

Animals, Agency, and Class: Writing the History of Animals from Below

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Abstract

This essay is an historical exploration of the nexus between animals, agency, and class. More significantly, it seeks to place the agency of horses, cows, sheep, pigs, etc. into the process of historical writing. This essay is divided into three sections. The first is a critique of the current state of the historiography of animal-studies. The second, 'A Product of an Unspoken Negotiation,' considers how animals themselves have shaped their own lives and labors. The third, 'The Evolution of Vegetarianism and Animal-Rights,' explores how a class relationship developed between humans and other animals. Moreover, this section demonstrates how this solidarity then led to the creation of social change.

Keywords: *animals, agency, class, animal-rights, and vegetarianism*

Introduction

These are the most devilish mules I ever saw. They destroy everything, eat up trees and fences, and have nearly killed half my men. Do you think of taking them away soon? If you love me, do so.

Correspondence between an Assistant Quartermaster and Quartermaster of the Union Army (1862)

In the 1880s, William Hornaday, the prolific animal collector for American museums, was traveling to Southeast Asia for an expedition. While docked in Ireland outside of Belfast, he purchased several donkeys from a local resident, as he wanted their skeletons for an exhibition. On the roadside, the man killed the donkeys, and Hornaday began the process of skinning and gutting their bodies. These actions, however, were soon halted, as several Catholic cottiers happened upon the scene. So affected by the slaughter and dismemberment of their fellow creatures, one member of the group exclaimed, "didn't Jesus Christ once ride on a Jack-ass," and the entire group set upon Hornaday and the donkey-seller with a fury of spades and fists. Hornaday had to actu-

ally seek shelter in a nearby cabin, and only escaped with his life when armed soldiers were called to assist him in fleeing the parish (Hornaday 1887, 3; Dolph 1975, 141-3). Humans, this American naturalist learned, could have different and often divergent perspectives when it came to other animals.

For the cottiers, donkeys could be property; they could be bought and sold; they could be worked. There were various rules and regulations regarding what, where, when, and how these animals lived and labored. There were punishments for misbehavior. There was sadism for pleasure. Yet, these creatures were not strictly thought of or treated as commodities, machines, or artifacts to dismemberment at will. There existed an intimate relationship between the cottager and the donkey. The donkeys had names. They had gender (he/she was not "it"). They had intelligence and reason. They had individual and unique personalities. They had spirituality. They had their own recognized customary rights. They participated in festivals. During May Day and Harvest Home, donkeys, along with cows, horses, and oxen, would be adorned with flowers and garlands. The individual animal's life had a value separate and outside of his or her production and reproduction. Jesus did once ride on the back of a jack-ass. The donkey was both an integrated and active member of the Irish *habitus*. This was a perspective from below.

For William Hornaday, donkeys were property. They were to be thought of and treated as commodities for sale, technology for power, exhibitions to display, or subjects to conserve. To use anthropological terms, the relationship between Hornaday and the donkey was not an emic one (like the cottiers) but rather an etic. Hornaday stood outside of the donkeys' world. There was a distinct and significant divide between humans and other creatures. Animals did not possess an independent form of agency. They did not deserve collective rights. Their life had little to no value outside of its service to humanity. This was a perspective from above.

This clashing of perspectives, from above and below, provides those of us who study the history of animals with a keen and necessary lesson. There has been a disturbing trend within academic scholarship over the past two decades, especially in the humanities, social sciences, and cultural studies, to erroneously equate social history to history from below. Many individuals like to discuss agency and class as theories,

but few ever apply these two forms of analysis within their work. E.P. Thompson is quoted again and again, and yet his actual methodology is not employed. In other words, if a scholar is studying unrepresented or underrepresented historical figures — such as African-American women, Irish peasants, or other animals — then by default, this scholar is supposedly studying history through the perspective of these same figures. This is most incorrect. For while it is true that social history can be done from below, these two approaches are not synonymous. In fact, their over-lapping is quite rare.

This confusion is notably prevalent within animal-studies. Recent volumes of collected essays — *Representing Animals* (2002), *The Animal-Human Boundary* (2002), and *Animals in Human Histories* (2002) — are rife with such misunderstanding. Erica Fudge's popular "A Left-Handed Blow: Writing the History of Animals" (2002), for example, does not make a distinction between social history and history from below. Agency is discussed as a theory, but it is not applied in practice. The agents (i.e. the animals themselves) dissipate into a vacant, theoretical category. This is a view from above.

History from below is not a theory. It is a methodology or form of analysis, which can be applied to the study of historically un/underrepresented groups. Its primary focus is upon two interconnected factors: agency and class. Agency refers to the minorities' ability to influence their own lives — i.e. the ability of the cow to influence and guide her own life. Class refers to the relationship(s) between historical figures — i.e. the relations between a dairy-cow and her owner, or between a dairy-cow and her fellow dairy-laborers. As for their interconnection, it occurs when the scholar discovers how the combined factors of agency and class have shaped the overall historical process. Hence, to simply study the history of cows does not mean then that the historical subjects, suddenly and without much effort, become actors.

Take, for instance, Harriet Ritvo's *Animal Estate: The English and Other Creatures in Victorian England* (1987), Nigel Rothfels's *Savages and Beasts: The Birth of the Modern Zoo* (2002), Louise Robbins's *Elephant Slaves and Pampered Parrots: Exotic Animals in 18th Century Paris* (2002), or Virginia Anderson's *Creatures of Empire: How Domestic Animals Transformed Early America* (2004). Within their work, these authors insert a minority group — in this case, other animals — into various historiographies where beforehand these characters barely existed. These are social histories. This is true. However, none of these histories are performed from below. The animals are not seen as agents. They are not active, as laborers, prisoners, or resisters. Rather, the animals are presented as static characters that have, over time, been used, displayed, and abused by humans. They emerge as objects — empty of any real substance.

A comparable approach is taken in the field of the history of technology. In Clay McShane and Joel Tarr's studies of the horse (1997, 2003), collected essays like *Industrializing Organisms: Introducing Evolutionary History* (2004), or Roger Horowitz's *Putting Meat on the American Table: Taste, Technology, Transformation* (2005), animals are cyborgs or living machines. Herein, the horse, cow, or chicken may have worked hard, resisted at times, and produced power, milk, and flesh; but it is not demonstrated how the horse or cow or chicken were workers, shaping their own density, and becoming part of the working class. Animals may be theorized as actors, but they are not proved to be actors. Instead, they appear as a tool or form of technology that has, over the centuries, been utilized and manipulated by humans.

In the field of environmental studies, the method has been similar. Consider two recent titles: Andrew Isenberg's *The Destruction of the Bison: An Environmental History, 1750-1920* (2000) and Jon Coleman's *Vicious: Wolves and Men in America* (2004). Therein, the bison and wolf are clearly present within the evolving history: from the effects of the introduction of European agriculture to the shifting attitudes towards these creatures. But the two animals remain in the background. Each author details the numerous methods that were used to kill and exterminate these creatures. Yet bison and wolves remain static victims. Each author provides a biological lesson on their respective subjects. Yet these lessons are not interwoven into the narrative. One author briefly touches upon adaptations made by the wolf in response to human activities. Yet these adaptations are not explored.

Even within the history of animal advocacy and vegetarianism, the animals themselves play little to no active role in the creation and development of the historical events and institutions. Monographs, such as James Turner's *Reckoning with the Beast: Animals, Pain, and Humanity in the Victorian Mind* (1980), Keith Thomas's *Man and the Natural World: A History of the Modern Sensibility* (1983), Timothy Morton's *Shelley and the Revolution in Taste: the Body and the Natural World* (1995), or Hilda Kean's *Animal Rights: Political and Social Change in Britain since 1800* (1998), portray other animals as helpless and voiceless. Horses, cows, and pigs may exist in the overall picture of these particular times and places; but the authors are far more concerned with considering the treatment(s) meted out to these creatures than with the circumstances that gave rise to them. Beyond the invocation of sentiment, animals simply did not possess the ability to create social change.

The historiography of animal-studies has been performed almost exclusively through the perspective of William Hornaday — a perspective from above.² It has truly become a sad situation when so many titles of books and essays contain the word "creature" or "animal" in them, and, yet, with-

in the pages of these texts, actual creatures or animals barely exist. Indeed, this relatively new disciplinary field has reached a critical and most precarious stage in its development — as this dominant view from above has not only done a disservice to the animals that we study in the past but has erected obstacles to the relationships we seek to establish with animals in the present. But this need not be the case. A different perspective, one from below, can be achieved if we attempt to gain a better understanding of the nexus between agency, class, and the history of other animals. How have animals been historical agents? How have they created and shaped class relationships? How are each of these categories interrelated to one another in terms of social change?

A Product of an Unspoken Negotiation

“The Irish cows,” the 17th century traveler Fynes Moryson (1904, 231) explained, *are so stubborn, as many times they will not be milked but by some one woman, when, how, and by whom they list. Yea, when these cows thus madly deny their milk the women wash their hands in the cows’ dung, and so gently stroke their dugs, yea, put their hands into the cow’s tail, and with their mouths blow into their tails, that with this manner (as it were) of enchantment they may draw milk from them. Yea, these cows seem as rebellious to their owners as the people are to their kings.*

Cows, Moryson came to recognize, had agency. They labored and produced. They resisted and fought. They negotiated with humans as to the actualities and limits of their own exploitation. Animals were themselves a force in social change.

Faking ignorance, rejection of commands, the slow-down, foot-dragging, no work without adequate food, refusal to work in the heat of the day, taking breaks without permission, rejection of overtime, vocal complaints, open pilfering, secret pilfering, rebuffing new tasks, false compliance, breaking equipment, escape, and direct confrontation, these are all actions of what the anthropologist James C. Scott has termed “weapons of the weak” (1987). Hence, while rarely organized in their conception or performance, these actions were nevertheless quite active in their confrontation and occasionally successful in their desired effects. For our purposes, these everyday forms of resistance have not been historically limited to humankind — as each of the above listed methods have been used by other animals.

Donkeys have ignored commands. Mules have dragged their hooves. Oxen have refused to work. Horses have broken equipment. Chickens have pecked people’s hands. Cows have kicked farmers’ teeth out. Pigs have escaped their pens. Dogs

have pilfered extra food. Sheep have jumped over fences. Furthermore, each of these acts of resistance has been fully recognized by the farmer, owner, driver, supervisor, or manager as just that: *acts of resistance*. The 18th century poet Henry Needler understood this, as he witnessed just such an action: every single day. There was a horse, he wrote to a friend, “which formerly work’d in this Yard; who wou’d labour very diligently, ‘till he heard the twelve-a-clock Bell ring.” “But after that,” Needler highlighted, “nothing cou’d prevail with him to proceed. As if he thought, he had then perform’d his due Task, and was resolv’d not to be impos’d upon” (1728, 213-4). In fact, if one desired to obtain an adequate, timely, and profitable amount of labor from such creatures, there always had to be some degree of negotiation involved.

Historically, there have been three kinds of offers made by owners and supervisors to their laboring animals in order to obtain production and obedience. The first was better treatment, food, and conditions — maybe even friendship. Farmer Carl Penner admitted quite honestly that “you couldn’t beat the meanness out of ‘em [horses and mules]. It just don’t work. But if you’d treat ‘em halfway right and try to pet ‘em a little bit and curry ‘em nice and give ‘em plenty to eat, they soon learned who was boss” (cited in McGregor 1980, 18). Mike Scorback, a teamster from Thunder Bay, Canada, chose a similar route. “There were some horses in camp with raw necks. Guys didn’t clean them. I used my own water to heal them with urine and I cured them in two weeks and stole oats from the barn boss to give the horses more blood.” “They were my chums, those horses” (cited in MacKay 1978, 116). The English miners at Denaby Coal Mine “used to send beer down t’pit for ‘em, for the ponies, as sort of medicine” (cited in Benson 1980, 119). The Civil War soldier William Meyer, when detailing the death of his horse, expressed this kind of attitude:

I stood there looking him over, saw him bleed and then boohooed like a child; I cried as if I had lost a brother; he had been my most faithful, playful friend, my good reliable carrier and companion for many months, and to care and feed him with the best and with my own rations when nothing else was left, had been my pleasure (cited in Gerleman 1999, 93).

Sadly, the sight of cavalry soldiers weeping over top of wounded or dead horses, even with battles still raging around them, was not unusual in wars.

The second kind of offer was the opposite of the first. Hedges and fences were erected to hinder escape. Crude devices, such as wooden yokes and clogs, sought to lessen the possibilities of motion. The spur, the bridle and bit, the bull-whip, and the bull-whacker (a board with nails) all purposely inflicted pain. Training manuals taught the art of ‘breaking.’

Bounties were placed on escapees. Local pounds were erected for holding the captured. Owners clipped wings, blinded eyes, and cut leg-tendons. Animals were gelded and spayed. Horns were cut off. Each of these practices were improved upon and standardized. As for those individuals whose recalcitrance simply could not be stopped, there was a final measure: capital punishment. The resistant were hung to death at the town gallows or on nearby tree limbs. The rebellious were baited to death at shows and festivals. The escaped and autonomous were shot to death on sight. These were public executions: brutal in their methods, meaningful in their display, and purposeful in their intention. Societal violence towards animals became institutionalized.

But it did not end there, for there also was an ideological feature to this process. Animals were deemed “brutes” and “dumb beasts.” They possessed neither gender, nor intelligence, nor a soul. They did not feel pleasure or pain. A dichotomy was drawn between “tame” versus “wild” — as those creatures who refused to be controlled were criminalized even further. Specialized trackers and hunters offered their professional services in the capturing and killing of these wild beasts. The captured were then often placed into zoos and traveling circuses for public exhibition. And the bodies of the dead were preserved and stuffed for public display at museums. Humans became conditioned to see other creatures as products to exchange, specimens to collect, technology to utilize, or vermin to destroy.

The third offer was not really an offer at all. Rather, this was a finality to negotiations — an end to labor. Over the course of the 19th and 20th centuries, proletarian horses, oxen, mules, and donkeys were being replaced by steam, electric, and combustible-powered engines. Whether in the factories, farms, mines, forests, or transport-operations, this replacement would and did occur. Yet, historians and economists of technological change have struggled to explain this transition adequately. Some have dove into the nitty-gritty of cost-benefit analysis. Their results, however, are not so clear. Other researchers have chosen to avoid such questions altogether. Electing the route of technological determinism, they claim that this transition was simply a matter of “progress” (for examples of these two trends, see Ankli 1980; Ankli and Olmstead 1981; Martin and Olmstead 1985; Olmstead and Rhode 1988, 1994; Ellenberg 2000; McKay 1976; McShane and Tarr 1997; McShane 2001; Greene 2004). In either case, the lack of an adequate explanation is due to the fact that these scholars have failed to fully take into account two primary (but not exclusive) factors for this technological change: (a) the agency of animals, and (b) the political advocacy of animal-rights organizations.

Crossing the Hudson River in 1827, a passenger described the daily working-conditions aboard horse-powered

ferries.

We bungled our entry into the docks on the eastern sides of the river, and, in spite of many an oath, and many a thump bestowed on a worn-out horse-Charlie by name. At last the ferryman, after urging his poor beasts to turn the paddles to no purpose, threw down his whip in despair, gave the horse nearest him a sound box on the chops, and roared out, to the horror of the good company, ‘Damn your soul, Charlie, why don’t you get up!’ (Hall 1829, 66-9).

This was *always* the difficulty of working with horses, mules, donkeys, and oxen. In fact, when purchasing a ferry and having to choose between the dual power-modes of steam or animal, operators based their decisions upon two issues (Crisman and Cohn 1998, 41, 58-9, and 73-4). The first was cost. The second was whether or not horses would perform the tasks needed in an *orderly and timely fashion*, in order to operate a profitable business. In other words, what was the difficulty of the labor involved and could you squeeze it out of the workers? How wide was the crossing? How strong were the currents? How many trips were to be made daily? Furthermore, what was the design of the ship? Some operators specifically built their craft to ease the labor requirements, and thus resistance, of the horses. Operators constructed canopies to protect them from the sun and rain. They erected walls to shield them from noisy passengers and the sight of open water. They increased the circumference of the walking paths to ease the physical strain.

In the cities, the production situation was even more precarious. Animal-powered carts, wagons, carriages, cabs, street-cars, and omnibuses filled the streets of the 19th century (McKay 1993; McShane and Tarr 1997, 2003; Winter 1993). For urban horses and mules, it took two years to become properly trained for this type of work. For coachmen, it took three years. Shifts lasted on average eight to 14 hours per day. The work week ranged from six to seven days. As populations continued to grow, traffic and congestion increased. By the early 20th century, the number of horses and mules working in American cities stood at approximately 35 million — an increase of six-fold from the beginning of the previous century. There were more and more vehicles on the road. The intensity and volume of work continued to accrue — more emphasis on speed, more night-work, greater distances, more routes, fewer breaks, longer shifts, heavier loads, and more starts and stops. This increase in production led directly to several happenings.

First, overcrowding and disease became problematic. An epizootic in 1872, which spread from Toronto to New York City, shutdown the transportation industry in Eastern cities for days to weeks. Second, rates of accidents, injuries, deaths,

and employee turn-over continued to climb. By the end of the century, the average working-life for an urban horse stood at three to four years maximum. Exacerbating the situation was the fact that horses often trained and worked in teams, and that it took considerable time and effort to introduce (profitably at least) new members into those teams. Third, this increase in production led to increased resistance on the part of the laborers — further refusals to obey, further slow-downs, further unofficial breaks, and further violence. And, when we consider that the horse, over the course of the 19th century, nearly doubled in size, coachman, supervisors, and city residents had even more reason to fear an angry and recalcitrant employee. It was never that horses could not work harder, faster, or longer. Rather, it was the fact that they (as opposed to the combustible engine) had the conscious ability to refuse to do so. Finally, horse-powered businesses, and all those dependent upon horse-power, could no longer treat their employees with impunity and squeeze profit-gains anyway they saw fit. For, by the middle of this century, the animal-rights movement had become a serious force to be reckoned with.

The Evolution of Vegetarianism and Animal-Rights

Over the course of the 17th, 18th, 19th, and early 20th century, an ever increasing number of animals were working. Humans witnessed this agency everyday. Some participated in it — as fellow laborers. Some profited from it — as farm, factory, or market owners. Few, if any, could ever avoid dealing with it. Oxen, bulls, cows, and goats were producing the leather industry. Sheep were producing the wool industry. Cows were the ones who produced the milk, cheese, and butter industries. Chickens produced the egg industry. Pigs and cattle produced the flesh industry. This was the labor of reproduction: feeding, clothing, and reproducing a continuously growing number of humans with their skin, hair, milk, eggs, and flesh.

On the agricultural farms, it was oxen, horses, mules, and donkeys, as well as the occasional cow, ewe, or large dog, which pulled and powered the plows, harrows, seed-drills, threshers, binders, presses, reapers, mowers, and harvesters. In the mines, they towed the gold, silver, iron-ore, lead, and coal. On the cotton plantations and in the spinning factories, they turned the mechanical mills that cleaned, pressed, carded, and spun the cotton. On the sugar plantations, they crushed and transported the cane. On the docks, roads, and canals, they moved the carts, wagons, and barges of mail, commodities, and people. In the cities, they powered the carriages, trams, buses, and ferries. On the battlefields, they deployed the artillery and supplies, they provided the reconnaissance, and they charged the lines. This was the labor of

production: producing the power necessary to propel the instruments of capitalism. Indeed, the modern agricultural, industrial, commercial, and urban transformations were not just human enterprises. The history of capitalist accumulation is so much more than a history of humanity. Who built America, the textbook asks? Animals did (Hribal 2003).

Yet animals did not just labor. They also resisted this labor and fought against their exploitation. During the 1850s, the United States government introduced 75 camels into military service. Their primary duties were to provide transportation for equipment and human personnel. This was, however, a short-lived experiment. For the camels resisted. They refused to cooperate and obey orders. They were loudly vocal in their complaints. They spat upon their fellow soldiers. They bit their fellow soldiers. Their fellow soldiers learned to both hate and fear them (Essin 1997, 59-60). The U.S. army stopped employing camels, and the horse and mule returned to full service in these units. The camels, in truth, were the ones who made their labor an experiment. In other words, this was no experiment. The U.S. Army actively sought to turn camels into soldiers. They failed. Hence, what was to be a permanent program became, after the fact, a trial period, an audition, an experiment.

In fact, through this combination of exponential growth in the number of proletarian animals together with the accruing intensity and duration of their labor, everyday types of resistance could only increase in their frequency. This growing struggle forced owners and supervisors to negotiate the applicability and limits of that exploitation. Are you going to beat them more? Are you going to surgically alter them in an attempt to decrease their resistance? Are you going to invent a device that seeks to prevent this behavior? Are you going to treat them better? Are you going to give up on trying to exploit one particular creature and switch to another? Are you going to quit all together and try a new occupation or business? Similarly, the labor and resistance of animals have influenced other members of human society — some of whom saw commonalities in their mutual struggles against such forms of exploitation.

The origin of animal-rights and vegetarianism lies within the history of this labor and resistance. The origin lies within the history of the modern Pythagorean movement — a movement that spanned from the 1640s into the 1790s. Named after the eminent Greek philosopher, the Pythagoreans refused to exploit other animals. They refused to eat the flesh and fat of these creatures. They refused to kill these creatures. Some would not drink milk or eat any milk-based dishes. Some would not eat eggs. Some would not wear leather or wool. Some refused to travel in horse-driven carriages. Some would not ride on any horse. The motivation for these practices came from two factors: experience and education.³

The experience was life itself. As children, many of the future Pythagoreans worked as farm laborers. Later, some continued in agriculture. Some served as soldiers. Some gained familiarity with sugar and cotton plantations. Others would live in the towns and cities, and work in various trades. In each of these locations and occupations, there were other animals — living, working, suffering, resisting, and dying. Over the course of these centuries, the capitalist process was *not* isolating humans from these creatures. There was separation, but this was in terms of the division of labor. The workers themselves were neither removed nor invisible to one another. Quite the opposite actually occurred. While the European peasant culture was being ripped asunder, they and their pigs, cows, horses, and chickens were, at the same time, being thrust together under a new and highly exploitative socio-economic system. A working class was being created — one that included humans and other animals. This experience opened the possibility for the formation of a new movement. All that was needed was a spark, and education provided it.

The education of the Pythagoreans can be divided into three historical periods. The first occurred during the English revolution. The second happened within the American Revolution. The third and final spark came with the French Revolution.

The historian Christopher Hill (1991) compared mid-17th century England to a time and place when the world was turned upside-down. It was an era of both civil war and social revolution. And its expressions took many forms. One of them was antinomianism. With the publication and dissemination of the King James version of the New Testament, a great many people were reading aloud, listening to, and thinking about their religion, about the church, and about spirituality. One consequence of this learning was antinomianism, or the rejection of moral law and its restrictions and constraints. Nowhere was this rejection more evident than with the reinterpretation of the place of animals in this world — both in the heavenly and earthly sense.

A few individuals proposed, contrary to moral law, that cows, chickens, and dogs have spiritual souls, which contain the essence of God. Moreover, each of these creatures would upon death participate in the afterlife and spiritual rebirth. Therefore, these individuals reasoned, again contrary to moral law, that other animals were not society's beasts and brutes. They were not commodities to be bought and sold. They were not objects to be exploited at will. Rather, these creatures had a moral and social worth equal to that of humans. This worth existed outside of the paternalistic structure. As such, these creatures were "fellow-creatures," and they were integrated members of our mutual society (Edwards 1645, 20-1, 27-8, 34, 67, and 79; Crab 1810; Tryon 1697).

Of those names of the early Pythagoreans we possess, there was the Hackney bricklayer and ex-soldier Mr. Marshall. There was his teacher: the lay-preacher Giles Randall (Edwards 1645, 80). There was the Chesham hatter and ex-soldier Roger Crab (Hill 1958, 303-10). There was the self-stylized prophet John Robins, who was either a "glasier" or "shoomaker" by trade. There were Robins's followers: Joan Robins, Joshua Garment, Joan Garment, John Theaurau, Thomas Kerbye, Thomas Tidford, Anne Burrell, Elizabeth Sorrell, Elizabeth Sorrell Jr., Mary Vanlopp, Margaret Hoolis, Elizabeth Haygood, Joshua Beck, John King, Gabriel Smith, John Langley, William Welch, Mary Wenmore, Mary Arthinworth, and Jane Thwait (Muggleton 1999; Robins 1992; Garment 1651; Taylor 1651). There was Captain Robert Norwood (Heywood 1882, 861). There was the young hatter-apprentice Thomas Tryon (1705). Among these people, the majority were trade-laborers. Some knew each other well; some did not. Some were Familists; some were Anabaptists; some were Ranters. Each of which had its own traditions of radicalism: rejection of the state, private property, and moral law. Few if any of these individuals had formal schooling—although several of them were self-educated and scholarly. Most were undoubtedly poor, if not destitute—although one or two would eventually do well for themselves. Some were ex-soldiers. Some were widows. Some were vagabonds. It was, in fact, these tough life experiences within the milieu of this revolutionary education that was the catalyst for this movement.

Whether in war, the labor process, or the daily grind of city life, a small number of working people came to identify their struggles with that of other working animals. Thomas Tryon, for example, dedicated an entire section in one of his books to the consideration of the perspective of these laborers. Cows complained to the readers about their everyday struggles in the production of milk. Oxen described the arduous tasks involved in the agricultural and commercial trades. Sheep explained how merchants grew rich off of the sale of their wool, while they received very little compensation for these efforts. Horses listed the benefits received by their sweat and toil (Tryon 1697, 333-47). Indeed, this identification and solidarity signaled the birth of a collective consciousness. A working class was creating itself.

The second period that provided a spark happened during the American revolution, and at its core were a small number of Quaker abolitionists. The elder was Benjamin Lay — who emigrated to the Americas in 1718. This jack-of-all-trades came to oppose the institution of slavery not long after his arrival. He would subsequently author one of the first books dedicated solely to the topic of abolition: *All Slave-Keepers that Keep the Innocent in Bondage* (1737/1969). As for Pythagoreanism, he adopted this tradition sometime be-

fore leaving England. But it was not until his move to Germantown, Pennsylvania that this belief and practice matured. Here, Lay not only refused to kill other creatures, eat their flesh and fat, or wear any article of clothing procured from them, he refused to burden any horse. Instead, Lay subsisted primarily upon a diet of green and white meats — that is, vegetables and milk-based dishes. He wore only tow-fabric. He traveled only by foot (Vaux 1815; Child 1842). Within the 18th century Friends' community, Lay would influence a generation of individuals who came to adopt and carry on this practice. Most prominent among them were grade-school teacher Anthony Benezet, dry-goods operator turned minister John Woolman, and traveling-preacher Joshua Evans (Brooks 1937; Woolman 1972; Cady 1965; Evans 1837).

Their reasons for embracing this tradition were three. First, this was about the value of life — in this case, the antinomian belief that every creature's life, whether a human or a cow, had a God-given value that lied outside of their production and reproduction. Second, this was about need — in this case, the growing inequality and exploitation of the animal creation that were occurring over this period of time. Third, this was about the Quaker principle — one taught but rarely practiced — of alleviating need. There was, in fact, a nexus between early abolitionism and Pythagoreanism.

In John P. Parker's (1996, 49 and 61) descriptions about his days trapped in involuntary servitude, this former slave directly compared the treatment of other creatures to that of his own people. African-Americans ". . . were sold south like their [master's] mules to clear away their forests." Parker himself was "an animal worth \$2000." And when these impositions were resisted, he was "only a beast of labor in revolt." For Frederick Douglass (1969, 207 and 212), the situation was no different. ". . . Like a wild young working animal, I am to be broken to the yoke of a bitter and life-long bondage. I now saw, in my situation, several points of similarity with that of the oxen. They were property, so was I; they were to be broken, so was I; Convey was to break me, I was to break them; break and be broken — such is life."

When William W. Brown (1969, 52) recalled "at these auction-stands, bones, muscles, sinews, blood and nerves, of human beings, are sold with as much indifference as a farmer in the north sells a horse or sheep," he was not analogizing flippantly. When Josiah Henson (1969, 56) talked about being "a brute-beast to be bought and sold," he was not playing loose with his comparisons. Nor when Henry Williamson (1969, 93) recalled that "I have seen people who had run away, brought back tied, like sheep, in a wagon," he was not making some sort of empathic point concerning the condition of ewes. Rather, these former slaves were describing an actual reality, a matter of historical fact. Socio-economic exploitation is often systemic, and slavery is not just a human condition.

A few early to mid-18th century Quakers came to recognize and understand these connections.⁴ Lay, Benezet, Woolman, and Evans each witnessed the practice of slavery. Some participated in it, profited from it, and later came to oppose it. Each took time to gather the knowledge and courage needed to speak against it and educate others about it. Yet, there were not just Africans on the plantations and in the cities; there were Africans, oxen, and pigs. It was not just wrong to treat humans in such an inhumane manner; it was wrong to treat any creature in such a manner. These Quakers did not just come to boycott the use of rum and sugar in their protest to this system of exploitation; they came to boycott the use of rum, sugar, flesh, fat, and the horse-driven carriage.

The final spark came with the French revolution, and it was composed of several overlapping educational lessons. The first were the traditions of earlier Pythagoreans — along with those writings, such as works by John Gay, Alexander Pope, Joseph Addison, Richard Steele, and Bernard Mandeville, which were sympathetic to their cause. Tryon's books, for instance, were well-known throughout the 18th century. The above-discussed Quakers read them. A young Benjamin Franklin was briefly converted by them (Franklin 1986, 17 and 39). Many of the latter Pythagoreans studied them.

The second lesson happened in the East. "Diffusing over every order of life his [Hindu] affections, he beholds, in every creature a kinsman," John Oswald wrote in 1791 [2000], "he rejoices in the welfare of every animal, and compassionates his pains; for he knows, and is convinced, that of all creatures the essence is the same, and that one eternal first cause is the father of us all" (18). Oswald was raised at the bottom of a narrow close in Edinburgh. As a young man, he would join the Royal Highland regiment and be sent to Madras, India. Not long after arrival, he resigned his post and spent the next year traveling back via land to England. Here, he would cross paths with the "Hindostan," "the Curdees," "the Tartars," and "the Turkomans" (Erdman 1986). Oswald lived among these peoples. He learned from them: their language, traditions, and culture. These encounters forever changed him. This is where Oswald became, not a member of the Hindu or Muslim faith, but a Pythagorean: a dialectic of his Western European roots together with a new found Eastern education. This was a reversed acculturation.

The third lesson was based upon the enlightenment. There was 'the great chain of being,' which taught that no creature's existence, as the historian Arthur Lovejoy (1960, 207) pointed out, "was merely instrumental to the well-being of those above it in the scale." There certainly could be a hierarchy to this philosophy, but it was "without subservience." No animal "was more important than any other." This meant, the Pythagoreans contended, that man should not "usurp power, authority, and tyranny over other beings naturally free

and independent” (Nicholson 1797/2000, 51). Pleas of utility, whether forcing them to labor, using them to procure the conveniences of life, or putting them to death to produce aliments, were insincere and false. Abstinence from animal food was itself a moral duty. In this respect, even the smallest of creation, the insects, should not be suffered, as “the cruelty, not to say ingratitude of gibbeting or impaling alive so many innocent beautiful beings in return for the pleasure they afford us in the display of their lovely tints and glowing colours, is abominable” (Nicholson 1797/2000, 98).

There was the reading of the classical works of natural history, like Pliny and St. Augustine. There were, from the 16th century on, an accruing number of treatises and discussions that specifically addressed the reasoning and language of “the brute creation” (Harrison 1998; Serjeantson 2001). There were the encyclopedias of Buffon, Geoffroy, and Goldsmith. Some of this evidence was anecdotal and philosophical. Some was biological, physiological, and anthropological. In either case, these studies affirmed “the voluntary exertions of Reason in animals, and of the obvious similarity of their faculties to those of the human species” (Nicholson 1797, title of part I). These exertions were not, as some scientists proposed, a matter of instinct. Rather, these were voluntary forms of intelligence and communication. Such forms of rationalities may be inferior to that of humans, but that fact did not preclude their existence or likeness.

There was the reading of Ovid, Plutarch, Porphyry, George Cheyne, John Arbuthnot, and Rousseau — each of whom explored the health aspects of a flesh-eating diet versus a vegetable regimen. These studies provided evidence that “animal food overpowers the faculties of the stomach.” It was pernicious to the entire process of digestion and fermentation. In comparison, vegetation “. . . dispenses health of body, hilarity of mind, and joins to animal vivacity the exalted taste of intellectual life” (Oswald 1791/2000, 22). The heart beats faster. The organs operate with more fluidity. The body lives longer. The mind is sharper. Flesh was not “natural” to man’s diet. Flesh was not necessary for the purpose of strength, corpulence, or quickness of perception. There were, in fact, many historical and anthropological examples of societies that functioned and flourished without it.

The final lesson that occurred during the French Revolution was the promotion of the principles of *égalité*, *fraternité*, and *liberté*. And they lied at the heart of Pythagoreanism. In fact, most of the prominent Pythagoreans of this period were Anglo-Jacobins. There was the Grub-Street writer, member of the Jacobin Club, and French commandant of the First Battalion of Pikemen (and women), John Oswald. There was the Bradford and Manchester printer George Nicholson. There was Richard Phillips, the publisher of the republican *Leicester Herald* (Phillips 1808, 1826). There was the London solicitor

Joseph Riston (Nicolas 1833; Bronson 1938). There was Robert Piggot, who popularized the *bonnet rouge* (Erdman 1986, 174). There was the minister William Cowherd and his Manchester congregation, who broke off from the main Swedenborgian church in 1791 (Cowherd 1818).

Among these people, *égalité* was expressed in both moral and social terms. Morally, it meant a spiritual equality existed between humans and other animals. Socially, it meant a societal equality existed. The word “brutes,” for instance, was “an expression which ought to be avoided, because it is used to signify a being precisely the contrary to its true meaning.” Preferable were the idioms “fellow animals” and “fellow creatures” (Nicholson 1797, 32). This fellowship was expressed through *fraternité*. John Oswald did not just care or sympathize for other animals. He made their struggle his own. This was a solidarity. These two principles then provided the base for the third. *Liberté* meant that fellow-animals deserved autonomy and independence. They should not be governed, managed, or conserved. Rather they should be free to make their own decisions — to live their own lives.

This era witnessed the height of Pythagoreanism, as well as the beginning of its ultimate demise. Its height was demonstrated by the publication of three seminal books: Oswald’s *The Cry of Nature; Or, An Appeal to Mercy and to Justice on Behalf of the Persecuted Animals* (1791), George Nicholson’s *On the Conduct of Man to Inferior Animals* (1797), and Joseph Riston’s *An Essay on Abstinence from Animal Food, as a Moral Duty* (1802). Its end was initiated by the assimilation of the tradition into mainstream society.

The first attempts at co-optation of the movement actually occurred a few years earlier. This was, as the prolific children-story writer Sarah Trimmer (1846, 49) deemed, the promotion of “pity.” Others had different names for this sensibility. James Granger (1772), the elite biographer and vicar, called this “an apology.” Humphry Primatt (1776), the doctor of divinity, considered it “mercy.” Jeremy Bentham described this as “the pain of sympathy” (Bahmueller 1981, 11). In either case, its meaning was the same: tenderness and concern aroused by the suffering or misfortune of another. Yet none of these individuals were saying that it was wrong to exploit, kill, or eat other creatures. Rather, this was about the prevention of “unnecessary pain.” As Bentham explained, “The question is not, can they [animals] *reason*? Nor, can they *talk*? But, can they *suffer*?” (1970, 283 [his emphasis]).

Animals were brutes. They were separate from humanity. They were subordinate to humanity. To be sure, they should not be overtly abused with unnecessary suffering. Animals were like the poor or children — that is, they lacked the moral and social abilities needed to care for themselves in an adequate manner. Hence these creatures must be rescued, legislated, and managed. Nevertheless, “subordination,” Primatt

finalized, “is as necessary in the natural, as in the political world.” And “the labouring brutes,” “the cheapest servants we keep,” were not exempt from this lawful exploitation (1776, 4; 1802, 12 and 38-9).

By the end of the century, however, the promotion of pity was no longer sufficient in slowing Pythagoreanism. The movement had to be dealt with by mainstream society, and it had to be done in a more substantial fashion. This dealing took two forms: vegetarianism and animal-rights advocacy.

The early 1800s witnessed a significant growth in the social acceptability of a natural diet or vegetable regimen. By the middle of the century, the word “vegetarian” itself became an active term. The first vegetarian society was founded in 1847 in the United Kingdom, and the first in the United States was founded three years later. But through this process of assimilation, this practice lost much of its radical tendencies. This was, the medical doctor William Lamb proclaimed, a “reformed diet” — one divorced from its Pythagorean roots (Wyndham 1940; Newton 1811; Shelley 1954). This was intentional. Take Reverend William Metcalf as an example.

In 1817, this disciple of William Cowherd emigrated to Philadelphia. There, instead of being embraced by the Society of Friends, he was attacked. In fact, in their own disassociation from earlier Quakers, the society demanded that Metcalf actually renounce his Pythagoreanism. He refused to do so, and in 1821 published *Abstinence from the Flesh of Animals*. This essay would come to influence two important future figures in vegetarianism: Sylvester Graham and Bronson Alcott (Spencer 1995, 272-3). Yet, neither of these two people would come to have much of any real interest in the well-being of other creatures. Rather, this was about the individual’s health. Elements of societal discipline — industry, sobriety, frugality — were inherent. Indeed, these professionals titled their dietary journal: *Moral Reformer*.

As for advocacy, its historical development was similar. The first call for “the rights of beasts” occurred in 1796. It was made by the foremost specialist in the care and medical treatment of horses, John Lawrence. Two years later, the Cambridge physician Thomas Young (1978, 2-3 and 8) argued likewise for “the foundation of the Rights of Animals.” These were proclamations for political rights: to provide lawful protections for “the brute creation” that regarded both “humanity and profit” (Lawrence 1796, 131). Yet, these liberties in no way equated equality or fraternity. In other words, in a reversal of the Pythagorean tradition, liberty (in this case, political rights) now provided the base from which equality and fraternity may, or may not, grow forth. The relations between humans and other animals became one increasingly based upon legality. This was middle-class reform, and animals were part of the working class.

By the turn of the century, advocacy legislation began to be campaigned for within Parliament with increased frequency. The first English laws acknowledging the rights of horses, soon followed by cattle, would be passed in 1822. These laws required employers, under penalty of fine, to provide more hospitable, safe, and sanitary working conditions for their brute laborers. The first formal organization, dedicated solely to this kind of political action, was established two years later in London: the Society for the Prevention of Cruelty to Animals. Across the Atlantic, the American Society for the Prevention of Cruelty to Animals was founded in New York City in 1866. By the end of the century, hundreds of similar institutions now existed throughout Europe and the United States (Harrison 1973; Ryder 1989; Kean 1998; Beers 2006).

Although these organizations instituted a wide variety of campaigns for proletarian animals during the 19th and early 20th centuries, the most successful of them was the campaign to protect the rights of the horse and mule. Public drinking foundations, for example, were placed throughout city streets for the working horse. Hospitals and ambulance services provided healthcare and transportation for the injured mule. Shelter, food, water, all facets of working conditions, and even the health and well-being of these creatures came to be monitored on a monthly to weekly to daily basis. Over time, these institutions became larger, stronger, and more aggressive. City, state, and federal laws would be passed regulating the exploitation and protecting the rights of these laborers. Failure to obey these laws brought constant threats, court cases, possible fines and jail-time, and the ill-repute of the general public. It was through this combined resistance — by horses, mules, and humans — that the historical transition from animal-power to steam-power occurred. This was not progress; this was an end to negotiations.⁵

Conclusion

Over the years since their publication, the ideas and writings of Ernest Seton, Jack London, and William Long have not generally been well-received by the academic community. Often ignored, ridiculed, or even mocked, they have been accused of everything from anthropomorphism to romanticism. Even in their own times, these individuals were labeled and dismissed as “nature fakers” by their fellow naturalists (Lutts 2001). This has been, most definitely, a clash of perspectives.

Seton, London, and Long each had a direct, extended, and intimate experience with other animals — especially autonomous ones. They lived among them. They worked with them. They worked against them. In fact, through these experiences, they learned that these animals have the ability to

make and guide their own history. This education both challenged and changed their perspective. Beyond sympathy, it awoke something inside of them. A collective consciousness began to form. These experiences and this education found expression through their writings.

In books, such as *Wild Animals I Have Known* (1898), *School of the Woods* (1902), *The Call of the Wild* (1903), fictionalized stories about wolves, dogs, rabbits, and birds were told to the general public. While often based upon true events and characters, these popular tales were certainly embellished. Yet, for the authors, their thesis and perspective were true. Animals have agency. Humans can identify with the struggles of these creatures. A solidarity between humans and other animals can be formed. This thesis, for instance, inspired the formation of the Jack London Club in 1918 — an organization whose sole purpose was to advocate for other animals. In particular, they demanded the immediate closure of zoos, circuses, and rodeos, and that the imprisoned and exploited be set free. So strong did this organization become that they forced the Ringling Brothers, Barnum and Bailey Circus to stop using animal acts from 1925 to 1929 — a extraordinary feat which no contemporary organization, such as PETA, HSUS, or the ASPCA, has yet to accomplish (Mighetto 1991, 68-70). This is what scared and angered Theodore Roosevelt, William Hornaday, and John Burroughs. This is what continues to confuse and frighten today's scholars. Indeed, the combination of animals, agency, and class can be a significant and powerful force in the creation of social change.

Endnotes

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E-mail: jasonchribal@yahoo.com
2. A notable exception would be Williams 2004.
3. Edward Thompson examined the balance between education and experience, and intellect and feeling in Thompson 1997, 23-4. It is a most significant point of emphasis for this section.
4. The historian Donald Kelley has argued that it was a growing ecological awareness among 18th century Quakers that provided the base from which a concern for animals developed. Again, this thesis denies the agency of these creatures: their labor, resistance, and class relations. Instead, animals are segregated under the category of "the environment." See Kelley 1982, 1986.
5. This end to negotiations, just as with human laborers, did not necessarily equate a golden retirement. In fact, it almost never did. For a description of the sad aftermath of the abolishment of dog-carts in London, see McMullan 1998. Indeed, when the final two mule-units of the U.S. Army were deactivated at Fort Carlson on the 15th of December 1956, there was a small ceremony, and honors were bestowed upon two particular soldiers — one of whom became the mascot of the West Point Academy. But as for the other 136 mules, there were no honors. They were quickly, and quietly, put up for sale. See Essin 1997, 1.

References

- Anderson, V.D. 2004. *Creatures of Empire: How Domestic Animals Transformed Early America*. New York: Oxford University.
- Ankli, R. 1980. Horses vs. tractors on the corn belt. *Agricultural History* 54, 134-48.
- Ankli, R. and A. Olmstead. 1981. The adoption of the gasoline tractor in California. *Agricultural History* 55, 213-30.
- Bahmueller, C. 1981. *The National Charity Company: Jeremy Bentham's Silent Revolution*. Berkeley: University of California.
- Benson, J. 1980. *British Coal Miners in the 19th Century: A Social History*. New York: Holmes and Meier.
- Bentham, J. 1970. An introduction to the principles of morals and legislation. In J.H. Burns and H.L.A. Hart (eds.). London: Athlone.
- Beers, D. 2006. *For the Prevention of Cruelty: The History and Legacy of Animal Rights Activism in the United States*. Athens: Ohio University.
- Bronson, B. 1938. *Joseph Ritson: Scholar-at-Arms*. Berkeley: University of California.
- Brooks, G. 1937. *Friend: Anthony Benezet*. Philadelphia: University of Pennsylvania.
- Brown, W.W. 1969. *The Narrative of William W. Brown: A Fugitive Slave*. Reading, MA: Addison-Wesley.
- Cady, E. 1965. *John Woolman*. New York: Twayne.
- Child, L.M. 1842. *Memoir of Benjamin (and Sarah) Lay*. New York: American A.S. Society.
- Coleman, J. 2004. *Vicious: Wolves and Men in America*. New Haven: Yale University.
- Cowherd, W. 1818. *Facts Authentic in Science and Religion*. Salford: J. Pratt.
- Crab, R. 1810. The English Hermit; or, Wonder of this Age. In *The Harleian Miscellany*. Vol. 6, 390-405. London: Printed for Robert Dutton.
- Creager, A. and W.C. Jordan (eds.). 2002. *The Animal/Human Boundary: Historical Perspectives*. Rochester: University of Rochester.
- Crisman K. and A. Cohn. 1998. *When Horses Walked on Water: Horse-powered Ferries in 19th Century America*. Washington, DC: Smithsonian.
- Dolph, J. 1975. Bringing wildlife to millions: William Temple Hornaday, the early years: 1854-1896. PhD dissertation, University of Massachusetts.
- Douglass, F. 1969. *My Bondage and My Freedom*. New York: Dover.
- Edwards, T. 1645. *Gangraena*. London: Printed for Ralph Smith.
- Ellenberg, G. 2000. Debating farm power: Draft animals, tractors, and the United States Department of Agriculture. *Agricultural History* 74, 2, 545-568.
- Erdman, D. 1986. *Commerce Des Lumières: John Oswald and the British in Paris, 1790-3*. Columbia: University of Missouri.
- Essin, E. 1997. *Shavetails and Bell Sharps: The History of the US Army Mule*. Lincoln: University of Nebraska.
- Evans, J. 1837. *Friends' Miscellany: Containing the Journal of . . . Joshua Evans*. Vol. 10. Philadelphia: John and Isaac Comly.
- Franklin, B. 1986. *The Autobiography and Other Writings*, edited by K. Silverman. New York: Penguin.
- Fudge, E. 2002. A left-handed blow: Writing the history of animals. In N. Rothfels (ed.), *Representing Animals*, 3-18. Bloomington: University of Indiana.

- Garment, J. 1651. *The Hebrews Deliverance at Hand*. London.
- Gerleman, D.J. 1999. Unchronicled Heroes: A study of union cavalry horses in the Eastern Theater; Care, treatment, and use, 1861-1865. PhD dissertation, Southern Illinois University.
- Granger, J. 1772. *An Apology for the Brute Creation; Or, Abuse of Animals Censured*. London: Printed for T. Davies.
- Greene, A. 2004. Harnessing power: Industrializing the horse in 19th century America. PhD dissertation, University of Pennsylvania.
- Hall, B. 1829. *Travels in North America in Years, 1827-8*. Vol. 2. Edinburgh: Cadell.
- Harrison, B. 1973. Animals and the state in 19th century England. *The English Historical Review* 88, 349, 786-820.
- Harrison, P. 1998. The virtues of animals in 17th century thought. *Journal of the History of Ideas* 59:3, 463-84.
- Henninger-Voss, M. (ed.). 2002. *Animals in Human Histories: The Mirror of Nature and Culture*. Rochester: University of Rochester.
- Henson, J. 1969. *Autobiography of the Rev. Josiah Henson*. Reading, MA: Addison-Wesley.
- Heywood, O. 1882. *The Rev. Oliver Heywood, 1630-1702: His Autobiography*. Vol. 1, edited by J. Turner. Brighouse: A.B. Bayes.
- Hill, C. 1958. *Puritanism and Revolution*. London: Penguin.
- Hill, C. 1991. *The World Turned Upside Down: Radical Ideas During the English Revolution*. London: Penguin.
- Hornaday, W. 1887. *Two Years in the Jungle: The Experiences of a Hunter and Naturalist in India, Ceylon, the Malay Peninsula, and Borneo*. New York: Charles Scribner's Sons.
- Horowitz, R. 2005. *Putting Meat on the American Table: Taste, Technology, Transformation*. Baltimore: John Hopkins University.
- Hribal, J. 2003. Animals are part of the working class: A challenge to labor history. *Labor History* 44, 4, 435-53.
- Isenberg, A. 2000. *The Destruction of the Bison: An Environmental History, 1750-1920*. Cambridge: Cambridge University.
- Kean, H. 1998. *Animal Rights: Political and Social Change in Britain since 1800*. London: Reaktion.
- Kelley, D. 1982. 'A tender regard to the whole creation': Anthony Benezet and the emergence of an 18th century Quaker ecology. *Pennsylvania Magazine of History and Biography* 106, 1, 69-88.
- Kelley, D. 1986. Friends and nature in America: Toward an 18th century ecology. *Pennsylvania History* 53, 4, 257-72.
- Lawrence, J. 1796. *A Philosophical and Practical Treatise on Horses, and on the Moral Duties of Man towards the Brute Creation*. Vol. 1. London: Printed for T.N. Longman.
- Lay, B. 1737/1969. *All Slave-Keepers that Keep the Innocent in Bondage*. New York: Arno.
- London, J. 1903. *The Call of the Wild*. Norwood, MA: Norwood.
- Long, W. 1902. *School of the Woods*. Boston: London, Ginn and Co.
- Lovejoy, A. 1960. *The Great Chain of Being*. New York: Harper Torchbooks.
- Lutts, R. 2001. *The Nature Fakers: Wildlife, Science, and Sentiment*. Charlottesville: University of Virginia.
- MacKay, D. 1976. *Lumberjacks*. New York: McGraw-Hill.
- Martin P. and A. Olmstead. 1985. The agricultural mechanization controversy. *Science* 227, 601-6.
- McGregor, A. 1980. From sheep range to agribusiness: A case history of agricultural transformation on the Columbia Plateau. *Agricultural History* 54, 1, 11-25.
- McKay, J. 1976. *Tramways and Trolleys: The Rise of Urban Mass Transport in Europe*. Princeton: Princeton University.
- McMullan, M.B. 1998. The day the dogs died in London. *London Journal* 23, 1, 32-40.
- McShane, C. and J. Tarr. 1997. The centrality of the horse in the 19th century American City. In Raymond Mohl (ed.), *The Making of Urban America*, 2nd Edition, 105-125. Wilmington, DE: Scholarly Resources.
- McShane, C. 2001. Gelded age Boston. *The New England Quarterly* 74, 274-302.
- McShane, C. and J. Tarr. 2003. The decline of the urban horse in American cities. *The Journal of Transport History* 24, 2, 177-198.
- Metcalf, W. 1821. *Abstinence from the Flesh of Animals*. Philadelphia, J.B. Lippincott.
- Mighetto, L. 1991. *Wild Animals and American Environmental Ethics*. Tucson: University of Arizona.
- Morton, T. 1995. *Shelley and the Revolution in Taste: the Body and the Natural World*. Cambridge: University of Cambridge.
- Moryson, F. 1904. The itinerary of Fynes Moryson. In C.L. Falkiner (ed.), *Illustrations of Irish History and Topography, mainly of the 17th Century*. London: Longmans, Green, and Co.
- Mugleton, L. 1999. *The Acts of the Witnesses*, edited by T.L. Underwood. Oxford: Oxford University.
- Needler, H. 1728. Letter to Mr. D. In *The Works of Mr. Henry Needler*. 2nd edition, 213-4. London: J. Watts.
- Newton, J. 1811. *A Return to Nature; or, A Defense of the Vegetable Regimen*. London: Printed for T. Cadell.
- Nicholson, G. 1797. *On the Conduct of Man to Inferior Animals*. Manchester: G. Nicholson.
- Nicolas, H. 1833. A Memoir of the Author. In *The Letters of Joseph Ritson*, i-lxxxii. London: William Pickering.
- Olmstead, A. and P. Rhode. 1988. An Overview of California Agricultural Mechanization, 1870-1930. *Agricultural History* 62, 3, 86-110.
- Olmstead, A. and P. Rhode. 1994. The agricultural mechanization controversy of the interwar years. *Agricultural History* 68, 3, 35-53.
- Oswald, J. 1791/2000. *The Cry of Nature; Or, An Appeal to Mercy and to Justice on Behalf of the Persecuted Animals*, edited by J. Hribal. Lewiston, NY: Edwin Mellen.
- Parker, J.P. 1996. *His Promised Land*, edited by Stuart Sprague. New York: Norton.
- Phillips, R. 1808. *Memoirs of the Public and Private Life of Sir Richard Phillips*. London: Printed by J. Dean.
- Phillips, R. 1826. *Golden Rules of Social Philosophy*. London: Printed for the Author.
- Primatt, H. 1776. *A Dissertation on the Duty of Mercy and Sin of Cruelty to Brute Animals*. London: Printed by R. Hett.
- Primatt, H. 1802. A Dissertation. In J. Toogood (ed.), *The Book of Nature*. Boston: Printed for Samuel Hall.
- Ritson, J. 1802. *An Essay on Abstinence from Animal Food, as a Moral Duty*. London: Richard Phillips.
- Ritvo, H. 1987. *The Animal Estate: the English and Other Creatures in the Victorian Age*. Cambridge: Harvard University.
- Robbins, L. 2002. *Elephant Slaves and Pampered Parrots: Exotic Animals in 18th Century Paris*. Baltimore: John Hopkins University.
- Robins, J. 1992. *The Declaration of John Robins and Other Writings*, edited by A. Hopton. London: Aporia.

- Rothfels, N. (ed.). 2002. *Representing Animals*. Bloomington: University of Indiana.
- Rothfels, N. 2002. *Savages and Beasts: The Birth of the Modern Zoo*. Baltimore: John Hopkins University.
- Ryder, R. 1989. *Animal Revolution: Changing Attitudes towards Speciesism*. London: Basil Blackwell.
- Schrepfer, S. and P. Scranton (eds.). 2004. *Industrializing Organisms: Introducing Evolutionary History*. New York: Routledge.
- Scott, J.C. 1987. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. New Haven: Yale University.
- Serjeantson, R.W. 2001. The passions and animal language, 1540-1700. *Journal of the History of Ideas* 62, 3, 425-44.
- Seton, E.T. 1991 [1898]. *Wild Animals I Have Known*. New York: Random House.
- Shelley, P. 1975. *A Vindication of Natural Diet*. New York: AMS.
- Spencer, C. 1995. *The Heretic's Feast: A History of Vegetarianism*. Hanover, NH: University of New England.
- Taylor, J. 1651. *Ranters of Both Sexes, Male and Female*. London: Printed for John Hammon.
- Thomas, K. 1983. *Man and the Natural World: A History of the Modern Sensibility*. New York: Pantheon.
- Thompson, E.P. 1997. Education and experience. In *The Romantics: England in a Revolutionary Age*, 4-32. New York: The New Press.
- Trimmer, S. 1846. *Easy Introduction to the Knowledge of Nature*. Philadelphia: American Sunday School Union.
- Tryon, T. 1697. *The Way to Health, Long Life and Happiness*. 3rd edition. London: Printed for H. Newman.
- Tryon, T. 1705. *Some Memoirs of the Life of Mr. Tho. Tryon*. London: Printed by T. Sowle.
- Turner, J. 1980. *Reckoning with the Beast: Animals, Pain, and Humanity in the Victorian Mind*. Baltimore: John Hopkins University.
- Vaux, R. 1815. *Memoirs of the Lives of Benjamin Lay and Ralph Saniford*. Philadelphia: Solomon Conrad.
- Williams, A. 2004. Disciplining animals: Sentience, production, and critique. *International Journal of Sociology and Social Policy* 24, 9, 45-57.
- Williamson, H. 1969. Interview of H. Williamson by B. Drew. In *The Refugee: A North-Side View of Slavery*, 92-4. Reading, MA: Addison-Wesley.
- Winter, J. 1993. *London's Teeming Streets, 1830-1914*. London: Routledge.
- Woolman, J. 1972. *The Journal of John Woolman*. Intro. F. Tolles. Secaucus: Citadel.
- Wyndham, H. 1940. *William Lamb, M.D.: A Pioneer of Reformed Diet*. Adelphi: London Vegetarian Society.
- Young, T. 1798. *An Essay on Humanity to Animals*. London: Printed for T. Cadell.