dominate the American equine landscape. In a table cited here, documenting the fifteen-year totals of the nine largest breed registries in the US, Quarter Horses registered with the AQHA made up nearly 60% of the total horses registered in the US. The study also published a table based on data from the USDA/National Animal Health Monitoring System from 1998, which showed that registered quarter horses made up 39.5% of the total equine population in the US (donkeys, burros, ponies, and miniature horses included). Kilby points to several difficulties in formulating an accurate number of the total equine population, but argues that it is at or above 9.6 million.
[423] Ibid.

may not be members of the AQHA) at 729,769. Another statistic compiled in this report showed that the "America's horse" label is fairly accurate, at least in terms of national popularity: the number of Americans owning Quarter Horses is over 7 times the number of Quarter Horse owners outside of the United States.[424]

This popularity, combined with openness to reproductive technologies that reward breeders for creating more foals than they intend to register, creates the surplus of horses like Scamper and his slaughter-bound compatriots. They are potentially well-bred but nevertheless illegitimate offspring in a system designed to reward official authentication. Grade horses may be Quarter Horses in all but registration papers, but they exist on the fringes of the Quarter Horse world. Scamper lived the a horse version of the American Dream, going from precarious fringe to superstardom with a combination of grit and love, from James' vantage. He also went from one form of illegitimacy to another, as the AQHA recognizes neither grade horses nor clones. James justified cloning Scamper not through bloodlines, like the Smart Little Lena Syndicate – which banked on the AQHA's eventual willingness to register their clones – but through her story of their love and through the capacity of American culture to value performance, or pluck, a la *Ragged Dick*, over pedigree. Scamper has what McKee calls "redemptive capital." In investigating what happens to horses, mostly surplus Thoroughbred racehorses, who are rescued from the slaughter pipeline, McKee "considers what happens when mounts do not become meat," and finds that the narrative of second chances is a powerful motivator

[424] AQHA Membership Report, 2013, www.aqha.com/annualreport. Accessed January 14, 2015.

for future owners of previously unwanted horses.[425] In Scamper's case, redemptive capital stands in for verifiable pedigree.

The narrative of redemptive capital is thrown akimbo by the use of irretrievably unredeemed horseflesh in the cloning process, however. Scamper may have come precariously close to the slaughterhouse, but the eggs used to grow his clone came from a less lucky, and wholly unknown, surplus horse who was not pulled from the brink. His process of reproductive redemption came at the price of invisible slaughtered mares – that pound of flesh that is at once an ovary and symbolic of the real, fleshy costs of breeding horses to excess in the United States. The final insult to the unseen organ donor is the removal of her identity, not only through the disembodiment of her reproductive organs, but at the molecular level. She is removed from herself, her genetic information pulled out from her reproductive cells, replaced with the *desired* horse – a cruel phrase in this story so bound up by love and value. SCNT codifies a chasm of equine value: on one side, a horse so far into a regime of care that a great deal of money and technology result in an exact genetic copy; on the other side, an invisible, unwanted, and ultimately erased horse cast out from a regime that, despite its turn from capital to caring, does not have room to care for all. The invisibility of slaughter mares is built into the very process of increasing the commercial value of horses with capital, whether redemptive or pedigreed. The forced invisibility of involuntary egg donor mares is the debt paid – the literal pound of flesh – to account for the failed promise of legitimated breeding.

[425] Tamar V.S. McKee, Email with Author, December 9, 2014.

The literary pound of flesh is properly more of a lien than a debt: something to be collected if a contract is violated, a consequence for failing to live up to a promise that cuts to the bone. Its origins in contingency are appropriate to the very nature of animal cloning generally, as well as to the specific connections between cloning and horse slaughter in the western United States. Franklin reminds us of the ancient and botanical roots of the word "clone," explaining that it is "derived from the Greek *klon*, for twig," and that it describes both the process and result of growing a new plant from a cutting of an existing one.[426] But she also makes clear that complex multicellular mammals are not plants, and the word "clone" is a loose and imperfect metaphor for the work involved in creating a new animal from the cells of an existing one. Imprecision, contingency, and obfuscation are part and parcel of calling Clayton, or Dolly, or any other animal that successfully represents the genes of another, a clone.

To complicate matters further, the purpose of SCNT is to produce an animal that can itself sexually reproduce as if cloning had never happened. This was the proof of Dolly's success: when she "confirmed her ability to reach sexual maturity and breed naturally."[427] In Scamper's case, the desire for his equine copy to be reproductively viable was the entire point. Since Scamper was a gelding, James wanted to re-create him in stallion form so she could capitalize on his performance record through stud fees. "My interest is in making the best barrel horses out there," James claimed. "If there was ever a horse to be cloned to help promote the sport of barrel racing [then he's it]...and that's

[426] Sarah Franklin, *Dolly Mixtures*, 19.
[427] Ibid., 23.

where my goal in life is, is to help promote barrel racing and help people get some better, sounder, quality horses out there."[428] When Clayton was born, James did "not plan to [barrel] race Clayton, because she regards him as too valuable to risk injury." Clayton's purpose was to serve "exclusively for breeding," using Scamper's performance record and status as the only barrel horse to be inducted into the PRCA's ProRodeo Hall of Fame as the basis for Clayton's breeding worth.[429] The goal of his cloning, then, was not to produce innumerable Scampers, but to produce one Scamper who could mix with mares *as if* he had been a stallion in the first place. It was also to make Scamper immortal: Scamper's genes are banked through ViaGen, and James may decide to produce as many clones as demand dictates over time.

Clayton completes an odd triangle between himself, Scamper, and slaughter mares. Clayton the clone turns the very notion of pedigree on its head: he simultaneously is and is not Scamper. Scamper was a horse living the American Dream, but Clayton carries the burden of authenticating it through reproduction. He technologically extends Scamper's redemption, recapacitating him into a horse with a reproductive legacy plucked from an unknown genetic tangle of unwanted horseflesh. Yet he is another "illegitimate" conception, in some way transgender, transgenic, and transformative, born not from sex but from the complex technological process of creating a horse from whole cloth. He is the reproductively mature equivalent of his impotent ancestor-self. Those wanting to use Scamper's genes to produces foals must buy Clayton's semen. He and

[428] Stephanie Church, "World Champion Barrel Horse Gelding Cloned."
[429] "Horse Success Stories: Charmayne James and Scamper," n.d., www.viagen.com/benefits/equine.php. Accessed January 13, 2015.

Scamper are genetically the same horse, but Clayton's path to coming into the world is a rupture in their genealogy, a crack where Clayton's historical embodiedness splits from Scamper's. By virtue of being a clone instead of a son, Clayton grafts a new twig onto Scamper's branch, instead of growing a new, related branch in the way of most family trees.

The imperfection of the word "clone" in its various scientific and commercial contingencies is therefore completely apt in the context of cloning rodeo horses in the early 2000s. Transgenic love is compromised love; it is costly and invisibly cruel in terms of money and flesh. It is also deeply historical, and rooted in long American relationships with horses, westernness, and agriculture. We may not know the specifics of Scamper's unverifiable genealogy, but we know that he is a cast-off of century-old American legacies of selective breeding, animal agriculture, westward expansion, and the longer processes governing the capitalization of animal flesh and horse flesh in the United States. We know that his redemption was proved through performance – through performative phenotype, if you like – rather than predicted or authenticated by his genotype. Clayton, however, by the very fact of being a clone of Scamper, is enmeshed with the additional set of historical meanings accumulated by molecular biotechnologies.

Clayton likewise plays a transformative role within systems of biocapital in a way Scamper himself does not, but he brings Scamper's genes along with him. Scamper's genetic mixing prevented the recording of his genes; Clayton, however, is equally illegitimate in the record books to which his genes belong, a circumstance that re-inscribes an older history of the value of horses in America. Franklin argues that, while

the technology used to make Dolly was revolutionary, the desire to create better agricultural animals was not, and nor were her connections to British nation-making through animal capital: "the feat of producing her viability belongs to a long tradition of reshaping animal bodies, crisscrossing cell lines, and redesigning animal germplasm in the interests of both capital accumulation and [British] national or imperial expansion." She further notes that Dolly's ovine lineage is as equally important as her clone identity in tracing her historical pathways, from the place of wool in Britain's industrial revolution and colonization of Australia to the role of Australian sheep in the development of human in-vitro fertilization and "contemporary bioscientific innovation." Likewise, Clayton's body is thick with significance as a cloned animal, and more specifically, as a clone within the context of American rodeo. Just as Dolly's genes were the product of centuries of purposeful British breeding, Scamper and Clayton's were products of the commercialization of American horseflesh throughout its industrial history, and also of a historical transformation in equine value set in motion by Velma Johnston in the 1950s that set out to place care above capital. They both embody ways in the horse has been roped into a project of American nation-making and identity formation. Yet Scamper and Clayton are the other side of the same coin: they were the leftovers, castoffs, and misfits instead of the prized, cultivated, and legitimated bloodlines. The fundamental irony of their hypertechnologized identities is that the sole purpose of cloning Scamper into Clayton was commercial. Unlike Dolly, Clayton was not produced as a form of research. He was made to make money on Scamper's behalf, fulfilling the cash-generating portion

of Scamper's redemptive capital.[430] Scamper embodies the histories of the excess western horses, western horseflesh speculators, mustang hunters, and cattle ranchers so central to the overarching narrative told through rodeo performances. Clayton brings all of this to the table, of course, but by virtue of being a clone also brings along the histories of agricultural research, animal reproductive science, and rodeo's own investment in veterinary care as a way to justify its humane treatment of its animal performers. Taken together, it does not get any more rodeo than Scamper and Clayton.

Related legal threads hold both horse slaughter and clone registration at bay. These two parallel legal battles share a time period, a long, circuitous process of appeal, and finally an upholding of the original language instating their respective bans. Like the slaughter ban, the AQHA's refusal to register clones hinges on complex definitions symbolic and economic value. Both debates are heavily invested in how horses should be valued in the United States, and how the west is central to that definition. The ban on registering clones, like the slaughter ban, is also at its heart a veterinary issue. Where the slaughter ban is held in place by making it impossible for veterinarians to inspect horse meat, the AQHA is withholding the registration from clones based on the intrusion of laboratory-based veterinary science to complete the SCNT procedure, making the resultant horse unworthy of inclusion in its "prestigious" organization. At the center of both, then, is the conflict between tradition and identity on the one hand, and scientific innovations in animal care on the other. Horse killing and horse cloning, as it turns out,

[430] In 2008, Clayton's first year at stud, a single dose of frozen semen reportedly cost $4,000.

both expose fissures in the transition from a regime of fleshy capital to a regime of animal care.

This conflict is fully visible in the recent cooling attitudes of the rodeo world towards cloning. In part because of the AQHA ban, the popularity of rodeo horse cloning is declining. Its use in rough stock breeding aligns with its use in animal agriculture, in which clones are used behind the scenes, as it were, to produce the animals for the arena or marketplace. This indirect use of cloning can be effectively hidden from public view, which is instrumental in preventing fears of "franken" foods. In this sense, taking clones out of the rodeo arena, whether equine or bovine, serves an important purpose for its allies in the beef industry by making the issue less visible altogether. According to scientific studies of the attitudes of American consumers, surveys of rodeo enthusiasts, and surveys of members of the AQHA, cloning is too disturbing, too "unnatural," too "science fiction," characterizations that lead to its status as an "illegitimate" technology. Cloning has challenged professional rodeo's ability to incorporate veterinary innovations into its ability to perform the past: cloned animals cannot comfortably fit that mold. In jumping at the chance to create reproductively viable animals from sterile ones, and thus increase the potential to make faster, stronger, more resilient performers, rodeo's early adopters of cloning exposed a rift in the sport's story about itself. Cloning, with its visceral connection to horse slaughter – a western historical fact that rodeo is built upon and worked hard to obscure –ultimately exposes the historical hypocrisy embedded in modern rodeo's incorporation of animal care into its core identity. Cloning lays bare the fluctuating contingencies of animal value and technological innovation, and also unveils

how rodeo, despite genuinely providing care for the animals that perform under its auspices, nevertheless reproduces histories of animal subjection under a regime of capital. Rodeo clones, and their challenge to rodeo's ability to use these animals in its definition of "America" in embodying traditional western values, force a reckoning with what those values historically have been, and may prove impossible to encompass in modern rodeo's regime of care. What counts as animal care is inextricably bound to, and often compromised by, the complexities of performance and profit.

Conclusion

I have tried to present the history of how rodeo, through the strategic use of animal science, creates new animals and new histories in order to preserve the conservative traditions that serve its allies in industrial agriculture. But I end by returning to a question I have frequently been asked in the process of writing this dissertation: "Is rodeo cruel to animals?" In fact, in its contemporary format, most rodeo animals are, in general, very well-cared for. The dietary, exercise, social, and medical needs of performance horses and bucking bulls are constantly monitored and provided for. Objections to the bucking strap and spurring used in rough stock events are misplaced: it is a common misperception that bucking straps, which wrap around the sensitive area of an animals' flank, interfere with the genitals of bucking animals. Instead, the strap, made of soft sheepskin, hangs loosely around the animal's belly. As the cowboy gets seated onto the animal in the chute, a handler ties the end of the strap to the door of the chute in a quick-release knot. When the horse or bull explodes out of the gate, the strap tightens around their flanks until the knot pops, immediately releasing the strap from the animal, which usually gets bucked off along with the cowboy. The brief sensation of tightening, not irritation or genital pain, encourages the animal to buck. While objections to this method are still valid, the bucking strap poses far less severe discomfort to bucking animals than it is often accused of. Likewise, cowboys spur the shoulders of bucking animals to raise their scores, as it demonstrates strong balance on the back of the plunging animal. These spurs are dull and round, making more of a jingle than a mark. Most marks on an animals' shoulder caused by spurs are places where the

hair has been rubbed back, exposing dusty, but not broken, skin, and are easily brushed off by putting the hair back in its natural direction. Despite the spectacular and violent nature of rodeo performances, Dr. Golla's insistence that rodeo animals receive better care than most horse owners provide to the animals they love does generally hold true.

At the same time, acknowledging that individual animals in rodeo are well-cared for should not distract from the larger structures of oppression that rodeo supports. Rodeo is cruel to animals in the sense that it is implicated in the growth of industrial animal agriculture from its origins all the way to its contemporary form. Despite exaggerating ranching tasks to extreme and unrecognizable forms, rodeo is still part and parcel of commercial animal production. By promoting cattle, ranching, and the production and consumption of beef as essential components of a "traditional" conservative American identity, rodeo supports political alignments with conservative deregulatory policies that have served to subjugate cattle and other animals under an increasingly "efficient" and brutal system of meat processing. As this dissertation has shown, the binary of cruelty versus compassion is a false one. Rodeo's attention to the care and treatment of the animals who perform in its spectacles has always deflected attention away from the brutal treatment of animals in other related commercial venues. From sanitizing the violent history of western horses through bronc riding, to producing hugely popular bucking bulls with the same reproductive technologies used to increase the number of cattle a plant can slaughter, rodeo is cruel to animals on a broad historical and cultural scale.

What rodeo does is celebrate the outcome of deliberate historical processes meant to subjugate animals as, instead, a natural progression from cruelty to compassion: the care it bestows now is meant to salve the historical violence at the root of all rodeo events. Of course, the same historical motivations for subjugating horses and cows from the nineteenth century forward were entwined with establishing racial and gendered control over the West. Industrial animal agriculture, from the earliest days of ranching, has and continues to be a significant agent of territorial claiming, exploitation of minority and immigrant laborers, and the economic draining of rural populations. Understanding the paradoxes of whether rodeo is cruel or not to animals exposes deep fissures in the West at points where racial identities intersect with those of class, gender, and nation. Veterinary advancements in animal science have made rodeo animals experience less pain, compete for longer, and live long, healthy lives. They have made the sport more profitable, popular and exciting. On the other side, they have made beef a cheaper, more accessible, and less fatty protein source for millions of burger-loving backyard grillers. Yet they have not ultimately redressed the violence that occurs where animals and profit-making meet.

I reached this conclusion after many attempts at reconciling the paradox of historical animal pain and scientific progress I encountered in my various sources, from the rodeo enthusiasts who demonstrated great love for their gleaming, happy animals; the veterinarians and medical professionals who demonstrated just how advanced their scientific forms of care really are; to the men and women in the dusty archival documents who genuinely worked towards creating better, more comfortable animals in an industrial

context. This research intersects with another question I am routinely asked, which is whether or not I eat meat. Many are surprised to learn that I do, given what I know about industrial meat. While my own personal food politics are as idiosyncratic and compromised as most Americans', the root of the issue for me is related to the conclusions I reach in this dissertation. In my view, there are many good reasons for abstaining from meat, whether from health, environmental, or ethical perspectives. However, abstaining from meat helps no animals, nor does it help people who are adversely impacted by the larger capitalist motivations behind industrial agriculture. Divesting oneself from meat as a political act does nothing to change the violent meeting between flesh and profit; it merely removes you from it. In my view, real change can only occur by paying close attention to how animal food production can work differently, and supporting the efforts of meat producers who are working to divorce their modes of production from industrial constraints. While this is not a solution for many animal advocates who do not find a way to reconcile animal care and animal killing, or meat eating and the systemic exploitation of women, minorities, and other vulnerable populations, it is acknowledgement that a more expansive way forward that acknowledges the potential pitfalls of assigning value to one at the expense of another is a more difficult and complex process than abstention allows.

The story of Velma Johnston solidified this approach for me. While she was instrumental in changing how Americans valued horses, ultimately her campaign *reinforced* instead of challenged the historical structures of subjugation. She removed a set of horses from the industrial pipeline: she did not dismantle the industrial apparatus.

Of course, such a task is well beyond the efforts of even as remarkable an individual as Johnson. But what we can learn from the terrible directions in which her legacies have been pulled is that addressing the subjugation of animals necessitates a broader focus. Asking whether or not rodeo animals suffer, or whether one should or should not eat meat, completely misses the point.

As this project moves forward into a book, it is this broader intersectional focus that I wish to explore in much more depth. It has taken me a long time to see how the paradox at the heart of animal care engages directly with larger historical compromises, and to understand how rodeo's re-writing of history deliberate makes those who are not part of a white, masculine, conservative worldview invisible. As it stands, the dissertation does nothing for making these stakeholders more visible. Now, it is time to go back through my various sources with a newly attuned eye, and once again brush against their various commitments to progress and compassion in order to emphasize the complex negotiations of race and gender that have bubbled up throughout the dissertation. Too often, activism for human and animal causes are separated from each other; the familiar refrain "how can you worry about animals when children are starving?" comes immediately to mind. However, as this project grows into a better version, my aim is to prove how the same structures that work against animals are working against vulnerable human populations as well, and that privileging the protection of one over the other is fundamentally unproductive. Rodeo is an ideal site for this investigation, as it brings together humans, animals, industry, and caring together in one arena, mingling the mediation of numerous connected histories with equally various

claims to modernity. Moving forward, I need to look at rodeo from a fresh vantage point: it is a good time to separate from the stories rodeo has invested in to look at the practices and politics it has created.

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