Horsepower:
Animals in Automotive Culture, 1895-1935

by

Daniel Bowman

A thesis submitted in partial fulfilment of the requirements for the degree of

Doctor of Philosophy
in
English Literature

School of English
University of Sheffield
March 2022

This work was supported by the Arts & Humanities Research Council (grant number AH/L503848/1) through the White Rose College of the Arts & Humanities.

ABSTRACT

This thesis examines representations of animals and technology in American literature and culture at the dawn of the motor age, 1895-1935, with particular emphasis on horses and automobiles—the transition from literal to mechanical horsepower. Early proponents of the automobile hailed it as a direct substitute for the horse, and while there were many practical reasons to replace these animals with machines, the influence of the horse in the United States (and on human understandings of civilisation as a concept) extended far beyond the animals' physical attributes. It is through the literature of this period that we can most effectively trace the cultural impact of replacing horses with automobiles, and this study focuses on a group of American authors whose works represent both animals and automobiles in both material and symbolic senses. Each of the literary texts featured also speaks to one of the four main intersections I have identified between Progressive attitudes towards animality and automobility—waste, care, war, and national identity—which converge to tell a story about the changing material and metaphorical relationships between humans, animals, and machines in modernity.

Using the publication of the first automotive periodical in the United States (and the English language)—*The Horseless Age*—as a jumping off point, this thesis takes a literary-historical approach to the question of the animal in modernity, considering animal metaphors as they appear in early automotive culture and these symbolic animals' material counterparts as they appear in a variety of literary and non-literary historical sources. The aims of this project are to demonstrate that the horseless carriage not only changed the way humans travel, but also how we conceived of and related to nonhuman animals and machines. While the Progressive ideal of a horseless age may have further separated humanity from animals on one level, it also served to emphasise our nostalgic need to maintain some bond, however

slight, with civilisation's animal origin. This thesis addresses a number of questions pertinent to the fields of Animal, Automobility, and American studies, as well as the Environmental Humanities more broadly, including: What does it mean to "substitute" an animal for a machine? To what extent has the automobile replaced the horse as a vehicle for qualities of human civilisation? And how did this symbolic shift mask the material impact of automobility on animal life? The answers to these questions, I propose, lie not only in material history, but also in the American literary imagination.

With this in mind, my research engages with a group of seemingly disparate well-known and unknown American authors, whose works share a common feature of representing animals and automobiles on material and symbolic levels, on the subject of either waste, care, war, or national identity. The primary texts studied include: muckraker Upton Sinclair's explorations of dirt, waste, and civilisation in *The Jungle* (1906) and *Oil!* (1927); several of the earliest examples of the "road-trip" narrative such as Theodore Dreiser's *A Hoosier Holiday* (1916), Louise Closser Hale's *We Discover the Old Dominion* (1916), and Sinclair Lewis's *Free Air* (1919); two forgotten autobiographical accounts from Americans who volunteered to drive motorised ambulances in the dehumanising conditions of the First World War—Robert Whitney Imbrie's *Behind the Wheel of a War Ambulance* (1918) and William Yorke Stevenson's *At the Front in a Flivver* (1917); and the only novel by Osage writer John Joseph Mathews—*Sundown* (1934)—which highlights the interconnectivity of animals and technology in the construction of American national identities.

In sum, my analysis of these literary engagements with animals and automobiles seeks to locate those nonhumans simultaneously venerated, harmed, and obscured in automotive culture—I am looking for the horse in horsepower.

PREFACE

Parts of the Introduction and Chapter Two of this thesis have been published in another venue as ‘Horsepower: Animals, Automobiles, and an Ethic of (Car) Care in Early US Road Narratives,’ *Journal of American Studies* (2022). At the time of submission, no volume or issue number has yet been specified. This article is available online at: <https://www.doi.org/10.1017/S0021875822000020>

ACKNOWLEDGEMENTS

I am extremely grateful for the support of faculty, staff, and my fellow colleagues in the School of English at the University of Sheffield. To my co-supervisors, Robert McKay and John Miller, I would like to extend special thanks for your time, patience, and input in helping me realise this project, and for always telling me what I needed to hear when I needed to hear it. Your encouragement and constructive feedback made this and other publications possible.

I would also like to thank everyone in the Sheffield Animal Studies Research Centre (ShARC) for your invaluable input over the years, at work in progress sessions, reading groups, conferences, and social events (online and in person). It was a pleasure to work alongside so many scholars I admire so much, especially when they are great people too. During the pandemic years of enforced working from home, the continued support of an animal studies cohort helped me keep momentum going. Particular thanks go to Sarah Bezan, Alice Higgs, Christie Oliver-Hobley, Mo O'Neill, and Peter Sands, my mentors and friends.

To those in Jessop West 5.85d, including Rob Fellman, Laura Gibbs, Sam Hind, and Rosanne van der Voet, I thank you for putting up with me in those final few months. It was a pleasure to share an office with you. Thanks also to everyone who offered feedback on my work throughout the last three and a half years, and those who were kind enough to show me their examples.

This work and many other aspects of my PhD would have been impossible without the support of the White Rose College of Arts & Humanities, and I would like to extend my thanks to everyone at WRoCAH, past and present, including Caryn, Clare, and Jo.

Without my friends and family, I would never be in the position I am now. Thank you to my parents for their unfailing love and support (and offers of food), and to my siblings for remembering in a loose sense what I was studying. Thank you to all my friends for the many suggestions for potential equine and automotive subject of analysis, and to Custard—my favourite nonhuman animal—for keeping me company during numerous lockdowns. Last but not least, I owe a debt of thanks to my fiancé Rachel for always believing in me through the highs and lows of this experience. I will always love you for it.

CONTENTS

LIST OF FIGURES

INTRODUCTION

> *It is often said that a civilization may be measured by its facilities of locomotion. If this is true, as seems abundantly proved by present facts and the testimony of history, the new civilization that is rolling in with the horseless carriage will be a higher civilization than the one we now enjoy.*
>
> —E. P. Ingersoll, 1895[1]

In the first article in the first issue of the first periodical in the English language dedicated to the automobile, the editor Edwards Platt Ingersoll laid out his vision of American civilisation on the cusp of the twentieth century, a civilisation whose progress would no longer be limited by a reliance on nonhuman animals. This was to be the horseless age. Published in New York City, *The Horseless Age* (1895-1919) printed news of the growing U.S. automotive industry as well as technical diagrams, opinion pieces, advertisements, and anything else 'devoted to motor interests.' Originally a monthly journal costing twenty-five cents an issue, Ingersoll found his readership increasing over the next few years in line with the gradual acceptance of the horseless carriage, and in April 1899 *The Horseless Age* became a weekly publication, which it remained until the end of its run in 1919.[2] Given its status as the forerunner in U.S. automotive literature, it is surprising to find so little scholarship on *The Horseless Age* within the ranks of automotive historians.[3] This thesis, however, not only uses this periodical as a

[1] E. P. Ingersoll, 'The Horseless Age', *The Horseless Age*, 1.1 (Nov. 1895), 7-8, 7.

[2] Volumes 1-3 were published monthly for a domestic subscription price of two dollars a year. In volume four, first published 5 April 1899, it became a weekly, publishing issues every Wednesday. In 1919, in its forty-fourth volume, *The Horseless Age* was incorporated into the larger publication group *Automotive Industries*, one year before Ingersoll's death in 1920.

[3] Despite drawing on a small number of articles from *The Horseless Age* as part of their studies, foundational texts in American automotive history—including work by James Flink, Michael L. Berger, Julian Pettifer and Nigel Turner, Peter J. Ling, Deborah Clarke, Virginia Scharff, and Jane Holtz Kay (to name but a few)—omit any extended engagement with the periodical itself, and certainly my study is the first to consider *The Horseless Age* from an animal studies perspective. See: James Flink, *America Adopts the Automobile, 1895-1910* (1970), and *The Automobile Age* (1990); Michael L. Berger, *The Devil Wagon in God's Country: The Automobile and Social Change in Rural America, 1893-1929* (1979); Julian Pettifer and Nigel Turner, *Automania* (1984); Peter J. Ling, *America and the Automobile: Technology, Reform, and Social Change* (1990); Deborah Clarke, *Driving Women: Fiction and Automobile Culture in Twentieth-Century America* (2007); Virginia Scharff, *Taking the*

springboard into debates around the incorporation of the car into American society, but also to explore the changing attitudes towards animals in the automotive age, and why the 'higher civilization' of an evolving society might be predicated on the absence of horses. Tracking the literal and literary treatment of animals and automobiles in the United States at the turn of the twentieth century, I will demonstrate the material and symbolic significance of substituting horses for automobiles in American culture. In short, I am looking for the horse in horsepower.

In this animal-focused literary history of the automobile (the first of its kind), I examine the forty-year period from the car's emergence in the United States through to its 'persistence,' as Gijs Mom terms the inter-war years during which the automobile became a ubiquitous feature of American society.[4] It is precisely this ubiquity which both emphasises and disguises the cultural significance of the car, one of the many paradoxes of automobility to be unpicked throughout the following chapters. Writing in 1917, the year which saw the two-millionth Ford Model T roll off the mass-production line, Viktor Shklovsky described the process by which habitual perception of a familiar object results in an uncritical acceptance, or even a certain blindness as to what that object represents. Such an object, Shklovsky notes, 'is in front of us and we know about it, but we do not see it.'[5] Certainly this would not have applied to the automobile in the opening decades of the twentieth century, which, despite its rapid proliferation throughout the 1920s in particular, remained a curiosity to many (as we shall see). It does, however, go some way to explaining why the animals in automotive literature and culture have gone so long unseen, flashing before us as shiny hood

Wheel: Women and the Coming of the Motor Age (1992); and Jane Holtz Key, *Asphalt Nation: How the Automobile Took Over America and How We Can Take it Back* (1997).

[4] Gijs Mom, *Atlantic Automobilism: The Emergence and Persistence of the Car, 1895-1940* (New York and Oxford: Berghahn, 2015), 4.

[5] Viktor Shklovsky, 'Art as Technique', in *Russian Formalist Criticism: Four Essays*, trans. by Lee Lemon and Marion Reis (Lincoln: University of Nebraska Press, 1965), 5-24, 13.

ornaments, car brand names, and automotive metaphors, while their fleshy, material counterparts suffer the consequences of unchecked automobility in a civilisation increasingly defined against proximity to nonhuman animals—ideas which I will flesh out later in this Introduction.

There is very little scholarly traffic at the intersection of literary, animal, automobility, and American studies, to the point that this study may *be* the intersection. My route to this point, however, has been mapped out by researchers across all four branches, and my approach builds on work such as that by Nicole Shukin in *Animal Capital* (2009), which examines the material as well as symbolic representations of animals and automobiles to 'restore a sense of capital's terrestrial costs.'[6] As Shukin suggests, 'the ubiquitous practice of metaphorizing cars as animal can be counted among the more powerful dematerializing forces of (neo)liberal culture and interrogated for the disavowal it enables of the escalating social and ecological costs of mobility.'[7] While I am certainly interested in the idea of 'metaphorizing cars as animal'—a process similar to what I call *theriomorphism*, discussed at length in Chapter Two—Shukin's use of the phrase relates specifically to advertising campaigns in the second half of the twentieth and early twenty-first centuries, by which point 'capital was increasingly diverted into the symbolic as well as the material production of cars.'[8] My research, on the other hand, demonstrates categorically that the horseless carriage has been fetishised as animal from the first moment it entered U.S. markets in 1895, a year which saw the establishment of the first American automobile company (Duryea Bros.), the first scheduled automobile race on U.S. soil (in Chicago, sponsored by the *Times-Herald*),

[6] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis and London: University of Minnesota Press, 2009), 14.
[7] Ibid., 116.
[8] Ibid.

and the first issue of *The Horseless Age*.[9] Defined against that which it was supposed to replace, the horseless vehicle in the horseless age nonetheless retained a strong equine association, albeit an idealised one. The material limitations of the overworked, ill-treated draft animal of industrial capitalism were used to demonstrate that the time of the horse was passing, even as their symbolic value in human civilisation was spurred into automotive service.

When I suggest that the horseless carriage was *fetishised* as animal, I am using this term in the same sense as Shukin, who notes that animal signs

> endow the historical products of social labor to which they are articulated with an appearance of innate, spontaneous being, and they serve as powerful substitutes or "partial objects" filling in for a lost object of desire or originary wholeness that never did or can exist, save phantasmatically.[10]

In other words, not only did imagining cars as animals disguise the many industrial processes on which they depended, it also satisfied the growing nostalgia in mechanised modernity for a more innocent, authentic, pre-industrial time, which may itself have been illusionary. As will be explained in detail in the chapters to follow, equine terminology and influence was rife in early car culture, as evidenced not only in journalistic automotive literature but also American fiction, from canonical authors such as Theodore Dreiser to the all-but-forgotten volunteer ambulance drivers turned writers in World War One (as seen in Chapters Two and Three, respectively), and many beside. Such animal signs implied that the automobile had simply evolved from the horse, as the next logical step in an increasingly mechanised modern civilisation (the social Darwinian implications of which will be discussed shortly). As is demonstrated in my fourth chapter, the commodification of nonhuman animals (and racially

[9] Shukin does concede that 'automobiles were certainly fetishized as animal in early Fordist culture,' but her analysis then proceeds to advertising campaigns from the early twenty-first century. See Shukin, 116.
[10] Shukin, 3.

animalised humans) in automotive culture provoked a certain nostalgia for a lost innocence preceding the ills of modern life, of which the automobile was, ironically, both symptom and remedy.

An example of this fetishism in *The Horseless Age* comes in the form of an address from one G. Herbert Condict (reportedly the first person to drive through New York in an automobile using a steering wheel) to the New York Electrical Society in March 1899.[11] Condict begins his speech by evoking the prophet Ezekiel, who 'had a vision, and in this vision he saw some marvellous wheels.' Condict makes no attempt to interpret this vision, but rather co-opts the statement of Ezekiel for his talk on the horseless carriage: '"For the spirit of the living creature was in the wheels." What an apt and concise description of the vehicle which, having discarded the "living creature," the horse, still moves on with his "spirit."'[12] For Condict, the coming of the automobile hailed the end of the horse, or at least the living, breathing fleshy horse, while the animal's symbolic value apparently survived in the wheels of the car. The notion that the automobile had (itself?) 'discarded' the horse raises a number of significant practical and ideological questions. On a material level, this was objectively not true, as in 1899 there were over 21 million horses and other equines in the United States, compared to 3,200 registered automobiles. In fact, the equine population would not peak until 1914, when a still-neutral United States began shipping horses to Europe to serve in WWI (the impact of which is discussed in Chapter Three), and even then it was not until 1920 that the total number of motor vehicles in the U.S. surpassed that of equines.[13] The wider argument framed by Condict's statement, however, relates to the idea

[11] 'G. H. Condict, 72, Engineer, is Dead', *The New York Times*, 11 Apr. 1934, 21. Prior to the steering wheel, automobiles had been variously steered using levers, or even mechanical reins.
[12] G. Herbert Condict, 'The Motor Vehicle in Commercial Operation', *The Horseless Age*, 3.12 (Mar. 1899), 14-15, 14.
[13] Equine population statistics taken from Emily R. Kilby, 'The Demographics of the U.S. Equine Population', in *The State of the Animals IV: 2007*, ed. by Deborah J. Salem and Andrew N. Rowan (Washington, DC: Humane Society Press, 2007), 175-205, 176. Automobile registration statistics are taken from two sources, one listing data specific to 1899, and one beginning in 1900. See Carroll Roop Daugherty, 'The Development of

that, once 'discarded' in the wake of the automobile, the horse could still be symbolically preserved in human society—its spirit in the wheels. This misalignment between the physical and figurative horse (diminishing *and* growing in number, discarded *and* reappearing in automotive culture) is a thread running through each chapter of my thesis, as animals pivot 'between literal and figurative economies of sense.'[14] It is this ability to be taken both materially and symbolically, Shukin explains, which generates the 'fetishistic potency' of the animal.[15]

Described by Paul Gilroy as the 'ur commodity' in American society, the automobile and its fetishisation have particular significance in understanding the roles of animals in consumer capitalism.[16] Simplistically, the Marxian idea of commodity fetishism alluded to by Shukin explains how a commodity (for example, an automobile) becomes a separate and distinct entity from the (often exploitative) processes of its production and material origin. This is what Shukin means by the 'dematerialization' of the automobile, and its figurative animal life which masks the material violence inflicted upon nonhuman animals as a direct and indirect result of ever-expanding automobility. As Rosemary Hennessy has explained, such commodities intersect 'between what is visible and what is seeable' in consumer society.[17] Considered alongside Shklovsky's claim that habituative perception renders objects right in front of us unseeable, we begin to understand the importance of looking at the horse

Horsepower Equipment in the United States', in *Power Capacity and Production in the United States* (Washington D.C.: Government Printing Office, 1928), 11-112, 74; and Federal Highway Association, 'State Motor Vehicle Registrations, by years, 1900-1995' <https://www.fhwa.dot.gov/ohim/summary95/mv200.pdf> [accessed 15/02/2022].

[14] Shukin, 5.

[15] Ibid., 6.

[16] Paul Gilroy, 'Driving While Black', in *Car Cultures*, ed. by Daniel Miller (Oxford and New York: Berg, 2001), 81-104, 89.

[17] Rosemary Hennessy, *Profit and Pleasure: Sexual Identities in Late Capitalism* (New York: Routledge, 2000), 95.

behind the horsepower. It is right there, at the very core of American car culture, but we do not see it.

In Chapter One, I will discuss the significance of such (in)visibility of animals and automobiles—what Timothy Pachirat would call the 'politics of sight'—but first, there is another key term used throughout my thesis which requires defining.[18] By *automobility*, I do not simply refer to individuals driving automobiles, but rather the complex web of intertwined political institutions and practices described in *Against Automobility* (2006), that 'seek to organize, accelerate and shape the spatial movements and impacts of automobiles, while simultaneously regulating their many consequences.'[19] As was remarked upon in *The Horseless Age* as early as January 1896, the word *automobile* is something of a misnomer, as it 'conveys the idea that the vehicle runs without human aid,' requiring 'no guidance or attention.' As a potential name for the horseless carriage, the article concludes, *automobile* 'must therefore be excluded.'[20] *The New York Times*, too, took issue with the term on the grounds that it was developed by the French, and with its etymology being 'half Greek and half Latin, is so near to indecent that we print it with hesitation […].'[21] Contrary to this assertion, however, the term soon gained prominence, associating the horseless vehicle with the values of autonomy and mobility which remain central to car culture. These values, note Böhm et al., are both independent and conjoined, in that mobility is an expression of autonomy, and can only itself be truly achieved autonomously—'the distinction between moving and being moved, a passive and decidedly dependent (as opposed to autonomous) state.'[22] This idea of true autonomy is embodied by the automobile, and ingrained into

[18] Timothy Pachirat, *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight* (New Haven & London: Yale University Press, 2011).
[19] Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson, 'Introduction: Impossibilities of automobility', in *Against Automobility*, ed. by Steffen Böhm, Campbell Jones, Chris Land, and Mat Paterson (Oxford: Blackwell, 2006), 3-16, 3.
[20] 'A Word to the Word Coiners', *The Horseless Age*, 1.3 (Jan. 1896), 1.
[21] 'Topics of the Times', *The New York Times*, 3 Jan. 1899, 8.
[22] Böhm et al., 4.

twentieth-century American cultural reflections on the road journey (as we shall see in Chapter Two). A profoundly conspicuous visual representation of these intangible ideas, the automobile actually renders *invisible* the wide range of industries, resources, and regulations upon which this notion of automobility depends. We see the shiny machine which grants (some of) us independence, but we do not see the social, political, and environmental consequences of oil extraction necessary for the continued production of petroleum, nor those of the steel and rubber industries essential for car production, nor the deforestation, land acquisition, and geographic racial and socio-economic violence behind road building, nor the 'traffic regulations, parking arrangements, insurance, criminal justice systems, healthcare,' not to mention the direct and indirect threat to all animal life (including humans).[23] The ubiquity and universality of the automobile has made these political, social, economic, and environmental decisions seem uncontroversial, and thus, at a time of looming environmental catastrophe and mass extinction, studies which confront and challenge humanity's accepted but unacknowledged relationships with both automobiles and other animals are more pertinent than ever.

Hiding behind the language of automobility is also the dependence of the early automobile industry on the horse, through which our relationship with the horseless vehicle was first defined. Surviving only in the ghostly term *horsepower*, 'the unit of power championed by our fossil-fueled modernity,' the material and symbolic significance of the horse in shaping the automotive culture of the twentieth-century United States is an animal legacy that early car champions such as Ingersoll would sooner have left in the dust.[24] The work of Imes Chiu has been foundational in establishing the deliberate and conscious attempts of early automotive advertisers to emphasise the similarities between horse and

[23] Ibid., 5.
[24] Mario Ortiz-Robles, *Literature and Animal Studies* (London and New York: Routledge, 2016), 29.

horseless vehicle, as well as the differences. Noisy, unfamiliar, and without the existing support network of modern automobility to ensure reliability and comfort, not everyone was initially as taken with the automobile as Ingersoll and those who viewed the society of the future as a horseless age. On the one hand, the physical limitations of the horse's corporeal body were decried in publications such as Ingersoll's, which pointed out that 'even the stoutest team' of horses would become exhausted after several continuous working days, while the automobile, 'unlike the thing of flesh and blood, does not tire, nor does it need grooming and bedding.'[25] On the other hand, early automotive designers sought to incorporate aspects of the horse and carriage into the new horseless vehicle in an attempt to reassure people (and horses) that there was nothing to be afraid of. These design features were sometimes relatively subtle, such as making automobile bodies look like carriages (only with an engine in the back rather than a horse in front), and sometimes not, as in the case of Joseph Barsaleaux's 1897 design for a 'Motor Horse' [Figure 1].

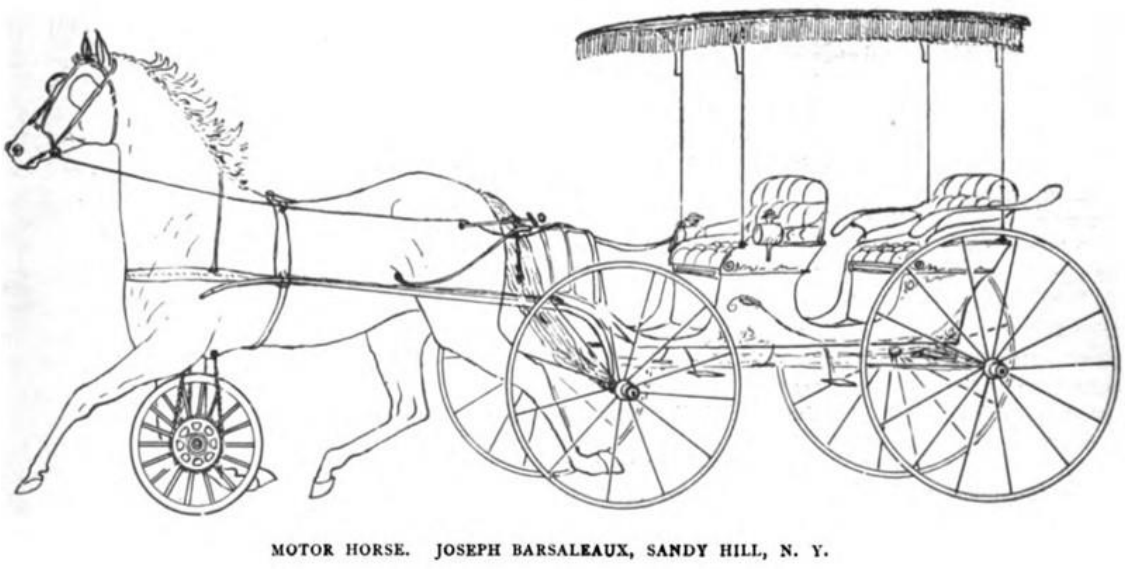

Figure 1: Joseph Barsaleaux's Motor Horse, *The Horseless Age*, 2.10 (Aug. 1897), 9.

[25] 'No Fair Weather Novelty', *The Horseless Age,* 1.3 (Jan. 1896), 4-5, 5.

The ‘frame of a horse’ attached to the front of the horseless carriage ‘does not move on legs, but on a single wheel about two feet in diameter,’ reports *The Horseless Age*. Not only a visual evocation of the traditional mode of equine transportation, the prototype also included reins which ‘are attached to the mouth of the horse, and when pulled cause the animal to turn in whatever direction the driver may desire,’ mimicking the practical steering mechanism that horse drivers would be accustomed to.[26] While Mr Barsaleaux’s design was acknowledged even then as something of a curiosity, Chiu presents many similar examples of ‘skeumorphism,’ a phenomenon defined by historian of science George Basalla as ‘an element of design or structure that serves little or no purpose in the artifact fashioned from the new material but was essential to the object made from the original material.’[27] One important lesson from Chiu’s work is that the numerous equine design features of early horseless carriages were not just to make the contraptions less frightening to horses, as was a common claim of designers such as Barsaleaux, but to make them less frightening to humans, too. Or, as one advert from *Life* magazine featured as the epigraph to Chiu’s work suggests, as ‘a compromise’ between lovers of the horse and lovers of the car.[28] It was by contriving a symbolic similarity to the horse, while still emphasising its physical superiority, Chiu claims, that the early horseless carriage ‘absorbed the technical, structural, and conceptual resources of the technology it replaced.’[29]

As the previous quotation demonstrates, Chiu’s ultimate concern is the practical means by which one piece of technology replaced another—focusing more on how this equine skeumorphism impacted on horsepower rather more than on horses themselves. This

[26] ‘Joseph Barsaleaux’s Motor Horse’, *The Horseless Age*, 2.10 (Aug. 1897), 9.
[27] George Basalla, *The Evolution of Technology* (Cambridge: Cambridge University Press, 1988), 106-107.
[28] Imes Chiu, *The Evolution from Horse to Horsepower: A Comparative International Study* (Amherst, ME: Cambria Press, 2008), 1.
[29] Chiu, 3. For specific examples of such ‘horselike’ features in automotive advertising from the early twentieth century, see Chiu, 87-99.

is one of the crucial differences between Chiu's work and my own study, which at every turn considers not only how animals influenced automotive culture, but also how automotive culture in turn impacted animals. Discussing horses as forms of technology, and machine technology in particular, was common to those in the nineteenth century for whom the value of a horse lay exclusively in the profit it produced for them. Historians Joel Tarr and Clay McShane note that in the 'rational' and unsentimental dealings of such people, horses were regarded 'as property or living machines subject to technical refinement, not as sentient beings.'[30] In 1775, James Watt developed the approximate horse to steam power equivalency defined as horsepower—33,000 foot-pounds of work per minute—allowing for direct, if not strictly accurate, comparisons to be made between animal and machine. Prior to this, even, it was René Descartes who compared animals' cries of pain to the screeching of machinery. I will, however, reserve my discussion of the Cartesian machinic animal until Chapter Two, not wishing to put Descartes before the horse in this introduction. While I do not dispute that horses and automobiles were evaluated *as machines* in terms of their productive output, considering only the rational, utilitarian factors behind the move from horse to horsepower oversimplifies what was not a smooth transition, but a complex and often emotive process with lasting ideological as well as practical ramifications.

In 1895, as the automobile first entered U.S. markets, *The Horseless Age* reprinted an interview with Thomas Edison in which he claimed that the horse was already 'doomed.' According to Edison, and corroborated by countless pro-automobile articles and advertisements, it would only be a matter of a short time—'as by a sweep of Aladdin's wand'[31]—before the more efficient technology replaced the living equine machine, as 'the expense of keeping and feeding horses in a great city like New York is very great, and this

[30] Joel Tarr and Clay McShane, *The Horse in the City: Living Machines in the Nineteenth Century* (Baltimore: Johns Hopkins University Press, 2007), 2.
[31] See note 25.

will be done away with […].'[32] While Edison's prediction may seem like common sense, developments in technology and attitudes towards fellow animals are driven by more than cold, hard economics. Ingersoll chastised those who resisted motorisation on sentimental grounds, claiming that Americans who valued the 'spirited animal' above the 'soulless machine' must have been 'reading romances of the days of chivalry […]. Hard work is the lot of most horses, and any spirit they naturally possess is soon subdued.'[33] I will discuss such chivalric romance in Chapter Three, but whether Ingersoll approved or not, the influence of the horse in the United States (and in human understandings of civilisation as a concept) far exceeded the animal's physical attributes.

Described as 'the hallmark of human civilisation,' horses had acted as more than just vehicles for human transportation, but also for the ideas of freedom, adventure, courage, prestige, wealth, power, and empire to name but a few.[34] More than that, however, horses had always been living, breathing confidantes, travelling companions, battlefield comrades, and friends. What did it mean, my thesis asks, to 'substitute' this animal for a machine?[35] To what extent has the automobile become the new vehicle for these qualities of human civilisation? And how did this symbolic shift mask the material impact of the automobile on animal life? I contend that the answers to these questions lie not only in the periodicals analysed by Chiu, and the advertisements discussed by Shukin, but in the American literary imagination at the dawn of the motor age, 1895-1935. My literary historical approach enables me to explore the social and cultural history of animals and automobiles in the "Progressive" United States—a term I shall define shortly—without privileging either the 'rational' reasoning behind the adoption of the automobile nor the emotional significance of this transition into a civilisation

[32] 'Interview with Thomas A. Edison in the New York World', *The Horseless Age*, 1.2 (Dec. 1895), 7.
[33] E. P. Ingersoll, 'The Soulless Machine and the Spirited Animal', *The Horseless Age*, 1.2 (Dec. 1895), 9.
[34] Ortiz-Robles, 29.
[35] Ingersoll notes repeatedly that the 'motor vehicle is a substitute for the horse.' See, for example, 'The Status of the Race', *The Horseless Age*, 1.2 (Dec. 1895), 5-6, 6.

where contact with nonhuman animals was becoming increasingly mediated—visible but not necessarily *seeable*. As Barbara Rosenwein has suggested, history as a discipline 'has never quite lost its attraction to hard, rational things. Emotions have seemed tangential (if not fundamentally opposed) to the historical enterprise.'[36] By uncovering literary texts which contain representations of both animals and automobiles, and then comparing such representations with the material realities of nonhuman animals and automobiles at the time each was written, my thesis tells a story of evolving human, animal, and machine relations in a supposedly horseless age.

About Looking

In considering the visibility and representation of animals in the emerging modern world of industrial technology, I am, in a sense, responding to the central question posed by John Berger in 'Why Look at Animals?' (1980). The increasing isolation of human civilisation from meaningful contact with animals (that is, contact beyond the limitations of captivity or commodification) has extinguished the recognition between human and nonhuman animal which, Berger argues, humanity had always lived with until the late nineteenth century.[37] Considering why animal signs function fetishistically for Shukin, that is, as 'substitutes' or 'partial objects' which fill in for a lost sense of 'originary wholeness,'[38] one particular passage from Berger points towards the psychology behind early automotive culture's symbolic reverence for the horse even in the prophesised horseless age. With reference to

[36] Barbara Rosenwein, 'Worrying About Emotions in History', *The American Historical Review*, 107.3 (June 2002), 821-845, 821.
[37] John Berger, *About Looking* [1980] (London: Bloomsbury, 2015), 21.
[38] See note 10.

Descartes's separation of the machinic animal body and the spiritual human soul, Berger writes (in unfortunately gender-biased language):

> What man has to do in order to transcend the animal, to transcend the mechanical within himself, and what his unique spirituality leads to, is often anguish. And so, by comparison and despite the model of the machine, the animal seems to him to enjoy a kind of innocence. The animal has been emptied of experience and secrets, and this new invented "innocence" begins to provoke in man a kind of nostalgia. For the first time, animals are placed in a *receding* past.[39]

One way of accessing such imagined innocence, or originary wholeness, in an increasingly artificial world was to project it onto animal bodies, and then find ways to possess those symbolic animals without compromising the strict boundary between human and animal. It is for this reason, as discussed at greater length in Chapter Four, that figurative animals are such a conspicuous part of an automotive culture which at the same time enables a disavowal of the material conditions of actual animal life.

Berger's notion of animal disappearance, that they are *receding* into the past, is taken up by Akira Mizuta Lippit, who notes that while animals in modernity 'recede into the shadows of human consumption,' they 'never *entirely* vanish. Rather, they exist in a state of *perpetual vanishing*.'[40] This idea of perpetual vanishing will be considered in relation to horses in a horseless age in Chapter Two, with particular reference to the discrepancy between the horse as presented in automotive culture and actual horse population statistics from the period. Pivoting between decrepit relic of the past and reassuring symbolic presence—its spirit in the wheels—the horse was represented in conflicting states of vanishing in early car culture, neither of which were representative of material reality. Lippit goes on to claim that 'while animals were disappearing from the immediate world, they were

[39] Berger, 10 [emphasis in original].
[40] Akira Mizuta Lippit, *Electric Animal: Toward a Rhetoric of Wildlife* (Minneapolis and London: University of Minnesota Press, 2000), 1 [emphasis in original].

reappearing in the mediated world of technological reproduction.'[41] While my work is interested in how technology interposes between humans and other animals, facilitating mediated encounters that seem to preserve the notion of human exceptionalism, I approach the works of both Lippit and Berger, as it were, with both eyes open. Jonathan Burt, in his close reading of Berger's essay, argues that this 'disappearance' of animals did not denote their material absence in human civilisation, but rather a deliberate attempt on behalf of industrial capitalists to disguise their continued presence. 'The loss in human–animal relations in the nineteenth century,' Burt writes, 'is primarily the marginalisation of animal death rather than animal disappearance per se.'[42] Burt's revision of Berger's thesis provides further justification for my approach, in which I take care to observe not only literary animal metaphors in automotive culture, nor just literary representations of animals themselves, but also the actual historical conditions of nonhuman animal life at the time my primary texts were written. As Burt notes, 'images and spectacle became crucial in keeping animal questions in play,' hence the significance of looking at animals in literature. But at the same time, it is important to avoid being drawn exclusively to those animals that were still visible, and remaining blind to those hidden from sight (themes I take up extensively in Chapter One).

Revealing the hidden suffering and mistreatment of animals in history is important if we are to understand the systemic violence at the heart of our conceptions of human civilisation, hence the need to pay attention to their material circumstances. But why look at animals in literature? The problem with considering animals in any kind of literature, fiction or non-fiction, is, as Erica Fudge has explained, that we are never looking at animals, only at

[41] Lippit, 25.
[42] Jonathan Burt, 'John Berger's "Why Look at Animals?": A Close Reading', *Worldviews*, 9.2 (2005), 203-218, 213.

the representation of the animals by humans.[43] For my purpose, however, which is to use the transition from horse to horsepower as a lens through which to understand the changing attitudes towards animals and technology in the modern United States, charting the ways in which human representations of other animals were influenced by the invention and proliferation of the automobile remains a viable means of enquiry. In this sense, to paraphrase Fudge, my thesis is less a literary history of animals and automobiles than a literary history of *human attitudes* toward animals and automobiles.[44] However, like Philip Armstrong and the cohort of animal studies scholars he identifies in *What Animals Mean in the Fiction of Modernity* (2008), I too am 'interested in attending not just to what animals mean to humans, but also what they mean themselves; that is, to the ways in which animals might have significances, intentions and effects quite beyond the designs of human beings.'[45] As such, my approach to animals in each of the primary texts studied in the subsequent chapters is to view them as neither exclusively material nor exclusively symbolic, but both: as metaphors for human relationships to technology and the nonhuman world, and as creatures with their own experiential realities. As McHugh, McKay, and Miller note, there is 'great value in both of these interpretive positions, the metaphorical and the material, in navigating between them, and attempting both at the same time.'[46] While I am aware that the true experiential realities of nonhuman animals lay not on the page, but in the real world, and thus seek to contextualise literary human–animal relations alongside those in actual U.S. societies at the time, literary representations of animals ought not to be overlooked as trivial. As Colleen Glenney Boggs indicates, it is because 'literary representations of animals always implicitly if not explicitly

[43] Erica Fudge, 'A Left-Handed Blow: Writing the History of Animals', *Representing Animals*, ed. by Nigel Rothfels (Bloomington and Indianapolis: Indiana University Press, 2002), 3-18, 5.
[44] Fudge, 6.
[45] Philip Armstrong, *What Animals Mean in the Fiction of Modernity* (New York and London: Routledge, 2008), 2.
[46] Susan McHugh, Robert McKay, and John Miller, 'Introduction: Towards an Animal-Centred Literary History', in *The Palgrave Handbook of Animals and Literature*, ed. by Susan McHugh, Robert McKay, and John Miller (Basingstoke: Palgrave MacMillan, 2021), 1-11, 2.

raise the question of whether the animal is to be taken literally or figuratively,' that 'animal representations crucially confront readers with the complex terrain of epistemology and ontology, of representation and symbolization.'[47] An awareness of both the metaphorical animals who animate the horseless carriages in Modern literature, and the material animals whose presence is often obscured by the former, is essential to understanding the full significance of animals in automotive literature and culture.

It is more convenient, from an anthropocentric perspective, for people to believe that animals simply disappeared in modernity, as this enables a disavowal of the most dangerous and damaging consequences of increasingly mechanised industrial "progress." Looking at animals, however, reminds us that we have much more in common with them than with the machinery that became increasingly important to defining civilisation at the turn of the twentieth century. The growing symbolic as well as material influence of technology goes some way to justifying another central focus of my thesis: Why look at cars? It is vital that humans not only look at these quotidian machines, but actually *see* them, to echo Hennessy. Simply because we have gotten used to something does not mean that it need, or ought, to be inevitable, and if we are to see the power structures that enable and actively encourage an idea of the car as an organic development in human societal evolution, we need to look at both automobile and automobility. As Terry Eagleton has argued, 'the fact that social life is dominated by inanimate entities lends it a spurious air of naturalness and inevitability: society is no longer perceptible as a human construct, and therefore as humanly alterable.'[48] This could be said of commodity culture in general, however, so what is it about the automobile in

[47] Colleen Glenney Boggs, *Animalia Americana: Animal Representations and Biopolitical Subjectivity* (New York: Columbia University Press, 2013), 33.
[48] Terry Eagleton, *Ideology: An Introduction* (New York: Verso, 1991), 85.

U.S. society which makes it a suitable vehicle for exploring not only national subjectivity, but human subjectivity?

In *Republic of Drivers* (2008), Cotton Seiler claims that automobility is 'essential to shaping the dominant meanings of "America" and "American" in the twentieth century.'[49] Although Seiler's definition of automobility is slightly different from that employed in this thesis—'all of those components that make driving possible, practical, empowering, fun, salutary, and imperative'—his point regarding the influence of the automobile on American national identity and values will recur throughout my chapters, and Chapter Four in particular.[50] Seiler's consideration of the ways that cars make 'Americans feel, think, and act,' follows the same track as my own, in that, while I am concerned with automobiles and the development of machine technology in the United States, my essential research questions are not automotive nor technological, but rather cultural, philosophical, and political.[51] My route diverges from Seiler's in the sense that his study does not consider questions of literature nor animal studies.

Deborah Clarke affirms Seiler's coupling of the car and U.S. national subjectivity, claiming that 'few objects epitomize American identity more than the automobile.' Given the automobile's significant role in the formation of identity, it follows for Clarke that 'the automobile therefore shapes and haunts American literature.'[52] Building on the work of feminist critics such as Virginia Scharff, Clarke's study not only situates the automobile in American literature but also women in the driving seat.[53] Alice Huyler Ramsey became the

[49] Cotton Seiler, *Republic of Drivers: A Cultural History of Automobility in America* (Chicago and London: University of Chicago Press, 2008), 7.
[50] Seiler, 4.
[51] Ibid., 2.
[52] Deborah Clarke, *Driving Women: Fiction and the Automobile in Twentieth-Century America* (Baltimore: Johns Hopkins University Press, 2007), 1.
[53] See Virginia Scharff, *Taking the Wheel: Women and the Coming of the Motor Age* (New York: Free Press, 1991).

first woman to drive across the American continent in 1909 (accompanied by three other women), and while she was certainly not the first woman with a passion for driving, her well-publicised journey inspired many others to strike out on the road. Louise Closser Hale's *We Discover the Old Dominion* (1916), which is analysed at length in Chapter Two, was one of the first "road-trip" narratives ever published in the United States, followed a matter of months later by Emily Post's *By Motor to the Golden Gate* (1916). Despite the fact that American women had taken an active role in automotive culture from its very outset, something about the mechanical, mobile, and tacitly violent nature of automobility meant that it was (and still is) often claimed as the province of men, and only certain men at that. 'Every time a woman learns to drive,' wrote Ray Sherman in a 1927 article for *Time* magazine, 'it is a threat at yesterday's order of things.'[54] To detail the impact of the automobile on women's social, cultural, and literary place in the United States would be to re-tread ground covered comprehensively by Scharff and Clarke, and thus is to a large extent beyond the scope of this thesis. What articles such as Sherman's, and studies such as those by Scharff, Clarke, and Seiler, demonstrate is that if automobility is essential to American liberal subjectivity, then such subjectivity is not guaranteed, but rather closely guarded and relying 'on tacit exclusions and norms that preclude substantive equality.'[55] As will be discussed to some extent in every chapter of this thesis, the right to claim automobility, and thus the right to claim subjectivity, in the modern United States, was frequently limited by one's race, gender, class, and *species* (both in the sense that alleged technological ineptitude was linked to a more "primitive" mind-set, and that humans are the only animal that drives)—the notion of nonhuman automobility is covered specifically in Chapter Two. My study will be the first to

[54] Ray Sherman, cited in Scharff, 117.
[55] Saidiya Hartman, *Scenes of Subjugation: Terror, Slavery, and Self-Making in Nineteenth-Century America* (Oxford: Oxford University Press, 1997), 122.

demonstrate the extent to which claiming automobility was to assert one's status as unequivocally *human*, that is, one's social and evolutionary distance from *animal*.

This point brings us back to the significance of the first automotive periodical in English being entitled *The Horseless Age*. As we shall see, there were many practical reasons to reduce the burdens placed on horses in rapidly-expanding U.S. cities at the end of the nineteenth century, but to conceptualise the emerging modern nation as one free from horses was to disregard the affective significance of the animal in human history. Until this point, human achievements in civilisation had been largely dependent on the harnessing of horses' motive power. As Nathanial Southgate Shaler recognised in 1895, while there are many animals which have stamped themselves on human history, 'no creature has been so inseparably associated with the great triumphs of our kind, whether won on the battle-field or in the arts of peace,' than the horse.[56] Of course, in 1895, the automobile had not yet proven itself in the United States as capable of performing reliably in place of the horse, but well into the twentieth century many Americans still found it difficult to separate human and equine achievement, and consign the horse to the past. One 1919 article in the humanitarian periodical *Our Dumb Animals* summed up the exalted place of the horse in human cultural history:

> In verse, in prose, in paint, and in marble, from the beginning of all things, the horse has been immortalized; throughout all advances in civilization and Christianity, he has played his important part—humble, patient, enduring. Think of his achievements and progress along all lines—military, agricultural, scientific, exploration, travel, communication—what you will—and what wondrous abatement would be chronicled if accomplishments directly and indirectly due to equine abilities were to be subtracted from the sum total.[57]

[56] Nathanial Southgate Shaler, *Domesticated Animals, Their Relation to Man and to His Advancement in Civilization* (New York: Charles Scribner's Sons, 1895), 58.
[57] George B. Loring, 'Helpmeet of Humanity—the Horse', *Our Dumb Animals*, 51.10 (Mar. 1919), 151.

Human ideals of civilisation, then, could not be said to be human achievements alone. The fact that the very notion of civilisation—a concept which, as we shall see, was often associated with the mastering of our animal natures—was itself predicated on animals complicated the idea of human exceptionalism. With the invention of the horseless carriage, a mechanical alternative to the animal and a product of human ingenuity, there emerged the possibility that civilisation could be man (or machine) made. This idea is affirmed by Clay McShane and Joel Tarr, who indicate that cities were meant to represent humanity's conquest of nature, and thus the overt presence of animals (and animal waste) seemed antithetical to civilisation. 'The city was and is supposed to be on the human side of the human/animal dichotomy,' they argue, and thus 'the presence of vast and growing herds of animals in increasingly "civilized" cities seems paradoxical.'[58] The horseless age was to be the age in which the more technologically advanced human societies demonstrated their fitness to survive in a world still reeling from Darwin's *Origin of Species* (1859) and *The Descent of Man* (1871), which not only made explicit the human's animal origins, but also left open the possibility that societies could *regress* as well as progress. An example of modern technology, progressive in even the most literal sense, which also reduced human civilisation's reliance upon and proximity to animals, the automobile was to be the horse in a horseless age.

As increasing steps were taken to marginalise or disguise the presence of nonhuman animals in urban spaces (as is covered in Chapter One), human–animal relations in American civilisation began to take on a more superficial and nostalgic nature such as that discussed in Berger. Adrian Franklin points out that the working horse, positioned centrally as it was in metropolitan life, 'maintained a strong link with the pre-modern, traditional rural and

[58] Clay McShane and Joel Tarr, 'The Horse in the Nineteenth-Century American City', in *Beastly Natures: Animals, Humans, and the Study of History*, ed. by Dorothee Brantz (Charlottesville: University of Virginia Press, 2010), 227-245, 228.

instrumental relations with animals.' By the time automobiles replaced horses as the primary form of transportation in urban spaces, the horse was 'already enjoyed with a sense of nostalgia,' notes Franklin. As we shall see, this nostalgic past was accessed most commonly via the horseless carriage itself, which retained much of the linguistic and symbolic currency of the animal it replaced. With cities 'finally cleansed of all pre-modern relations with animals,' the sense of continuity from traditional ways of life to the present was severed. It was Fordism, Franklin claims, which 'ushered in this final separation […].'[59] Applying Frederick Winslow Taylor's principles of scientific management to automobile production, Henry Ford became a defining figure in the United States in the early decades of the twentieth century, with his mass production line 'often taken as paradigmatic of capitalist modernity […].'[60] The relationship identified by Shukin between Ford's auto assembly line at Highland Park and the animal disassembly taking place in the slaughterhouses of Chicago's Packingtown will be expanded in my first chapter, along with a discussion of where Ford and Taylor's methods of reducing all waste movement in workers interjected in questions of the human, animal, and machine divide. As we shall see, Franklin's choice of the word 'cleansed' to describe the removal of animals was apt in more senses than one.

Ford first receives a 'minor mention' in *The Horseless Age* in November 1898, when he was at the time working as chief engineer for the Edison Electric Light Company. While Ingersoll's periodical was aware that 'Mr Ford has built a number of gasoline vehicles which are said to have been successfully operated,' they regretfully note that 'no information can be gleaned regarding his vehicles or his plans for their manufacture.'[61] Ford's stance on the notion of a horseless age soon became clear, however. In his own autobiography, Ford talks

[59] Adrian Franklin, *Animals and Modern Cultures: A Sociology of Human–Animal Relations in Modernity* (London: Sage, 1999), 41.
[60] Shukin, 87.
[61] 'Minor Mention', *The Horseless Age*, 3.8 (Nov. 1898), 22.

about his wish to rid the world of the inefficient animals who, 'considering the bother of attending them and the expense of feeding, did not earn their keep.'[62] Never fond of the farm animals with whom he grew up, Ford's entirely unsentimental approach to horses as living (and dying) machines is encapsulated in his verdict that actual machines were preferable to animal power as 'you couldn't fix a dead horse with a monkey wrench.'[63] Despite the inevitability of confronting the influence of Fordism on modern American society, Ford is not a central focus of this thesis. While I recognise that his influence in American culture went far beyond the material production of automobiles, touching upon all aspects of what Böhm et al. called the 'regime of automobility,' such influence has been documented extensively elsewhere, and thus my focus is on the nonhuman animals in automotive culture.[64] That said, Ford's seemingly clear-cut stance on the transition from horse to horsepower—as a man who 'liked machinery and disliked horses'[65]—should be considered a starting point which will be complicated through each successive chapter and revisited in my Conclusion. So many were the paradoxes of early automobility, and so conflicting were views on the place of animals in the horseless age, that even Henry Ford ultimately came to feel nostalgia for a pre-modern age, free of the automobiles he himself had done so much to establish in American culture. As this thesis will demonstrate, even for the most enthusiastic advocate of mechanisation, something more intrinsic than a beast of burden was lost in the transition from horse to horsepower. A foundational figure in human constructs of civilisation, hailed in literature of all kinds for thousands of years, the horse would continue to influence American identity into

[62] Henry Ford and Samuel Crowther, *My Life and Work* [1922] (London: William Heinemann Ltd., 1924), 26.
[63] Ford, cited in Reynold Wik, *Henry Ford and Grass-Roots America* (Ann Arbor: University of Michigan Press, 1972), 229.
[64] See, for example: Reynold M. Wik, *Henry Ford and Grass-roots America* (1972); Steven Watts, *The People's Tycoon: Henry Ford and the American Century* (2009); A. Nevins and F. E. Hill, *Ford: The Times, the Man, the Company* (1954); D. E. Nye, *America's Assembly Line* (2015); and K. Sward, *The Legend of Henry Ford* (1948).
[65] John B. Rae, 'Why Michigan?', in *The Automobile and American Culture*, ed. by David L. Lewis and Laurence Goldstein (Ann Arbor: University of Michigan Press, 1983), 1-9, 5.

the twentieth century and beyond, regardless of claims in *The Horseless Age* that 'the civilized world says the horse must go.'[66]

White City

In the epigraph to this Introduction, Ingersoll specifically links the coming of the horseless carriage to the achievement of a 'higher civilisation,' implying that societies still reliant on the power of nonhuman animals were less civilised than those on the brink of a horseless age. Michael Adas contends that in industrialised Europe and North America, technological advancement became the yardstick by which human societies were judged and compared, as machines became 'the most reliable measure of humankind' to those producing them.[67] Increasingly, Adas argues, these industrialised nations established a dichotomy between themselves and the pre-industrialised world through polarities of 'machine versus human or animal power; science versus superstition and myth; synthetic versus organic; progressive versus stagnant.'[68] As well as introducing these significant binaries which will each be considered throughout this thesis, Adas draws attention to a term I use frequently but which I have yet to define specifically—Progressive. Historians have long advised caution when applying this term to the broad array of (sometimes conflicting) values held by reformers in the United States between 1890 and 1920, loosely defined as the Progressive Era.[69] In his 1970 'obituary' for the Progressive movement, Peter Filene argues that Progressivism 'lacked unanimity of purpose either on a programmatic or philosophical level,' and that its

[66] 'Editor's Note', *The Horseless Age*, 1.4 (Feb. 1896), 28.
[67] Michael Adas, *Machines as the Measure of Men*: *Science, Technology, and Ideologies of Western Dominance* (New York and London: Cornell University Press, 2014), 134.
[68] Adas, 144.
[69] Ann Norton Greene provides this date range for the Progressive Era. See Greene, *Horses at Work: Harnessing Power in Industrial America* (Cambridge, MA: Harvard University Press, 2008), 245.

unfocused, moderate goals meant that it can hardly be considered a social movement as such.[70] However, given the prevalence of the term in many of the primary and secondary literary and historical sources featured in this thesis, it is necessary to try and find some common features shared by Progressives, beyond simply believing in the idea of progress.

Mark Lytle, acknowledging that a common understanding of Progressivism remains elusive, suggests some central ideals which fuelled the drive toward progress at the turn of the twentieth century. These include human 'destiny to rule over and improve on nature, the capacity of science to unlock the secrets of man and nature, and the inevitable progress of mankind to higher status of material, moral, and spiritual being.'[71] This notion of improving upon nature through human engineering is central to understanding the progressive impulse as it appears in my thesis, and will be explored to greater depth in Chapter Four. One thing that Progressives had in common, writes Glen Gendzel, was the wish to establish mastery over nature by 'seizing the wheel' themselves, steering the nation (defined as a mechanical vehicle) towards a better future (in which civilisation is increasingly distinct from nature).[72] With this in mind, it follows that Americans such as Ingersoll and Henry Ford, in conceiving of humanity's future as a horseless age, should be considered Progressive for my purposes, advocating for the abandonment of horses in favour of a machine which literally facilitated faster progress. 'In the transition from animal to automotive power,' argues Ann Norton Greene, 'Progressivism was a catalyst, through its critique of animal power.'[73] As we will see in Chapters One and Two in particular, there were many urgent material problems with

[70] Peter G. Filene, 'An Obituary for "The Progressive Movement"', *American Quarterly*, 22.1 (Spring 1970), 20-34, 27.
[71] Mark Lytle, 'The Progressive Tradition and the Problem of Global Warming', in *Progressivism in America: Past, Present, and Future*, ed. by David Woolner and Jack Thompson (Oxford and London: Oxford University Press, 2018), 165-178, 166.
[72] Glen Gendzel, 'What the Progressives Had in Common', *Journal of the Gilded Age and Progressive Era*, 10.3 (July 2011), 331-339, 334.
[73] Greene, 246.

relying on horses to meet the transportation needs of rapidly-expanding U.S. cities at the end of the nineteenth century, but in addition to these practical issues there existed a sense that animals were simply old fashioned, and Progressive citizens did not need daily reminders of the animality which was supposed to be antithetical to urban civilisation.

Darwin's theory of biological evolution through natural selection was one of the most influential concepts of the nineteenth century, revolutionising not only human understandings of biology but also of our place amongst other animals and the notion of civilisation itself. 'The decades after Darwin's work became widely circulated,' notes Carrie Rohman, 'mark one of the most extreme upheavals in humanism vis-á-vis animals that human history has witnessed,'[74] dealing a crushing blow to the notion of human exceptionalism. Applying Darwin's theories to human society, sociologists such as William Graham Sumner sought to explain the economic and technological progress of the United States as evidence of "natural selection," attributing these advances to wealthy, white, male Americans such as themselves. Social Darwinism, as it became known, 'supported the conservative temper of many Americans at the time,'[75] as well as adding quasi-scientific justification to the general Progressive mindset, as technological and economic progress became associated with evolutionary progress. Jacqueline Jones claims that, beginning in the 1890s, white Americans 'put a white face upon […] the ideal of technological progress, which relied on increasingly complicated kinds of machinery operated by certain groups of white men and women.'[76] The racial politics of machine technology in the Modern period will be discussed in Chapter Four,

[74] Carrie Rohman, 'Modernist Animals and Bioaesthetics', in *The Palgrave Handbook of Animals in Literature*, ed. by Susan McHugh, Robert McKay, and John Miller (Basingstoke: Palgrave MacMillan, 2021), 385-396, 386.
[75] John Whiteclay Chambers II, *The Tyranny of Change: America in the Progressive Era, 1890-1920* [1992], 2nd Edition (New Brunswick: Rutgers University Press, 2000), 5.
[76] Jacqueline Jones, 'Race and Gender in Modern America', *Reviews in American History*, 26.1 (Mar. 1998), 220-238, 224.

but for a rather conspicuous example of the 'white face' alluded to by Jones, let me now turn to a discussion of the Chicago World's Fair of 1893, and the exhibits of the White City.

Properly known as the World's Columbian Exposition (the colonial implications of which are discussed in Chapter Four), the Chicago World's Fair opened in October 1893, and as noted by John Whiteclay Chambers II, 'people came from all over the country to marvel at the achievements of technology and the evidence of rapid progress demonstrated at the "great white city" erected by the lakefront.'[77] Built from scratch on a 686-acre (2.8 km^2) site on the banks of Lake Michigan, the white neo-Classical buildings which gave White City its name enclosed, along with countless artworks from all over the world, examples of the latest developments in technology including dynamos, engines, and electrical generators. As if to emphasise which exhibits were more important to American ideals of progress at the end of the nineteenth century, Henry Watterson (editor of the Louisville *Courier-Journal*) claimed in his dedicatory oration at the official opening of the Exposition that Americans were 'a plain, practical people. We are a race of inventors and workers, not of poets and artists. We have led the world's movement, not its thought […].'[78] Although the Exposition came two years before the first American automobiles (and no cars were featured in the exhibitions), Watterson's championing of technological invention and movement, without necessarily pausing for thought, says much about the ideological conditions which made possible the subsequent regime of automobility, and the fact that even today American urban infrastructure continues to play catch up with demand for automobiles. Of course, Watterson's estimations of the American public were more idealistic than representative, but the growing nationalist emphasis on technology and machinery over art and literature is pertinent in understanding the cultural impact of replacing animals with automobiles, and

[77] Chambers, 2.
[78] Henry Watterson, cited in David F. Burg, *Chicago's White City of 1893* (Lexington: University Press of Kentucky, 1976), 107.

makes literary responses to this phenomenon all the more worthy of exploration, a task taken up in this thesis.

This attitude was reflected in the words of Ingersoll, who accosted automobile sceptics for reading chivalric romances rather than focusing on the practical application of horses in contemporary society.[79] In his 1893 history of the Exposition, Ben C. Truman confirmed that the building which housed the electrical and technological exhibits—the 'progressive industries' in his words—held visitors' attention for considerably longer than the Fine Arts building. There was 'no place where the crowds go so early and so often linger for so long' as the Electricity Building, explains Truman, but it was more than novelty which held the crowds' attention.[80] In harnessing the powers of electricity (as if it were a wild mustang, to be tamed and subjugated to humanity's will), the engineers and inventors bending nature to the purposes of civilisation appeared to be the very embodiment of Progressive values, improving on nature's work as human society evolved. Henry Adams's notorious veneration of the dynamo at the Paris Exposition of 1900 will be discussed in Chapter One, but he was not the only commentator to acknowledge the admiration bordering on religious fervour for the 'progressive industries.' At White City, seven years before Adams's encounter with the dynamo, Cornell professor Robert H. Thurston claimed that, at Chicago:

> The product of the inventive genius […] was made shrine as well as monument; and all the world went there to admire, if not to worship, the material evidences of the culmination of an era of triumphs in every department of invention, construction, and engineering achievement.[81]

[79] See note 33.
[80] Ben C. Truman, *History of the World's Fair* (Philadelphia: Mammoth Publishing, 1893), 355.
[81] Robert H. Thurston, cited in Burg, 205.

The absolute faith that technology was going to indelibly improve (a select portion of) human civilisation was at the heart of Progressive values, and whatever industry it was applied to could only benefit from increasing mechanisation. If there was any doubt about Darwin's influence on this culture of Progressive technological development and Watterson's veneration of movement, the following statement from Truman in which he describes White City's Machinery Hall clears this up: 'How Darwin would gloat over the transportation exhibit! […] Whether or not the doctrine of evolution applies to man, there is no question that it applies to the works of man […].'[82] Referring to the rapid "evolution" of the train, from Robert Stephenson's primitive Rocket of 1829 to 'the 130-ton locomotives capable of a speed of 100 miles an hour,'[83] Truman demonstrates not only the concern as to whether evolutionary theory was applicable to humans, but also the conviction that it was applicable to technology. Machine evolution was premised upon human ingenuity, restoring a sense of our superiority over nature, which was not the only evolutionary force in the Modern era. Variously described as 'Heavenly City' or the 'New Jerusalem,'[84] the designers of White City, according to another 1893 history of the Exposition, 'must have been very near to God.'[85] When Ingersoll claimed that the civilisation that was rolling in with the horseless carriage would be a 'higher civilisation' than that currently enjoyed, the religious undertones should be understood in the context of Progressive faith in technological evolution.

A celebration of American civilisation and progress, symbolised primarily through its advances in technology, White City represented an optimised image of urban civilisation in which nature was completely governed by human systems. It was, as Greene has noted, a 'rationalized, sanitary environment […] devoid of the organic messiness and many animals of

[82] Truman, 341.
[83] Ibid.
[84] W. Hamilton Gibson, cited in Burg, 114.
[85] James W. Shepp and Daniel B. Shepp, *Shepp's World Fair Photographed* (Chicago: Globe Bible Publishing Co., 1893), 8.

traditional urban life.'[86] Crucially, it was horseless city—electrically-powered public trams provided transportation for White City's millions of visitors—keeping the streets white, shining, and free from horse excrement. Its clean and sanitary streets, 'scientifically planned' design, electric lights illuminating the brilliant white buildings and statue of Christopher Columbus on the 400th anniversary of his "discovery" of the New World; the White City 'exemplified modernity' as envisaged by American Progressives of the 1890s.[87] Such a vision, however, could not be preserved for very long. When the government refused to provide the funding necessary for the maintenance of the White City for another year, the decision was taken by the World's Fair planning committee to burn their labours to the ground rather than see them fall into disrepair. On January 8, 1894, reports David Burg, 'incendiaries set a fire which destroyed the Casino, the Peristyle, and the Music Hall.' A second fire was then started on July 3, which brought down the 'Administration, Mines and Mining, Electricity, Machinery, Agricultural, Manufacturers, and some smaller buildings, creating a fantastic pyrotechnic display' on the eve of Independence Day.[88]

As the glorious White City went up in plumes of smoke, Chicagoans such as the novelist Henry Blake Fuller became all the more aware of the disparities between this idealised vision of the future and the current conditions of much of their urban surroundings, labelled 'Black City' by Fuller in his 1894 novel *With the Procession*.[89] With the slaughterhouses of Packingtown mere miles away from where had once stood this humanist utopia (to be discussed in Chapter One), visitors to the Chicago World's Fair were not seeing American civilisation as it currently was, but, as Burg acknowledges, 'as it might have been or could become.'[90] Unable to simply start again with the planned urban systems of White

[86] Greene, 250.
[87] Greene, 250-251.
[88] Burg, 287-288.
[89] Henry Blake Fuller, *With the Procession* (New York: Harper and Brothers Publishing, 1895), 10.
[90] Burg, 296.

City, Progressive Americans sought to develop and evolve existing systems in current cities, proffering technological solutions to political and social problems. While electric trams were fit for purpose in White City, operating within a limited, well-planned space and able to serve as the primary form of transportation (other than walking), the same could not be said for "Black City," with its disorganised maze of streets and population centres (Chicago did not even have an equivalent electric trolley system until 1906). Cities all across the United States were in a similar situation, in that while electricity-powered public transportation certainly made a positive difference, it could never replicate the ability of the horse and carriage to provide personalised transportation for the individual. Hence, with the invention of the horseless carriage, humanity seemed to have taken one step closer to that 'higher civilisation' of the promised White City, and the automobile was hailed by Progressives such as Ingersoll as the answer to many of the pressing social issues of the day.

The Horseless Age

Public trolley systems, noted Ingersoll, 'have each in their turn given impetus to "progress," but they are in their nature monopolies, and their usefulness is limited by the narrow tracks on which they run.' Such systems are the 'great main arteries of traffic, which as civilization advances, require to be supplemented by an increasing number of tributaries and feeders.' It is in this article, itself entitled 'The Horseless Age,' that Ingersoll presents what is essentially a manifesto for the horseless vehicle. Acknowledging that existing automobile designs would need to be improved upon, Ingersoll's faith in the evolutionary capacity of technology led him to the conclusion that historians of the future would one day look back on these primitive machines 'with something of the same interest a scientist has for the petrified remains of an

extinct species.'[91] As we saw with Ben C. Truman's conviction that Darwinian laws of evolution were applicable to the 'works of man' (if not humanity itself), animal metaphors have been bound up with the logic of technological development since at least the 1890s. When the technology being replaced is, in fact, an animal itself—the horse—the sense that human civilisation was improving on nature became all the more literal for automotive advocates. In another early automotive journal from 1905, one such advocate described what this technological development meant for both human and machine: 'The automobilist, like the machine he drives, is in the process of evolution; or perhaps it were better said, he is himself the product of an evolution.'[92] Understood alongside the many practical reasons to seek an alternative to physical horse power in cities, there also existed a sense that human society itself needed to evolve in order to survive, in the shadow of Darwin's "survival of the fittest" doctrine. As exhibitions such as White City demonstrated, the next stage in civilisation as imagined by Progressives would be achieved by reducing reliance on nonhuman animals, with machine technology emphasising the difference between our dirty, organic, animal predecessors and the clean, scientific branch of humanity that would determine the future.

Ingersoll's "manifesto" provides a jumping off point for the organisation of this thesis, but is by no means a table of contents. While Ingersoll identifies some key areas in which the horseless carriage was expected to improve upon the horse, there proved to be some more pressing intersections between animals and automobiles which he could not have foreseen in 1895. Nonetheless, as the first automotive periodical in the English language to cover the evolution from horse to horsepower, Ingersoll's predictions about the horseless age are worth quoting at length:

[91] Ingersoll, 'The Horseless Age', 8.
[92] Robert Bruce, 'Motor Car Travel: An Evolution', *The Automobile Magazine*, 7.2 (Feb. 1905), 129-136, 129.

> Once more we have fairly earned our title as the mechanics par excellence of the world. A pleasing prospect it is that rises before us in contemplating this array of horseless vehicles! […] In cities and in towns the noise and clatter of the streets will be reduced, a priceless boon to the tired nerves of this overwrought generation. Then there is the humanitarian aspect of the case. To spare the obedient beast, that since the dawn of history has been man's drudge, from further service at the industrial treadmill will be a downright mercy. On sanitary grounds too the banishing of horses from our city streets will be a blessing. Streets will be cleaner, jams and blockades less likely to occur, and accidents less frequent, for the horse is not so manageable as a mechanical vehicle.[93]

To pick up on what was arguably the most visible (and odorous) issue with relying so heavily on horses in cities, Ingersoll's sanitation argument would certainly have held weight in turn-of-the-century America. By 1900, the average number of horses per square mile in urban areas was 446, producing up to 5 tons of manure per square mile per day.[94] White City had appeared so clean and glowing not only because it was illuminated with electric lights, but also because there was no horse waste to turn it into Brown City. Progressive rhetoric against animal power emphasised not only sanitation, but also efficiency. 'To argue against efficiency,' Greene notes, 'was to argue against American progress itself.'[95] Thus, the concept of waste was doubly objectionable—whether defined as inefficient use of time and resources, or the biological by-products of animals, waste was antithetical to Progressive ideas about progress and civilisation.

Another significant Progressive reform movement of the times alluded to in Ingersoll's article is that of animal-welfare—'the humanitarian aspect of the case.' The economic depression of the 1890s led to urban haulage companies cutting costs wherever they could, the heaviest burden of which was usually carried by horses, the companies' living machines. As more and more work was demanded of already-overburdened horses, incidents

[93] See note 91.
[94] Greene, 247-248.
[95] Greene, 254.

of violent abuse against the struggling animals in broad daylight became all the more common. These occurrences were not only distressing for the abused animals, but also (to a lesser extent) for the general public, resulting in growing support for the Society for the Prevention of Cruelty to Animals. By replacing horses with automobiles, Ingersoll argued, Americans were performing a humane service, and those who truly cared for horses ought to get behind the idea of a horseless age.

Considering the nationalist and at times overtly racist discourses surrounding technological advancement and social Darwinism (particularly from Sumner himself), and the tendency to put a 'white face' on such achievements in the words of Jacqueline Jones, Ingersoll's comment about Americans as 'the mechanics par excellence of the world' deserves critical consideration. I have already alluded to the psychological significance of equating the Modern age with a horseless age, and the association of higher civilisation with both a physical and evolutionary proximity to nonhuman animals, but the automobile in particular seemed bound up with ideas of national identity and American Progress more so than any other piece of technology. The fact that the horse retains its own (albeit different) symbolic currency in the American cultural imagination suggests a conflicting set of national ideas around what constituted "American" in the Modern age.

While Ingersoll also makes reference to the noise problems in urban environments caused by the sound of horses' hooves on cobbled streets, this line of enquiry turned out not to be a decisive issue in the rise of the horseless vehicle (unlike the issues of waste, care, and national identity). There was one major global event that Ingersoll could not have predicted when he wrote his "manifesto," the significance of which in the transition from horse to horsepower can hardly be overstated—the First World War. The shipping of horses to Europe for the purposes of war not only instigated the first decrease in U.S. equine populations since

Ingersoll predicted a horseless age, but the increasing mechanisation of warfare also altered perceptions of the horse's role in human conflict. A combination of literal and symbolic violence against the warhorse fuelled Progressive narratives that the modern (human-made) world was no place for an animal. The automobile, meanwhile, had been up until this point considered primarily an expensive form of leisure and adventure, but throughout the war demonstrated its practical (and deadly) function in transporting soldiers and munitions to and from the front lines.

While these four themes—waste, care, war, and national identity—are by no means comprehensive, they are significant points at which Progressive attitudes towards animals and automobiles converge, and together help to tell a story about the changing material and metaphorical relationships between humans, animals, and machines at a specific time in American history. Because the following chapters are organised around these themes, the literature I have selected for study excludes a number of texts that one might expect to be included in a literary history of horsepower, 1895-1935. Canonical American authors such as Edith Wharton, Booth Tarkington, and F. Scott Fitzgerald, to name but a few, have all written extensively on the automobile in American society, but the bounds of this study are limited to include texts which speak directly to one of my four key themes *and* feature representations of animals and automobiles considered as both material and symbolic entities. While Gatsby's great Rolls-Royce may have been of 'monstrous' size, we see little discussion in Fitzgerald's novel about the metaphorical animality of the car.[96] Tom Buchannan may boast that while many Americans had converted their stables into garages, he 'was the first man who ever made a stable out of a garage,' but for all his pastoral posing we hear nothing of the horses themselves.[97] Conversely, there were many writers in the same period whose works

[96] F. Scott Fitzgerald, *The Great Gatsby* [1925] (London: Penguin, 2000), 63.
[97] Ibid., 113.

represent nonhuman animals without engaging with automobility to any serious extent, including Jack London, Ernest Thompson Seton, and William J. Long. While these texts and authors have much to contribute to debates around what it means to represent nonhuman animals in literature—all were involved in the "Nature Fakers" controversy following John Burroughs's criticism of their fantastical portrayals of animal characters—they do not specifically relate to animals in automotive culture, and thus do not feature in this study.[98]

With these parameters in mind, the primary texts featured in my chapters include a group of seemingly disparate well-known and unknown American authors, whose works share the common feature of engaging with animals and automobiles on both material and symbolic levels, on the subject of one of my four individual chapter themes. Chapter One, 'Muck Raking: Waste and Animality in Upton Sinclair,' considers portrayals of animals, automobiles, and waste of all kinds in Sinclair's *The Jungle* (1906) and *Oil!* (1927). As evidenced in *The Horseless Age*, the automobile was hailed as a force of cleanliness and order by Progressive reformers, not only because the wastes it produced were less visible than those of horses, but also because this novel machine technology was associated with efficiency in both production and operation. Power dependent on the physical capabilities of animals (including humans), according to this logic, was inherently wasteful, dirty, and regressive. Machine power, by contrast, was presented as efficient, clean, and progressive. One group of reformers unafraid of getting their hands dirty (literally and metaphorically) were muckrakers such as Sinclair, whose novels set in the Packinghouses of Chicago and the oil fields of California will enable me to unpack the various connotations of waste, cleanliness, animality, and technology in the overlapping slaughter and oil industries. This chapter on waste comes first because it establishes key ideas about the role of machine

[98] For further information on the "Nature Fakers" debate, and a collection of relevant texts, see Ralph H. Lutts (ed.), *The Wild Animal Story* (Philadelpia: Temple University Press, 1998), esp. 127-212.

technology in interposing between the categories of human and animal. Progressive faith in technology is thus shown to be a driving force in human exceptionalism, obscuring the material realities of nonhuman animals and those humans rendered animalic.

Chapter Two, 'Animals on the Road: An Ethic of (Car) Care in Early Road Narratives,' examines the varying levels of care for animals and cars in some of the earliest texts in the automotive "road-trip" genre from the 1910s: Theodore Dreiser's *A Hoosier Holiday* (1916), Louise Closser Hale's *We Discover the Old Dominion* (1916), and Sinclair Lewis's *Free Air* (1919). Taking Ingersoll's claims about the humanitarian influence of the automobile as a starting point, this chapter analyses the extent to which an existing ethic of care for horses was transferred to horseless carriages via a process I call theriomorphism, or the attribution of nonhuman animal characteristics to inanimate objects (theorised more extensively in Chapter Two). Through an analysis of the three road narratives based on journeys which all took place in 1916—the same year that the coast-to-coast Lincoln Highway was completed—this chapter will demonstrate how, by metaphorically representing automobiles as horses, drivers were able to maintain an illusionary bond with these animals even as they were being banished from civilisation. This draws attention to one of the great ironies of automobility that persists even to this day, as drivers come to care for their animalised automobiles based on the imagined sentience of their machines, while at the same time disregarding the impact of automobility on actual sentient life. The symbolic animal (whose 'spirit' is in the wheels) has the potential to obscure the material animal (who may be beneath the wheels) in automotive culture, and thus it is necessary to re-read these foundational texts in the road-trip genre with an eye for the horse as well as the horsepower.

Chapter Three, 'Knights on Wheels: Chivalry and Horsepower in the First World War,' considers the impact of the Great War on symbolic perceptions of both horse and

automobile, as well as the material repercussions for the millions of horses shipped to the Allies before and during the United States' official involvement. With the role of the traditional cavalry much changed in the face of modern battlefield conditions, and automobiles primarily employed in haulage, there seemed to be little opportunity for glory and heroism in a conflict defined by the stasis of trench warfare. There were, however, several groups of American civilians who volunteered to drive motorised ambulances in France while the U.S. was still officially neutral, transporting *blessés* (injured French soldiers) from the front lines to hospitals, often using dead horses as landmarks.

These 'Gentlemen Volunteers,' so called because the vast majority were recruited from elite educational institutions, included many Americans who subsequently became distinguished literary figures, the most famous of which were Ernest Hemingway, John Dos Passos, and e. e. cummings.[99] While there can be no doubt that works such as cummings's *The Enormous Room* (1922), Dos Passos's *One Man's Initiation* (1917) and *Three Soldiers* (1921), and Hemingway's *A Farewell to Arms* (1929), to name but a few examples, incorporated some of the writers' own experiences whilst serving in the American Ambulance Corps, these caustic works are not particularly concerned with automobility or nonhuman animals, focusing instead on addressing the disillusionment and inhumanity of the human soldier. As Arlen J. Hansen notes, Hemingway was only actually part of the service for five weeks, during which he probably only drove an ambulance on 'either one, or at most two' days, given the relative inactivity in the Schio area of Italy where he was based.[100] With this in mind, it is difficult to get an impression of what these automobiles actually meant to the Gentlemen Volunteers based on the works of canonical writers such as Hemingway, Dos Passos, and cummings. Therefore, I have identified two autobiographical works by American

[99]Arlen J. Hansen, *Gentlemen Volunteers: The Story of the American Ambulance Drivers in the First World War* [1996] (New York: Arcade Publishing, 2011) 15. Ebook Central ebook.
[100] Ibid., 242.

ambulance drivers whose accounts (though they have long since fallen out of print) were considered two of the best 'books from the front' according to a 1918 bibliography in *The New York Times*—Robert Whitney Imbrie's *Behind the Wheel of a War Ambulance* (1918) and William Yorke Stevenson's *At the Front in a Flivver* (1917).[101] In these narratives, it becomes clear that the car performs much more than its practical purpose of navigating the battle-ravaged landscape for these technological chevaliers, charting a shift in emphasis from horses (and the "Old Guard" of the cavalry) to automobiles as vehicles for the qualities of patriotism, courage, and heroic masculinity in modern warfare. The contrasting treatment of cars and horses in the aftermath of WWI is indicative of U.S. priorities in modern industrial capitalism; while one Ford Model T received the Croix de Guerre (on behalf of a company of drivers) and was safely repatriated, most animals fortunate enough to survive the conflict were rewarded with the abattoir.

Chapter Four, 'A Nation of Mechanics: Animals and Indigenous Automobility in John Joseph Mathews's *Sundown* (1934),' uses Osage writer John Joseph Mathews's only novel to explore the relationship between animals, automobiles, and American national identity, following Ingersoll's assertion that Americans were the 'mechanics par excellence' of the world. In the decades following the discovery of oil beneath Osage lands (the story behind which is expanded in Chapter Four), the Indigenous Osage of northern Oklahoma became the wealthiest nation per capita anywhere in the world, prompting jealousy, exploitation, and violence from the encroaching Euro-American population. Drawing on a range of literary historical sources such as *The Horseless Age*, Mathews's ecological writing, and traditional stories of the Osage, my reading of *Sundown* examines the inherent difficulties in separating the symbolism of the automobile from its material ecological consequences. In much the

[101] 'Growing Literature of the War', *The New York Times*, 20 Oct. 1918, 65-68.

same way that animal symbols are co-opted in automotive branding, Indigenous identities are exploited in car culture to conjure up a nostalgic past in which the ecological and colonial violence of American modernity is conveniently forgotten. I will argue that Mathews's Osage characters find themselves in a double-bind as they seek to refute stereotypes of technological primitivism whilst still maintaining and respecting Indigenous connections to the natural world.

Indigenous Americans, of course, were by no means the only Americans excluded from the hegemonic national identity idealised at White City. As Frederick Douglass noted at the opening of the Chicago World's Fair, despite speaking of progress as a broad human virtue, not one of the eight million African Americans living in the U.S. in 1893 was invited to join the dignitaries on the main platform during the ceremony, a decision which Douglass saw as 'an intentional slight to that part of the American population with which [he] is identified.'[102] The history of Black Americans in automotive culture, as drivers, road builders, and production line workers in Ford's factories, merits extensive study, and is a subject taken up as part of Mia Bay's history of African Americans and transport, *Traveling Black* (2021). The Model T, notes Bay, 'was both a catalyst and a tool by which the Great Migration occurred: a reason for African Americans to leave the South,' under the demeaning conditions of Jim Crow, 'and a means for them to do so.'[103] In his history of the automobile in American literature, Ronald Primeau discusses the reasons why the 'road was not always open' as it was for white travellers, noting that 'the automobile journey has not figured prominently in African American literature.'[104] The initial publication of Victor Hugo Green's *Negro Motorist Green Book* (1936-1966)—a publication which listed Black-friendly

[102] Frederick Douglass, citied in Burg, 109.
[103] Mia Bay, *Traveling Black: A Story of Race and Resistance* (Cambridge, MA: Harvard University Press, 2021), 116.
[104] Ronald Primeau, *Romance of the Road: The Literature of the American Highway* (Bowling Green, OH: Bowling Green State University Popular Press, 1996), 117-119.

amenities for travellers, such as hotels, garages, and restaurants—in the year immediately after the period covered by my thesis tells us something about the prohibitive conditions faced by Black travellers at the time. Nonetheless, my research found sporadic incidents of Black automobility in fiction written by African Americans pre-1935, including Langston Hughes's *Not Without Laughter* (1930), Wallace Thurman's *The Blacker the Berry* (1929), Jessie Redmon Fauset's *Plum Bun* (1928), and the short story 'A Summer Tragedy' (1933) by Arna Bontemps. However, the automobile is either too peripheral in these texts to support extended literary analysis, or where it features prominently (as in Bontemps's short story) there is no consideration of nonhuman animality, and consequently this particular literary canon is beyond the scope of this thesis.

Throughout the chapters that follow, I look at animal metaphors as they appear in early automotive culture and these symbolic animals' material counterparts as they appear in a variety of literary and non-literary historical sources, in order to demonstrate that the horseless carriage not only changed the way humans travel, but how we conceived of and related to nonhuman animals. In the history of automotive branding, there is a menagerie of nonhuman animals (and animalised Indigenous identities), but the horse has maintained a particularly prominent place in car culture from the first issue of *The Horseless Age* to the present day. Even in a supposedly horseless age, the automobile actively retains links to its imagined animal origin, accelerating humanity's progress away from base animality, yet at the same time offering a hollow replacement for something lost along the way.

CHAPTER ONE

Muck Raking: Waste and Animality in Upton Sinclair

> *Jurgis had stood with the rest up in the gallery and watched the men on the killing beds, marvelling at their speed and power as if they had been wonderful machines; it somehow never occurred to one to think of the flesh-and-blood side of it...*
>
> —Upton Sinclair, 1906[1]

In the quotation above which serves as the epigraph for this chapter, the protagonist in Upton Sinclair's *The Jungle* (1906)—Lithuanian immigrant Jurgis Rudkus—stands on the observation deck of a slaughterhouse in Chicago's Packingtown experiencing a kind of disconnection between material reality and figurative interpretation. What he is actually witnessing are the carcasses of innumerable animals being furiously dismembered by other animals (humans), and yet the association of this latter group with machine technology provides sufficient distraction that Jurgis is (initially) able to separate himself from the scenes unfolding before his very eyes. It is worth considering this phenomenon alongside Henry Adams's description of the great hall of dynamos at the Paris Exposition of 1900. Adams claims that the great gallery of machines felt to him like 'a moral force, much as the early Christians felt the Cross,' which humanity was compelled to worship as a symbol of 'ultimate energy.'[2] In the case of Jurgis, the figurative evocation of technology in the wondrous speed and power of the workers acts as a moral force by focusing attention on the incredible potential for production in industrialised slaughter, and away from the morality of such ends

[1] Upon Sinclair, *The Jungle* [1906] (New York & London: Penguin Classics, 1986), 70. Henceforth cited parenthetically.
[2] Henry Adams, *The Education of Henry Adams* [1918], ed. by Jean Gooder (New York & London: Penguin Classics, 1995), 361.

and means. Distracted by the flashy, figurative machine, he fails to notice the fleshy, material animals.

While the 'wonderful machines' in this passage are in fact human beings, whose movements have been mechanised and sped-up in accordance with principles of scientific management (to which I shall return), they are representative of a broader phenomenon of the Progressive era in which technology becomes synonymous with notions of cleanliness, sanitation, efficiency, and order. Animals—'the flesh-and-blood side of it'—are increasingly viewed in opposition to this rhetoric, associated with dirt, disease, waste, and chaos. Progressive reformers were responding to the pervasive concern that American society was becoming more disordered, regressing rather than advancing. As Ann Norton Greene notes:

> The growing influence of corporate structures and industrial management, and the spread of professional education, with its emphasis on science and technique, led many in the middle and upper classes to believe that creating a more sanitary, efficient, orderly, safe, and democratic society was primarily a technical problem. Once it was solved, moral order would follow.[3]

According to this logic, the cleaner and more technologically efficient a society appeared to be, the more likely its citizens would be to uphold high moral standards. The notion of civility—of civilisation—is therefore linked not only to cleanliness but to finding technological solutions to social issues.

These themes will be developed further throughout the chapter, drawing on debates surrounding the transition from horse to horsepower as a case in point. Horses, as we shall see (and as can probably be imagined), were responsible for dirtying the streets in a number of obvious ways, and thus their proposed replacement, the automobile, became increasingly associated with Progressive ideals of cleanliness and, by extension, civilisation. I am not

[3] Ann Norton Greene, *Horses At Work: Harnessing Power in Industrial America* (Cambridge, MA. & London: Harvard University Press, 2008), 247.

seeking to dispute or diminish the seriousness of the pollution issue faced by urban Americans in the late nineteenth century, but rather to draw attention to the ways in which this Progressive faith in technology (what Adams identified as the instinct to worship the dynamo) conceptualised pollution, waste, dirt, and disorder in ways which avoided placing any responsibility for such issues on industrial activity.[4] Rather than identifying industrialisation as one of the root causes of pollution (and, therefore, moral regression), nonhuman animals were presented in dichotomy to technology as symbols of regressive and progressive values, respectively.

Despite an overarching belief in technological solutions to societal problems, one integral part of Progressive reform was the exposing of corruption and scandal in politics and large (primarily mechanised) corporations. Those who practiced this scurrilous form of investigative journalism (as well as fictional exposé) were known as the muckrakers, of whom Upton Sinclair achieved the greatest literary prominence. As well as *The Jungle*, which documents the dirty, material realities of animals (including humans) in everyday "progressive" urban society, this chapter will also consider Sinclair's later work, *Oil!* (1927), which I argue evidences the role of technology—the automobile specifically—in both encouraging and providing a distraction from the same moral degeneracy which it was supposed to alleviate. In both novels, machine technology acts as a force which confirms human exceptionalism, interposing between "clean" civilisation and "dirty" nature. While the immigrant workers such as Jurgis are first-hand witnesses to 'the flesh-and-blood' side of human civilisation, wealthy oil baron J. Arnold Ross and his son Bunny in *Oil!* depend on automobility to both maintain their business and protect them from witnessing the material consequences of their immoral business decisions.

[4] See Martin V. Melosi, *Effluent America: Cities, Industry, Energy and the Environment* (Pittsburgh: University of Pittsburgh Press, 2001), 59.

Both the industrial slaughter and oil extraction industries are inextricably linked to automobility in the Progressive era, as I will go on to demonstrate, and both industries are shown through Sinclair's muckraking exploits to simply remove from sight, rather than eliminate, the supposedly wasteful and inefficient aspects of animal-powered human societies. In this sense, I would suggest that both *The Jungle* and *Oil!* can be read as challenges to what Elizabeth Kolbert has described as 'Parable[s] of Horseshit'—stories which imply that there is always a technological fix for a political or social problem.[5] Before embarking on any further analysis of Sinclair's work, however, there are a number of important ideas raised so far which require further elaboration, including the relevance of horses to Progressive debates on cleanliness, the notion that humans could not be both animals *and* civilised, and the relevance of a novel about the meat-packing industry to the transition from horse to horsepower.

The Parable of Horseshit

In the introductory statement to volume one, issue one of the first automobile periodical ever published in the United States, *The Horseless Age* editor E. P. Ingersoll recorded his delight in contemplating the advantages that an array of horseless vehicles would bring to urban life. Not least of these was the idea that banishing horses from city streets would be a 'blessing,'[6] on account of the sheer quantity of animal waste (excrement) that would be prevented from piling up on public roads. This sentiment was echoed by co-founder of the Duryea Motor Company, Charles E. Duryea, who was a regular contributor to *The Horseless Age*. As opposed to the horse-drawn vehicle, Duryea wrote, 'in the motor wagon the objectionable

[5] Elizabeth Kolbert, 'Hosed: Is There a Quick Fix for the Climate?', *The New Yorker* (16 Nov. 2009) <https://www.newyorker.com/magazine/2009/11/16/hosed> [accessed 29/01/2019].
[6] E. P. Ingersoll, 'The Horseless Age', *The Horseless Age*, 1.1 (Nov. 1895), 8.

features can be and usually are behind the riders, where they are not in evidence.' Thus, he concluded, the motor wagon was 'much superior' to the locomotive or horse wagon. Furthermore, Duryea assured readers, any odour that is produced by the motor wagon 'does not contain elements of filth, or gases that are decidedly poisonous.'[7] Given that Duryea wrote this in 1896, it is somewhat ironic that his dubious claims appeared in the same year that Swedish scientist Svante Arrhenius first theorised that human activity could raise the Earth's temperature by increasing the levels of Carbon Dioxide in the atmosphere, although it would not be until after the Second World War that this was conclusively proven.[8] Writing not as a scientist but as a car manufacturer, however, Duryea was not too concerned as to whether the internal combustion engine actually produced less *objectionable features* than the horse, so long as such features remained *not in evidence*.

The evidence for waste produced by horses, on the other hand, was inescapable. In 1880, there were a minimum of 150,000 horses living in New York City alone, each contributing about twenty-two pounds (approx. 10 kilos) of manure a day.[9] These figures meant that the city's monthly accumulation of horse dung totalled at least forty-five thousand tons, leading one Manhattan resident to describe the streets as being 'literally carpeted with a warm, brown matting…smelling to heaven.'[10] That same year the United States had gathered together a panel of leading global experts to determine what New York would look like in a century's time, with feats such as the recent completion of the first skyscraper—the Equitable Life Assurance Building—inspiring many to picture a futuristic hub of technical innovation. When the team returned, however, it was with the unanimous consensus that, by 1980, New

[7] Charles E. Duryea, 'Bogies', *The Horseless Age*, 1.10 (Aug. 1896), 4.
[8] Mark Maslin, *Global Warming: A Very Short Introduction* (Oxford and New York: Oxford University Press, 2004), 24-25.
[9] See note 5.
[10] Ibid.

York would be buried under a mountain of horse droppings.[11] The city's population had grown from around thirty thousand at the beginning of the nineteenth century to nearly four million by 1880, roughly doubling in size every ten years. If this trend continued, the experts concluded, the number of horses required to meet the transport needs of the human population would be 'more than six million,'[12] or in terms of horse waste: sixty-six thousand tons *every day*. The city could not have functioned for another twenty years at this rate, never mind one hundred.

Having played a pivotal role throughout the history of human societal development, the horse now threatened to drag a civilisation bent on building skyscrapers back down into a quagmire of filth and urine. Yet prior to the invention of the automobile, the horse was such an intrinsic feature of society that no one, including the world's leading experts in city planning, could theorise a world without them. Whether Henry Ford actually said it or not, if he had asked people what they wanted, they would have said faster (and probably cleaner) horses.[13] In 1895, following the formation of the Duryea Motor Company, Ingersoll claimed that 'as by a sweep of Aladdin's wand, steedless wagons will be gliding through the streets in varied forms and varied uses,'[14] and in terms of timescale he was not far off the mark. By 1912, less than two decades after the first issue of *The Horseless Age*, cars outnumbered horses on the streets of New York, and the technological innovation of the automobile had

[11] Jeff Stibel, *Breakpoint: Why the Web will Implode, Search will be Obsolete, and Everything Else You Need to Know about Technology is in Your Brain* (Basingstoke: Palgrave Macmillan, 2013), 23.
[12] Stibel, 24.
[13] Whilst the quotation 'If I had asked people what they wanted, they would have said faster horses,' is often attributed to Henry Ford, the earliest usage I have come across is from John McNeece, a cruise ship designer, quoted in Greg Miller, 'Creating Cruise Ships with an Eye on Next Generation', *The Cruise Industry News Quarterly*, 9.37 (Summer 1999), 37. McNeece does not quote Ford but suggests that '[t]here is a problem trying to figure out what people want by canvassing them. I mean, if Henry Ford canvassed people on whether or not he should build a motor car, they'd probably tell him what they really wanted was a faster horse.' In 2005, however, Henry Ford's great-grandson, William Clay Ford, Jr., attributed the quotation to his great-grandfather: 'My great-grandfather once said of the first car he ever built, "If I had asked my customers what they wanted, they would have said a faster horse."' See William Clay Ford, Jr., 'Transcript of Q4 2005 Ford Motor Company Earnings Conference Call', *Quote Investigator* <https://quoteinvestigator.com/2011/07/28/ford-faster-horse/#note-2539-11> para. 28 of 33 [accessed 19/02/2019].
[14] E. P. Ingersoll, 'The Bloodless Revolution', *The Horseless Age*, 1.2 (Dec. 1895), 6.

made all those who dared to question whether the metropolis could handle the exponentially increasing needs of its population seem very old-fashioned indeed.

This story of how a new piece of technology swept in to rescue a supposedly doomed society has been referred to as 'The Parable of Horseshit' by Elizabeth Kolbert, and has been recycled as humanity stands embroiled in what could be termed another crisis of waste management: global warming.[15] In 2009, Steven D. Levitt and Stephen J. Dubner published a book arguing that 'doomsayers' forecasting the end of the world were of the same pessimistic mind-set as those who thought that the great New York City could actually end up buried under horse waste. 'Just as equine activity once threatened to stomp out civilization,' they remark, 'there is now a fear that human activity will do the same.'[16] But rather than focus on reducing waste, or CO_2 emissions, Levitt and Dubner cite the invention of the automobile as reason to remain optimistic that an as-of-yet inexistent 'technological fix' is bound to be the ultimate solution.[17] Just as Charles E. Duryea did not allow the fact that he himself had no scientific expertise discourage him from making bold scientific claims about car fumes, so too do Levitt and Dubner (an economist and a journalist, respectively) charge into the climate change debate armed with, essentially, horseshit. What they choose to overlook is that whilst the automobile may have postponed waste problems on a civic level, it remains a primary cause of the current planetary crisis.[18]

---

[15] See note 5.

[16] Steven D. Levitt and Stephen J. Dubner, *SuperFreakonomics: Global Cooling, Patriotic Prostitutes, and Why Suicide Bombers Should Buy Life Insurance* (New York: William Morrow, 2009), cited in Kolbert.

[17] Levitt and Dubner, cited in Kolbert.

[18] According to the Environmental Protection Agency (EPA), transportation accounts for 28% of total greenhouse gas emissions, where 'the largest sources of transportation-related greenhouse gas emissions include passenger cars and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans. These sources account for over half of the emissions from the transportation sector. The remaining greenhouse gas emissions from the transportation sector come from other modes of transportation, including freight trucks, commercial aircraft, ships, boats, and trains, as well as pipelines and lubricants.' This makes automobiles a primary cause of emissions alongside the generation, transmission, and distribution of electricity (28%), industry (22%), commercial and residential (11%), agriculture (9%), and land use and forestry (2%). See 'Greenhouse Gas Emissions Data', *United States Environmental Protection Agency* <https://www.epa.gov/ghgemissions/ sources-greenhouse-gas-emissions> [accessed 19/02/2019].

The car, in this parable, is hailed as a force of cleanliness. It was seen as a 'technological fix' for an ecological problem, and where a less advanced civilisation might have sunk back into the mud, New York City would continue to expand upwards towards the heavens (instead of just stinking to heaven). The problem with this, of course, is that the inorganic waste produced by a car's internal combustion engine is considerably more dangerous (in terms of its global ecological impact) than the organic waste produced by a horse, and the fact that this waste remains out of sight does not mean that it does not exist. This "out of sight, out of mind" attitude, however, is fairly typical of the human civilising process, according to Norbert Elias, in which '[i]t will be seen again and again how characteristic of the whole process that we call civilization is this movement of segregation, this hiding "behind the scenes" of what has become distasteful.'[19] Thus a supposedly more civilised society is one which successfully disguises the repugnant in everyday life, without actually eliminating it.

It is worth remembering at this stage that excrement was not the only form of animal waste left by the horse. In the 1880s, approximately 15,000 horses died in the streets of New York every year. Whilst most were hastily removed, large carcasses were often left to rot where they lay until they had disintegrated sufficiently to be picked up.[20] In 1901, a Mr Benjamin Staddler of 106 Rivington Street, New York City, described the sight of two dead horses left lying in the street for three days as 'terrible' and 'nauseating'—the excuse offered by the Department of Street Cleaning was, ironically, that they had been 'laboring under a great disadvantage lately for want of horses.'[21] This incident could hardly be considered an anomaly given that in 1901, the Board of Health were tasked with removing a total of 19,846

[19] Norbert Elias, *The Civilizing Process* [1939] (Oxford and Malden: Blackwell, 2000), 103.
[20] Jennifer S. Lee, 'When Horses Posed a Public Health Hazard', *The New York Times Blog* (9 June 2008), <https://cityroom.blogs.nytimes.com/2008/06/09/when-horses-posed-a-public-health-hazard> [accessed 08/03/2022].
[21] 'Foul Smells Rouse East Side Residents', *The New York Times*, 8 July 1901, 2.

dead horses from the streets of New York.[22] An article in *The Horseless Age* claimed that the automobile would not only mean less horses dying in the streets, but also the speedier removal of those that did. 'Following the example of Berlin,' argues the writer, U.S. cities ought to place into service 'a motor truck for the removal of dead horses.'[23] Technology cannot die as it was never living, and so the automobile promised the reduction of both animal waste and waste animals.

In the course of the civilising process, Elias claims, humans 'have sought to suppress in themselves everything that they feel to be of an 'animalic character,"[24] and have extended this to society at large. We can see then how the success or failure of human civilisation is judged by its perceived proximity to the world of nonhuman animals, with categories such as "human" and "animal" serving as effective disguises. One of the first claims made in *The Horseless Age* is that the 'new civilization that is rolling in with the horseless carriage will be a higher civilization than the one we now enjoy,'[25] and whilst this quotation does not make explicit whether it is the introduction of cars or the absence of horses that will instigate this civilisational rise, the ambiguity has been cleared up by issue four: 'The civilized world says the horse must go.'[26]

In 1880, *The New York Times* published an article in which it identified the primary 'outside nuisances' of city life as 'manure, and offal deposits, and offensive trades of all kinds, embracing slaughtering [and] rendering of scrap and fats.'[27] In this reporter's view, at least, the waste products of the slaughter and rendering industries were just as objectionable

[22] 'Annual Report for the Board of Health of the Department of Health of the City of New York for the Year Ending December 31, 1901' (New York: Martin H. Brown, 1902), <http://tlcarchive.org/images/search/archive/1901_020_037.pdf> [accessed 13/03/19], 37.
[23] 'Our Foreign Exchanges', *The Horseless Age*, 24.1 (July 1909), 23.
[24] Elias, 103.
[25] Ingersoll, see note 5.
[26] E. P. Ingersoll, 'Editor's Note', *The Horseless Age*, 1.4 (Feb. 1896), 28.
[27] 'The City's Sanitary Work: Inside and Outside Nuisances Considered', *The New York Times*, 15 Nov. 1880, 8.

as those of the transport industry. In cities such as Cincinnati and Chicago, however, the mechanisation of slaughterhouses and rendering plants had already placed them behind the scenes of urban civilisation, providing a technological fix for the problem of waste animals, just as the car would do for animal waste. Nicole Shukin comments on the tactics employed by such industries in an attempt to scrub themselves clean of carnal residue:

> Retreating out of an urban field of vision was just one step in the reorganization of slaughter and rendering; doing everything possible to prevent a sensory revolt triggered by smell has arguably been even more critical to the affective management of animal capital.[28]

As Shukin indicates, it is often not just the sight of nuisances such as offal and manure that is so objectionable, but also the smell. This point will be discussed at greater length later in this chapter, but for now let us just keep in mind the argument that the most animalic of the human senses is the olfactory sense. Max Horkheimer and Theodor W. Adorno, building on Freud, claim that smell embodies an archetypal longing for the 'lower forms' of existence, and thus it is considered 'a disgrace to civilization, the sign of lower social strata, lesser races and base animals.'[29] Here we see again how human civilisation depends upon the denial of animalic character, and it is the role of technology to prevent what is animal entering our bodies via the nose.

Shukin goes on to highlight another congruence between the slaughter and automobile industries when she reminds us that Henry Ford's auto assembly line, so often taken as the paradigm of capitalist modernity, was preceded and indeed inspired by the mechanised abattoirs of Cincinnati and Chicago, meaning that the assembly of automobiles 'is thus mimetically premised on the ulterior logistics of animal disassembly.'[30] Ford himself

[28] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis: University of Minnesota Press, 2009), 63.
[29] Max Horkheimer and Theodor W. Adorno, *Dialectic of Enlightenment* [1947], trans. by John Cumming (New York: Continuum, 1972), 184.
[30] Shukin, 87.

admitted that the idea to construct cars piece by piece, suspended on overhead rails, 'came in a general way from the overhead trolley that the Chicago packers use in dressing beef.'[31] As well as enabling faster production (if the breaking down of animal bodies into cuts of meat can be so called), the machinated abattoir served to reduce human contact with the animals they consumed. As Chris Otter notes, an array of 'hooks, pulleys, rails, electric sausage-mincers, and hog-scraping devices made slaughter and dressing an act increasingly performed by machines rather than humans.'[32] The interposition of machines as a kind of screen between humans and animals is something that will be seen in both *The Jungle* and *Oil!*. While large-scale mechanised slaughterhouses provided physical and conceptual separation from the nonhuman animals that would become food for civilised dinner tables, Ford's automotive assembly lines churned out horseless carriages according to a similar logic. Machines produced machines defined by the absence of the animal—horseless.

By rendering the objectionable features of modern civilisation invisible, technological fixes such as mechanised slaughterhouses and the automobile made it possible to enjoy the benefits of modernity without worrying about the inevitable consequences—out of sight, out of mind. But of course neither of these industries were as clean as they strived to appear, and whilst both seemed to offer technological fixes to the problem of waste there were always those who were required to work behind the scenes, doing the real dirty work. Exposing the waste, the dirt, and the disorder in these mechanised industries is key to critiquing the Progressive idea that technological development is the same as social development. As Ronald Gottesman notes in his introduction to *The Jungle*, 'Americans have always responded to writing that calls attention to discrepancies between the ideal and the actual

[31] Henry Ford, *My Life and Work* [1922] (London: William Heinemann Ltd., 1924), 81.
[32] Chris Otter, 'Civilizing Slaughter: The Development of the British Public Abattoir, 1850-1910', in *Meat, Modernity, and the Rise of the Slaughterhouse*, ed. by Paula Young Lee (Durham, New Hampshire: University of New Hampshire Press, 2008), 89-106, 96.

[…].'[33] For this reason, muckraking is key to this chapter's goal of separating the ideal view of urban technological civilisation (of wonderful machines) from the material realities of those animals (human and nonhuman) who society would rather keep out of sight—Upton Sinclair was one of those not afraid to get his hands dirty.

The Muckrake Man

In *Shifting Gears,* Cecelia Tichi claims that, in the opening decades of the twentieth century, the word 'waste' became 'a pejorative American byword, virtually the industrial-era devil denounced in texts of all kinds from literary criticism to advertisements.'[34] Whether understood as the inefficient use of time and resources, or the biological refuse of animal life, waste was viewed as detrimental to human progress and many "captains of industry" denounced it publicly. Henry Ford devoted ten pages of his autobiography to complaining about 'the horror of waste,' in either materials or man-power, claiming that it was 'waste motion [and] waste effort' which kept prices high and profits low.[35] According to automotive historian James Flink, Ford 'longed to rid the world of unsanitary and inefficient horses,'[36] and although Ford does not mention horse waste explicitly in his autobiography, he does claim that horses 'did not earn their keep,' and goes on to insist upon the 'absolute cleanliness' of his showrooms and factories.[37] Ford used technology to reduce wasted time and resources, and of course cars don't shit on the roads. Meatpacking magnate Philip Danforth Armour was equally keen to establish himself as an enemy of waste and

[33] Ronald Gottesman, 'Introduction', in Upton Sinclair, *The Jungle* [1906] (New York & London: Penguin Classics, 1985), vii-xxxv, xxiv.
[34] Cecelia Tichi, *Shifting Gears: Technology, Literature, Culture in Modernist America* (Chapel Hill and London: University of North Carolina Press, 1987), 57.
[35] Ford, 15.
[36] James Flink, *The Automobile Age* (Cambridge, MA.: MIT Press, 1988), 37.
[37] Ford, 26, 60.

inefficiency, claiming that 'nothing is wasted' in his Chicago packinghouse: 'things are made cheaper and better for the world in general, out of material that was before a waste and a menace.'[38] Whether the public knew that their food products were being made from waste materials, however, was a matter of considerable controversy.

It was in this same time period that a new term emerged for a particular type of investigative journalism—muckraking. The etymology of this word reveals its relevance not only to the discourse of waste, but also to the binaries of clean/dirty, technological/animal, and visible/invisible which this chapter seeks to unpack. The primary definition of *muck* is given as 'excrement, manure; dirt, waste matter,' which has been in use since the twelfth century.[39] To rake up muck, then, was to deal with dirt and animal waste; to make sure that such objectionable features did not meet the eyes or noses of those "more civilised" persons with enough money that they could pay others to do their dirty work. The second (although now largely obsolete) definition of *muck*, dating back just as far as the first, reads 'worldly wealth, money, esp. regarded as sordid, corrupting.'[40] In this sense, then, it is the wealthier class who are the "muckier," emphasising the fact that the outward appearance of cleanliness and the public shunning of waste ought not to be considered evidence of moral superiority.

As for the term *muckraking*, it was first used in a literary (but non-literal) sense by then-president Theodore Roosevelt, in a 1906 speech given outside the House of Representatives. In this speech, Roosevelt made several hostile remarks aimed at writers who he felt had gone too far in their criticisms of American politicians. His own central government would be criticised on more than one occasion for 'very inadequately'[41]

[38] P. D. Armour, in Theodore Dreiser, 'Life Stories of Successful Men', *Success*, 1 (Oct. 1898), 1-2.
[39] *OED*, <http://www.oed.com/view/Entry/123164?rskey=r9b0sq&result=1#eid> [accessed 01/02/2019], para 1 of 19.
[40] Ibid., para. 8 of 19.
[41] William Archer, 'The American Cheap Magazine', *Fortnightly Review* (May 1910), 921, cited in C. C. Regier, *The Era of the Muckrakers* [1932] (Chapel Hill: University of North Carolina Press, 1957), 3.

enforcing the laws of the land, and allowing giant conglomerates such as Standard Oil, U.S. Steel, and The Beef Trust to bribe their way into effectively owning the country's railways, and thereby denying competitors the opportunity to compete in a free capitalist market. Citing *Pilgrim's Progress* (1678) by John Bunyan, Roosevelt sought to discredit those who attempted to expose the muck lurking behind the scenes of capitalist enterprise (which supposedly despised the idea of waste):

> [T]he Man with the Muck-rake is set forth as an example of him whose vision is fixed on carnal instead of spiritual things […]. Now, it is very necessary that we should not flinch from seeing what is vile and debasing. There is filth on the floor, and it must be scraped up with the muck-rake […] [b]ut the man who never does anything else, who never thinks or speaks or writes, save his feats with the muck-rake, speedily becomes, not a help to society, not an incitement for good, but one of the most potent forces of evil.[42]

Here we see the two definitions of muck brought together; by focusing their attentions on the corruption and ill-gotten wealth of American institutions, these journalists, according to Roosevelt, only debased themselves through an implied fascination with excrement. It is precisely by focusing on carnal (the flesh-and-blood) rather than more abstract 'spiritual' things that the material realities of American Progressive industry are made visible—that the flashy does not distract from the fleshy.

Two months prior to Roosevelt's speech, in February 1906, Upton Sinclair's *The Jungle* was published, receiving immediate national attention. Having spent seven weeks living in Chicago's Packingtown, 'among the wage slaves of the Beef Trust,'[43] Sinclair merged together workers' stories, his own observations, and (by his own admission) a little imagination, to form what Jack London called the '*Uncle Tom's Cabin* of wage slavery.'[44]

---

[42] Theodore Roosevelt, cited in Robert M. Crunden, *Ministers of Reform: The Progressives' Achievement in American Civilization, 1889-1920*, (New York: Basic Books, 1982), 195.
[43] Upton Sinclair, *The Autobiography of Upton Sinclair* [1962] (London: W. H. Allen, 1963), 117-119.
[44] Jack London, *Chicago Socialist*, 6.351 (25 Nov. 1905), 2.

Taking aim at the awful conditions in the Chicago Stockyards, as well as the corruption in Roosevelt's government that allowed organisations like the Beef Trust to monopolise the market, it is fair to assume that Sinclair was one of Roosevelt's original muckrakers. Certainly this title was readily adopted by Sinclair himself (one chapter of his autobiography is called 'The Muckrake Man'), as well as many other writers seeking progressive reform. Significantly, as noted by C. C. Regier, almost as soon as Roosevelt had coined the term *muckraker* in a figurative sense, 'the expression lost most of its unsavoury connotations […].'[45] When applied to what was essentially a group of intellectuals as opposed to someone who literally cleaned up waste, the word *muckraker* seemed to become somehow cleaner itself. [46]

As we learned from The Parable of Horseshit, contemporary readers of *The Jungle* were living in a time when animals were considered major contributors of dirt and waste, making Sinclair's enquiry into the meat-packing industry one truly concerned with 'carnal instead of spiritual things.'[47] This chapter will relate these arguments back to the automobile specifically in my analysis of Sinclair's *Oil!*, but first it is necessary to return to Jurgis Rudkus in the slaughterhouses of *The Jungle* to understand exactly how the Progressive faith in technology as a force of cleanliness and order was premised on what was immediately visible, rather than what was occurring out of sight. Such logic enables consumers of the slaughterhouse's products to maintain a conceptual (as well as physical) distance from the moral (and physical) messiness of the killing process. It is only this conceptual distance, enabled by the absolute neutrality of machine technology which separates Progressive civilisation from what Elias calls the animalic.

[45] Regier, 2.
[46] Crunden notes that 'about forty journalists have been subsequently identified as muckrakers; about twenty of these were consistently active.' These twenty muckrakers 'were inherently intellectuals. They preferred to research and write rather than to apply their ideas.' See Crunden, 163,187.
[47] See note 40.

Dirty Work

Returning to the quotation from *The Jungle* in the epigraph to this chapter, it is the speed and power of the men on the killing beds which so impresses Jurgis, 'as if they had been wonderful machines.' Casting the slaughterhouse as a series of impersonal processes performed by various machinery belies the obvious reality that human beings are responsible for taking the lives of every animal who enters the Packinghouse—'nearly a quarter of a billion' (51) as the Durham tour guide boasts to Jurgis and Jokubas. Upon securing a job at Brown's, supposedly a rival Packinghouse, and first laying eyes on the sheer number of cattle waiting to be slaughtered, Jurgis experiences the sensation of becoming absorbed into the incomprehensible process, of becoming 'a cog in this marvellous machine' (41). Crucially, this sensation is expressed *before* Jurgis actually starts working, and is based on what he is allowed to observe rather than the physical experience of working in these conditions. Not once is the machine described as 'marvellous' after Jurgis has actually taken part—'Then he saw things in a different light, he got at the inside of them' (70). Admiring the mechanised elements of the slaughter process is a key difference between those who witness only the spectacle of slaughter, and those who actively participate in it. Watching the continuous 'stream of animals' flow through the various levels of the Packinghouse, Jurgis and Jokubas stand transfixed by 'the wonderful efficiency of it all' (42). Rather than viewing the scene as a 'river of death,' as described in Sinclair's narrative voice, the speed and power of the machine process is what holds their attention—once again, the flashy distracts from the fleshy.

Nicole Shukin has analysed the cinematic spectacle of mechanised animal disassembly in the Chicago stockyards, noting that, under the roof of the vertical abattoir

'there rolled a moving line that not only served as a technological prototype for automotive and other mass modes of production but also excited new modes of visual consumption.'[48] Prior to the development of mass motion picture technologies, Eadweard Muybridge's zoopraxiscope (a predecessor to the projector, displaying a series of photographs in motion) represented the closest simulation of animated images available to an American audience. Displaying Occident the horse (and an assortment of other nonhuman animal life) apparently in motion at the World's Columbian Exposition of 1893 in Chicago, Muybridge's animal reproductions were being consumed by spectators mere miles away from the spectacle unfolding in the slaughterhouses of Packingtown.[49] While most of those who participated in Packinghouse tours found the visceral display even more interesting than many of the exhibitions at White City,[50] it was 'too much for some of the visitors' in *The Jungle*—'the men would look at each other, laughing nervously, and the women would stand with hands clenched, and the blood rushing to their faces, and the tears starting in their eyes' (44). Whether responding with fascination or trepidation, those observing events from the outside are at least able to form an emotional response. Meanwhile, the workers on the killing floor must keep their heads down and their speed up:

> Neither squeals of hogs nor tears of visitors made any difference to them; one by one they hooked up the hogs, and one by one with a swift stroke they slit their throats. […] Now and then a visitor wept, to be sure; but this slaughtering-machine ran on, visitors or no visitors. (44-45)

While there may have been workers on the killing floors who were naturally indifferent to their role in the slaughter process, the point is that the physical nature of their work is made so demanding that there is simply no opportunity to process the emotional side of it. As

[48] Shukin, 92. For further discussion of the relationship between slaughter and film, see Shukin, 93-104.
[49] Ibid.
[50] Louise Carroll Wade, *Chicago's Pride: The Stockyards, Packingtown, and Environs in the Nineteenth Century* (Urbana: University of Illinois Press, 1987), 62.

Jurgis discovers when he himself is on the front lines, 'there was never one instant's rest for a man, for his hand or his eye or his brain' (71). The principles of scientific management championed by Frederick Winslow Taylor not only increased the productive output of human workers, but also desensitised them to sentiment, which was energy wasted in a non-productive manner.

The same time-motion studies that enabled the creation of Muybridge's zoopraxiscope also served as the foundation for Taylor's revolutionary approach to organising production. Under the principles of scientific management, workers' physical motions while completing a task were separated and broken down into the smallest possible components, like the individual photographic frames which, when viewed in quick succession, gave a moving picture of the whole. Each frame was scrutinised to identify any waste motion, any instance of unnecessary energy expenditure on the part of the workers which could be applied to production, aiming to eliminate all inefficient mechanical movement. In industries which adopted Taylor's principles (including the Chicago Packinghouses and Henry Ford's Highland Park Factory), workers were 'required to perform repetitive motions with increased mechanical efficiency and speed.'[51] From his viewing position on the spectators' gallery, Jurgis is able to look all the way down the line as each hog carcass is set upon by Taylorised workers:

> There were men to scrape each side and men to scrape the back; there were men to clean the carcass inside, to trim it and wash it. Looking down this room, one saw, creeping slowly, a line of dangling hogs a hundred yards in length; and for every yard there was a man, working as if a demon were after him. (46)

If any worker becomes so efficient at performing their given task that they do have a second to spare, the pace of the work is increased 'until they had worn him out, and then they would

[51] Shukin, 73.

throw him into the gutter' (74), to be replaced by one of the many desperate unemployed. Even fourteen-year-old Stanislovas is forced to endure these same principles of scientific management at his job in the lard-canning factory, where he is required to stand on the same spot 'from seven in the morning until noon, and again from half past twelve till half past five, making never a motion and thinking never a thought, save for the setting of lard cans' (89). The workers are deliberately given no opportunity for thoughts beyond their immediate physical task, lest they dwell too long on the material reality of their actions. As architectural historian Sigfried Giedion has claimed, the most striking aspect of the mechanised slaughterhouse is its 'perfect neutrality' in the midst of mass-killing.[52] The machine is immune to emotion. Hence, association with the machine is a dissociative experience for the human workers, who are forced to respond to the hogs' protests with the same perfect neutrality:

> [The hogs] were so innocent, they came so very trustingly; and they were so very human in their protests—and so perfectly within their rights! They had done nothing to deserve it; and it was adding insult to injury, as the thing was done here, swinging them up in this cold-blooded, impersonal way, without a pretence at apology, without the homage of a tear. […] Relentless, remorseless, it was; all his protests, his screams, were nothing to [the machine]—it did its cruel will with him, as if his wishes, his feelings had simply no existence at all […]. (44-45)

It suits the business interests of the Packers to promote the entire process as impersonal—'pork-making by machinery, pork-making by applied mathematics' (44)—because this seems to eliminate human participation in the slaughter industry. Timothy Pachirat was privy to the ways in which such mechanised, multi-staged processes of industrial slaughter create conditions which seem to absolve the human kill-floor workers of any potential wrongdoing, breaking the actual act of killing down into such minute steps that it is difficult to pinpoint

[52] Sigfried Giedion, *Mechanization Takes Command: A Contribution to an Anonymous History* (New York: Oxford University Press, 1948), 221.

any one person who is responsible for the actual taking of the animal's life. While Pachirat's findings are primarily applicable to modern slaughterhouses, the logic remains the same for those featured in *The Jungle*. On Jurgis's tour of the 'killing beds' there are men known as 'knockers' whose job is to render the animal insensible with a blow from a sledge hammer. It is then shackled and 'jerked up into the air,' where another man, the 'butcher,' slits their throats (48-49). Just like the modern slaughterhouse where Pachirat worked, there is no executioner, but rather there is one man who 'delivered the blow that knocked each creature unconscious,' while it is another's job to slit the creature's throat.[53] In total there are 121 jobs on the kill-floor alone, and yet:

> at the one point in the long chain of industrialized killing where the animals are at once sensible and insensible, conscious and not conscious, it was impossible to state categorically that there was a moment when the cattle were alive and a separate, distinct moment when they were dead.[54]

The abstract, impersonal perception of slaughter under the principles of scientific management not only encourages neutrality in the face of animal "neutralisation," but also breaks down the actual act of killing into so many pieces that no one individual bears the full responsibility—even if a worker has enough time to feel guilty, there is plausible deniability.

While this "mechanising" of human workers might appear to have little to do with horses and horsepower, it demonstrates a point that will recur throughout this thesis: that machine technology creates a moral detachment from the material treatment of nonhuman animals, interposing between *us* and *them* as a barrier to recognition. While the overlap between mechanised slaughter and automobility has already been established by Shukin, the

[53] Timothy Pachirat, *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight* (New Haven & London: Yale University Press, 2011), 238.
[54] Ibid.

direct relevance of the automobile to the interposition I have just described will become clearer in my analysis of *Oil!* and in subsequent chapters.

In order to attain such machine-like neutrality in the face of mass killing, Taylorism required that workers relinquish their humanity, becoming organic matter within the mechanical system, a fact that Jurgis is able to recognise in the latter part of *The Jungle* with the admission he had been 'one of the packer's hogs' (376). By reducing workers' functions to the purely mechanical, Taylorism, as Antonio Gramsci put it, was able to 'sever the old psychophysical nexus of skilled professional work in which the intelligence, initiative, and imagination were required to play some role, and thus to reduce the operations of production solely to the physical aspect.'[55] When Jurgis describes the 'brutalizing monotony' (100) of this kind of work, he his perhaps speaking more literally than he knows, as his humanity is slowly stripped away, leaving a "brute." This reduction to the purely physical, mechanical functions of life is the Cartesian definition of animality, in which 'the machine of the body' moves without thought, creating 'natural automata [that] are the animals.'[56] Taylor himself suggested that on the optimally efficient production line, there were tasks that were so 'crude and elementary' that even 'an intelligent gorilla' would be able to perform them.[57] Casting those who do the dirty work of civilisation as less-than-human, as animals themselves, adds another level of abstraction between the "civilised" American who eats the piece of pork in New York City and the "barbarous" act of killing which takes place out of sight, and out of consciousness.

[55] Antonio Gramsci, *Selections from the Prison Notebooks* ed. and trans. by Quintin Hoare and Geoffrey Nowell Smith (New York: International, 1971), 216.
[56] René Descartes, 'Letter to Henry More (Feb. 5, 1649)', in *Descartes: Philosophical Letters*, trans. and ed. by Anthony Kenny (Oxford: Oxford University Press, 1970).
[57] As Nicole Shukin notes, Taylor's comment was in relation to improving efficiency of pig-iron handlers in Pennsylvania steel mills. The full quotation reads: 'This work is so crude and elementary in its nature that the writer firmly believes that it would be possible to train an intelligent gorilla so as to become a more proficient pig-iron handler than any man can be.' See Shukin, 253.

Evidently, there is a highly racialised component to this discourse, whereby an immigrant workforce is deliberately utilised to perform the dirty and debasing jobs on which U.S. civilisation depended, but did not wish to acknowledge. Carl A. Zimring's study of race and waste in the United States posits that white supremacist thinking has its foundations in the racist idea that 'white people were somehow cleaner than non-white people.'[58] These attitudes were sustained by endemic racist policies and practices which ensured that many of the most unpleasant, dirty, and dangerous occupations were the only work available to non-whites. As Zimring notes, factory and slaughter positions in Chicago 'were the domain of Eastern and Southern European immigrants,' who were often ridiculed for their filthy appearance.[59] Paul Hoch has also argued that, particularly in the United States, there has been a tendency of 'older' white generations to view successive influxes of immigrants—'whether Irish, Italian, Jewish, East European, Mexican or Afro-American blacks from the south'—as threats to their hygiene and humanity, as 'a new dark plague. A barbarian invasion […]. Vermin.'[60]

The fact that non-white, immigrant workers were expected to find the dirtiest jobs (if they found jobs at all), requiring the least amount of thought and the maximum quantity of physical output, was used as justification for the idea that they were "uncivilised." The conditions imposed upon them by "civilised" U.S. society ensured that racist preconceptions of immigrants as unclean were (to some degree) reflected in reality, despite the best efforts of individuals to prove them wrong. Jurgis and his family, as well as the tens of thousands of other Eastern European immigrants tricked into abandoning their lives back home for the

[58] Carl A. Zimring, *Clean and White: A History of Environmental Racism in the United States* (New York & London: New York University Press, 2015), 3.
[59] Zimring, 111. See also David Roediger, *Working Toward Whiteness: How America's Immigrants Became White* (New York: Basic Books, 2005).
[60] Paul Hoch, *White Hero, Black Beast: Racism, Sexism and the Mask of Masculinity* (London: Pluto, 1979), 52-53.

promise of higher wages and better living conditions in the United States, find themselves living, quite literally, in garbage. As Sinclair explains, the area of the stockyards where the majority of workers lived was 'made' land: 'it had been 'made' by using it as a dumping ground for the city garbage' (36). A historical survey of living conditions around the stockyards conducted in 1909 confirms that there were four 'city dumps' in the immediate vicinity of the residential buildings (where immigrant workers lived). These dumps consisted of large holes in the ground 'from which clay had been dug out for the neighbouring brickyards.' However, as the report goes on to note, these dumps became so large as to be considered one 'great city dump,' which 'had been filled with deposits of waste matter until it was almost level with the street.' Once this great mass of waste from distant city wards (and the Stockyards themselves) has been "picked" over by 'professional' scavengers, who pay $15 a week for the privilege, the women and children of the stockyards are allowed to 'hunt for the wood they want for kindling, the old mattresses which may serve on the bed at home, and the fragments of food.' In case there was any doubt about the unsuitability of such an environment, the article confirms that 'the filthy condition of some of the household articles and the presence of decaying organic matter, make this an obviously unfit place for children.'[61] Forced not only to live on land made from garbage in a residential sense, the immigrant stockyard workers must also live (survive) on what they are able to scavenge from this garbage. As Sinclair writes of the dirt and squalor which characterises the neighbourhood where Jurgis and his family live, 'it is out of this material that they have to build their lives' (11). The same wealthy, white Chicago residents who considered these immigrants to be vermin, and derided them for taking such little care of their children and families, could sustain a physical and psychological distance from the fact that it was their own household

[61] Sophonisba P. Breckinridge and Edith Abbott,' Housing Conditions in Chicago, Ill: Back of the Yards', *The American Journal of Sociology*, 16.4 (Jan. 1911), 433-466, 464-466.

waste which furnished the households of families such as Jurgis and Ona's. City zoning practices ensured that these distances were maintained by keeping nuisances such as dumps and factories out of sight of neighbourhoods in which house prices precluded low-wage earners.

It was not just the unhygienic conditions in which immigrants were forced to live, however, which made them "dirty" in the eyes of urban U.S. civilians. As anthropologist Mary Douglas has asserted, dirt is simply 'matter out of place,' which is to say that no person or object is inherently dirty, but that dirt 'exists in the eye of the beholder.'[62] One example Douglas gives of this is food, which is not considered dirty in itself, yet when it spatters on clothing, it becomes dirt. Similarly, clothing is not dirt, yet when it is left all over a carpet the room becomes dirty.[63] When we consider dirt as simply the by-product of a system of strict organisation, something which upsets a pattern and not dirty in and of itself, it becomes easier to see how racist narratives of cleanliness could be applied to people, who were not where they were supposed to be. Upon arriving in Chicago, Jurgis and his family have no idea where to go—they are simply matter out of place. They are promptly 'put upon a car' by a local policeman who ensures they are taken to their proper place—the stockyards. The family's first impressions of Packingtown are of sensory revulsion:

> Down every side street they could see it was the same—never a hill and never a hollow, but always the same endless vista of ugly and dirty little wooden buildings. Here and there would be a bridge crossing a filthy creek, with hard-baked mud shores and dingy sheds and docks along it; here and there would be a railroad crossing with a tangle of switches, and locomotives puffing and rattling freight cars filing by; here and there would be a great factory, a dingy building with innumerable windows in it, and immense volumes of smoke pouring from the chimneys, darkening the air above and making filthy the earth beneath.

[62] Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London: Routledge and Kegan Paul, 1966), 35.
[63] Douglas, 35-36.

> […]
> And along with the thickening smoke they began to notice another circumstance, a strange, pungent odour […] It was no longer something far off and faint, that you caught in whiffs; you could literally taste it, as well as smell it […]. The new emigrants were still tasting it, lost in wonder, when suddenly the car came to a halt, and the door was flung open, and a voice shouted—'Stockyards! (31-32)

Sinclair's repeated use of the term 'filthy' echoes the imagery used by Roosevelt, who chastised as evil those who failed to look beyond the filth on the floor. This becomes a challenge, however, when no matter where one looks everything is filthy. The environment of the stockyards causes discomfort for Jurgis and family on multi-sensory levels: the ugly vistas, rattling of freight cars, and strange odours which can be tasted as well as smelled. In this sense the residents of Packingtown are forced into engagement with their own organicism, particularly through the pungent odour, by which the filth enters their bodies.

Jurgis Rudkus, like most immigrants, did not come to America with the intention of living in filth, quite the opposite, he had 'dreamed of freedom; of a chance to learn something; to be decent and *clean*' (165—my emphasis). When Jurgis first arrived at the stockyards, he had been like many others, 'as clean as any working man could well be.' But due to a combination of the 'sickness and cold and hunger and discouragement, and the filthiness of his work, and the vermin in his home, he had given up washing in winter, and in summer only as much of him as would go into a basin' (256). With all of their time spent working to acquire the food to continue working it is no surprise that Mrs Jukniene, too, 'had definitely given up the idea of cleaning anything' (35). Even if Jurgis and his compatriots had the time or energy to clean themselves or their houses, the nature of their work and the environment in which they are forced to live would only ensure that their efforts were undone. Living and working in the most concentrated slaughter operation in the world, there is no keeping the 'fetid odour' out of their homes or bodies: 'a ghastly odour, of the all the dead things of the universe' (36).

According to Freud, mankind's physical rise from a quadruped to a biped set in motion a chain of events beginning with 'the devaluation of the olfactory stimuli' towards 'the time when visual stimuli were paramount and the genitals became visible and thence to the continuity of sexual excitation, the founding of the family and so on to the threshold of civilization.'[64] This physical rise prompted psychological associations between the lofty specular sense (which sees only the exciting spectacle of slaughter), and the lowly olfactory sense (the flesh-and-blood side of it). In this sense one's social standing can be linked to one's ability to stand on two feet, unluckily for quadrupedal animals. To really understand why smell is associated with the dirty requires us to recall Mary Douglas's definition of dirt as matter out of place. The problem with odours is that they 'cannot be readily contained, they escape and cross boundaries, blending different entities into olfactory wholes.'[65] Smells do not respect binary categories; even the line separating a good from a bad smell is, according to Dominique Laporte, 'a fragile boundary.' Following the smell of fresh flowers or manufactured perfume back to its source reveals, for Laporte, 'that all smell is tendentially the smell of shit.'[66] It was through the olfactory sense that the dirty could most easily contaminate the bodies of the clean. Hence, zoning plans ensured that the "animals" (including those humans forced to work in close proximity to nonhuman livestock) were kept well out of sight (and smell) of the "civilised."

Sinclair was frequently accused of exaggerating many negative aspects of the Packingtown worker's life, although notably these accusations tended to come from the

---

[64] Sigmund Freud, *Civilization and Its Discontents* [1930], ed. by Leo Bersani, trans. by David McLintock (London: Penguin, 2002), 41-42. Cary Wolfe discusses the central problem with Freud's theory, which is that 'the human being who only becomes human through an act of 'organic repression' has to *already* know, before it is human, that the organic needs to be repressed […].' See Cary Wolfe, 'Faux Post-Humanism, or, Animal Rights, Neocolonialism, and Michael Crichton's *Congo*', *Arizona Quarterly*, 55.2 (Summer 1999), 115-153, 118.

[65] Constance Classen, David Howes, and Anthony Synnott, *Aroma: The Cultural History of Smell* (London and New York: Routledge, 1994), 4.

[66] Dominique Laporte, *The History of Shit* [1978], trans. by Nadia Benabid and Rodolphe el-Khoury (Cambridge, MA: The MIT Press, 2002), 103, 104.

packers rather than the workers.[67] His depictions of the dirty and unsanitary conditions of the yards, however, are a matter of historical fact. Breckinridge and Abbott remarked that a combination of muddy, unpaved streets, a lack of pavements, and the absence of a proper sewer system made 'outside insanitary conditions as bad as any in the world.'[68] The study goes on to suggest that such filthy living conditions cannot fail to impact upon the character of those who live there:

> No other neighbourhood in this, or perhaps in any other city, is dominated by a single industry so offensive in character. Large numbers of live animals assembled from all section of the country, processes of slaughtering and packing, the disposition of offensive animal waste, constitute an almost unparalleled nuisance. South Chicago lies under the smoke-shadows of the steel mills, and in those mills are dangers to life and limb, blinding glare from the furnaces, magnificent exposure and terrible peril; but the influence upon the neighbourhood is rather terrifying than degrading. In the Stockyards, on the other hand, are the mingled cries of the animals awaiting slaughter, the presence of uncared-for-waste, the sight of blood, the carcasses naked of flesh and skin, the suggestion of death and disintegration—all of which must react in a demoralizing way, not only upon the character of the people, but the conditions under which they live.[69]

Subjected to degrading physical living and working conditions, immigrants in the stockyards appeared, on the surface, to embody the moral degradation associated with dirt in the minds of racist locals. However, as this report suggests, such conditions can cause psychological as well as physical degradation in those who make their lives there. The sights and sounds are demoralising not only in the sense of causing upset, but can also be *de-moralising*, forcing perfectly moral people into committing immoral acts out of desperation and then having this cited as evidence of their barbarism which was assumed from the beginning. Ona is forced to prostitute herself to Connor in order to pay doctor's fees, and when Jurgis learns of this he,

[67] For examples of such accusations, see J. Ogden Armour, *The Packers, the Private Car Lines, and the People* (Philadelphia: Henry Altemus Co., 1906), cited in *The Jungle: A Norton Critical Edition*, ed. by Clare Virginia Eby (New York: W. W. Norton & Company, 2003), 377-378.
[68] Breckinridge and Abbott, 433.
[69] Ibid.

too, is driven to actions he would never have entertained before. His violent attack on Connor is not described as a fair fight between two human beings, but rather as a predatory animal hunting its quarry: '[Jurgis] understood that he was losing his prey. In a flash he had bent down and sunk his teeth into the man's cheek; and when they tore him away he was dripping with blood, and little ribbons of skin were hanging from his mouth' (183). Following the savage attack, Jurgis is convicted and sent to jail, with no hope of paying his three hundred dollar bail. As the bells ring outside for Christmas Day, Jurgis thinks of his children who, with himself in jail and Ona ill, have little hope of survival. To the civilised urban populace, Jurgis realises, 'he was of no consequence; he was flung aside like a bit of trash, the carcass of some animal' (192). As human waste, as meat, Jurgis is helpless to affect the fate of his children and Ona, who herself has been reduced to the value of her flesh by Connor. Jurgis, in his own view, has been treated like a 'wild beast, a thing without sense or reason, without rights, without affections, without feelings.' In fact, Jurgis goes on to suggest that he has been treated *worse* than a nonhuman animal in Chicago: 'Nay, they would not even have treated a beast as they had treated him! Would any man in his senses have trapped a wild thing in its lair, and left its young behind to die?' (193). While physical proximity to dirt and animal death is suggestive of evolutionary proximity, the equation in *The Jungle* between the treatment of human workers and nonhuman animal in Packingtown must end at the suggestive—the material differences remain stark and sinister. While the living conditions of workers were appalling, they were nothing compared to the *dying* conditions of countless other animals.

According to the census of 1910, there were 48,413 people living in the one square mile of streets to the West and South of the Stockyards known as Packingtown.[70] These ratios

[70] J. C. Kennedy and others, *Wages and Family Budgets in the Chicago Stockyards District* (Chicago: University of Chicago Press, 1914), 4, cited in Eby, 396.

led to over 1,981 violation of the overcrowding law, and for Breckinridge and Abbott to bemoan the 'demoralizing lack of privacy' afforded to the workers.[71] The accommodation of the nonhuman animals, however, was somewhat more demoralising. As described by Jurgis on his first day as a Stockyard worker: '[A]s far as the eye can reach there stretches a sea of pens. And they were all filled—so many cattle no one had ever dreamed existed in the world […] as for counting them—it would have taken all day simply to count the pens' (40-41). The actual number of animal pens Jurgis would have counted is 2,300, contained within a 100-acre area (approx. 0.4 km^2), and capable of holding a maximum of 21,000 cattle, 75,000 hogs, 22,000 sheep, and 200 horses—at the same time.[72] Already likely to be caked in faeces from long train journeys, and given the fact that animals often defecate when introduced to the unfamiliar and frightening environment of a slaughter facility,[73] the nonhuman animals of Packingtown are forced into conditions so physically degrading as to be unthinkable for even the most (supposedly) morally inferior human beings—yet no overcrowding laws were violated.

It might be expected that the multiple equations of human and animal suffering throughout *The Jungle* would have the effect of eliciting sympathy for the animals.[74] However, by suggesting that the experiences of workers and livestock at the slaughterhouse are equivalent, Sinclair demonstrates the discrepancy between what is considered cruel (and illegal) treatment of humans and their nonhuman counterparts. Human beings may be subject to demoralisingly cramped and dirty conditions, but these seem practically palatial compared to the animal pens. Workers might accidentally suffer injury or even death in their jobs at the

[71] Breckinridge and Abbott, 461.
[72] William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton & Company, 1991), 210.
[73] Paul Shapiro, *Clean Meat* (New York: Gallery Books, 2018), 12.
[74] The hogs are described as being 'so very human in their protests' (44); the packers are described as 'grinding down' the workers, as they would the carcass of an animal (82); workers are 'rats in a trap (83); and Jurgis is 'one of the packer's hogs' (376)—these are but a few examples from *The Jungle*.

slaughterhouse, but animals are literally brought there to die. As Marian Scholtmeijer points out, nonhuman animals 'are by far the most persecuted victims of the meat-packing industry,' and by using animal suffering simply as a mechanism to expose comparably smaller-scale human suffering, Sinclair himself is to some extent guilty of exploiting animal death for human gain.[75] The limit of the public's sympathy for animal welfare can be ascertained from the reforms which followed publication of *The Jungle*. The Pure Food and Drug Act of 1906 was welcomed by readers who were appalled not by Sinclair's descriptions of worker and animal conditions of life and death, but by the suggestion that their meat products were dirty. 'I aimed at the public's heart,' wrote Sinclair in response, 'and by accident I hit it in the stomach.'[76]

There were, of course, valid concerns raised about the quality of the meat being produced in the Packinghouses. Exposing the muck, waste, and other objectionable features of the meat industry was one of Sinclair's obligations as a muckraker. 'They don't waste anything here' (42), is the repeated and exalted claim made by the slaughterhouse guide in *The Jungle*, one based on the historical boasts of real-world meatpackers.[77] In the Progressive era, the notion of efficiency was linked to cleanliness just as strongly as the notion of waste was linked to dirt. Consequently, it followed that because the efficiency of the mechanised slaughterhouse reduced waste *by definition*, the meat which it produced must therefore be cleaner. As William Cronon indicates, however, the packers had specific 'waste disposal' products which enabled them to pass off inedible materials as foodstuffs:

> Bologna sausage became a great waste disposal product because it could hide a multitude of sins. Once ground up and combined with spices and potato flour, all manner of body parts could go into it: inferior meats that drew lower prices on the open market, meat from

[75] Marian Scholtmeijer, *Animal Victims in Modern Fiction: From Sanctity to Sacrifice* (Toronto: University of Toronto Press, 1993), 153.
[76] Upton Sinclair, 'What Life Means to Me', *Cosmopolitan*, 41 (Oct. 1906), 594.
[77] See note 36.

> diseased cattle, meat that had spoiled and begun to smell, sweepings from other production processes, even sawdust and dirt.[78]

The fact that the packers' produce had been "processed" to such an extent that consumers did not even know what they were eating represents arguably the most important achievement of the mechanised meatpacking industry—the severing of meat from its animal origin. It was the innovations of famous Chicago packer Gustavus Swift that gave rise to the pre-cut and packaged meat parcels we see in supermarkets today. Prior to Swift's marketing techniques, customers would ask a butcher for their desired "cut," which would then literally be cut from an animal carcass. The more accustomed people became to Swift's products, 'the more easily they could fail to remember that their purchase had once pulsed and breathed with a life much like their own.'[79] This willing amnesia on the part of consumers, this societal forgetfulness, is exactly what Norbert Elias was referring to when he noted that people, 'in the course of the civilizing process, have sought to suppress in themselves everything that they feel to be of an "animalic character." They have likewise suppressed such characteristics in their food.'[80] Noëlie Vialles's interpretation of the mechanised slaughterhouse also lends support to the idea that machine technology interposes between the animalic and the civilised to maintain a level of human exceptionalism. "Dirty" animals go in at one end of the process, and "clean" products come out at the other—this idea, Vialles argues, is reflected in the different sectors of the slaughterhouse:

> Clearly, the "dirty sector" is the realm of the warm, the moist, the living, of smells and secretions, of the biological threat that needs constantly to be contained and cleared up. The "clean sector," on the other hand, is where everything is inert, bloodless, trimmed, and stabilised by cold.[81]

---

[78] Cronon, 252-253.
[79] Cronon, 256.
[80] Elias, 102.
[81] Noëlie Vialles, *Animal to Edible* [1987] trans. by J. A. Underwood (Cambridge: Cambridge University Press, 1994), 35. Timothy Pachirat confirms this division of the modern slaughterhouse into "Clean" and "Dirty" sectors based on whether the animal is alive or dead. See Pachirat, 61-72.

The primary goal of mechanised slaughter, then, can be described as the "deanimalisation" of animal flesh, lest humanity allow something of animalic quality to enter our civilised bodies.

Any literal interpretation of the "clean sector" in Progressive era slaughterhouses was banished by Sinclair's exposure of the mucky meatpacking practices in Chicago's Packingtown. It is Jurgis's father, old Antanas, who is first to experience the 'cleaning out' process at Durham's packinghouse, which, as it turns out, involves scraping out traps in which scraps of meat and 'odds and ends of refuse' had been caught for days: 'it was the old man's task to clean these out, and shovel their contents into one of the trucks with the rest of the meat' (76). One of Sinclair's contemporaries, Theodore Dreiser (whose work is among those analysed in Chapter Two of this thesis), wrote for popular magazines such as *Success* before pursuing a career as a novelist. Among those he interviewed was Philip D. Armour, owner of the largest Packinghouse in Chicago (at the time). Armour claimed during the interview, conducted in 1898, that the principal advantage of concentrating meat production and adopting new 'mechanical' improvements was that 'the health of the city' would no longer be 'injured' by the many parts of cattle that were wasted under less efficient methods.[82] But as Sinclair was at pains to demonstrate, the 'health of the city' was hardly the packers primary motivation. 'Under the system of rigid economy which the packers enforced,' Sinclair writes in *The Jungle*, 'there were some jobs that it only paid to do once in a long time, and among these was the cleaning out of the waste barrels.' The refuse from the annual clean would then be 'dumped into the hoppers with the fresh meat, and sent out to the public's breakfast.' The Bologna sausage identified by Cronon is then referenced specifically as 'smoked' sausage, which, because of the extra processes required to mask the taste and texture of the spoiled meat, dirt, and detritus, would be labelled 'special,' and priced at 'two cents more a pound' (164). If horse excrement was identified as the most objectionable visual

[82] Dreiser, 1-2.

and olfactory example of waste in Progressive civilisation, then readers of *The Jungle* would not have been too happy at the suggestion that 'a man could run his hand over these piles of meat' sat in leaky storerooms, 'and sweep off handfuls of the dried dung of rats' (163). The complete separation of meat production from the eyes and ears (and noses) of the consumer worked both ways: one couldn't have the luxury of "forgetting" what went into one's sausages whilst also remaining aware of their contents.

The mechanical grinding up and deforming of meat in the slaughterhouse severs any connection that the finished product had with the animal it came from. In fact, the very notion that the canned products from Durham's packinghouse had any single animal origin is unpacked by Sinclair. The product sold as 'potted chicken' is discovered by Jurgis to contain not chicken at all, but rather a mixture of 'tripe, and the fat of pork, and beef suet, and hearts of beef, and finally the waste ends of veal, when they had any' (117-118). The 'potted game' and 'potted grouse,' 'potted ham' and 'devilled ham,' are all shown to come from the same hopper, with only the arbitrary markers of name and price to distinguish one from another. Similarly, Jurgis reports, 'a good part of what [the public] buys for lamb and mutton is really goat's flesh!' (118). As Vinciane Despret notes, this 'transformation of the dead into something else that no longer recalls its origin results from the work of what the sociologist Catherine Rémy calls the "deanimalization" of the animal.'[83] This further level of separation between the living, breathing animal and the miscellaneous meat product of the slaughterhouse makes it easier for the human consumer to forget not only the endemic violence of this process, but also that they are allowing something animalic to breach their civilised bodies.

[83] Vinciane Despret, *What Would Animals Say If We Asked the Right Questions?*, trans. by Brett Buchanan (Minneapolis and London: University of Minnesota Press, 2016), 83.

One final observation from *The Jungle* returns the argument to The Parable of Horseshit, and to concerns about waste, efficiency, horses, and automobility. I referred earlier to the fact that it was not only animal waste which was clogging up the streets of urban American cities, but *waste animals*—the bodies of horses who collapsed in the streets from exhaustion and overwork. These carcasses were frequently removed for free by Packinghouses, ostensibly to render them down into fertilizer and other products. Sinclair, however, draws attention to the fact that only a few years prior to the publication of *The Jungle*, 'the newspapers had been able to make the public realise that horses were being canned' (118). Despite acknowledging that 'it was against the law to kill horses in Packingtown, and the law was really complied with' (118), Sinclair says nothing about horses which were killed (or died) elsewhere. Readers are left to understand for themselves that since they have no idea what goes into the meat products, they would have no way of knowing whether their potted chicken was potted horse.

Later on in his interview with Philip Armour, Theodore Dreiser asks the Packinghouse magnate what he does 'after your hard day's work,—think about it?' Armour replies: 'Not at all, I drive, take up home subjects, and never think of the office until I return to it.' Dreiser goes to the trouble of adding up some of the business which Armour is able to avoid thinking about: 'The hogs killed [in 1897] were 1,750,000; the cattle were 1,080,000; the sheep, 625,000.' Driving an automobile is Armour's first and foremost distraction from the more-than-three-million animals slaughtered on an annual basis in his Packinghouse, so effective is it as a method of placing physical and mental distance from unsavoury subjects, that 'at half past four he is done, and the whole subject is comfortably off his mind.'[84] The

[84] Dreiser, 2. Philip D. Armour died of pneumonia in January, 1901, when his meatpacking business was passed on to his eldest son, J. Ogden Armour.

remainder of this chapter will consider the automobile as an example of machine technology which interposes between clean, human civilisation, and its dirty material consequences.

The Ethics of Motoring

The opening of Upton Sinclair's *Oil!* is essentially an homage to automobility. The novel's two central characters, oil magnate J. Arnold Ross (henceforth Ross) and his son Bunny, speed down a 'smooth and flawless' Southern California road in their powerful car, a million miles away from the plights of Jurgis and the animals of *The Jungle*.[85] In Dreiser's interview with P. D. Armour, we saw that the "captain of industry" was able to dissociate himself from the stresses of the working day by taking a drive, and the description of motoring in the first section of *Oil!* (from the perspective of the innocent thirteen-year-old Bunny) demonstrates what it is about automobility that enables this kind of escape. More than just the feeling of putting physical distance between the driver and the geographical source of their troubles, the car creates a separate mental space in which a different set of social and ethical rules apply—in the words of Ross, these constitute the 'ethics of motoring' (1). Travelling forward at high speed, the driver does not have the opportunity to worry about the consequences of their actions: 'You never looked back; for at fifty miles an hour, your business is with the things that lie before you, and the past is past—or shall we say that the passed are passed?' (3). Not only does this kind of attitude discourage reflection and accountability (if one is only ever looking ahead), but also maps on to the Progressive ideals of technology as a civilising force. Progressive in the most literal sense of the word, the automobile propels its owner ahead of anyone, or anything, travelling slower. The association of the 'passed' with the 'past' reinforces the notion that speed and power of machine technology represents the future, while

[85] Upton Sinclair, *Oil!* [1927] (London: Penguin, 2008), 1. Henceforth cited parenthetically.

those moving slower are viewed as comparatively regressive. Ross anticipates a time when 'it would be forbidden to drive less than forty miles an hour on state highways, and people who wanted to drive spavined horses to tumble-down buggies would either have to go cross-lots or stay at home' (3-4). According to the ethics of motoring, once the horse is passed, it is in the past, and the past is history. As Bunny informs us later on, his father 'shared the opinion of the manufacturer of a nationally advertised automobile—that history is mostly "bunk"' (20).

Kristin Ross's concept of 'panoramic perception' provides another way of understanding the insulated, dissociative experience of driving. Such perception, Ross claims, 'occurs when the viewer no longer belongs to the same space as the perceived object.'[86] If we think back to Shukin's discussion of the cinematic qualities of mechanised slaughter earlier in this chapter, and Muybridge's zoopraxiscope which created a moving image of Occident the horse, we can start to understanding how these technologically mediated experiences establish a kind of screen between the (human) viewer and the perceived object. Although Ross's discussion of 'panoramic perception' and the separation of the driver from the scenes they drive through is more applicable to later automobile designs, which create an entirely separate environment from that outside the car (through fully enclosed interiors, temperature control, and sound systems), there is also evidence of this phenomenon in *Oil!*. From the passenger seat in his father's car, Bunny is aware of the speed at which they are travelling, but is sheltered from its physical impact by another kind of screen: 'The cold wind of morning whistled by, a storm of motion, a humming and roaring with ever-shifting overtones; but you sat snug behind a tilted wind-shield, which slid the gale up over your head' (1). The power of the automobile renders the landscape homogenous, '[g]rades made no difference,'

[86] Kristin Ross, *Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture* (Cambridge, MA & London: MIT Press, 1995), 38.

Bunny notes, as 'the fraction of an ounce more pressure' on the accelerator causes the car to race on 'up, up, up' (2). The drivers of such vehicles are able to travel at (what were at the time) incredible speeds whilst remaining safe in the knowledge that, should they hit anyone not driving an automobile, they will certainly come off the better. As Ross hurtles around corners, sounding the car's horn loudly, Bunny describes the noise as 'sharp and military,' with 'no undertone of human kindness.' In the ethics of motoring, however, 'there is no place for such emotions—what you want is for people to get out of the way, and do it quickly, and you tell them so' (4-5). The onus is on other people to make way for the automobile driver. Returning to the image of Philip Armour driving his car home to relax after a day in the slaughterhouse offices, I argue that aspects of the driving experience—the ethics of motoring—reinforce Progressive faith in technology as a civilising tool. Just like in the mechanised slaughterhouse, there is no room for 'human kindness,' nothing to be gained from dwelling on the material consequences of one's decisions (the past is past), and anyone who stands in the way of progress only endangers themselves.

Ross's greatest annoyance while driving are those who fail to make way for his onrushing automobile, such as the 'Mexicans in tumble-down buggies, who failed to keep out on the dirt where they belonged […]' (3). Buggies, in this sense, refer to carriages which would have to be drawn by horses.[87] The association of immigrants and animals with obstacles to progress echoes racist rhetoric seen most explicitly in *The Jungle*. The road is 'smooth and flawless […] unmarred by bump or scar,' and thus is the territory of "clean" machines and civilised people; the Mexican immigrants and horses, representing the past/passed, belong in 'the dirt.' Ross continues to animalise immigrants throughout the novel, but on one of these occasions he exposes an irony in the notion that such people should

[87] For an example of this usage of the term 'buggy' from 1912 (the year in which the opening part of *Oil!* is set) in an automotive context, see 'Ohio and Jewel Now One', *The Horseless Age*, 29.5 (31 Jan. 1912), 279.

stay off the road. When Bunny asks what 'magic' created the concrete highway on which they are driving, Ross glibly replies that 'money had done it,' before elaborating to explain that those responsible for the actual building of the road were 'swarming Mexicans and Indians, bronze of skin, armed with picks and shovels […]' (5). Just like the dehumanised workers in *The Jungle*, who carve up the bodies of other animals to be consumed in civilised society, these 'swarming' builders prepare the very infrastructure from which they are excluded (as Chapter Four will discuss further). In fact, the fruits of their exploitation actually enable those who provide the money to dissociate themselves from the workers' plight. Whether it is Armour taking a drive to forget about the squalid living and dying conditions of his Packingtown business, or Ross ignoring the past/passed, the attitudes of the powerful toward automobility can be summed up by Vee Tracy (the Hollywood actress who aims to marry her 'oil prince' Bunny): '[I] jump into my car and drive fifty miles an hour to get away from troubles, and from people who want to tell me theirs!' (342-343).

Bunny's acknowledgement of and sympathy for those considered "dirty" by civilised society is one of the qualities which sets him apart from his father and the wealthy elites he meets at school. Despite being accepted into such an exclusive crowd in part because he 'drove to school in a car of this year's model' (109), Bunny's ethics are not those of motoring. He is alert to the dangers of getting too comfortable and forgetting that his automobility is dependent on those who toil on his family's oil fields, who provide not only the income necessary to purchase the car, but also the fuel to run it. As Bunny drives out to the Prospect Hill oil field, his experience of the scene is mediated through the technology of the automobile, which keeps him at a distance from the work itself, and provides only a fleeting glance of the scene before it recedes into the past. It is this 'panoramic perception' that enables him to imagine the dirty and dangerous oil field in a very different way to the workers, for whom material reality is there only mode of experience:

> When you came near, you heard a roaring and a grumbling, as of Pluto's realm; at night there was a sense of enchantment, a blur of white and golden lights, with jets of steam, and a glare of leaping flame where they were burning gas that came roaring out of the earth, and which they had no way to use. (113)

Viewed from the safety of the automobile, the scene takes on a mythical quality. Although Pluto's realm may be the underworld, it is significant that Sinclair uses the name Pluto (as opposed to his Greek counterpart Hades), as this evokes Plutus, the god of wealth, so named because as a subterranean god he was thought to control mineral wealth—in this case oil. Rather than accepting this naïve and fantastical view of the oil extraction process, however, Bunny re-evaluates his own interpretation, acknowledging the role of the automobile in mediating his experience:

> Yes, when you drove past, sitting in a comfortable car, you might mistake it for fairyland. You had to remind yourself that an army of men were working here, working hard in twelve hour shifts, and in peril of life and limb. […] Then your fairyland was turned into a slaughter-house, where the many were ground up into sausages for the breakfast of the few! (113)

As Bunny is vigilant in reminding himself, all that it takes to turn fairyland into Hell is actually looking at what is happening. The flashing lights viewed from the flashy car almost obscure the fleshy corporeal workers, whose fleshiness is emphasised by the evocation of the slaughterhouse. Echoing Norbert Elias's assessment of the civilising process referenced earlier in this chapter, it is not the fact that this dangerous and exploitative work takes place that threatens the veneer of civilisation, but that someone might witness it.

The notion that 'the many' (oil workers) were 'ground up' into sausages for the few not only serves the metaphorical purpose of drawing the slaughterhouse workers of *The Jungle* together with the oil workers of *Oil!* (as well as the meat and automobile industries), but also emphasises the physical danger that industrial machinery poses to organic life. Ross is notably unsympathetic when it comes to the wellbeing of his employees, complaining to

Bunny about ‘the shiftlessness of the working-class he had to employ.’ On discovering a worker with his head and fingers trapped between a chain and a bull-wheel, Ross’s response is to dismiss those who ‘ain’t got sense enough to take care of their own fingers, to say nothing of their heads […]’ (68). On this occasion, the man survives, but it is not long before another worker is ground up, this time with fatal consequences. Joe Gundha falls head-first into the drill hole, which was ‘a kind of funnel, its edges slippery with mud, and in this case with traces of oil,’ and drowns in the mud. This horrifically elemental death is followed by the brutal treatment of Gundha’s body, which is now simply matter causing an obstruction, a blockage that must be cleared to resume efficient functioning. Ross makes it clear that he does not want Bunny around when the ‘torn body’ is hauled up out of the hole, and thus Bunny ‘turned the car in silence, and drove away.’ Rather than looking at the material cost of their business, at who pays the real price for their automobility, Bunny is forced to retreat by that very means. As his father understands, these horrific images are best left in the past, as ‘the less you thought about a thing like that, the better for your enjoyment of the oil-game!’ (153).

As with the previous case of panoramic perception, however, Bunny is not able to leave these consequences behind him. This incident also provokes in Bunny a realisation that it is not only the suffering of human workers which is a permissible (if hidden) part of civilisation, but also that of nonhuman animals. As the Ross family sit down to Thanksgiving dinner, Bunny begins to make connections: ‘You lived in the little narrow circle of your own consciousness, and, as people said, what you didn’t know didn’t hurt you.’ Bunny contemplates not only the death of Joe Gundha, but also all the other oil workers in distant parts of the country who suffered similar fates, as well as ‘all the men who were dying over there in Europe,’ and wonders why these remote deaths do not trouble him simply because they happen out of sight (155). In an attempt to take his mind off these objectionable

thoughts, his father suggests that they 'go quail shooting, and forget what they couldn't help.' But Bunny cannot so easily segregate different types of killing: 'in truth he didn't enjoy the sport, because in his mind somehow the quail had got themselves mixed up with Joe Gundha and the soldiers in France, and he couldn't get any fun out of mangled bodies' (156). The fate of such soldiers in France, and their relevance to the key questions of this thesis, is discussed at length in Chapter Three.

The fact that Bunny views animals *as animals*, rather than simply game or food, is a crucial difference between he and his father, and their varying attitudes reveal much about the position of animals in the ethics of motoring. The previous quotation from Bunny is not the first time we hear of his pity for quail. A reluctant hunter, Bunny nonetheless joins his father on a few trips as 'it was the only way you could get him away from his work, and out into the open, which the doctor said was good for his health.' However, Sinclair informs us that:

> Bunny didn't really care very much about killing quail, he was sorry for the lovely black and brown birds, that had such proud and stately crests, and ran with such quick twinkling legs, and made such pretty calls at sundown. (95)

For his father, the hunting of quail and his oil riches are implicitly linked, as it is on this very hunting trip that they first discover oil under the Watkins' ranch. Not wishing to arouse suspicion, and have to pay a fair price for the land, Ross pretends that he wishes to purchase the land so that he and his son might have somewhere to go quail hunting whenever they liked. 'I happen to be jist crazy about quail shooting,' Ross informs the town's real estate agent, '[b]ut get this clear, I can shoot quail on one hill jist as good as on the next—and I don't let nobody mistake me for a quail!' (104). For Bunny's father, the quail can be game, a bargaining ploy, or one to be exploited—anything but quail in their own right.

Bunny's sympathy for nonhuman animals extends into his adulthood, when he has a curious meeting with a group of seals close to the oil baron Vernon Roscoe's mansion. After

acknowledging the seals out on the rocks, Bunny 'made sure he was alone, and then undressed and waded out into the water' (336). Not alone, but without any other humans to acknowledge his nudity, Bunny proceeds into the water, where the 'attention of the seals became riveted upon him […]' (336). He does not experience the 'malaise' of being seen naked by a nonhuman animal experienced by Jacques Derrida in front of his cat—'the impropriety of a certain animal nude before the other animal […].'[88] Bunny's father has previously emphasised the importance of dressing appropriately at all times, 'for clothing was part of a man's dignity, a symbol of his rise in life' (7), as if to confirm Derrida's assessment that clothing could be called one of the 'properties of man.'[89] Yet Bunny does not feel this shame in front of those who, although naked, do not *know* that they are naked, and therefore, Derrida would argue, are not naked.[90] Arguably, Bunny does not see himself as superior to these animals, and so the notion that his clothes represented his *rise* does not occur to him. In an equally un-anthropocentric position, he does not regard the seals as incapable of communication, but rather acknowledges that it is he 'who does not know their language,' and thus the abyss of incomprehension that stands between them does not exist because of the seals' shortcomings, but his own limited understanding. Wondering '[w]hat must it be like to be a seal?' is as far as Bunny is able to go toward answering that question. 'What did they think concerning this arrogant being who commandeered their resting places?' (337). An attempted empathy with these fellow animals is the best Bunny can hope for, but this exchange establishes that he at least considers animals as sentient beings, not machines, with their own individuality and means of communication. Sinclair ends this passage with the assertion: 'Thus Bunny—just the same at the age of twenty-one as when we first met him, driving over the Guadalupe grade and speculating about the feelings of ground-squirrels and

[88] Jacques Derrida, *The Animal that Therefore I Am* [2006], ed. by Marie-Louise Mallet, trans. by David Wills (New York: Fordham University Press, 2008), 4.
[89] Derrida, 5.
[90] Ibid.

butcher-birds' (337). These speculations made right at the novel's beginning, from the passenger seat of his father's speeding automobile, are what enable Bunny to see the animals in automotive culture.

To better understand the significance of Bunny's way of thinking, it is first necessary to examine that of Ross. On these long drives, Sinclair informs us, Ross would often say nothing for hours at a time:

> The stream of his consciousness would be like a river that has sunk down through the rocks and sand, clean out of sight; he would be just a pervading sense of well-being, wrapped in an opulent warm overcoat, an accessory, you might say, of a softly purring engine running in a bath of boiling oil, and traversing a road at fifty miles an hour. If you had taken his consciousness apart, you would have found, not thoughts, but conditions of physical organs, and of the weather, and of the car, and of bank-accounts, and of the boy at his side. (14)

This ordered, rationalised way of thinking proceeds from one subject to the next like steps on a mechanised production line, concerned only with measurable quantities rather than abstract thoughts. As 'an accessory […] of a softly purring engine,' Ross is presented as part of a machine—an automobile specifically—whose 'consciousness,' such as it is, is assembled with precise components. His ethics are, quite literally, those of motoring. In this efficient arrangement, there is little room for superfluous notions of sympathy and empathy, and the only concern is dealing appropriately with what is right in front of him. Bunny, on the other hand, perceives life in an entirely different way, his thoughts jumping from theme to theme, and landing, more often than not, on other animals:

> There was a jackrabbit, racing away like mad; he had long ears, like a mule, and why were they so transparent and pink? There was a butcher-bird, sitting on the fence; he stretched his wings all the time, like he was yawning—what did he mean by that? And there was a road-runner, a long lean bird as fast as a race-horse, beautiful and glossy, black and brown and white, with a crest and a streaming tail. Where do you suppose he got water in these dry hills? (15)

As with the seals, Bunny is quick to attribute meaning to the actions of the animals, and although he does not presume to interpret these meanings, he equally does not assume that their actions are automatic or without significance. It is Bunny's attention to animal life that makes him alert to animal death. On the same stretch of road, Bunny suddenly notices 'a mangled corpse—a ground-squirrel had tried to cross, and a car had mashed it flat […].' The 'mangled corpse' anticipates the language used in the descriptions of Joe Gundha and the soldiers in France. Similarly, the oil workers who were 'ground up' into sausages are reflected in the body of the ground-squirrel, which is 'ground to powder' (15) by the wheels of car after car, an incessant mechanical process which obliterates all trace of the animal's original form—much like the Packinghouses of *The Jungle*. While Bunny is thinking about 'the poor little mite of life that had been so suddenly snuffed out' (15), the corpse of the ground-squirrel does not even register a blip for Ross or the automobile. For motorists such as Ross, and Progressives in general, animals are supposed to disappear once the automobile arrives. According to the ethics of motoring, animals belong in the dirt, not the roads, and death is a socially acceptable punishment for any animal insensible of this fact.[91]

The importance of looking at animals is emphasised further down the road, when Bunny and his father stop for lunch. Ross decides on 'fried rabbit,' whereas Bunny cannot bring himself to order the same—'not because of the cannibalistic suggestion, but because of one he had seen mashed on the road this morning. He chose roast pork—not having seen any dead pigs' (19). Evidently, it is more than just the one ground-squirrel that has joined the ranks of roadkill on their morning's drive. The fact that Bunny is able to eat the pork but not the rabbit is entirely down to the visibility of killing. Having just witnessed a live jackrabbit frolicking in the hills, followed by a dead one in the road, the rabbit on the menu now appears alarmingly close to its living counterparts. The pig, however, is at such a physical and

[91] Roadkill is discussed at length in Chapter Two.

conceptual distance that it is hard to believe that the cut of pork on his plate ever breathed like himself—even its name as food (pork) bears no resemblance to the living animal. Despite Bunny's sympathies not extending to the unseen pigs, however, his refusal to ignore the animals from the automobile results in his questioning the treatment of animals in other areas of human civilisation. While automobility was, for some, a distraction or abstraction from the deadly consequences of technological modernity, Bunny remains vigilant throughout the novel to what is, essentially, another parable of horseshit.

This way of looking is, in a way, paradigmatic of the aims of this thesis. While there is always a temptation to believe that automotive culture makes animals disappear, Bunny is constantly bringing them back *into evidence*, even when he is

> [s]ailing along up there close to the clouds, with an engine full of power, magically harnessed, subject to the faintest pressure from the ball of your foot. The power of ninety horses—think of that! Suppose you had had ninety horses out there in front of you, forty-five pairs in a long line, galloping around the side of a mountain, wouldn't that make your pulses jump? (5)

Ensuring that the term 'harnessing' maintains its equine evocations, Bunny is unwilling to allow the horse, which, in the words of Jonathan Crary, 'had been for thousands of years the primary mode of vehicular movement in human societies,' become symbolically dismantled and quantified into 'lifeless units of time and movement.'[92] Ross's very mode of thinking depends on subjects being broken down into exactly such measurable units; even his chain of car keys is 'symbolical of efficiency and order' (8). As a "captain of industry" whose wealth depends on the exploitation of other animals (human and nonhuman), it is perhaps unsurprising that the most important piece of advice Bunny recalls receiving from his father is 'to smile amiably over the foibles of human nature, and to go on gathering in the dollars'

[92] Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge, MA & London: MIT Press, 1999), 144.

(205). Unable to take this advice, however, Bunny repeatedly sticks his nose where it is not wanted: into the dirty and disreputable actions of his father's oil colleagues. Vernon Roscoe, known as 'the immaculate one' (468), is supposedly the very embodiment of cleanliness, efficiency, and civilisation, yet as soon as Bunny and his 'muckrakin [*sic*]' (442) friends start 'smelling around Verne's outhouse' (425), the immaculate one proves to be just as 'heavily smeared' (468) as any other criminal. Even the waste of the most Progressive industrialists, it would appear, still stinks.

The Paradox of Waste

At the turn of the twentieth century, large-scale mechanised production came to be associated with efficiency on the grounds that it paid to eliminate waste wherever possible, whatever the noneconomic cost. The role of the muckraker was to stick their nose where they were not welcome—around the outhouses—and expose these noneconomic costs to the public, revealing the often dirty material truths festering behind symbolic curtains. The excremental nomenclature of muckraking demonstrates a coalescence between the industrial waste products of capitalist enterprises and the biological wastes produced by animals—shit. Both are sources of pollution which threaten public health and the Progressive ideal of a clean and ordered civilisation, yet because horseshit was a tangible, material form of dirt, it was easier to target than the more imperceptible and diversified wastes of industrialisation.[93] One prime example of the latter kind of waste is that created by the automobile. Despite the assurances of automotive pioneer Charles E. Duryea that fumes from the internal combustion engine were entirely clean, the devastating environmental impact of burning fossil fuels is now well documented.[94] But further to this, there are the wastes in industries seemingly removed from

[93] For further discussion see Melosi, 43.
[94] See note 16.

everyday automobility which are nonetheless essential to its continuation. As is indicated by Steffan Böhm et al., the *auto* of *auto*mobility belies its dependence on what they term a 'regime' of interdependent systems and power structures which act in mutually supporting ways.[95] One example of this would be the automobile's dependence on oil. As a solution to the problem of municipal horse waste in the streets,

> […] access to cheap oil has to be maintained and enormous amounts of money have to be spent in order to explore, produce, transport, refine and store oil so that it can finally be consumed at a petrol station in Washington, London, or Berlin.[96]

Sinclair uses the final chapter of *Oil!* to suggest that the competitive business of oil extraction is itself an inherently inefficient system of resource management. Desperately trying to cash in on the discovery of oil on the Prospect Hill field (where Bunny's father made his money), hundreds and hundreds of individuals established wells to try to grab even a small share:

> Here had been a treasure of oil that, wisely drilled, would have lasted thirty years: but now the whole field was "on the pump," and hundreds of wells producing so little that it no longer paid to pump them. One sixth of the oil had been saved, and five-sixths had been wasted! (526)

Simply because modern machine technology made it possible to extract the oil from the ground in a short space of time does not mean that it was the most efficient course of action. If we recall descriptions of mechanised slaughter in this chapter, it was primarily the 'speed and power' of the process which prompted admiration from viewers. Equally, it was the speed and power of the automobile that seemed to propel it into the future. In all of these cases, speed appears to be the primary determining factor in Progressive ideas of efficiency, following Taylor's principles of scientific management which constantly demanded that if

[95] Steffan Böhm, Campbell Jones, Chris Land, and Mat Paterson, 'Introduction: Impossibilities of Automobility', in *Against Automobility*, ed. by Steffan Böhm, Campbell Jones, Chris Land, and Mat Paterson (Oxford: Blackwell, 2006), 3-16, 6.
[96] Ibid., 10.

something could be done faster—if time could be saved—then this was always to be desired. As Lewis Mumford has argued, however, the rapid (excessive) accomplishment of extraneous tasks is not to be confused with proficient organisation of production:

> We have with considerable cleverness devised mechanical apparatus to counteract the effect of lengthening time and space distances, to increase the amount of power available for performing unnecessary work, and to increase the waste of time attendant upon irrelevant and superficial intercourse. But our success in doing these things has blinded us to the fact that such devices are not by themselves marks of efficiency or of intelligent social effort.[97]

The assumption underpinning Progressive ideas of mechanised industry is that because it is profitable, it must therefore be efficient. However, as Sinclair's muckraking exploits demonstrate, the second that reducing waste becomes non-profitable, this principle is abandoned. As discussed in my analysis of *The Jungle*, Sinclair notes that the packers operate under 'the system of rigid economy,' and if there were certain jobs 'that it only paid to do once in a long time' (164), then these jobs will not be done more than the minimum frequency to maintain profit, regardless of the noneconomic impact. In the words of Cronon, waste 'was one of the symbolic paradoxes of meat-packing in Chicago' in the sense that, despite an apparent obsession with monetising even that which they should have thrown away, the packers 'did little to prevent pollution from the wastes that finally washed down their sewers.'[98] Sinclair's description of "Bubbly Creek"—the arm of the Chicago River that runs along the southern border of Packingtown—highlights this paradox of waste:

> […] all the drainage of the square mile of packing houses empties into it, so that it is really a great open sewer a hundred or two feet wide. One long arm of it is blind, and the filth stays there forever and a day. The grease and chemicals that are poured into it undergo all sorts of strange transformations, which are the cause of its name […]. (115)

[97] Lewis Mumford, *Technics and Civilization* (London: Routledge & Kegan Paul Ltd, 1934), 276.
[98] Cronon, 253.

Sinclair's description was based on first-hand observation, and is corroborated by an autobiographical account by a Lithuanian immigrant worker in the Stockyards from 1914, who claims that the river was 'so full of grease and dirt and sticks and boxes that it looked like a big, wide, dirty street, except in some places where it boiled up. It made me sick to look at it.'[99] Despite persistent claims from the Packers that nothing was wasted, the filthy waters ought to have served as evidence of pollution, equally if not more offensive than the horse excrement that dominated discourses of urban waste management. However, by 1871, city engineers had succeeded in reversing the flow of the Chicago River away from Lake Michigan (and the city's drinking water) and towards the Illinois River, where it flowed downstate to become someone else's problem—'out of sight, out of smell, out of mind.'[100] In a tactic typical of what Elias has called the civilising process, those objectionable features are removed from the purview of civilisation, without addressing their root causes. While Packingtown workers and downstate residents in the path of the contaminated Illinois River might well complain about the inefficiency of Chicago's answer to its waste problem, modern citizens could make similar complaints about the short-sightedness of hailing the automobile as an ecological saviour—selling future generations, as it were, down the river.

It is important to recognise the role of the automobile in reducing the amount of horse waste in urban environments. Without a rapid reduction in equine excrement, cities faced a public health crisis of almost unimaginable proportions, with experts even predicting the unglamorous demise of entire centres of civilisation.[101] The problem with repeatedly trotting out this parable of horseshit is that it encourages blind faith in technological solutions which, as we know from the current global ecological crisis, can have unforeseen negative impacts

[99] Antanas Kaztauskis, 'From Lithuania to the Chicago Stockyards—An Autobiography [1904]', cited in Eby, 388-395, 393.
[100] Cronon, 249.
[101] See note 10.

of their own. Ignoring such downsides, some critics continue to cite the parable of horseshit as reason to be sceptical of 'draconian regulations and disincentives for travel,' which were not necessary to solve the horse waste problem. 'Human ingenuity and technology,' argues Eric Morris, 'did the job.' Employing a strange logic, Morris suggests that this parable of how the automobile solved the climate crisis serves as evidence of how new technology will save us from the climate crisis—caused by the automobile: '[W]ith determination and inventiveness, perhaps one day the environmental consequences of the private car will be as dim a memory as the horse pollution crisis of the nineteenth century.'[102]

This kind of logic rests on the underlying assumption that technological advancements are, *de facto*, signs of civilisation and progress. As we have seen throughout this chapter, animals and the animalic have been increasingly associated with the dirty, the wasteful, the backward, and the uncivilised. Horses were named the cause of urban pollution while mechanised industries fed their waste into rivers (and sausage casings!) and automobiles belched out poisonous gases. The animals and the animalised immigrants of Packingtown lived and died in dirt and squalor while the Packers were hailed as models of efficiency. Animals became associated with the past once passed in an automobile, as the machine's speed and power seemed to embody the forward momentum of Progressive values, flattening everything that stood in its path. Like the 'wonderful machines' of this chapter's epigraph which distract from the 'flesh-and-blood' side of things, the automobile became a symbol for qualities which it did not necessarily materially possess. As the solution to the horse waste epidemic, the car symbolised cleanliness. Mass-produced according to the principles of scientific management and capable of moving at high speeds, the car symbolised efficiency. As a novel invention which replaced an archaic form of transport, the car symbolised modernity. Consequently, anyone who owned and operated an automobile also

[102] Eric Morris, 'From Horse Power to Horsepower', *Access*, 30 (2007), 2-9, 9.

acquired these imagined characteristics, distracting from their own animalic flesh-and-blood side of things. The next chapter will pay closer attention to the characteristics of automobiles, as they were increasingly represented as possessing animal qualities, such as emotions, sentience, and the capacity to suffer if mistreated. While such symbolic sentience provoked emotional attachment to cars, the material cost of such attachment was, once again, bourn by the nonhuman animals of automotive culture—the horses in horsepower.

CHAPTER TWO

Animals on the Road: An Ethic of (Car) Care in Early Road Narratives

> *It makes me feel sorry for an engine straining to do its level best, and I am impatient when they are shut up in a garage after a hard day's run without any appreciative oil or grease or kerosene in the cylinders. One might as well let a horse go supperless to bed.*
>
> —Louise Closser Hale, 1916[1]

The quotation in this chapter's epigraph is taken from one of the first examples of the American road-trip narrative—*We Discover the Old Dominion* (1916) by Chicago-born actor, playwright, and novelist Louise Closser Hale (1872-1933). Best known for her on-screen work in Hollywood from 1917 until her death in 1933, Closser Hale was also a frequent contributor to *Harper's*, and served as one of their wartime correspondents during the First World War. It was *Harper's* who suggested that Closser Hale publish an account of a long-distance automobile trip around Virginia, beginning and ending in New York City. Together with her husband Walter (also the novel's illustrator), their dog Toby, and an unnamed chauffeur, Closser Hale embarks upon an expedition with no particular destination, on which travelling by automobile is the purpose in and of itself. Her account was serialised across four issues of *Harper's* between August and November 1916, before being published as a single 'book for motorists' (297) that same year.

In the passage above, Closser Hale attributes animal characteristics to their automobile, and expresses sympathy for the machine which had been 'straining' to do its best. In this representation, the loyal service of the automobile is to be rewarded with proper care for its components, and failure to do so is equated with letting a hungry horse 'go

[1] Louise Closser Hale, *We Discover the Old Dominion* (New York: Dodd, Mead & Company, 1916), 163-164. Henceforth cited parenthetically.

supperless to bed' (164). In this sense, existing public sentiment for the horse is transposed onto the horseless carriage, fostering humane care for the machine that was itself only figuratively alive even as it replaced the animal which inspired such sentiment. Significantly, Closser Hale does not spare any concern for the team of horses required to pull their car out of the mud, nor for the chickens which need to be periodically removed from the motor's wheels (as we shall see), suggesting that while animals may play a significant symbolic role in automotive culture, they are afforded an ironic lack of care in any material sense. In other words, the irony to be investigated in this chapter rests on the imagined sentience of the automobile existing alongside a simultaneous disregard for the actual sentience of nonhuman animal life.

Closser Hale's narrative is by no means the only example of an early road-trip text which displays a tension between the material and symbolic representations of animals and automobiles. Historian Douglas Brinkley claims that it was in the year 1916 that the automobile came to 'the forefront of American literature.'[2] Factors including the completion of the Lincoln Highway (the first coast-to-coast road across the United States) in 1916 and the outbreak of the First World War cutting off popular European tourism destinations contributed to an explosion of road narratives documenting the automobile trips of those who ventured out to '*See America First*.'[3] Brinkley identifies Theodore Dreiser's *A Hoosier Holiday* (1916)—published a matter of months before Closser Hale's text—as heralding the 'birth of the road book,' defined as a commercially published narrative structured around a road-trip undertaken by automobile.[4] Sinclair Lewis is another writer known to have taken

[2] Douglas Brinkley, 'Introduction: Theodore Dreiser and the Birth of the Road Book', in Theodore Dreiser, *A Hoosier Holiday* [1916] (Bloomington: Indiana University Press, 1997), 3-12, 4.
[3] For further discussion on the role of the *See America First* advertising campaign, see Andrew Vogel, ''Change in fixity': Theodore Dreiser's *A Hoosier Holiday* and the commitment to American automobility', *Studies in Travel Writing*, 17.2 (2013), 145-159, 145.
[4] Brinkley, 3.

such a trip in 1916, covering the two thousand miles from Minneapolis to Seattle with his wife, Grace Hegger Lewis. This journey was the inspiration for what became *Free Air* (1919), a fictionalised account of protagonist Claire Boltwood's drive along the same route. Although there are other examples of early road narratives from the 1910s in which automobiles are attributed animal characteristics, the works of Closser Hale, Dreiser, and Lewis stand out in that they also afford nonhuman animals a greater role than as simply part of the scenery.[5]

This chapter will preface textual analysis of these road narratives with some background on the significance of the humane movement in early automotive culture—a Progressive initiative to reduce (visible) animal suffering spearheaded by the Society for the Prevention of Cruelty to Animals (SPCA). As well as providing further practical rationale for civilisation to reduce its reliance on horses, the movement's spirit of care for sentient life also found its way into automotive nomenclature, playing on the public's sentimental attachment to horses as reason to substitute them for machines. Examples of this phenomenon will be discussed alongside the work of automotive historian Imes Chiu, whose study of early automotive advertising demonstrates why it was necessary for car manufacturers to emphasise the automobile's similarities to the horse, as well as its differences. Translating automobiles into 'an equine idiom'[6] was an important tactic in increasing the cultural acceptability of this new form of transportation, rendering the horse obsolete whilst co-opting its symbolic value.

---

[5] Examples of automotive texts from the period which feature symbolic representations of animals include Thomas and Agnes Wilby's *On the Trail to Sunset* (1912), in which cars are variously described as "cat-like," "purring," and "roaring." Similarly, Beatrice Larnard Massey's *It Might Have Been Worse*: *A Motor Trip from Coast to Coast* (1912) describes an automobile as "snorting," and at one point as "injured." Emily Post's *By Motor to the Golden Gate* (1916), too, features descriptions of cars as "injured" and "puffing and snorting." Significantly, none of these texts engages with the material consequences of automobility for animals, making no mention of roadkill despite the seeming inevitability of colliding with animals on the road in the early twentieth century. See notes 60 and 62.

[6] Imes Chiu, *The Evolution from Horse to Horsepower: A Comparative International Study* (Amherst, ME: Cambria Press, 2008), 85.

The term 'rendering' here recalls Nicole Shukin's 'double entendre of rendering'—'the mimetic act of reproducing, making a copy, and the boiling down of actual animal remains.' This dual meaning represents the capacity of "the animal" to be understood both materially and symbolically, or to act as 'a hinge allowing powerful discourses to flip or vacillate between literal and figurative economies of sense.'[7] Chapter One demonstrated the ways in which Progressive faith in machinery as a driving force in human exceptionalism obscured the material realities of those humans rendered animalic as well as nonhuman animals themselves. Chapter Two will consider how symbolic representations of automobiles as animals (specifically horses) enabled drivers to maintain the illusion of a bond with those animals, whilst simultaneously displacing them with that very machinery.

Attributing animal characteristics to automobiles is an example of what Shukin means by "the animal" operating in a figurative economy of sense. Henceforth, I will be referring to such instances as they appear in the works of Closser Hale, Dreiser, and Lewis, as *theriomorphism*, which can be understood simply as the attribution of nonhuman animal characteristics to an inanimate object. Whilst the classical definition of theriomorphism is the 'ascription to God or to a god of the form or characteristics of a beast,' the definition of its adjective form—*theriomorphic*—is simply 'having the form of a beast.'[8] Steve Baker draws on this latter definition when clarifying the distinction between theriomorphism and therianthropism, noting that:

> A theriomorphic image would be one in which someone or something (in the words of the *OED* definition) was presented as 'having the

[7] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis and London: University of Minnesota Press, 2009), 5.
[8] *OED* <https://www.oed.com/view/Entry/200542?redirectedFrom=theriomorphism&>, para. 1 of 1; *OED* <https://www.oed.com/view/Entry/200541?redirectedFrom=theriomorphic#eid>, para. 1 of 1[accessed 31/08/2021].

> form of a beast.' Therianthropic images, in contrast, would be those 'combining the form of a beast with that of a man.'[9]

Whilst Baker's analysis is interested in the 'some*one*' of this definition, my work will focus on the 'some*thing*,' that thing being the automobile. Theriomorphism differs from anthropomorphism in the sense that it specifically relates to animals other than human beings (for example, a 'galloping' car or a 'roaring' engine).

Considering animals in a literal as well as a figurative economy of sense requires that my analysis of these early road-trip narratives looks beyond the theriomorphic representation of machines, and at the animals themselves. As in Chapter One, the flashy (automobile) is often in danger of obscuring the fleshy (animal), which is why it is necessary to examine one of the more unpleasant realities of long-distance driving, particularly in the early decades of the twentieth century—roadkill. Whilst an idea of the animal remains in the theriomorphic horseless carriages, literal animal remains can be found lining the highways. There are other nonhuman animal characters (such as Toby the dog) who are allowed to venture out on the road with their human owners, but the closest most animals get to this experience is being flattened on the road itself. The chapter will conclude with a discussion of the skewed (bio)power dynamics which apparently give one species the capacity to discard of others to make way for novel human technology. The fact that theriomorphic representations of automobiles not only did symbolic violence to horses (and other animals) but was also a driving factor behind them becoming more valuable as dead than living commodities is one of the necropolitical implications of horsepower in a horseless age.

[9] Steve Baker, *Picturing the Beast: Animals, Identity, and Representation* (Urbana and Chicago: University of Illinois Press, 2001), 108. For further discussion of the differences between theriomorphism and anthropomorphism, see Claire Parkinson, *Animals, Anthropomorphism and Mediated Encounters* (London: Routledge, 2020), esp. 33-35.

The Equine Idiom

Shortly after discussing the sanitary problems of horse waste which framed my discussion in Chapter One, E. P. Ingersoll expands his argument for the substitution of horses for automobiles into what he calls 'the humanitarian aspect of the case.'[10] According to this argument, the coming of a horseless age was actually in the interest of horses: 'To spare the obedient beast, that since the dawn of history has been man's drudge, from further service at the industrial treadmill, will be a downright mercy.'[11] While Ingersoll certainly had a point, it is significant that the editor offers no comment on what was to become of these liberated horses. As with many animals in Progressive human civilisation, the expectation seemed to be that they would simply disappear. Where they actually ended up was largely immaterial so long as it was out of sight.

Ingersoll's appeal to humanitarian concerns was certainly well timed, as the latter half of the Nineteenth Century saw an explosion of humane societies and literature throughout the urban United States. Henry Burgh founded the first of such American societies in 1866, and by 1870, Minnesota, Pennsylvania, Illinois, California, and Massachusetts all had their own SPCA.[12] It was in 1868 that the Massachusetts branch (the MSPCA) and its founder George Thorndike Angell (1823-1909) began publishing the first animal welfare periodical in the English language, entitled *Our Dumb Animals*. There were 200,000 copies of the first edition printed, which, as Jennifer Mason indicates, was an astounding figure given that as late as 1885 only four monthly magazines had circulation of over 100,000.[13] By 1900, every state in

[10] E. P. Ingersoll, 'The Horseless Age', *The Horseless Age* 1.1 (Nov. 1895), 8.
[11] Ibid.
[12] Jennifer Mason, *Civilized Creatures: Urban Animals, Sentimental Culture, and American Literature, 1850-1900* (London and Baltimore: Johns Hopkins University Press, 2005), 16.
[13] Mason, 17.

the Union had passed legislation against cruelty to domesticated and companion animals; slaughterhouses, meanwhile, continued to operate in the conditions described in Chapter One.

As well as directly intervening in cases of animal cruelty, humane education was another large branch of the SPCA's tactics. The American Humane Education Society (AHES) focused on teaching children kindness to animals, and George Angell took it upon himself to provide free copies of Anna Sewell's *Black Beauty* (1877) to schools, families, and teamsters themselves. Despite making no effort to secure legal publication rights, Angell determined to 'print immediately a *hundred-thousand copies*' of Sewell's 'autobiography of a horse,' aiming to put a copy of it '*in every home in America.*'[14] Although he did not quite succeed in this ambitious project, the AHES did themselves publish over 800,000 copies between 1890 and 1910, and distributed free of charge over two million more published by commercial companies.[15] Despite its London setting, the descriptions of violence toward the equine characters of *Black Beauty* would certainly has resonated with urban U.S. readers. The following passage recounts the suffering of Black Beauty's friend Ginger at the hands of cruel drivers, straight from the horse's mouth, as it were:

> When they found out my weakness, they said I was not worth what they gave for me, and that I must go into one of the low cabs, and just be used up; that is what they are doing, whipping and working with never one thought of what I suffer—they paid for me, and must get it out of me, they say. […] men are strongest, and if they are cruel and have no feeling, there is nothing we can do, but just bear it, bear it on and on to the end.[16]

Compare this with the description of a teamster beating his over-burdened horse from *The New York Times* in 1896:

---

[14] Angell's comments appeared in his pirated edition of the text published in 1890. See Anna Sewell, *Black Beauty: The Autobiography of a Horse* [1877] ed. by Adrienne E. Gavin (Oxford: Oxford University Press, 2012), 176 [emphasis in original].
[15] Adrienne E. Gavin, 'Introduction', in Anna Sewell, *Black Beauty: The Autobiography of a Horse* [1877] ed. by Adrienne E. Gavin (Oxford: Oxford University Press, 2012), ix-xxvii, xvii.
[16] Sewell, 131-132.

> An expressman was driving a poor broken-down horse on Adams Street. His wagon was heavily loaded with house-hold goods—a load almost too great for the starved-looking horse to haul, and the driver was cursing the brute and belaboring it with a heavy whip at every step.[17]

Sadly, such cruelty to horses was 'always occurring,' testified another New York resident.[18] Ginger's narrative draws attention to the place of animals in industrial capitalism, where the logic of 'they paid for me, and must get it out of me' trumps any care for the wellbeing of the worker (human or nonhuman). As one horse-railroad manager explained, it made better commercial sense to "use up" old animals and buy more, rather than pay for their sustenance, as 'horses are cheaper than oats.'[19] If horses were going to be given the regard of inert machinery, it made sense from a humane perspective to use actual machines wherever possible.

This was without doubt one benefit of the automobile, and various humane societies spoke out in favour of the car for hauling heavy loads.[20] In this sense, substituting horses for automobiles could be viewed as a humane act, with public care for horses actually working in favour of the horseless carriage. However, this same sentimental attachment to horses also formed the basis of many initial objections to the idea of a horseless society. Despite acknowledging several practical advantages of the machine, one 1897 article in *The New York Times* claimed that it could never truly replace the animal as 'man loves the horse, and he is not likely to ever love the automobile.'[21] A decade later, the same point was still being extolled in the MSPCA journal *Our Dumb Animals*—that while it was pleasing to see the car 'relieve the horse of his heavier burdens,' the horse's historic place in human civilisation had

[17] 'Woman Whips a Driver', *The New York Times*, 13 Dec. 1896, 2.
[18] "West Sider," 'Treatment of a Tired Horse', *The New York Times*, 9 Sept. 1899, 7.
[19] Cited in Diane L. Beers, *For the Prevention of Cruelty: The History and Legacy of Animal Rights Activism in the United States* (Athens, Ohio: Swallow Press/Ohio University Press, 2006), 59.
[20] See, for example, 'Humane Society Favors Autos', *The Horseless Age*, 25.3 (12 Jan. 1910), 96.
[21] 'The Automobile', *The New York Times*, 23 Aug. 1897, 4.

'endeared him to man with a bond of sympathy too strong for any whiz-wagon to sever.'[22] Of course, these objections to the automobile represent only a small proportion of the American public, and thus should not be taken as evidence of a broad rejection of automobility based on love for the horse. Their significance to my argument in this chapter is that they demonstrate an existing sentimental attachment to horses as a familiar and long-established feature of civilisation, with considerably more cultural acceptability than the automobile around the turn of the century.

It was with the goal of achieving this same level of cultural acceptability that automobile manufacturers actively encouraged comparisons between their machines and traditional horse powered vehicles. Imes Chiu's comprehensive analysis of early automobile advertising demonstrates a conscious attempt to evoke the animal which the car ultimately sought to replace. Chiu notes that one challenge facing the development of the early automobile industry was turning the car from an exclusive fad into an everyday necessity:

> One way to accomplish this transformation was to associate the devil wagon with the most accepted form of motive power—the horse. Thus at this early stage manufacturers had to emphasize the automobile's similarity to the horse rather than its novelty. At the same time, they also sought to displace the horse by highlighting its biological limitations.[23]

Not wishing to alienate the public with their noisy, smelly, and mechanically complex machines, many early manufacturers aimed to replicate the physical features of horse-drawn transportation. Chiu provides visual comparisons between advertisements for traditional horse carriages and automobiles made by the same manufacturers to highlight the conceptual dependence of the automobile on existing equine culture; 'Cars,' Chiu explains, 'were

[22] 'The Future of the Horse', *Our Dumb Animals*, 40.4 (Sept. 1907), 55.
[23] Chiu, 83.

translated into an equine idiom […].'[24] This notion of an 'equine idiom' is particularly significant to my comparison of the fluctuating material and symbolic roles forced upon animals in automotive culture as it suggests a deliberate policy of associating the cars with horses in a figurative sense, whilst simultaneously seeking to supplant them.

The physical superiority of the automobile in terms of its performance was constantly described in relation to actual corporeal horses. Chiu cites a number of advertisements from various manufacturers throughout the 1910s which boast that their automobiles were as powerful as 'an entire stable of horses,' were 'equivalent to 15 animal horse-power,' and could 'climb hills easier than horses.'[25] Advertisers thus sought to directly compare the physical qualities of horses and automobiles, quantifying the superiority of the automobile and justifying it as worthy successor to the horse. At the same time, however, the horse was still expected to play a symbolic role in the horseless age of automobility. As well as imitating designs of horseless carriages, automobile manufacturers sought to associate driving their machines with traditional methods of controlling horses. Figure 2 shows an advertisement for the Autocar Company which was displayed in *Life* magazine in 1905. In an attempt to quell consumer fears about the complexity of operating an automobile, the ad suggests that it is as 'Simple as a Pair of Reins.' Not pictured itself, the horse is a ghostly presence in this image, suggested by the apparition of the reins yet absent in reality. Here the horse has no corporeality at all, its symbolic associations alone are utilised in the service of its apparent successor. Although, in reality, the operation of automobile and horse-carriage

[24] Chiu, 85. For a comprehensive analysis of printed advertisements for U.S. automobiles in the 1910s see Chiu pp. 85-101.
[25] Cited in Chiu, 108.

Figure 2: Simple As a Pair of Reins, *Life* (7 Sept. 1905), 266.

were largely inequivalent, advertisers 'strained to make the resemblance,'[26] in order to piggyback on the familiarity of equine culture. As Chiu summarises:

> On one level, horses were expensive, inefficient, and weak, but on another, motorcars worked just like horses. Manufacturers used the horse to explain the automobile concept but at the same time discounted the horse in order to justify replacing it.[27]

The equine idiom emphasised the automobile's symbolic connection to the popular figure of the horse, while at the same time decrying the animal's material limitations. The animal can

[26] Chiu, 105.
[27] Chiu, 109.

be seen here as functioning in both literal and figurative economies of sense, in Shukin's formulation. The horse is at once a ponderous, tired, and reluctant body, and a friendly, familiar, and reliable symbol. By co-opting that symbolism, but stressing the physical superiority of the car, automobile manufacturers turned care for the horse into reason to adopt the horseless carriage.

While Chiu's work sheds light on the importance of animal symbolism in early car culture, its focus is rather more on the horsepower than the horse itself, establishing the ways in which animal symbolism affected the automobile's reception without considering how such representations affected animals themselves. My concern is with automotive texts that engage with animals both materially and symbolically, demonstrating not only a care for animalised automobiles but also an endemic violence toward actual animals. My project also differs in the sense that I expand Chiu's concept of the equine idiom beyond automotive periodicals and into American literature. As is evident from the description of the suffering automobile in the epigraph to this chapter, the equine nomenclature which found its way into automotive culture, combined with a heightened historical sensitivity to the wellbeing of horses, resulted in many examples of automotive theriomorphism—what we might call an ethic of car care.

In the first issue of *The Horseless Age,* Charles Brady King proposed the formation of an organisation dedicated to the interests of the automobile.[28] Two months later, the inauguration of the first automobile organisation in the United States—The American Motor League—was announced in *The Horseless Age*, along with its aims. These aims included defending 'the *rights* of said vehicles when threatened by adverse judicial decisions [and] assisting in the work of constructing better roads, better sanitary and *humane* conditions' for

[28] Charles Brady King, 'A Timely Suggestion', *The Horseless Age,* 1.1 (Nov. 1895), 8.

automobiles.[29] This statement begs the question: what does it mean to treat an inert machine humanely? In the latter years of the nineteenth century, articles began to appear in *The Horseless Age* equating care of one's automobile to care of a horse. Both machine and animal, one such article claimed, could be over or under fed; both are better 'when not subjected to sudden starts'; both 'renew their strength and usefulness after a reasonable rest'; and 'both require when ill the care of an expert.'[30] By the 1910s, the content of automotive advice manuals began to stray beyond technical maintenance tips and toward advocating actual care and affection for one's machine. New York-based publishing company Outing produced a series of handbooks on various topics including *The Automobile: Its Selection, Care and Use* (1910) and *The Horse: His Breeding, Care and Use* (1911). David Buffum, author of *The Horse* handbook, makes it clear from the preface that his motivation for writing this book was 'none other than my love for the horse.'[31] Buffum's advice is that before anyone makes the decision to breed or train these animals, they must be sure that they have 'that innate love of the horse which brings insight into character and nature as well as physical features […].'[32] Technical expertise is not enough to master true horsemanship and there are few rules that apply to every equine, Buffum claims, as horses 'vary in character and disposition as much as human beings do […].'[33] Love, and a willingness to acknowledge the unique character of each individual, are essential qualities of horse care.

This, somewhat strangely, correlates with Josephine Donovan and Carol J. Adams's definition of the feminist ethic of care in animal rights discourse. For much of the nineteenth and into the early twentieth century, animal rights campaigners faced hostility from the

[29] 'The American Motor League', *The Horseless Age*, 1.3 (Jan. 1896), 15 [my emphasis]. The meeting was planned to take place several miles outside the city, with 'no provisions made for horses.'
[30] Theodore D. Bunce, 'The Charging and Care of Automobile Batteries', *The Horseless Age*, 4.26 (27 Sept. 1899), 12-13, 12.
[31] David Buffum, *The Horse: His Breeding, Care and Use* (New York: Outing Publishing Company, 1911), 6.
[32] Ibid., 41.
[33] Ibid., 46.

scientific community for their supposed emotional excesses in debates surrounding vivisection.[34] Charles Loomis Dana (1862-1935)—'the dean of American neurologists'[35]—wrote in 1909 that a 'hypertrophy of affection' was a sign of weakness and mental illness, to which women were particularly susceptible: 'In not very stable minds, it becomes especially frequent nowadays that the emotional interests overshadow the judgement and the power of control; so that worry and concern are the complements of love and devotion.' Dana specifically identifies 'excessive' care for animals as symptomatic of a nervous malady he calls 'zoophil-psychosis,' and pleads for humanity to avoid 'excesses in such sentiment for animals […].' Victims of this psychosis, Dana claims, 'are so eager to observe the unhappy horse that they do not see the human suffering.'[36] This attitude can be seen reflected in the derisive responses to horse-affection in *The Horseless Age*, unless of course that affection was transferred from horse to horseless carriage.

Josephine Donovan indicates that the inherent bias towards rationalism in animal rights theory (as exemplified by Dana and, in the latter half of the twentieth century, by Peter Singer and Tom Regan)[37] is paradoxical in the sense that such rationalism, 'in the form of Cartesian objectivism, established a major theoretical justification for animal abuse.'[38] It is by acknowledging our emotional connection to nonhuman animals that we avoid treating them as Descartes envisaged them when he likened their cries of pain to the screeching of

[34] For further discussion of the antivivisection movement in this period see Craig Buettinger, 'Women and Antivivisection in Late Nineteenth-Century America', *Journal of Social History*, 30.4 (Summer 1997), 857-872, 867.
[35] 'Dr Charles Dana, Neurologist, Dies', *The New York Times*, 13 Dec. 1935, 25.
[36] Charles Loomis Dana, 'The Zoophil-Psychosis : A Modern Malady', *Medical Record*, 75.10 (Mar. 1909), 381-383, 383.
[37] Singer claims that it is the characterisation of animal rights activists as "animal lovers" that has 'had the effect of excluding the entire issue of our treatment of nonhumans from serious political and moral discussion.' Regan similarly contends that animal rights campaigners must make 'concerted effort not to indulge our emotions or parade our sentiments. And that requires making a sustained commitment to *rational* inquiry.' See Peter Singer, *Animal Liberation* [1975] (London: The Bodley Head, 2015), xvi-xvii; Tom Regan, *The Case for Animal Rights* (Berkeley: University of California Press, 1983), xii [my emphasis].
[38] Josephine Donovan, 'Animal Rights and Feminist Theory', in *The Feminist Care Tradition in Animal Ethics*, ed. by Josephine Donovan and Carol J. Adams (New York: Columbia University Press, 2007), 58-86, 59.

machinery. Machines can be understood as the Cartesian archetype of things which *do not* require humane consideration, whereas the feminist ethic of care acknowledges the emotional connections between all sentient creatures, and 'recognizes the diversity of animals—one size doesn't fit all; each has a particular history.'[39]

In the case of the automobile, however, this logic is turned on its head. The following passage from another handbook in the Outing series, *The Automobile*, can be read as advocating an ethic of car care:

> The same sort of attention is meant that a lover of horses would give to a well-selected cob or span he can afford to keep. One can learn to drive an automobile even more quickly than to drive a horse, but that is far from *knowing* either animal or machine. […] Talk with any automobile enthusiast—a real one, who has driven many cars of many makes—and if you stir him to the true mood of reminiscence, he will reveal *little intimate acquaintances* with machines, which will convince you that *every motor has its own personality, like every horse*—even as between two identical models from the same manufacturer. [40]

Whilst there would certainly have been small differences between machines of the same make and model (particularly prior to Ford's mass-production line), it is telling that Sloss considers these to be markers of character or personality rather than inconsistencies in assembly and operation. Other machinery is not privileged in this sense, as can be seen in another of the Outing handbooks on *The Gasoline Motor* (1913), which dealt with 'the practical problems of motor operation.'[41] At no point in this text are there any examples of 'little intimate acquaintances' with this piece of technology, nor does the motor have 'its own

[39] Josephine Donovan and Carol J. Adams, 'Introduction', in *The Feminist Care Tradition in Animal Ethics*, ed. by Josephine Donovan and Carol J. Adams (New York: Columbia University Press, 2007), 1-15, 3.
[40] Robert Sloss, *The Automobile: Its Selection, Care and Use* (New York: Outing Publishing Company, 1910), 66 [my emphasis].
[41] Harold Whiting, *The Gasoline Motor* (New York: Outing Publishing Company, 1913), 7.

personality.'[42] Examples of such 'acquaintances' can be found, however, in the road narratives of Closser Hale, Dreiser, and Lewis.

Theriomorphism

The epigraph to this chapter serves as a prime example of theriomorphism in Closser Hale's *We Discover the Old Dominion*, in which the improper maintenance of a machine is transformed into an act of animal cruelty through the evocation of the horse. The author subsequently feels sympathetic toward the car, generating an emotional bond between human and machine which is premised on the pre-existing bond between humans and horses—the very animal which the automobile was to replace. This particular incidence of theriomorphism is not an isolated occurrence in Closser Hale's narrative; rather the automobile that drives the narrative is represented more as animal than machine throughout. From the opening pages of the novel, Closser Hale describes cars as 'beautiful sleek creatures' (4). Not only does the noun 'creatures' clearly suggest living entities, but the adjective 'sleek' has animalic connotations, referring to 'hair or fur which lies close and smooth' (like a well-groomed horse) in addition to 'smooth or polished surfaces.'[43] These sleek creatures stop and 'exchange sympathies' (255) when they meet on the road, as two dogs or horses might under similar circumstances. As we will see repeated almost verbatim in Dreiser's *A Hoosier Holiday*, Closser Hale imagines that other drivers 'instinctively cry "Whoa!"' (75) when they wish to stop their cars, rather than pressing down on the machine's footbrake (or having their chauffeur do it). Accidents that occur when young people are out driving on a Sunday (when they 'ought to be in church') are attributed to the automobile's

[42] See note 40.
[43] *OED* <https://www.oed.com/view/Entry/181592?rskey=cLsNYX&result=4&isAdvanced=false#eid> para 1, 2 of 6 [accessed 30/11/2021].

moral judgement: 'the car bucks and throws them out. "Steering gear goes wrong," reads the newspapers—but the other motors know!' (336). Of course, this latter example does not suggest that Closser Hale actually believes that her automobile enacts retribution on those who skip their religious obligations, but the choice of the word 'bucks' is further evidence of the car being saddled with equine terminology.

Because of this figurative equation with the horse, the wellbeing of the automobile becomes a humanitarian issue, as opposed to merely a mechanical one. When the party stop to help a stranded couple at the side of the road, they first offer to give them some extra fuel, in case 'the carburetor [*sic*] had drunk its last drop […].' Rather than being thirsty, however, they eventually determine that 'the engine had stopped only because it was hot and wished to rest' (162). The notion that automobiles should not be overworked any more than a horse can be found in automotive literature as early as 1899, when an article in *The Horseless Age* (cited earlier) noted that the car, 'like its equine rival,' renewed its 'strength and usefulness after a reasonable rest.'[44] Here the equine idiom acts to reassure drivers that what may be a complex and largely unfathomable mechanical issue can be understood simply as a tired animal needing to stop for a while, using the recognisable and sympathetic symbolism of the horse to help people adapt to the horseless carriage. Any faults with Closser Hale's car are interpreted as physical injuries, causing the machine to 'limp' (257) through certain legs of their journey. This 'poor creature' elicits the same kind of consideration that a humane person would offer a horse, which includes the assertion from Closser Hale's husband, Walter, that 'the engine should be fed before us' (227). While there is not only kindness but also logic in feeding a hungry horse before those humans that it has transported, the idea that an automobile driver should delay meeting their own animal needs to satisfy an inert machine is

[44] See note 30.

based entirely on force of (equine) habit. Putting the needs of the automobile before those of any actual animal is an example of the irony acknowledged earlier in this chapter.

The equine idiom continues in Theodore Dreiser's *A Hoosier Holiday*. The automobile trip on which the novel is based came about when illustrator Franklin Booth attended a party hosted by Dreiser in New York City. Booth had recently purchased a Pathfinder touring car, and invited Dreiser to join him on a road-trip back to Indiana, where both were born and raised. The two men hire a chauffeur known only as Speed, and the trio depart in Booth's sixty-horsepower Pathfinder determined to take the road less travelled. Dreiser is dead against the popular Hudson-Albany State Road route, picturing the 'thousands of cars' they would likely meet along the way, even in 1915. Keen to distinguish themselves from the 'imitative rabble,' they decide to take the Scenic Route, where the roads are somewhat 'undernourished'[45]—note here that neglect of road surfaces is framed as neglect of a living thing, as if these conditions for the automobile are somehow inhumane.

Near the beginning of their journey, Dreiser spies a horseshoe in the road. Believing it to be a sign of good luck, he hangs is over the automobile's speedometer, and the road-trip proceeds with a physical embodiment of the equine idiom dangling in front of them like a relic of a bygone era (52). This reference to equine culture makes the automobile feel more familiar, and this familiarity is expressed in the theriomorphic language applied to the car. The sound of the engine is frequently described in animalic terms which reflect the car's "mood"—emitting a soft 'croon' when it is 'at its best' (26), or a 'snort and growl' when it is struggling (47). Rather than asking Speed to park the car at the next hotel, Dreiser suggests that they 'tie-up' (122) for the night, and the idea that they 'dismounted' from their vehicle also has equine connotations (52). Just as in *We Discover the Old Dominion*, Dreiser finds

[45] Theodore Dreiser, *A Hoosier Holiday* [1916] (London: Constable & Co. Ltd., 1932), 21. Henceforth cited parenthetically.

himself calling 'Whoa!' when he wishes to stop, as if Speed were driving 'a horse' rather than a horseless carriage (215). As Chiu has demonstrated, there was a conscious effort on behalf of automobile manufacturers to replicate elements of the horse-drawn carriage, and evidently both Closser Hale and Dreiser instinctively apply equine customs to automotive travel. As was the case in Closser Hale's narrative, faults with the car are described in the language of physical injury, as the car with a blown-out tire 'limped' back to a garage (381). It is through this literary equine idiom that the intricate mechanics and overall unreliability of early automobiles can be explained away by the idea that the car is a 'delicate organism' (46). The narrative in *A Hoosier Holiday* is frequently interrupted by various mechanical mishaps, which sometimes occur mid-sentence: 'I was smiling comfortably to think that my life was thus charmingly guarded, when "whee!"—have you heard a whistle blowout?' (52). Yet because such malfunctions are interpreted as injuries to a 'delicate organism,' Franklin is more concerned with 'the wellbeing of his car' (117) than the interruption to their progress. This ethic of car care turns literary automobiles from tools for the protagonists to utilise into characters in their own right, each with its own *personality*—to quote Robert Sloss's handbook on automobile care—with whom one can form *little intimate acquaintances.*

Such automotive acquaintances arguably go one step further in Sinclair Lewis's *Free Air*, in which protagonist Claire Boltwood comes to think of an automobile as not only equine, but human—as possessing *person*ality in the most literal sense of the word. Claire and her father set out on the trip of over 'two thousand miles'[46] from Minneapolis to Seattle in their Gomez-Deperdussin roadster, following a similar route to that taken by newly-married Grace and Sinclair Lewis in 1916. Pursued by the love-smitten mechanic Milt Daggett, Claire experiences numerous breakdowns and technical issues with her Gomez-Dep over the course of a trip which lays bare many of the downsides of long-distance car travel

[46] Sinclair Lewis, *Free Air* [1919] (Mineola, NY: Dover Publications, 2018), 7. Henceforth cited parenthetically.

over inadequate rural roads. Fortunately (depending on how you look at it), Claire has Milt stalking her along the road in his Teal bug—or as she originally terms it, the 'mechanical flea' (12). Milt, enamoured with Claire, decides to follow her and her father for the remainder of their trip, providing repairs and general assistance along the way. Just as in the narratives of Closser Hale and Dreiser, automobiles in Sinclair's road-trip novel are described in theriomorphic language. Poor quality roads lead to the car struggling to gain any traction, but it 'sulkily kept going' (2), until the wheels eventually get stuck in the mud and Claire requires the help of a local farmer and his horses to pull them out. Farmer Adolph Zolzac hitches his team to the car's axle and they are easily able to rescue the car from its rut. Unfortunately for Claire, the farmer deliberately attaches a weak harness, knowing it will snap and he can then charge them for a new one, but were it not for this trick the team of horses would have rescued them. Claire struggles to process the idea that these two horses were able to succeed 'where seventy horsepower had fainted' (10), as if the abstract unit of measurement had anything to do with the corporeal qualities of an actual horse.

The success of this horse power where horsepower failed exposes the fact that equine symbolism is the only thing uniting these two disparate prime movers—a horse and an automobile share no material features whatsoever. Nonetheless, the equine idiom persists in Sinclair's narrative, reenforcing the conceptual bond between horse and horseless carriage. Claire is made to regret offering a lift to a stranger walking along the side of the road who attempts to overpower her and steal the car. Milt once again proves himself a hero by chasing them down in his Teal Bug and knocking the stranger out onto the road. As Milt spins his car around, the Teal Bug is described as a 'prancing bronco' which 'paws the air' like a hero's noble steed (65). In this case, the equine metaphor conjures up chivalric associations in Milt as the car's driver—the word *chivalry* coming from the French *cheval* (horse).[47] The equine

[47] Chivalry and horsepower are discussed at length in Chapter Three.

idiom returns later in the narrative as Claire is driving down a particularly dark and solitary stretch of road. In an attempt to comfort herself, she makes up a song whose rhythm was 'intended to echo the hoofs of a fat old horse on a hard road.' The song begins:

> The old horse trots with a jog, jog, jog, And
> a jog, jog, jog; and a jog, jog, jog. And the old road
> makes a little jog, jog, jog, To the west, jog, jog; and the
> north, jog, jog. (116)

Her father had caught a chill, and was 'weak as a small boy,' sleeping 'curled up on the bottom of the car […]. She was alone' (116). Although the automobile may share some symbolic features with the horse, it is not actually a living body, and thus can offer no companionship in reality. Claire has to conjure up an imagined horse in order to comfort herself as she drives through the night, as seventy horsepower cannot keep her company. Her 'driving song' evokes a more familiar and reassuring presence, and thus works in much the same way as the equine idiom in automotive advertising, drawing on her emotional connection to the 'old' horse even as she drives its replacement.

As the story develops, Claire's relationship to the automobiles in the text is increasingly described in terms of a human relationship. While this is anthropomorphism as opposed to theriomorphism, and thus not strictly an example of the equine idiom in literature, the human–automobile bonds established in Sinclair's road narrative demonstrate how an ethic of care for cars can progress to the point where certain (figuratively sentient) machines are treated with *more* regard than certain (actually sentient) animals. Lewis described *Free Air* as 'a romance with a motor car,'[48] and while he probably meant that the story followed a traditional romantic plot with the addition of an automobile, this would also be an apt description of the relationship between protagonist Claire Boltwood and one of the cars in the

[48] 'Letter from Sinclair Lewis to Ellen Eayrs [1919]', cited in Grace Hegger Lewis, *With Love from Gracie: Sinclair Lewis, 1912-1925* (New York: Harcourt, 1955), 133.

text. It could be said that Lewis himself had a kind of romance with motor cars; as his wife Grace Hegger Lewis wrote in her autobiographical recollections of their lives together:

> There were to be many thrilling occasions in the life of Sinclair Lewis—seeing an entire bookseller's window on Fifth Avenue devoted to *Main Street*, receiving the Nobel Prize from a king—but it's a safe guess that neither topped that moment when he stopped the Ford [his first car] neatly in front of the old stone carriage step and called out to his father and mother and me sitting on the porch after supper: "How about a ride?" […] Story-writing was one thing but owning and driving a car was another.[49]

Evidently no stranger to equine idioms himself—asking his parents if they want to 'ride' his horseless carriage—signs of Lewis's enthusiasm for the automobile are visible throughout his literary career. Roger N. Casey indicates that as early as his second novel, *The Trail of the Hawk* (1915), Lewis includes a character named Carl Ericson who invents the Touricar, 'a vehicle especially for auto touring.'[50] The growing prominence of the automobile in U.S. culture is recognised by Lewis most famously perhaps in *Main Street* (1920) and *Babbitt* (1922), but also in the character of Samuel Dodsworth, of *Dodsworth* (1929), who is president of a motor company.

Such attachment to automobiles on the part of the author is evident in *Free Air* as Claire begins to anthropomorphise Milt's Teal Bug. At one point, the car rolls down a rocky embankment, and as Claire fears for its safety she realises that she had come to think 'of the Teal bug as a human thing—as her old friend, to which she had often turned in times of need' (131). The car's importance to Claire develops from the equivalence of a flea to a human being over the course of their road trip, the irony of which is that surely even a flea would benefit more from humane treatment than an inert automobile. The bond created between Claire and the car is also described as something more than sympathetic, rather, it is a

[49] Grace Hegger Lewis, 98.
[50] Roger N. Casey, *Textual Vehicles: The Automobile in American Literature* (New York and London: Garland Publishing, 1997), 25.

friendship, based on a mutually rewarding connection, in contrast to pity for a suffering animal where the connection is assumed to be one directional. The friendship Claire imagines can, of course, only ever be one directional, and the idea that her emotional connection to the automobile could not only equal but actually exceed that with any nonhuman animals in the text demonstrates where animals fall in the hierarchy of care on the highways, spaces where they literally fall as roadkill (as we shall see).

Claire's association with the machine goes further than anthropomorphising it. Despite the persistent difficulties and hold-ups that were part and parcel with rural motoring in the 1910s, Claire still undergoes 'that magic change which every long-distance motorist knows' (18). This somewhat mystical transformation involves associating so strongly and emotionally with the machine as to become a part of it, in what we might call 'mechanomorphism'[51] of the (human) animal: 'Instantly she was alert, seemingly able to drive forever. The pilot's instinct ruled her; gave her tireless eyes and sturdy hands. Surely she had never been weary; never would be […]' (18). Claire herself becomes aware of the sensation that 'she was merely a part of a machine' (18). It is in passages such as this that we can see why Futurists such as Filippo Tommaso Marinetti saw the automobile as establishing a new kind of bond between human and machine. Making few concessions to gender-neutral linguistic norms, Peter Marsh and Peter Collett describe this bond in the following terms:

> Man and his transport had been joined together in a new symbiotic relationship. This was not the half-man, half-beast of mythology, but the half-man, half-machine of the modern age. Man and machine had become fused into a mechanomorhic centaur![52]

The centrality of this 'symbiotic' relationship to Futurist ideology underscores the endemic violence in the human–automobile bond. It is after jumping into an automobile and

[51] Defined as the attribution of machine characteristics to a human or other animal. See Peter Marsh and Peter Collett, *Driving Passion: The Psychology of the Car* (Boston: Faber & Faber, 1987), 142.
[52] Marsh and Collett, *Driving Passion*, 142.

subsequently being involved in a violent crash—'with my wheels in the air'—that Marinetti notes down the founding principles of Futurism, including the exaltation of movement, aggression, and war.[53] The increased capacity for violence conferred upon the human by this mechanomorphic bond was, for the Futurists, the main attraction of automobility. As we shall see later in this discussion, the violence of this human–machine bond was directed at nonhuman animals both physically and symbolically—in the literal deaths of animals and the denial of these deaths as a result of an imagined (but definitively impossible) 'symbiosis' between the mechanic and the anthropic.

The intersection of these various -morphisms (*therio-*, *anthropo-*, *mechano-*) highlights the symbolic role of the nonhuman animal in establishing relationships between humans and machines. Making a distinction between anthropomorphism and theriomorphism is arguably evidence of anthropocentrism, placing the human in a separate category from all other animal life (with much the same effect as using the word *animal* to refer to all animals other than one), however it is important to recognise the differences between rendering automobiles as human and rendering them as equine. Anthropologist Stewart Elliott Guthrie has written on the human tendency to both 'animate' and 'anthropomorphize' the non-living in order to better comprehend that which we do not fully understand—'a strategy that is almost never conscious.'[54] For the authors of the road narratives discussed, and no doubt many motorists past and present, the automobile was a complex and often unfathomable piece of machinery, with which any number of things can, and often do, go wrong. Understanding these unknowns as aspects of the car's personality (as in the *The Automobile* guide by Robert Sloss) can be reassuring, providing meaning in an otherwise potentially

[53] F. T. Marinetti, 'The Founding and the Manifesto of Futurism [1909]', in *Modernism: An Anthology*, ed. by Lawrence Rainey (London: Blackwell, 2005), 3-6, 4.
[54] Stewart Elliott Guthrie, *Faces in the Clouds: A New Theory of Religion* (Oxford: Oxford University Press, 1993), 39-40.

hopeless situation, just as we saw in Chiu's research on the equine idiom in automotive advertising. Why is it, though, that we see only theriomorphism in the narratives of Dreiser and Closser Hale, but also anthropomorphism and mechanomorphism in that of Lewis? I believe that the difference lies in who is actually driving the car.

In both *A Hoosier Holiday* and *We Discover the Old Dominion*, the writers have chauffeurs who are responsible for all the actual driving and maintenance of the automobile. As Kevin Borg has established, it was common practice for wealthy motorists of this era to hire chauffeurs and pass on to them the duty of car care, 'transposing the rules associated with horse transportation to their new horseless carriages.'[55] In this sense, Dreiser and Closser Hale are passive participants in automobility; they are served by the automobile which (along with the chauffeur) does all of the work, while they sit back and ruminate in much the same arrangement as in pre-automotive times. Although they may experience the thrill of increased speed or discomfort at bumps in the road, they are less attuned to the actual workings of the machine than, for example, Claire Boltwood in Lewis's *Free Air*, who has what we might call the full road-trip experience of trying to control the cumbersome automobile over rough terrain, and being responsible for its maintenance (at least until Milt Daggett comes along). While all three protagonists render their automobiles in animate terms, Claire is the only one who feels a direct connection to the machine—an imaginary 'symbiotic' relationship between automobile and driver. In the works of Dreiser and Closser Hale, the symbolic rendering of automobiles as horses provides a vocabulary by which some of the mysteries of the automobile can be explained away, but not all of them. There remains a disconnection between the passengers and the driving force in the same way that there is inevitably a disconnection between the passengers and the nonhuman animal in horse-drawn

[55] Kevin Borg, 'The 'Chauffeur Problem' in the Early Auto Era: Structuration Theory and the Users of Technology', *Technology and Culture*, 40.4 (1999), 797-832, 797.

transportation. They are never in control of the vehicle, and thus while it can become something worthy of pity and sympathy (like the automobile in *We Discover the Old Dominion* which, like a poorly-treated horse, goes supperless to bed) they never develop a social connection to the machine as a humanlike entity.[56]

As the driver of her car, however, Claire is (or at least has the illusion of being) in control of her automobile. As human and machine work together, both relying on the other to perform their roles correctly, a social connection seems to develop (of course, the social element is entirely one sided). Claire feels that she is 'able to drive forever,' and this bond with the machine gives her 'tireless eyes' (18). The fatiguing animal body Claire possesses is transformed by the automobile into something more powerful—the 'half-man, half-machine of the modern age.'[57] As Ingersoll wrote, 'the motor vehicle, unlike the thing of flesh and blood, does not tire […].'[58] Whilst Ingersoll was referring directly to horses, the automobile also provided the human animal with the illusion of invincibility, as if the next stage in human evolution was to leave behind our flesh and blood (that which made us animal) and strive toward the machinic. It is only after Claire has experienced this mechanomorphism that she comes to view the Teal Bug as 'a human thing—as her old friend' (131), as if, due to the symbiotic bond between driver and car, each has symbolically taken on the qualities of the other—Claire is tireless, the car is friendly. Whilst theriomorphised vehicles had the potential to evoke pity amongst humans, and therefore deserve humane treatment, anthropomorphised cars could be imagined as extensions of ourselves, and thus leapfrog nonhuman animals in terms of ethical consideration in an anthropocentric society.

[56] Guthrie claims if we see something as 'humanlike, we can try to establish a social relationship.' Whereas, if we only animate, rather than anthropomorphise, our options are limited to, for example, 'stalk or flee.' Guthrie, 5.
[57] See note 52.
[58] E. P. Ingersoll, 'A Word to the Word Coiners', *The Horseless Age*, 1.3 (Jan. 1896), 5.

Whether rendered animate in the form of horses or humans, the equation of biological and mechanical wellbeing contributed to an emerging ethic of car care, through which automobiles could be understood as having personalities and emotions influenced by the facilities (such as good roads) made available to them. Nowhere is this equation more visible than in the "Efficiency Chart" which appeared in the *Journal of Rural Education* in 1924 [Figure 3]. This chart encourages readers to treat their automobiles with the same care with which they would (supposedly) treat a living being, sparing no expense in keeping their cars clean, safe, and even happy.

EFFICIENCY CHART

Good gas	Good food
Clean spark plugs	clean teeth
Clean headlights	Good eyes
Tuning and adjustment	Outdoor exercise
Full air pressure	Good posture
No carbon	No constipation
Keep clean and oiled	Frequent baths and plenty of sleep
Good mixture	Balanced ration—fruits, vegetables, etc
Don't choke engine	Chew food thoroughly
Humming motor	Cheerfulness
Keep radiator filled	Drink plenty of water
Good brakes	Self control and self reliance
A hot spark	Ambition
Strong axles and frame	Stamina
Well balanced mechanism	Even temper
Rolls easy	Plays well
Good hill climber	Hard worker
A tiny speck in the current breaker can kill the engine	A tiny germ may cause fatal illness

Figure 3: Reproduced from 'Efficiency Chart', *Journal of Rural Education*, 4 (Nov. 1924), 137.

However, an alternative way of reading this chart complicates the notion that a human–machine symbiosis (as seen in *Free Air*) does anything to improve the efficiency of the

human body, as the chart demonstrates that automobiles are just as susceptible to "illness" and malfunction as the body of flesh and blood. It is easy to read charts like this as purely humorous, and to dismiss the significance of theriomorphising automobiles as inconsequential. However, as Shukin is keen to emphasise, animals in automotive culture do not exist in purely symbolic terms, and whilst the figurative rendering of cars as horses may have contributed to the human–machine relationship, the terrestrial cost of automobility was being paid not only by actual horses (as we shall see) but also many other animals, who were consigned to the homogenous classification of what we now call roadkill.

Roadkill

As Roger M. Knutson notes in his satirical yet factually sound history of roadkill in the United States, '[f]ast cars and hard-surfaced roads have produced the entire flattened fauna described here in less than an eye blink […].' Before the automobile, when all animals had to worry about on the roads were horse-drawn wagons, the category of 'flattened fauna' consisted only of 'the occasional horse-stomped snake.'[59] Knutson goes on to claim that there is little published research into 'flattened fauna' before 1930, but Dayton Stoner succeeded in unearthing some such research, conducted by the United States Entomological Laboratory and the Illinois Natural History Survey in 1925. The report states that in a single 632-mile trip on Iowa roads in 1924, '255 dead animals were found, representing 29 species.' The investigator concluded that automobiles already demanded 'recognition as one of the important checks upon the natural increase of many forms of life.'[60] Although the road narratives by Dreiser, Closser Hale, and Lewis take place in the decade prior to this study,

[59] Roger M. Knutson, *Flattened Fauna: A Field Guide to Common Animals of Roads, Streets, and Highways* (Toronto: Ten Speed Press, 1987), 4.
[60] Dayton Stoner, cited in Michael L. Berger, *The Devil Wagon In God's Country: The Automobile and Social Change in Rural America, 1893-1929* (Hamden, CT: Archon Books, 1979), 20.

Michael L. Berger suggests that the total number of flattened fauna was possibly greater in the 1910s, assuming that by the 1920s 'farmers had taken certain precautions to keep domestic animals off the highway […].' Berger also notes that the figures collected ought to be considered a minimum estimate of the deadly impact of the automobile, as animals 'such as pigs and chickens' were usually removed from the road immediately after they were killed to be used for food, and thus would not have been counted.[61]

In one of the first book-length studies of roadkill, *Feathers and Fur on the Turnpike* (1938), James R. Simmons links the increase in flattened fauna to the increasing speed of modern automobiles. As well as giving animals less time to get out of the way, the collisions that do occur are more likely to be fatal due to the increased force of impact. At forty-five miles per hour, Simmons claims, automobiles and their drivers begin to 'kill rapidly.'[62] At sixty miles per hour, one can expect to kill some kind of animal once 'every fifty miles' in the summer months, and at any speed above sixty, 'you can figure on scoring a kill every ten miles or less on most of the improved roads.'[63] It is worth noting that Simmons's figures, too, are conservative estimates, and do not account for animals who managed to limp away from the road before ultimately succumbing to their injuries.

With this in mind, it is likely that Closser Hale, Dreiser, and Lewis would have encountered (and created) roadkill on their long-distance automotive excursions. We know that the car in *A Hoosier Holiday* is a 'sixty-horsepower Pathfinder' (24), a high-end model retailing at around $2500 and described by *The Horseless Age* in 1916 as 'a very powerful car […].'[64] From one of the few occasions where Dreiser makes explicit reference to the car's speed, we learn that the Pathfinder is capable of climbing to 'thirtyfive and then forty and

[61] Berger, 20.
[62] James R. Simmons, *Feathers and Fur on the Turnpike* (Boston: Christopher Publishing: 1938), 13.
[63] Ibid.
[64] 'The Twelve-Cylinder Pathfinder', *The Horseless Age*, 37.3 (1 Feb. 1916) 104-105, 104.

then fortyfive' (26) miles per hour on stretches of good road, meaning that it reached (and likely exceeded) the speed at which cars begin to—in Simmons's words—kill rapidly. Dreiser notes in the final chapter that they had 'registered about two thousand miles' (506)—more than three times the distance covered in the survey conducted by the United States Entomological Laboratory which found 255 dead animals. Claire Boltwood in *Free Air* drives a yet more powerful car—a seventy horsepower Gomez-Dep roadster. Lewis gives us no indication of the top speeds Claire reaches, but with greater power and less weight than Dreiser's Pathfinder, she would certainly have been capable of exceeding forty-five miles per hour. Her journey from Minneapolis to Seattle is reportedly 'two thousand miles' (7). Louise Closser Hale is the only author who gives no indication of the type of car she is riding in, nor any mention of the speed. A road trip encompassing all locations mentioned by Closser Hale would be of at least 1,233 miles on today's road networks. Based on the assumption that highways are today more direct than in 1916, the actual distance is likely to be greater.

These statistics point to the conclusion that the drivers in *A Hoosier Holiday* and *Free Air* were likely to have encountered roadkill on a frequent basis, and unless Closser Hale's touring car was driven significantly slower, the same goes from *We Discover the Old Dominion*. If this was the case, however, these deadly encounters go largely unacknowledged by the writers, and where they do appear it is often for comic effect. Interpretations of roadkill in these early automotive stories reflect contemporary attitudes toward nonhuman animal life in automotive culture, and the price we are happy to let others pay for progress. Written during a period of great humanitarian concern in the U.S., these renderings of roadkill are complicated by the care afforded to theriomorphised automobiles. By virtue of their symbolic relationship to horses, the cars in these texts often receive greater ethical consideration than actual sentient animals. The very minor presence (or often complete absence) of roadkill in road trip narratives highlights the anthropocentrism of an idealised

open road, where the only animals on roadways are those figurative horses powering automobile engines (and humans of course). Closser Hale's *We Discover the Old Dominion* presents an intriguing question about the visibility of animals beneath the wheels. No instances of roadkill are described explicitly in Closser Hale's narrative, and thus it might seem like an unusual choice of text to begin with, but the text's subtle allusions to roadkill tell us much about the place of flattened fauna in automotive culture—an ever-present but often unspoken feature of car travel.

When the party stop at a hotel *en route*, Closser Hale is delighted to discover that for dinner they will be eating 'chicken in large quantities […] for the first time' on their trip, having 'not met with it before *except under the motor's wheels*' (241—my emphasis). This sentence, appearing over halfway through the text, is the first mention of the word 'chicken,' and the first and only allusion to roadkill of any kind. The reader can infer from this, then, that during the previous 250 pages of highly detailed travelling reports, Closser Hale's party have flattened at least one other chicken (likely more if we are to recognise the roadkill statistics of Stoner and Berger). The nonchalance with which roadkill is reported (or not reported) in Closser Hale's narrative, compared with the outpouring of sympathy for the automobile—'shut up in a garage after a hard day's run without any appreciative oil or grease or kerosene in the cylinders' (164)—demonstrates that chickens were considerably lower down the pecking order than automobiles in terms of deserving human care.

Despite narrating numerous encounters with farmers while motoring across their land, Lewis's *Free Air* features only one passing reference to roadkill, also involving chickens. There is again a sense of indifference, even perhaps amusement, in the way Lewis describes Claire as absently watching

> another member of the Poultry Suicide Club rush out of a safe ditch, prepare to take leave for immortality, change her fowlish mind, flutter

> up over the hood of the car, and come down squawking her indignities to the barnyard. (46)

The implication here is that the chickens are at fault for leaving the 'safe ditch' and entering the *un*safe road, and that it is their stupidity that endangers them as opposed to the automobile or its driver. Claire's nonchalance towards the chickens' peril reflects a sense of inevitability surrounding roadkill in automotive culture that remains the norm today. The banal quality to this scene of animal death (particularly the death of *poultry*—domestic birds bred for their corporeal economic value) demonstrates Claire's emotional detachment from the chickens; they are things rather than beings, and thus do not merit empathy. As Simmons would go on to acknowledge, all drivers 'are aware of the fact that a great number of animals lose their lives on the highway,'[65] but this does not have any meaningful impact on the behaviour of motorists. Claire is considerably more concerned about the wellbeing of Milt Daggett's Teal Bug, a thing which is rendered figuratively alive, than the chickens which are the real beings in this scene.

Of the three road narratives discussed, Dreiser's is the only one which affords roadkill any meaningful discussion. This is not to say that *A Hoosier Holiday* is particularly sensitive or thorough in its treatment of road fauna, but Dreiser is at least prepared to consider events from the animals' perspectives. As they approach East Aurora, Franklin notices a hen only narrowly avoid being flattened by their onrushing vehicle. Rather than interpreting the hen's dash toward the road as stupidity or suicidal tendency, Franklin considers (without any reference to the classic joke) why hens seem to 'invariably cross the road' when an automobile approaches:

> It's because they always have the instinct, when any dangerous object approaches, to run toward their home—their coop, which is often just opposite where they are eating. […] Our car will come along, and instead of moving a few feet farther away from their home, and so

[65] Simmons, 9.

> escaping altogether, they will wait until the car is near and then suddenly decide to run for home—the longest way out of danger. Lots of time they'll start, as this one did, and then find when they're nearly half way over, that they can't make it. Then they start to run ahead of the car and of course nearly always they're overtaken and killed. (161-162)

Franklin is by no means a specialist on the behaviour patterns of poultry, but his explanation frames the matter as serious rather than merely comical—as in the Poultry Suicide Club. Ultimately, the point is not whether he is correct, but that he does not automatically blame the hens nor assume that their actions have no explanation. It is also significant that Franklin acknowledges the automobile as a dangerous object, thus reframing the crime as murder rather than suicide. Dreiser stops short of suggesting that humans should feel guilt over such instances, however, as when they inevitably do run down and kill a chicken later in the narrative, he claims that his 'one fear in connection to this chicken incident was that the loss might prove something much more valuable than a chicken, and the thought of death by accident, to others than myself, always terrifies me' (481). Evidently chickens are not included in Dreiser's definition of beings other than himself, and their deaths on the road are only worrisome in sense that they portend human death. While no humans are harmed by automobiles in any of the three texts featured in this chapter, Dreiser's notion that people, like other animals, have the potential to become roadkill draws attention to the uncomfortable fact that as much as some drivers (like Claire Boltwood) would like to believe they have more in common with cars than animals, they too are fauna.

From the examples given thus far, one could argue that while the motorists appear to care more about their theriomorphised automobiles than chickens, this may tell us more about the low value of chickens specifically than the privileged place of automobiles. As a small, domesticated animal with a (relatively low) commercial value already assigned to its life, running over a chicken is unlikely to register as much more than a bump and perhaps a

squawk for the occupants of an automobile. Had any party hit a dog (like Closser Hale's dog Toby, for example) the emotional repercussions would likely have been much greater given dogs' higher value in human society, and the fact that their deaths are mourned as tragic, unlike chickens whose deaths are seen as routine. There is one other instance of roadkill right at the end of *A Hoosier Holiday* involving a larger animal, when a pig appears suddenly out of the darkness. Despite its squealing, 'as though seeking human care,' their new chauffeur Bert was 'quite unable […] to turn quickly enough to save it' (508). We know that the party were travelling fast by the language in which Dreiser describes the collision: 'There was a smash, a grunt, and then silence. We were speeding along quite as swiftly as before' (508). Such is the violent power of the automobile that even the death of a pig barely registers a blip, either physically or emotionally, for the human occupants. Of course pigs, like chickens, have a pre-existing monetary valuation in the slaughter industry which makes their machine-induced deaths appear more inevitable than is truly the case. Two paragraphs later, Dreiser claims that it 'had been a pleasant day, like all these days—save for *the evoked spirits of dead things*. We drank and smiled and paid and then sped out […]' (509–my emphasis). In automotive culture, then, it seems that the evocation of animal spirits is only positive when we understand the animal in a figurative sense—the horse's spirit in the wheels rather than the pig's flesh.

Theriomorphic automobiles and roadkill are not the only two forms in which nonhuman animals appear in the road narratives, at least in those by Closser Hale and Lewis. Domestic animals join their human owners on the road, even as their flattened counterparts appear on the road in a more visceral sense. Closser Hale's dog Toby accompanies the party on their automobile trip and is anthropomorphised throughout, as the narration shifts at points into Toby's humanised voice. His perceived opinions on various aspects of automobility receive considerably more attention than either Closser Hale's husband, Walter, or their

chauffeur, who remains unnamed and voiceless throughout. In Lewis's *Free Air,* Milt rescues a cat named Lady Vere de Vere from the abusive Baumschweiger farm. She accompanies Milt in his pursuit of Claire and, like Toby, influences how the automobile is perceived by the human characters. If the machines are accepted by other nonhuman animals, this only serves to strengthen the idiom through which they are afforded humane care.

The notion of animal acceptance has been a recognisable feature of automobile advertisements in recent decades, particularly in TV advertisements that portray cars as a natural part of the same wildlife habitats that are destroyed by automotive infrastructure. Nicole Shukin and Dennis Sown are among those to analyse this phenomenon, in which the car's "naturalisation" is confirmed by the wild animals it endangers. Discussing a 2002 advertisement for Volvo Saturn in which a human family's drive is interrupted by a herd of caribou intersecting with the car's trajectory, Shukin highlights a moment at which the 'car and the caribou commune […].'[66] Like the two automobiles in *We Discover the Old Dominion* which stopped to exchange sympathies, these two "creatures" seem to share a moment of affective recognition, which is in turn recognised by the female driver of the car. 'The female driver,' Shukin notes, 'is essential to the consolidation of the mimetic moment: woman's biological wiring ostensibly attunes her to the mysterious unianimality of car, caribou, and driver.'[67] The fleeting moment of recognition between two animal species (the woman and the caribou) lends validity to the third element of this trilateral unianimality—the car. The caribou appear to afford the human driver and the automobile the same regard as fellow beings, and are possibly unable to distinguish between driver and machine. The fact that there *is* a genuine animal comparison between the driver and the caribou implies that the caribou recognise the same status in the machine.

[66] Shukin, 117.
[67] Ibid.

The idea that a genuine human–animal bond is at the centre of this imagined automobile-animal bond is what forms the basis of the equine idiom, and is an example of how human relationships with automobiles today have their roots in the theriomorphic bonds between humans, horses, and horseless vehicles discussed in this chapter specifically and in the thesis as a whole. Dennis Sown has commented on the 'combination of nostalgia and denial' so often inspired by automotive culture, whereby 'vehicles become a native part of the environment […] allowing us to commune with wild animals that reflect suppressed parts of ourselves.' At the same time as automobiles become vehicles to a nostalgic animal past, they facilitate a denial of our animal *present*: not only in the sense that human animality is not something we have left behind but also the truth that automobiles collide with more animals than they 'commune' with. As Sown notes, effaced from these idyllic representations of human, animal, and machine coexistence are the material consequences of this union, such as 'gridlocked traffic, expressways, intersections, overpasses, strip malls, parking lots, ex-urban business parks, fast food signs, tract housing, roadside garbage, and—more to the point—dead animals.'[68] In this sense, treating automobiles as if they were sentient beings in need of humane treatment comes at the direct expense of the actual animals they mimic.

Ironically, it is imagined recognition of the automobile as a sentient being by other animals that facilitates those animals' subjugation. Passing this 'biological test,'[69] to use Shukin's words, confirms the automobile's symbolic status as animal. As an example of how animal acceptance is used to authenticate technological reproductions, Shukin draws attention to Michael Taussig's analysis of the RCA Victor logo "His Master's Voice," in which a dog is depicted listening to an early phonograph. The advertising goal of the logo is to suggest that the sound produced by the phonograph is so realistic that the dog is fooled into believing

[68] Dennis Sown, 'Road Kill: Commodity Fetishism and Structural Violence', in *Critical Theory and Animal Liberation*, ed. by John Sanbonmatsu (Lanham: Rowman & Littlefield, 2011), 54-66, 63.
[69] Shukin, 119.

that his master is right there, speaking to him directly. As Taussig notes, the animal is at once lauded for its heightened sense of hearing (presumably a more discriminating judge of the phonograph's authenticity than a human), and shown to be foolish as its senses are outwitted by the machine.[70] Although human engineering comes out as superior in the animal's biological test, Shukin uses Taussig's analysis to demonstrate that the machine nonetheless requires an animal judge in the process of its naturalisation. As Taussig puts it: the 'technology of reproduction triumphs over the dog but needs the dog's validation.'[71] Hence, automotive advertisements continue to present animals as the arbiters of validity—supposedly, they cannot lie.

While these examples are all from the late twentieth/early twenty-first centuries, it is my claim that automobile manufacturers have utilised animal authentication since the equine idiom first came into existence. The automobile in *We Discover the Old Dominion* is an example of a machine that clearly requires a dog's validation. While Toby is a West Highland terrier 'with wiry white hair, two black eyes and a black snout' (20), the degree to which he is anthropomorphised makes him more like what Mark Seltzer has called 'men in furs,' that is, an essentially human character in the guise of another animal.[72] Closser Hale claims (in jest) that she can 'understand a good deal that [Toby] says' (5), and proceeds to render Toby's views in human speech. He frequently comments on the performance of the various cars they sample before making a purchase, remarking that one model 'takes the hill well' or that another runs smoothly (6). The process of selecting an automobile for the trip lasts considerably longer than Closser Hale imagines, as her husband Walter insists on testing many machines, including some which she 'was sure he had no thought of buying' (4). It soon transpires that Toby has been accompanying Walter on every test drive, at which point

[70] Michael Taussig, *Mimesis and Alterity: A Particular History of the Senses* (New York: Routledge, 1993), 213.
[71] Ibid.
[72] Mark Seltzer, *Bodies and Machines* (New York and London: Routledge, 1992), 166.

Closser Hale realises that 'it was all to give Toby a pleasant little airing' (5). While it is Walter who ultimately foots the bill for the car, 'it was Toby […] who cast the deciding vote for the type of roadster which took us to—and away from—the Old Dominion' (6). Clearly, this can be read as tongue-in-cheek, but Toby's opinions on and ultimate acceptance of the automobile nonetheless serves to make the machine less threatening, as the dog (who usually guards his family) identifies the car as friend not foe.

Having accepted the automobile as part of the pack, the dog revels in the driving experience as much as his human family. Too excited to sit in the back as they speed along, Toby 'insinuated himself by every wile known to dog into the front seat' and 'beamed over the wind shield […]' (359). The idea that motoring appeals to the dog's keen senses reassures human readers for whom the automobile may have been a frightening contraption. The image of a happy dog leaning out of a car window is now a recognisable trope of car culture, which not only emphasises the positive relationship between domestic animal and theriomorphic domestic machine, but in doing so distracts from the violent nature of the animal-automobile relationship in the form of roadkill. 'Toby leaned out on his elbow as does an engineer from his cab,' Closser Hale writes. 'The wind blew through his young white hairs. "This is the life," he said' (326). Safely within the confines of the automobile, Toby is free to enjoy life on the road, in contrast to animals outside the automobile for whom the road more commonly means death.

Toby's eagerness to set out on another automobile trip makes him by no means unique among "society dogs," and *The New York Times* abounds with articles reporting the apparent thrill that dogs experienced while riding automobiles (although one could make the case that the observing humans are considerably more thrilled than the animals). One article from November 1916—the same time that Closser Hale and Toby were arriving back into New York from their trip around the Old Dominion—reports 'a white collie dog in the

driver's seat of an automobile, with its paws on the steering wheel, and apparently piloting the car through Broadway traffic.' The dog, who wore 'a chauffeur's cap on its head and a pipe in its mouth,' seemed 'thrilled' as they controlled the machine 'with the nonchalance of an expert.'[73] The crowd responds to the anthropomorphism of the dog wearing human clothes, but also to the idea that the dog is not only able to, but *enjoys* operating the automobile. As Chiu highlighted, the noise and mechanical complexity of early automobiles was often off-putting to would-be drivers. Deliberately staged performances such as the one featured in this article implied (through fanciful means) that cars were actually nothing to fear, and were so simple to operate that even a dog could learn. Few, it can be assumed, actually believed that the dog was really in control of the car—and indeed, the article concludes by confirming that the owner of the car actually did the steering by 'a set of levers hidden from view'—but the potential of animal acceptance to alter human perspectives of automobility is evident by the 'thrilled' onlookers.[74] In the years prior to this, canine validation of automobiles reached epidemic proportions according to a satirical 1911 article in the *Chicago Daily Tribune*, which alerted readers to a fictional affliction known as 'autoitis' which was sweeping through the domestic dog population of America. One symptom of this 'new malady' is imitating the behaviour of automobiles: 'trying to bark like an automobile horn and daubing gobs of oil on their well brushed coats.'[75] The article strikes a light-hearted tone, similar to the canine narration sections of *We Discover the Old Dominion*, but this text, too, attests to the prevalence of involving domestic dogs in

[73] 'Dog at Motor Car Wheel: White Collie Smoking a Pipe Thrills Automobile Row', *The New York Times*, 7 Nov. 1916, 8. A selection of other articles in periodicals from the 1910s which suggested that dogs enjoyed riding in cars include: 'New Motor Hound Lives on Car's Dust: The Bounding Badanga Gets Speed by Inhaling Gas from Automobile', *The New York Times*, 21 Nov. 1920, 105; 'Rides Bareback on Motor Car: Dog Does Stunts and Obeys Signals like Circus Performer', *Motor Age*, 30 (3 Aug. 1916), 32; 'Guard Rail for the Dog Motorist', *Motor Age*, 30 (13 July 1916), 48.
[74] Ibid.
[75] 'Has Your "Society Dog" Got Autoitis?', *Chicago Daily Tribune*, 22 Oct. 1911, 62.

automobile trips, with the effect of familiarising and to some extent domesticating the car. In imitating the automobile, the dog who has caught 'autoitis' pays respect to the machine while at the same time acknowledging it as the superior being.

While dogs were apparently the only species (other than perhaps humans) susceptible to 'autoitis,' they were not the only domestic animal reported to enjoy the company of automobiles. In 1916, *Country Life* magazine published an article entitled 'The Horseless Cat,' which relays the (extremely dubious) second-hand account of one household's horse, cat, and automobile. 'Our acceptance of the motor vehicle and its gradual encroachment on the horse's realm of activity has been shared by the displaced horse himself,' the article begins, as well as the dog, who 'has turned from Dobbin's head to the automobile's wheel' without a second's thought. Cats, in the writer's opinion, have taken characteristically more time to come around, but have now also accepted the passing of the horse. The tabby cat (unnamed) and the family horse (Frank) had previously been great friends, and the cat would sleep on the horse's back every night. When the human family are forced to dispense of Frank for economic reasons, and replace him with a horseless vehicle, the family cat goes missing, assumed to have gone looking for their equine friend. This, however, proves not to be the case:

> Passing the box stall which had been Frank's home, but with alterations now housed the four-wheeled steed, the children were attracted by the warm, alluring, oily smell of the latter and turned aside from their search to inspect by pocket flash its primitive shininess. And there, sitting on the slowly cooling engine hood was the tabby cat, warming her toes for the evening before starting to hunt rats. "Truly," said our acquaintance, relating the incident to us, "the automobile has driven the horse out of his last stronghold."'[76]

No author or advertiser is named on the piece, but given the strong anti-horse and pro-car sentiment throughout—the children apparently do not 'waste emotion on a relic of the

[76] 'The Horseless Cat', *Country Life*, 29 (Jan. 1916), 33.

past'—combined with the fact that the following two pages of the magazine are dedicated to 'Automobiles of Yesterday and the Day Before,' there is a good chance that 'The Horseless Cat' was placed by an automobile enthusiast if not an actual automobile manufacturer. The implication of the article is that if the children, the dog, the cat, and even the horse have accepted the car as the latter's replacement, such a transition must be natural to a degree. The level of intimacy established between cat and car suggests that the cat has completely accepted the automobile as a living entity, equivalent to the displaced horse (who simply vanishes), replaced by the new 'four-wheeled steed.' Such stories (or advertisements) are a perfect example of the equine idiom, whereby the emotional symbolic currency of the horse is celebrated and transposed onto the car, even as the horse is decried as economically inefficient.

Although feline acceptance of automobiles seems to have been utilised less than canine, Sinclair's *Free Air* features a large, grey cat who joins Milt Daggett on the road for a portion of his trip. Known as 'Rags' on the Baumschweiger farm, the unfortunate cat has 'an extraordinarily punk time'(31) evading the pitchforks that her owner Emil throws at her for sport, and the sympathetic Milt offers her a place in his getaway vehicle to Minneapolis. The cat jumps into Milt's car as they set off across the country, protected from the rain 'with the tarpaulin winter radiator-cover' (35). The automobile becomes the cat's sanctuary from her violent and abusive owners; in the car she becomes the 'Countess Vere de Vere,' of 'noble ancestry' (31), a step up from Rags on the farm. The noble lady soon accepts Milt's Teal Bug as 'her itinerant castle' (40), and while this may not be an example of the cat acknowledging the car as another living thing, the animal's willingness to embrace the automobile adds to the machine's social acceptability, and her rescue establishes Milt's car as a humanitarian machine.

Lady Vere de Vere is extremely content to ride around in the Teal Bug, and facilitates the increasing closeness between Claire and Milt, as she 'twinkled her whiskers at Claire, and purred to a stroking hand' (40). That is, until her castle is threatened by animals outside the car. In Chapter XIV, Milt, Claire, and Vere de Vere watch 'a large, black, adipose and extremely unchained bear' (86) break into their parked car to steal a box of candy left on the front seat. After a half-hearted effort from Milt to shoo the bear away, Vere de Vere 'gave one frightful squawl, shot from Milt's shoulder and at the bear, claws out, fur electric' (87). The bear casually bats her away before turning and leaving, having sent the cat 'sail[ing] into the air' (86). 'Good old Vere!' jokes Milt, as they run over to pick her up, but what initially promises to be a light-hearted aside to the main plot takes a surprisingly dark turn:

> The cat did not move, as they came up; did not give the gallant "Mrwr" with which she had saluted Milt on lonely morning after morning of forlorn driving behind the Gomez. He picked Vere up. "She's—she's dead," he said. He was crying. (87)

This is perhaps the expected outcome of a domestic cat fighting a wild bear, which makes it such a strange act on the cat's behalf. It could be that the sudden death of Vere de Vere is a tool employed by Sinclair to bring Milt and Claire closer, as it is only after burying the cat that the pair develop 'the queer, quick casualness of intimates' (87). The Teal Bug, apparently, means so much to the cat that she embarks on a suicide missions to defend it. Even those animals within the car, it seems, can still lose their lives because of it.

The Passing of the Horse

Three of the earliest examples of the American road-trip novel, the Outing guidebooks to both horse and car care, and numerous articles in contemporaneous American periodicals demonstrate how an ethic of care for horses was transferred to horseless carriages in early

automotive culture. The irony of this transference is that, from its advent, proponents of the automobile considered the machine a substitute for the horse, an attitude optimised by the title of the first automotive periodical in the English language—*The Horseless Age*. In this sense, car care depended on the evocation of the very animal set to be replaced, benefitting from the horse's sentimental connection to humanity whilst symbolically killing it.

As early as 1903, an advert for Olds Motor Works featured an image of an automobile passing a horse on the road with the caption "The Passing of the Horse" [Figure 4], the implication being not only that the horse was the more laggardly mode of travel (as the car physically passed it by) but that the time of the animal itself was passing. The advertisement employs exactly the same logic as can be seen in Upton Sinclair's *Oil!* (discussed in Chapter One), whereby the homonym "passed/past" appears in Ross's ethics of motoring as 'the past

Figure 4: The Passing of the Horse, advert for Olds Motor Works, 1903 <http://oldcaradvertising.com/Oldsmobile/1903/1903%20Oldsmobile%20Ad-01.html> [accessed 16/03/2022].

is past—or shall we say that the passed are passed?'[77] The text of the advertisement continues: 'The silent horse power of this runabout is measurable, dependable, and spontaneous—the horse-power generated by supplies of hay and oats is variable, uncertain, and irresponsive.' The horse itself, having already receded into society's rear-view mirror, is not even mentioned as a being in itself, but simply as an undisclosed intermediary in the process of turning hay and oats into motive power.[78] That the power produced by the machine is 'measurable' as opposed to the 'variable' output of the animal is another example of what

[77] Upton Sinclair, *Oil!* [1927] (London: Penguin, 2008), 3. See Chapter One.

[78] To the best of my knowledge, there was no such thing as an actual rear-view mirror on automobiles when this advertisement appeared in 1903. While the invention of the rear-view mirror is often credited to Missourian Elmer Berger, who patented the device in 1921, reference to such devices can be found much earlier in a 1906 article in *The Automobile*. The writer claims, in a letter to the editor, that they have 'seen some firm advertising a mirror to be attached to the dash of a car in order to see behind without looking round.' See 'The Man From Georgia Wants to Know', *The Automobile,* 15.24 (13 Dec. 1906), 855.

Jonathan Crary described as the dismantling and quantifying of the horse into 'lifeless units of time and movement.'[79] E. P. Ingersoll suggested that the automobile would liberate horses from the industrial treadmill, yet in doing so, the horse died a symbolic death, rendered lifeless as its mechanical replacement was rendered living.

Many of the horses "liberated" from human service by the automobile, however, died more than just symbolic deaths. Fleshing out the symbolic relations between humans, animals, and automobility leads us back to Shukin's double-entendre of rendering, a particularly apt formulation for reminding ourselves that once horses had entered into the industrial marketplace they could not simply disappear into an imagined Edenic past. The industrial rendering of dead horses in meatpacking facilities had occurred in years before the automobile. As we saw in Chapter One, packers would often offer to collect the bodies of horses who had died in the street, their hides, hooves, and bones were all used to make various products.[80] As Susanna Forrest notes, however, this practice became increasingly common after 'the first parpings of the motor car,' as the monetary value of horses as a means of transportation became lower and lower, until many former draft horses were worth more as dead than living commodities.[81]

It is in this sense that the theriomorphising of cars as animal was a driving force that rendered actual animals disposable. While drivers could fondly remember the noble horse every time they ventured out in their cars, many horses of the supposedly horseless age entered a new kind of market. The first large-scale dog food canning operation in the U.S. was set up in the late 1910s—Chappel Brothers, Inc.—yet, as Katherine C. Grier has shown,

---

[79] Jonathan Crary, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge, MA and London: MIT Press, 1999), 144.
[80] Katherine C. Grier, 'Provisioning Man's Best Friend: The Early Years of the American Pet Food Industry, 1870-1942', in *Food Chains: From Farmyard to Shopping Cart*, ed. by Warren Belasco and Roger Horowitz (Philadelphia: University of Pennsylvania Press, 2010), 126-141, 130.
[81] Susanna Forrest, *The Age of the Horse: An Equine Journey Through Human History* (London: Atlantic Books, 2016), 239.

this company does not appear in the 1922 *Packer's Encyclopaedia* (the business directory of the meat industry). Grier suggests that this absence is down to the fact that Chappel Brothers was 'exclusively a horse slaughtering operation,' which, in Grier's words, was a shadowy '[…] but necessary' part of the horse world.[82] As I demonstrated in Chapter One of this thesis, the slaughter industry was a similarly shadowy presence in the automobile world, evidenced with particular clarity by Shukin's assertion that the auto assembly line, 'so often taken as paradigmatic of capitalist modernity, is thus mimetically premised on the ulterior logistics of animal disassembly that it technologically replicates and advantageously forgets in a telling moment of historical amnesia.'[83] Remembering the literal as well as the figurative horse in horsepower is thus necessary if we are to understand the ethical turns made by humanity about which animals are expendable for our ideas of progress, and which are allowed to join us in reaping the benefits of their deaths. Evoking the figurative horse meant that Closser Hale's automobile was treated humanely, but it may well have been literal horses which meant that Toby the dog did not go supperless to bed.

As Dreiser muses from the back seat of the Pathfinder car, 'Men are animals with dreams of something superior to animality […]' (113). While this stray thought is never worked through in *A Hoosier Holiday*, its inclusion bespeaks the importance of the automobile in achieving this dream. The symbolic reverence for the horse in automotive culture, through the equine idiom and the theriomorphism present in the foundational texts of the American road-trip genre, is a welcome distraction from the corporeal reality of horses whose primitive animality meant that they needed to be discarded to make way for the automobile. It was simpler to believe that they had simply passed into the past, rather than confront the horrific literality of their being rendered obsolete.

[82] Grier, 130.
[83] Shukin, 87.

Despite experiencing both literal and symbolic death automotive culture, the horse remained materially present in American society for years to come, with equine populations continuing to grow right up until 1914, the point at which the (still officially neutral) U.S. government began shipping horses to Europe as part of the war effort.[84] At the same time, the horse was simultaneously resurrected in automobile form and yet said to have slipped out of existence—passed into the past. In this sense, horses were in a state of perpetual dying, suspended in the process of passing without ever actually realising a horseless age. The next chapter will investigate the impact of the First World War on human, animal, and automobile relations, as the equine idiom (and the concept of chivalry itself) played out on the front lines of a conflict that laid bare the endemic violence of modern, mechanised society.

[84] Emily R. Kilby, 'The Demographics of the U.S. Equine Population', in *The State of the Animals IV: 2007,* ed. by Deborah J. Salem and Andrew N. Rowan (Washington, DC: Humane Society Press, 2007), 175-205, 176.

CHAPTER THREE

Knights on Wheels: Chivalry and Horsepower in the First World War

> *War as a theory is a magnificent, spectacular adventure—playing bands, dashing horses, flying colors; as a reality it is a gray, soul-wearying business, a business of killing and being killed, a business from which there can be no turning back and the learning of which will mean much agony for America.*
>
> —Robert Whitney Imbrie, 1918[1]

The United States officially entered the First World War in April 1917, having remained neutral for almost three years since the war began. During this time the U.S. had furnished the Allies with various supplies including munitions, clothing, and horses to name but a few, bringing in a staggering twenty billion dollars between 1914 and 1916 from the United Kingdom alone.[2] On top of these supplies, thousands of American civilians also made the trip across the Atlantic to serve as volunteer motorised ambulance drivers with the French Army, transporting injured soldiers (*blessés*) from the front lines back to field hospitals at great risk to their own lives. By the time the various volunteer organisations were merged and placed under the control of the U.S. Army in October 1917, over 3,500 Americans had served as drivers.[3] Among these was Yale Law graduate Robert Whitney Imbrie (1883-1924), who kept copious notes of his experiences driving an ambulance in France between December 1915 and October 1916, before being transferred to Macedonia until April 1917. Those notes became his memoir, *Behind the Wheel of a War Ambulance* (1918), from which the epigraph to this chapter is taken.

---

[1] Robert Whiney Imbrie, *Behind the Wheel of a War Ambulance* (New York: Robert M. McBride & Co., 1918), 222. Henceforth cited parenthetically.
[2] Kathleen Burk, *Britain, America and the Sinews of War, 1914-1918* [1985] (London and New York: Routledge, 2014), 27.
[3] Arlen J Hansen, *Gentlemen Volunteers: The Story of the American Ambulance Drivers of the First World War* (New York: Arcade Publishing, 2011), 18. Ebook Central ebook.

The particular passage quoted is significant in that it introduces several key themes of this chapter in a single sentence. The differences between war 'as a theory' and 'as a reality' (222) represented some of the starkest revelations of the First World War, a conflict which laid bare the horrors of modern, mechanised warfare and saw any traditional romantic notions of glory and heroism buried in the mud of the trenches. The 'dashing horses' in Imbrie's articulation are representative of this romantic theory of war—an experience which promises to be a 'spectacular adventure' for those men courageous enough to fight (or at least drive) for their convictions. The horses remain central to this traditional idea of warfare despite playing a considerably different role in the Great War than in any previous U.S. conflicts, as well as dying in unparalleled numbers. That the heroic symbolism of the warhorse could inspire Americans like Imbrie to get behind the wheel of a war automobile—even as actual horses were dying unglamorous deaths hauling munitions—demonstrates the figurative/material tensions between horse and horsepower in civic society discussed in the previous chapter bleeding onto the battlefields of Europe. While the theory of war is an adventure embodied by the warhorse, the reality, as Imbrie repeats several times, is 'a business.' This can be understood not only in the sense of a 'soul-wearying business' but also as a financial opportunity from which U.S. industry stood to profit greatly. As we shall see, few profited more from the conflict in the long run that the automotive industry, capitalising not only on the material deaths of horses and the increased market for horsepower back home, but also on the symbolic death of the warhorse as the cavalry were reduced to 'comic figures,' while the drivers of the American Ambulance Field Service were decorated as heroes.[4]

[4] Imes Chiu, *The Evolution from Horse to Automobile: A Comparative International Study* (Amherst, NY: Cambria, 2008), 160.

Imbrie's account features in a bibliography published by *The New York Times* in 1918 of the best books 'from the front;' a distinct category from 'War Songs and Poems,' 'Fiction, Drama, Juveniles,' and books about 'Germany and Austria.' The astonishing number of war books published between April and October 1918 is remarked upon by the editor of the bibliography, who claims that:

> Naturally, at this moment America's greatest literary yearning is for books from the front, descriptive of soldier life, books that visualize the various phases of warfare, especially in the localities where our fighting men are operating.[5]

While most, if not all, of these books from the front have long since fallen out of print, their brief popularity suggests that they played an important role in connecting the American people to the European conflict. Reliable news of the war, notes Arlen J. Hansen, 'was virtually impossible to obtain' given that British and French police (for the most part) denied reporters access to the front: 'With news of the war so poorly reported, letters from the American drivers found grateful and devoted readers hungry for firsthand news.'[6] While this chapter will draw on several of these accounts from American *ambulanciers*, there are two in particular which emphasise a shift in both the material and symbolic roles of automobiles in American conceptions of warfare, and what this meant for the horse and the cavalrymen who depended upon it for their own identities. In addition to Imbrie's narrative, I will also be focusing on another of the 'best books from the front'—William Yorke Stevenson's *At the Front in a Flivver* (1917)—in which Imbrie features by name, being part of the same ambulance unit. Both of these narratives contain examples of the kinds of theriomorphism and car care explored in the previous chapter, whereby automobiles are rendered sentient and treated as if they were the very animals they were built to replace. Rather than simply

[5] 'Growing Literature of the War', *The New York Times*, 20 Oct. 1918, 65-68.
[6] Hansen, 104. A more detailed account of press censorship from a U.S. perspective during the First World War can be found in William G. Shepherd, *Confessions of a War Correspondent* (New York: Harper & Brothers, 1917).

continuing the same lines of inquiry in a different *locale*, however, this chapter builds upon my previous arguments by examining the extent to which the symbolism of the warhorse specifically (as opposed to the draft horse) was transposed onto the automobile, and whether these so-called 'gentlemen volunteers'[7] really were the technological *chevaliers* they were hailed as by French armed forces.[8]

Prior to analysing these primary sources on more detail, this chapter will first lay the groundwork as to why exactly the First World War was so significant in the transition from animal to mechanical horsepower in the United States. The sheer numbers of equines transported to Europe left a gaping hole in everyday life, on farms and in cities, which was certainly a factor for many in overcoming reservations about the automobile. Looking beyond the practical side of things, I will then move on to establishing what the figure of the warhorse meant to traditional conceptions of class, masculinity, and nation for American soldiers. With particular reference to the story of Comanche—a famous cavalry horse and reportedly 'the only living thing to survive the Battle of Little Bighorn'[9]—as well as the testimonies of U.S. Cavalry officers in *The Journal of the United States Cavalry Association*, I will demonstrate the potency of the automotive equine idiom as it infiltrated the very foundations of the human–horse relationship.

In 1914, *The Horseless Age* featured an article entitled 'War's Effect on Automobile Industry.' The basic argument can be summed up in the first line: 'An increased world demand for automobiles and motor trucks will result from the European war from which

[7] See note 2.
[8] One of those drivers posthumously awarded the Croix de Guerre was Richard N. Hall of Ann Arbor, Michigan. In his citation, the French surgeon-in-chief of the 66th Division claimed that 'Driver Richard Hall' had died like a 'Chevalier de la Bienfaisance.' See Edwin E. Morse, *The Vanguard of American Volunteers in the Fighting Lines and in Humanitarian Service, August, 1914-April 1917* (New York: Charles Scribner's Sons, 1922), 138.
[9] Karen Jones cites an article in the *Bismarck Tribune*, 10 May 1878, as the source for the 'living survivor' description. See Karen Jones, 'The Story of Comanche: Horsepower, Heroism and the Conquest of the American West', *War & Society*, 36.3 (2017), 156-181, 158.

America should profit.'[10] It is in this sense that war, to quote Imbrie in the epigraph, is 'a business' (222). Of course, one expects a journal published in the interests of the automobile industry to consider such positions, but the brutality with which the article continues highlights a key point of this chapter, namely, the de-romanticising of the horse in warfare: 'This demand will be produced by […] the loss of horse flesh in the war and the inability to replace this loss for several years following the close of the war.'[11] This particular example of the horse being reduced to flesh and market opportunity in machine culture is representative of another idea which will recur throughout this discussion, whereby human–animal relationships become little more than the 'fleshy entanglements' described by Vicki Tromanhauser, as mechanised warfare forced many soldiers to confront 'the matter of our own *meatness* […].'[12] The brutally economic treatment of horses compared to "veteran" automobiles by the U.S. Army post-WWI (as we shall see) suggests that war fought as 'a business' will inevitably value expensive (and inert) machinery higher than sentient life, horse or human.

Before we get to the *meatness* of the argument, however, it is important to flesh out the details of the United States' equine exportation transactions over the course of the conflict. Automotive industrialists recognised the potential markets (domestic and foreign) that a shortage of horses would open up, but the sale of these horses and other equines generated considerable income for the United States in and of itself. In the years leading up to the First World War, there were approximately 2 million horses in the United Kingdom, 3.2 million in France, and 1 million in Italy, while Germany and Austria had a combined total of around 6.3 million. The United States and European Russia (including Poland), had around

[10] 'War's Effect on Automobile Industry', *The Horseless Age*, 34.12 (16 Sept. 1914), 438.
[11] Ibid.
[12] Vicki Tromanhauser, 'Inside the "Butcher's Shop": Women's Great War Writing and Surgical Meat', in *Literature and Meat Since 1900*, ed. by Seán McCorry and John Miller (Cham: Palgrave Macmillan, 2019), 19-34, 20 [emphasis in original].

23 million each.[13] After it became apparent that their own supplies would fall far short of the numbers required for a war of this magnitude, many European nations sent agents to the U.S. to secure as many horses as they could lay their hands on:

> Beginning in September 1914, U.S. horse exports rose rapidly, going from 804 in August to 7,146 in September, 12,091 in October, 28,071 in November and 30,687 in December. They reached a peak of 47,380 in July 1915 and did not fall below 18,000 a month till July 1917. In the four years ending June 30, 1918, U.S. horse exports rose from 111,456 in the previous four years to 1,101,332, with 67 percent, or 734,311 going to the United Kingdom or France. Over the same period U.S. exports of mules expanded from 15,213 in the previous four years to 343,271, with some 57 percent, or 197,215, going to the United Kingdom alone.[14]

To add to these figures are the 300,000 horses and mules purchased by the U.S. Army between June 1917 and March 1918 that were intended for service in the American Expeditionary Force.[15] Of these, 182,000 actually made it over to Europe. Thousands had been killed at sea in German submarine attacks (including the sinking of the *Georgic* in 1917 which had 1,200 horses aboard),[16] and apart from that the logistics of transporting so many animals alongside human troops proved almost insurmountable. Between July and November 1917, the U.S. paused all horse transportation efforts and focused instead on trying to acquire French horses.[17] Despite this, the equine population of the U.S. fell from its all-time peak of 26,493,000 in 1915 to a little over 25 million by 1920. This set the tone for a downward trajectory from which the population would never recover, and the war was the catalyst.[18]

---

[13] Jonathan V. Levin, *Where Have All the Horses Gone? How Advancing Technology Swept American Horses from the Road, the Farm, the Range and the Battlefield* (Jefferson, NC: McFarland & Company Publishers, 2017), 11.
[14] Levin, 13-14.
[15] Wayne Dinsmore, 'Military Exports of Horses and Mules', *Breeder's Gazette*, 25 Apr. 1918, 865.
[16] Irving Parmeter, 'The Use of Cavalry Through the Ages', *Current History (1916-1940)*, 28.3 (June 1928), 447-452, 451.
[17] Levin, 25.
[18] Emily R. Kilby, 'The Demographics of the U.S. Equine Population', in *The State of the Animals IV: 2007*, ed. by Deborah J. Salem and Andrew N. Rowan (Washington, DC: Humane Society Press, 2007), 175-205, 176.

The upshot of this was that the United States was left with a national shortage of horses (and horse manure) on farms during the war years, which threatened food production. At a time when food supplies were being strained more than ever (the country now had armies to feed overseas), automotive companies were quick to point out that motorised vehicles were the answer. According to a spokesperson for 'one of the automobile companies,' quoted in a 1915 article in *The New York Times* (right next to an advertisement for the Winton Motor Company of New York City), '80,000,000 acres of the best farm land in the United States' is dedicated to 'the raising of feed for horses and mules […].' If the U.S. was to furnish food for its soldiers, its allies, and potentially the civilian populations of Europe after the war, the article continues, 'it is obvious that it will be much too expensive a luxury to feed a horse,' especially considering an automobile 'doesn't eat when it isn't working' and 'is far more economical to operate.' One positive of the Great War, the automotive spokesperson notes, is that 'it has killed the prejudice of the horseman against machine transportation,' and has done 'more toward the banishment of the draft horse than fifty years of peace and peace propaganda.'[19] It was not only pro-automobile spokespeople who recognised the likely acceleration of the shift from horse to horsepower in the post-war United States. The *Journal of Zoöphily* (the monthly publication of the American Anti-Vivisection Society) noted in 1915 that 'the land is being robbed of these animals, and more and more people are willing to replace them with automobiles […].'[20] In 1916, U.S. automobile registrations rose from approximately 2.4 million in 1915 to just over 3.3 million, an increase of around forty-two percent.[21]

[19] 'War Means Replacement of Horse by Truck', *The New York Times*, 14 Feb. 1915, 81.
[20] W.O.S., 'War Horses Exported', *Journal of Zoöphily*, 24.4 (Apr. 1915), 54.
[21] Figures from the 1915 and 1916 editions of *Automobile Registrations, Licenses, and Revenues in the United States* (Washington, DC: United States Department of Agriculture, Office of the Secretary) <https://archive.org/details/automobileregist73unit/page/n1/mode/2up> <https://archive.org/details/automobileregist59unit/page/n1/mode/2up> [accessed 10/01/2022], 1.

In addition to replacing lost horses, the war also expanded the market for American automobiles both home and abroad. Another 1915 article in *The New York Times* remarked that warring nations would one day soon look to the U.S. to supply their motor cars. Automobile manufacturers, the article reports in tellingly aggressive language, realised that the (currently neutral) United States, 'unthreatening and unthreatened,' must not pass up the opportunity of 'invading new fields, heretofore practically untouched by the car built in the United States […].' With the domestic automobile manufacturing capabilities of many countries in continental Europe and South America dedicated almost entirely to government uses during the war, there was a need for commercial supply that the U.S. was able to fill.[22] Additionally, as discussed in Chapter Two of this thesis, the closing of popular tourist destinations in Europe meant that many Americans would have to make do with domestic vacations—seeing America first, to paraphrase the popular tourist slogan. Thus, the article in *The New York Times* anticipates that 'there will be a stimulus to touring in America, and hence automobile buying.' The greatest shift in public perception of the automobile predicted in this article, however, was that its incorporation into the modern army would convert one of the 'luxuries of yesterday' into one of the 'necessities of today.' The automobile, the article continues, 'has adapted itself to nearly every feature of warfare:'

> Motor ambulances are busy by thousands in the work of mercy; armoured fortresses on wheels deal death and destruction, and lighter machines equipped with machine guns, perform the duty of patrol and surprise skirmishing. […] In addition there is the legion of passenger cars, big and little, used by officers and messengers, and sometimes made to enter into thrilling fights and flights, and the omnipresent host of motor cycle dispatch riders, travelling as swiftly as the shell torn roads will permit and daring death daily. It is rightly called an automobile war.[23]

[22] 'How the War Has Affected the American Automobile Trade', *The New York Times*, 3 Jan. 1915, 81.
[23] Ibid.

As this passage demonstrates, there were considerably more vehicles than just the motorised ambulances driven by Americans such as Imbrie and Stevenson in this unprecedented style of mechanised conflict. Worth noting here is the specific mention of duties such as 'patrol and surprise skirmishing,' carrying officers and messengers, and engaging in 'thrilling fights and flights,' all of which would have, until very recently, been performed on horseback. The war, as envisioned in this *New York Times* article, acts as something of a test track for the automobile's status as one of the 'necessities of today.' If it could become as integral to the functioning of a modern army as the horse, then public perception of the automobile as a luxury plaything of the rich would no longer hold sway, as there was little room for luxury in war.

But the significance of this so-called 'automobile war' had consequences far beyond the practical in the move from animal to mechanical horsepower in the United States. At a time of significant societal turbulence throughout Europe and around the world, when the very notions of progress and civilisation were being blown apart by the same machine technology which was supposed to drive them forward, zeroing in on this example of "traditional" animal power being replaced by "modern" machine power offers a way in to understanding some of the cultural shifts taking place at the pinnacle of Progressive U.S. society. Modris Eksteins has written at length on the cultural shift which took place during the First World War, whereby long-held traditional values of the 'Old World' began to give way to a modern 'preoccupation with speed, newness, transience, and inwardness—with life lived, as the jargon puts it, "in the fast lane" […].'[24] That these modern values should be rendered via automotive metaphor is no coincidence, as Eksteins identifies the motor car (more accurately the 'corpses' of old motor cars) as representative of post-WWI principles in

[24] Modris Eksteins, *Rites of Spring: The Great War and the Birth of the Modern Age* (London: Bantam Press, 1989), xiv.

twentieth-century mechanised societies. More people, Eksteins claims, now identify with the metal corpses of the 'automobile graveyard' outside Verdun than with the 'impersonal horror' symbolised by the thousands of white crosses in the memorial cemetery further up the road.[25] Of course, the transition from the 'Old World' to the modern was not clear cut, rather it was overlapping, with contrasting values coexisting. The events of the First World War simply accelerated a transition already in motion. Exactly the same can be said about the transition from horse to automobile, which makes it an apt lens through which to view these broader cultural shifts. In order to understand how these changing values and beliefs are part of this thesis's investigation into animals and automobiles, it is necessary to discuss the horse's physical and figurative roles in warfare prior to the Great 'automobile war.' The heroic symbolism of the equine body, affirmed through centuries of participation in human conflicts, found no reflection in the material conditions of horses on the mechanised battlefield, yet the legacy of the noble steed survived both in the minds of cavalrymen and in the narratives of the gentlemen volunteers—the knights on wheels.

Horse Heroes

In 1895, the same year which saw the publication of the first issue of *The Horseless Age* and the founding of the first U.S. automobile company, American palaeontologist Nathanial Southgate Shaler (1841-1906) published his work on the relative values of various domesticated animals in the advancement of human civilisation. Generally supportive of the adoption of modern technology, Shaler noted that even in 1895, before the automobile had established its place in U.S. society, 'the greater part of the work which of old had to be done

[25] Eksteins, xiii.

by horses can, at a slight increase of cost, be effected by mechanical engines.'[26] This being said, there was 'one great occupation' of which Shaler could not conceive without the services of horses—'This is war.'[27] Even acknowledging that modern invention, 'in giving us heat-engines,' had paved the way for the horse to become merely a 'luxury and an ornament' within the space of one generation, Shaler still adds the caveat: 'save for the uses in war.'[28] Of course, despite a change in role from key aggressor to primarily draft animal, horses remained essential to all belligerent nations throughout World Wars One and Two. The fact that Shaler could not even conceive of war without the horse, however, tells us something about the significance of warfare in the human–horse relationship, and how many of the qualities that Americans associated with conflict (strength, heroism, courage, and masculinity, to name but a few) were bound up with equine symbolism. While in Chapter Two I considered the incorporation of such symbolism into automotive culture with a focus on draft horses—those everyday 'drudges' to quote E. P. Ingersoll—this Chapter is concerned with that of the warhorse, a very different material and symbolic beast.[29]

The warhorse in Western literary history is as old as that literature itself. As Mario Ortiz-Robles has discussed, before human soldiers rode horses into battle, 'they rode in them; or, rather, in one very special horse: the so-called Trojan horse, which, like philosophy, was really a Greek invention.'[30] Although the wooden horse does not appear in Homer's *Iliad*, it is referenced in the *Odyssey* when Odysseus asks Demódokos to 'sing that wooden horse Epeios built, inspired by Athena' (VIII, 526-527). In the Latin tradition, Aeneas of Virgil's *Aeneid* describes the Trojan horse as a *montis equum* (which Ortiz-Robles translates as a

[26] Nathanial Southgate Shaler, *Domesticated Animals, Their Relation to Man and to His Advancement in Civilization* (New York: Charles Scribner's Sons, 1895), 100.
[27] Shaler, 101.
[28] Shaler, 102.
[29] E. P. Ingersoll, 'The Horseless Age', *The Horseless Age*, 1.1 (Nov. 1895), 7-8, 8.
[30] Mario Ortiz-Robles, *Literature and Animal Studies* (London and New York: Routledge, 2016), 29.

"steed of monstrous height"), and a *fatalis machina* ("deadly engine").[31] While this latter phrase foregrounds both the weaponisation and ultimately the mechanisation of horsepower by human civilisation, the story of the Trojan horse demonstrates that classical conceptions of military conquest were bridled in equine symbolism, with the legendary wooden horse signifying 'the victory of a group of humans and their gods over another group of humans and their gods.'[32] As Ortiz-Robles suggests, because the horse in question is a human invention (both in the sense of having been created by Odysseus and the Greeks *and* being a literary creation), it stands as a symbol of the human ability to 'harness nature' for the purposes of warfare. The mounted human is not only physically more imposing than the foot soldier, but also stands for the idea of military victory in itself.[33]

As well as planting its hooves firmly in the classical literature of Western societies, the horse (and the warhorse in particular) is the only animal after which an entire literary genre is named. The chivalric romances of the age of chivalry take their name from the French word for "horse"—*cheval*.[34] The term "cavalry" also has its etymological roots in the French *chevalier*, or mounted knight, connecting the cavalry branch of the armed forces to the romantic ideals of chivalry, via France (where such ideals would be re-enacted by the American ambulanciers). As Ortiz-Robles explains, the figure of the horse remained central to European literature throughout the medieval period:

> The role of the horse in Medieval Europe's most important literary genre, the chivalric romance, consists, as its name implies, in nothing less than a structural necessity. The close bond obtaining between horse and horseman (*caballero, chevalier, Ritter,* knight) informs the

[31] For these translations, and for a more in-depth discussion of the Trojan horse in Greek and Latin literature, see Ortiz-Robles, 30-31.
[32] Ortiz-Robles, 31.
[33] Ortiz-Robles, 32.
[34] Ortiz-Robles, 29.

> culture of chivalry operating in the Middle Ages as well as the literature that emerges during this period.[35]

The very concept of a knight is constructed of two parts: one human, one equine. As Sir Thomas Malory, the author/compiler of one of the most significant texts in Arthurian literary history—*Le Morte D'Arthur* (1485)—put it, 'What is a knight but whan he is on horsebacke?'[36] From the very beginnings of chivalry, the horse was integral to the identity of the knight, and thus is every bit (if not more) important to the image of the chivalric war hero as the actual qualities possessed by the human rider. Qualities essential to the notion of chivalry, such as courage and loyalty, were shared (supposedly) by human and horse in an affective valence of knighthood.[37]

Not only is the mounted human soldier endowed with the muscular power of the horse, and therefore a more formidable fighting force than the infantry, but is also raised above the person on foot in a social sense: 'to walk is to move as a servant moves; to ride is to be elevated both physically and conceptually above the rank of servant.'[38] This is reflected in the etymology of the term "infantry," which indicates youth and inexperience as well as servitude—'a footman.'[39] The high social status of the warhorse (compared to draft horses) reinforces the social status of the mounted soldier. As Jordanus Rufus noted in his treatise on horse training published in the high Middle Ages: 'No animal is more noble than the horse, since it is by horses that princes, magnates and knights are separated from lesser people […].'[40] The warhorse, then, far more than a beast of burden, can be understood as embodying the social structure by which humans were separated into "lesser" and "greater" people—with

[35] Ortiz-Robles, 33.
[36] Sir Thomas Malory, cited in Susan Crane, *Animal Encounters: Contacts and Concepts in Medieval Britain* (Philadelphia: University of Pennsylvania Press, 2013), 137.
[37] Crane, 144.
[38] Crane, 140-141.
[39] *OED* <https://www.oed.com/view/Entry/95236?redirectedFrom=infantry#eid> para. 1 of 2 [accessed 11/01/2022].
[40] Jordanus Rufus, cited in Crane, 141.

those in the position of greatest physical power assumed to possess the most chivalric natures.

The relevance of the literary historical symbolism of the warhorse to the experiences of those Americans who drove motorised ambulances in World War One will become clear in my analysis of the theriomorphic language in which automobiles are described in the narratives of Imbrie and Stevenson later in this chapter. For the time being, it is worth recalling the fact that when American volunteer Richard Hall posthumously received the Croix de Guerre after being killed in his car by a German shell, his citation from the French surgeon-in-chief of the 66th Division stated that 'Driver Richard Hall' had died like a 'Chevalier de la Bienfaisance.'[41] The idea that an automobile driver could be compared to a *chevalier*, particularly during a conflict in which the actual horse cavalry experienced such a fall from the romantic ideals of the mounted knight, not only infuriated U.S. Cavalry officers but suggested that the corporeal horse was perhaps no longer necessary to the modern conception of chivalry. Mechanical horsepower threatened to take the heroic place of the animal, relegating the corporeal horse (and the rider) to less noble endeavours. Before elaborating on these ideas alongside the narratives of the gentlemen volunteers, however, it is necessary to locate the legacy of the warhorse specifically within nineteenth-century American history.

Prior to its adoption into the U.S. Army, the horse became an important part of military culture for Indigenous Americans. Many Plains tribes—including the Comanche, whose importance will soon become clear—acquired horses from the Spanish in the seventeenth century, going on to become renowned riders, hunters, and warriors.[42] As Karen Jones has shown, the Comanche, Cheyenne, and Apaches were among those who engaged in

[41] See note 8.
[42] Jones, 159.

raids or battles 'with the specific aim of acquiring equine prizes […].'[43] The capturing of horses was considered a heroic act, and the Crow and Cree 'celebrated not only the taking of horses but their taking under particularly difficult circumstances.'[44] As Frank Gilbert Roe has noted, the horse in Plains cultures was often 'not only the means of war; it was also the end.'[45] According to J. M. Brereton, the horsemanship of many Indigenous peoples rivalled that of the Mongols, placing them amongst the mightiest mounted warriors in history. It was the horse, Brereton claims, 'that enabled [such tribes] to hold out against the white man for nearly a century […].'[46] As we shall see, the horse would play a significant material and symbolic role in conflicts between Indigenous Americans and white colonisers after the Civil War.

When South Carolina seceded from the Union in December 1860, there were approximately 6 million horses between government and private ownership in the U.S., with the majority of the best horses located in the Southern States.[47] Confederate troops enjoyed something of an advantage in the early stages of the war as most Southern cavalrymen were able to ride into battle on their own horses, with whom they already shared a bond. In a strictly practical (rather than an ideological) sense, Ryan Hediger has argued, 'the U.S. Civil War became largely a contest over horses, and the participants knew it.'[48] Union soldiers were often less familiar with the saddle, as many would have recognised the horse as more of a draft animal attached to a plough.[49] Consequently, Union horses were frequently underfed and overworked, with many animals unsuited for warfare being pressed into service at great

[43] Jones, 160.
[44] Jones, 161.
[45] Frank Gilbert Roe, *The Indian and the Horse* (Norman, OK: University of Nebraska Press, 1955), 227.
[46] J. M. Brereton, *The Horse in War* (Newton Abbot: Douglas David & Charles Ltd., 1976), 103.
[47] Ibid.
[48] Ryan Hediger, 'Animals in War', in *The Palgrave International Handbook of Animal Abuse Studies*, ed. by Jennifer Maher, Harriet Pierpoint, and Piers Beirne (London: Palgrave Macmillan, 2017), 475-494, 482.
[49] Brereton, 104.

physical expense. In one instance, President Lincoln's order to attack could not be obeyed as the unit's '19,000 draft horses were starving and only 3,700 were usable.'[50] In the Confederate Army, horses were comparatively well treated (although the conditions of warfare really only permitted a sliding scale of animal abuse). In the words of Gervase Phillips, the horse 'was as well ridden and as well cared for as conditions allowed; understanding his dependence on the horse, the experienced [Confederate] rider treasured his horse not merely as a comrade but also for its physical prowess and character.'[51] The relationship between soldier Jim Cochran, of the 2nd Tennessee Cavalry, and his 'nice bay mare' named Lize is emblematic of the close bond between warhorse and rider seen throughout the history of human conflict to that point: 'I can ride her up to a man and tell her to paw a Yankee and you would laugh to see her rear up and strike the ground with her fore feet […]. She has more sense than many of the men in our Battalion.'[52] The strong existing bond between many Southern troopers and their horses enabled them, as a unit, to adapt swiftly to wartime ordeals. So strong was the bond between General Robert E. Lee and his horse "Traveler" that, following the capitulation of the Confederate Army, Traveler lived with Lee in Lexington where he was the General's 'only companion.' Following the deaths of first man and then horse, Traveler became another equine veteran whose body was transferred to a museum, joining "Winchester," General Phillip Sheridan's charger.[53]

Arguably the most famous warhorse of the American West, however, was a relatively unremarkable animal of the Seventh Cavalry known as Comanche—supposedly the only 'living survivor' of the Battle of Little Bighorn (1876).[54] The battle, known as the Battle of

[50] J. M. Kistler, *Animals in the Military: From Hannibal's Elephants to the Dolphins of the U.S. Navy* (Santa Barbara, CA: ABC-CLIO, 2011), 167.
[51] Gervase Phillips, 'Writing Horses into American Civil War History', *War in History*, 20.2 (2013), 160-181, 168.
[52] Jim A. Cochran, cited in Phillips, 168-169.
[53] Brereton, 109.
[54] See note 9.

the Greasy Grass to the Lakota, saw the defeat of General George Armstrong Custer's cavalry by the Lakota Sioux, Northern Cheyenne, and Arapho tribes, led by, amongst others, Crazy Horse. The horse named Comanche was found limping around the scene of the battle, before being nursed back to health and subsequently paraded in full military regalia. While Comanche no doubt performed an important physical role in the Seventh Cavalry during his time in active service, it was his subsequent symbolic significance that earned him a place in history, or, as Sandra Swart would say, *horsestory*.[55] As Jones notes, Comanche's afterlife was even more distinguished than his military career:

> Following a funeral service with full military honours (the second American horse to receive such an accolade was Black Jack, the 'riderless horse' that participated in the funeral procession of JFK), Comanche was stuffed and presented at the 1893 Columbia Exposition. He is now installed […] at the Kansas Natural History Museum: a potent and enduring relic of the equine frontier.'[56]

The same Exposition which saw the technological reproduction of horses' movement via Eadweard Muybridge's zoopraxiscope (discussed in Chapter One)—within the technological celebration that was White City—also featured the reproduction of Comanche's living form via taxidermy. The horse's inanimate remains became emblematic of Custer's "martyrdom" (from a colonial perspective), embodying masculine courage, patriotism, and sacrifice 'in the emerging mythology of the mounted Western hero as exemplified by the likes of George Custer, Bill Cody and Theodore Roosevelt, iconic figures of the frontier period who drew at least some of their masculine swagger from a life in the saddle.'[57] The fact that Comanche still stands in the Kansas Natural History Museum as a symbol of the lost 'equine frontier' demonstrates the integrity of the horse to the modern construction of the American West, as

[55] Sandra Swart, *Riding High: Horses, Humans and History in South Africa* (Johannesburg: Wits University Press, 2010).
[56] Jones, 158.
[57] Ibid.

well as the fact that such a place now exists only in a collective imagination, if it ever existed at all.

The ideas and values with which Comanche's body is saddled rest on the colonial assumption that he was the only living thing to survive the Battle of Little Bighorn, which, of course, ignores the victorious Lakota and Cheyenne warriors and their horses. One year prior to the Battle of Little Bighorn, the last remaining band of Comanche warriors led by Quanah Parker surrendered to U.S. forces and were forcibly relocated to the Fort Sill reservation in Oklahoma. Recalling only this colonial victory over Indigenous populations, and rewriting the defeat at Little Bighorn as a massacre from which only one brave horse emerged, the veneration of Comanche demonstrates the symbolic role of horses in U.S. military campaigns. Regardless of the historical deception behind Comanche's story, his legend lives on as a potent symbol of military victory—a metaphorical Trojan horse.

Dead Horse Corner

Understanding the material and symbolic importance of the warhorse in European and American history highlights the significance of the violent changes which took place with regard to the horse's image in First World War. In Robert Whitney Imbrie's narrative, the theory of war as a glorious adventure was rendered figuratively in the image of 'dashing horses' (222), drawing upon the heroic symbolism of the warhorse. As Imbrie and the other volunteers discover, however, the war as 'a theory' differed greatly from the material reality, and one way to understand this discrepancy between expectation and experience is through the mismatched material and symbolic figure of the horse. Like Comanche, the heroic image of the warhorse in WWI belied the truth of modern, mechanised warfare.

In 1917, when the United States officially joined the conflict, the government issued a recruitment poster encouraging young Americans to join the cavalry [Figure 5]. This is an example of the mobilisation of the symbolic warhorse, drawing on the *horsestory* in which the animal is a celebrated military figure and an active agent in turning regular men into heroes. The masculine figures of the soldiers stand erect on their glistening mounts, the stars and stripes flying behind them. These are exactly the images described by Imbrie in the epigraph to this chapter, the 'flying colors' and 'dashing horses' in the recruitment poster portray war as the U.S. government wanted it portrayed, convincing young men to sign up for what would be a great and honourable adventure—in theory. Imes Chiu affirms that 'the image of the cavalryman mounted on a horse charging toward the battlefield typifies a classic picture of a war hero.'[58] This picture was informed not by lived experience for the vast majority of new Army recruits, but through stories. From the Trojan horse through to Comanche and the cavalry recruitment poster (below), the horse has been hailed as a vehicle for human chivalry. There are countless stories from the front which detail the grim realities of human and equine suffering in the Great War, but the narratives of the gentlemen volunteers provide a unique angle in that they are written from the perspectives of those drivers christened the modern *chevaliers*.

The German soldier, philosopher, and author Ernst Jünger (1895-1998) served in the Imperial German Army during the First World War, and was present at the Battle of the Somme in 1916. It was here, Jünger claims, that

> chivalry disappeared for always. Like all noble and personal feelings it had to give way to the new tempo of battle and to the rule of the machine. Here the new Europe revealed itself for the first time in combat.[59]

[58] Imes Chiu, *The Evolution from Horse to Horsepower: A Comparative International Study* (Amherst, NY: Cambria Press, 2008), 154.
[59] Cited in Eksteins, 144.

Figure 5: Pro Patria!, U.S. Army recruitment poster, 1917. Library of Congress.

The machine-induced slaughter of the Somme represented a new kind of warfare that persisted throughout the Great War, whereby "the enemy" became increasingly abstract, and the qualities of courage, heroism, and chivalry were a poor defence against shells and bullets from anonymous origin—'the hero,' Eksteins claims, 'lost his name […].'[60] The concept of chivalry, literally named after the horse, died a death on the French soil in which the word

[60] Eksteins, 135.

has its etymological root. What replaced this concept, according to Jünger, was 'the rule of the machine.' Although Jünger was not referring directly to automobiles here, the transition from horse to horsepower encapsulates this historical transition from the old to the 'new Europe.'[61] Before examining the extent to which the wartime equine idiom entered into military automotive culture, I will first demonstrate the discrepancy between the heroic image of the horse in the 'theory' of war, and the unromantic reality as presented in the narratives of drivers Imbrie and Stevenson.

Robert Whitney Imbrie joined the American Ambulance Field Service (AAFS) in December 1915. Volunteer ambulance drivers were recruited from the United States through three primary organisations: The first was the Harjes formation established by Henry Herman Harjes (1875-1926), the senior partner of the Morgan-Harjes Bank in Paris. The second was set up by the American Richard Norton (1872-1918). Initially known as the American Volunteer Motor-Ambulance Corps (despite being sponsored by the British Red Cross and St. John's Ambulance), the organisation merged with that of Harjes in 1916, to become the Norton-Harjes Formation, associated with the American Red Cross and under the direct control of the French Army. The third organisation, to which both of the drivers whose works feature in this chapter belonged, was the AAFS, organised by Abram Piatt Andrew, Jr., (1873-1936). Andrew's organisation, Arlen Hansen notes, 'eventually became the most complete volunteer operation in France.'[62] Robert Whitney Imbrie was one of the longest serving ambulance drivers at the front, and was awarded numerous honours for his service including the Ambulance Medal, the Field Service Medal, and the Croix de Guerre. He later

[61] See note 59.
[62] Hansen, 18.

attained the dubious honour of being the first U.S. Foreign Service officer to be assassinated, when he was the victim of a brutal attack in Tehran.[63]

In *Behind the Wheel of a War Ambulance*, Imbrie's initial picture of a classic war hero is not unlike that used in the U.S. Cavalry recruitment poster, *Pro Patria!*. When driving back from his unit's position on the front lines to Paris for six days leave, Imbrie first catches sight of mounted cavalry troops resembling those in his imagination, having already been in France for three months:

> It was on this voyage that, for the first and only time during my service in the army, I saw lancers. This group was some seventy kilometers back of the line. With their burnished casques, graceful weapons and fluttering pennants they have left me one of the few memories of the picturesque which the war has furnished. (68)

A casque is not a standard military helmet but refers to a more ornate piece of armour that covers the head, traditionally worn by knights. Whether the lancers were actually wearing such headgear or Imbrie was using the term poetically, the result is the same in that clearly these mounted soldiers *appear* to be the very embodiment of chivalry. This image of the picturesque, however, proves to be fleeting, as Imbrie's narrative paints a disturbing picture of the *cheval* at the front lines, where horsepower fairs considerably better than horses.

Only a few pages after the picturesque lancers, Imbrie describes the sight of several passing artillery units, all reliant upon animal horse power to transport and position huge guns, ammunition, and other supplies. These creatures, which are a much truer representation of horses' roles in the conflict, are not the noble beasts of Arthurian legend: 'Horses by the hundred plunged and pulled at restraining ropes or stood with downcast heads—bone-weary of the struggle' (76-77). And well might they look downcast, as, unbeknownst to them,

[63] Michael P. Zirinsky, 'Blood, Power, and Hypocrisy: The Murder of Robert Imbrie and American relations with Pahlavi Iran, 1924', *International Journal of Middle East Studies*, 18 (1986), 275-292, 275-276.

enemy batteries would often deliberately target large teams of horses in an attempt to reduce the mobility of artillery units.[64] The majority of the horses featured in Imbrie's narrative from this point on could be accurately described in the brutal terminology of the automobile spokesperson in *The Horseless Age* article—horse flesh.[65] On a short drive out to a posting, Imbrie notices two horses tied up at the side of a dirt road; after turning around having collected his *blessés*, however, there are now 'the bodies of two horses killed by a shell since I had passed on the out trip' (101). The sight (and smell) of dead horses is a constant backdrop against which the action of the narrative takes place. 'Mangled horses were lying about,' Imbrie reports dispassionately, 'and great pools of blood reflected the last light of the day' (233). These animals have not met their honourable deaths in the cavalry charge, one minute they are hauling munitions, supplies, or even corpses (176), the next they are obliterated by falling shells. Those killed instantly by shells are, to the smallest possible degree, the lucky ones—many animals died considerably slower deaths from injuries sustained under shellfire or from suffocating on chlorine gas (231). Because there is no time to bury them, Imbrie reports, horse carcasses often lay around rotting. On Christmas Day 1916, Imbrie is stationed in Macedonia, watching 'helmeted soldiers leading weary pack mules over pitted, sloughy streets, […] pariah dogs feasting on dead horses […]' (187-188). Recalling the industrial dog food canning operations turning former draft-horses into meat for other domesticated animals (as discussed in Chapter Two), the fleshy materiality of the horse in mechanised warfare is rendered visible—no stories of warhorses such as Comanche end with the noble steed being eaten by dogs.

[64] John Sorenson, 'Animals as Vehicles of War', in *Animals in War: Confronting the Military-Animal Industrial Complex*, ed. by Colin Salter, Anthony J. Nocella II, and Judy K. C. Bentley (Lanham: Lexington Books, 2014), 19-35, 20.
[65] See note 10.

The bodies of dead horses also play a surprising role in automotive navigation on the front lines. From their post at Cabaret, Imbrie's car is dispatched to the Etain-Moulainville crossroads: 'Our directions for finding the place were "to go to the fifth smell beyond Verdun,"—directions inspired by the group of rotting horse carcasses which were scattered along the way' (98). This degrading incorporation of the material (rather than the symbolic) horse into automotive military culture might seem unrealistic were it not also recounted in the narrative of William Yorke Stevenson, who served in the AAFS at the same time as Imbrie. 'One gets some astonishing directions when one is working in a new country at night,' Stevenson writes in *At the Front in a Flivver*:

> For instance, in going to Fort Tavannes, which is now being shelled by the Germans, I was told to go along the — road, until I passed two smells and then turn to the left. This referred to two piles of dead horses.'[66]

It is difficult to reconcile these images with the glorious symbolism of the warhorse in the American collective imagination; even as these animals were still being used to signify the beautiful 'theory' of war in recruitment propaganda, their rotting corpses were little more than road signs. It seems highly likely that both Imbrie and Stevenson were referring to the same horse carcasses, as not only were both in the same section but Stevenson also mentions that he is writing his diary entry 'here at the Etain-Moulinville cross-road beside a dead and odoriferous horse' (129). The closest that Stevenson comes to seeing the 'dashing horses' imagined by Imbrie is watching a cavalry officer trying to cross a swamp: 'He got bogged, and they spent an hour trying to get the horse out' (254). Enlisting in February 1916, Stevenson came to France slightly later than Imbrie, leaving his position as financial editor of a Philadelphia newspaper to volunteer with the AAFS. The editor of *At the Front in a Flivver* praises the 'offhand' manner in which it is written, relaying the author's experiences of war

[66] William Yorke Stevenson, *At the Front in a Flivver* (Boston and New York: Houghton Mifflin Company, 1917), 115-116. Henceforth citied parenthetically.

'divested of all literary effort or desire to impress' (vi). The sight of dead white horses, whose bodies have been stained sorrel, being 'washed almost white again by the rain' may have tempted other writers to reflect on the symbolic, as well as the material, significance of the fallen animals. Stevenson, ever the pragmatist in his reporting, simply notes that this makes them 'useful landmarks at night' (138). The only thing these drivers read into the equine body, it seems, was which way to steer their automobiles.

If frequent contact with dead and dying animals affected the drivers' perceptions of war and duty, this does not come through in their books from the front. Like Imbrie, Stevenson takes the time to record the sheer numbers of dead horses that he encounters while on duty. In addition to those examples given already, Stevenson is continuously 'passing more dead horses' (120). He finds roads 'blocked by a mass of dead and wounded horses […]' (169), as supply teams are targeted by enemy shells, leaving the busiest routes 'littered with dead animals' (116)—they are 'everywhere' (92). The inclusion of so many references to suffering and deceased horses suggests that these sights resonate with Stevenson, even if his style of writing does not permit ruminations on such subjects. Even Imbrie's narrative, which is not entirely devoid of 'literary effort,' tends not to dwell on the emotional strain of their work. This could be explained by a desire to appear as brave, heroic, and unflinching men to their reading public back home.[67] One particular passage in Stevenson's account, however, implies that driving an automobile itself helps maintain a psychological distance from such harrowing sights. This following passage mentions Imbrie by name, and suggests

[67] In relation to the causes of shell-shock, Billy Tyrrell (an Ulster doctor in WWI) reported the social pressure on soldiers to keep their emotions and fears supressed. Under these conditions, Tyrell notes, 'a man squanders nervous energy recklessly in order to suppress his hideous and pent-up emotion, and mask and camouflage that which if revealed will call down ignominy upon him and disgrace him in the eyes of his fellows. He must save his self-respect and self-esteem at all costs.' See Ben Shephard, *A War of Nerves: Soldiers and Psychiatrists 1914-1994* (London: Pimlico, 2002), 139-140.

that there was an awareness of the dangers of thinking too much about what one is actually witnessing:

> Imbrie is certainly a scream. He remarked to-day that on going out on his run to the "poste" the road was O.K., but coming back he saw a fresh-killed horse. He said: "Now, that's the sort of thing that causes one to stop and reflect, but I did n't [*sic*]. I jammed down both levers and did my reflecting at forty miles an hour!" (125)

The idea that one can simply speed away from any discomforting situation in an automobile recurs throughout the automotive culture of the early twentieth century, as described in detail in my discussion of the ethics of motoring in Chapter One. It is worth recalling the words of oil magnate J. Arnold Ross in Upton Sinclair's *Oil!*: 'You never looked back; for at fifty miles an hour, your business is with the things that lie before you, and the past is past—or shall we say that the passed are passed?'[68] The sight of a 'fresh-killed horse' is acknowledged by Imbrie (in Stevenson) as something which would usually cause one to 'stop and reflect,' but by jamming down the car's accelerator he is able to leave the scene behind both physically and psychologically, as the passed horse is left in the past. The automobile here acts as a machine which interposes between the human and the horse, mediating and limiting human exposure to the horrific suffering of animals in the military industrial complex.[69] As we saw in Chapter One, the ethics of motoring actively impede contemplation of animal exploitation in the mechanics of human civilisation.

The automobile shielded its driver from harm in more than just a mental sense. It is estimated that eight million horses were killed in the First World War, approximately one for every three human causalities.[70] Unlike those who volunteered to drive motor ambulances, many of the human *blessés* were originally drafted into the conflict as infantry, and were not

[68] Upton Sinclair, *Oil!* [1927] (London: Penguin, 2008), 3.
[69] For the 'military-animal industrial complex,' see note 64.
[70] Hediger, 'Animals in War', 484.

able to simply accelerate away from distressing sights. Even when (human) combatants did join the armed forces voluntarily, Hediger contends, 'rarely can soldiers be said to know exactly what such consent entails.'[71] Considering the recruitment posters such as *Pro Patria!* that displayed an image of warfare defined by the power and prestige of the equine body, it would be fair to suggest that those who enlisted were not reliably informed—better informed than the horses, however, who gave no consent whatsoever. For those foot soldiers who served a considerable period of the war stuck in trenches, there was a good deal less mobility and acceleration than the narratives of the AAFS volunteers suggest. While Americans such as Imbrie and Stevenson no doubt put their lives at great risk in order to save those of countless French soldiers, they were not operating under the same conditions as other animals of the front in that they were a mobile target with a degree of protection from flying shrapnel, or *éclat*.

Horses and human infantry were pulverised to the point that Imbrie and Stevenson cannot distinguish the smell of rotting human flesh from that of horses (Imbrie, 125; Stevenson, 168), an example of the 'fleshy entanglements' suggested by Tromenhauser whereby humans are forced into confrontation with their own animality, in this case in a blend of actual viscera. The drivers, on the other hand, had a better chance of maintaining a distance between themselves as human and themselves as flesh. 'The car,' writes Gijs Mom, 'is a shell, a protective capsule against the shells (grenades) outside.'[72] Imbrie, Stevenson, and other *ambulanciers* report having their lives saved by their automobiles at various points in their narratives. 'When shrapnel and shell *éclat* fall,' Imbrie explains, the ambulance driver 'dives under [his car] for protection' (15). A number of the cars (although not all) were installed with a 'steel shield, placed at a deflecting angle as protection from flying shrapnel,'

[71] Hediger, 'Animals in War', 492.
[72] Gijs Mom, *Atlantic Automobilism: Emergence and Persistence of the Car, 1895-1940* (New York and Oxford: Berghahn, 2015), 259.

however, this shield covers only the 'driving-seat' (72). Many of the AAFS volunteers were wounded or killed during their service, but at a considerably lower rate than regular infantry, which Imbrie attributes to 'American luck!' (106). In fact, many of these 'miraculous escapes' are down to the extra protection afforded by the driver's shields. Imbrie notes that his colleague Bob was saved by the fact that flying shrapnel which pierced the car only 'wounded the already wounded men therein […] Some of the cars were hit but the Squad did not suffer a scratch' (124). Sanders, another driver mentioned in Stevenson's narrative, survived a shell blast which killed his passenger because the force 'had been checked by the steering wheel which was first hit by all three "*éclats*"' (228). This kind of event, too, is dismissed by Stevenson as 'the luck of the game' (4). In another, much shorter, account from American ambulance driver William Barber, featured in *Red Cross Magazine* in 1916, the author recalls an occasion when flying *éclat* had killed all of the wounded men in the back of his car. In his almost (literal) bullet-point diary he notes: 'Found piece of shrapnel next morning in hair of cushion at my back; had come from rear.'[73] The safest man on the front lines, it seems, was the one in the driver's seat.

The mobility and (relative) safety of the American ambulance drivers must be understood, argues Gijs Mom, alongside the brutal (but no less modern) stasis of those men in the trenches. The dynamism of 'the privileged, motorized few,' Mom claims, was needed 'to communicate the soldiers' heroism to the home front (and to us).'[74] The narratives of these 'privileged' volunteers, then, relay not only the suffering of the immobile, pedestrian soldiers, but also the superior position of the automobile driver—the *chevalier* of the modern age. Having established the traditional role of the cavalry horse in American military history, and found that the animal's material and symbolic importance was not reflected in the

[73] William Barber, 'Ten Days at Verdun: The Story of an American Ambulance Driver', *Red Cross Magazine*, 11.10 (Oct. 1916), 335-338, 336.
[74] Mom, 264-265.

narratives of the American ambulanciers, the remainder of this chapter will explore the extent to which the automobile and its driver performed both the physical and figurative roles of the traditional horse cavalry during (and after) the First World War.

The Pulseless Machine

There was a time when the privileged among soldiers would not have been the 'motorized few,' but the mounted few.[75] However, as Matthew G. McCoy has demonstrated, the First World War hailed the end of 'the traditional idea of the aristocratic officer keeping an eye on his troops from horseback.' There were many occasions, McCoy shows, where even officers' horses were commandeered for the duties of draft animals in the American Expeditionary Force, with the suggestion that officers instead use bicycles when conducting their inspections.[76] This was another insult to the prestige of the cavalryman, whose very identity was at stake as the horse became an increasingly de-romanticised figure. Many cavalry officers looked to the internal military publication *The Cavalry Journal* (1920-1946) as an outlet for their concerns about, amongst other issues, the mechanisation of the cavalry. Imes Chiu is one historian to have made an in-depth study of *The Cavalry Journal* in order to examine the incorporation of the Jeep into the U.S. armed forces between the world wars. While Chiu's work goes a long way towards revealing the resistance with which mechanisation was met by the cavalry's "Old Guard," and includes examples of the equine idiom entering into descriptions of the Jeep, its focus is largely post-1920 and does not discuss any examples of theriomorphism pre-1937.[77] One reason for this is that Chiu's study

[75] Ibid.
[76] Matthew G. McCoy, 'Grinding Gears: The AEF and Motor Transportation in the First World War', *War in History*, 11.2 (Apr. 2004), 193-208, 198-199.
[77] Chiu's work is discussed at greater length in Chapter Two of this thesis. For examples of theriomorphism of the Jeep in U.S. cavalry culture, and evidence of the timespan covered by Chiu's study, see Chiu, esp. 150, 167-197.

does not include the journal issues pre-1920, before the title changed from the *Journal of the United States Cavalry Association* (henceforth *JUSCA*), which had been in print since 1891. This, combined with the fact that Chiu's study is primarily historical rather than literary, distinguishes my use of this resource and builds upon, rather than reiterates, that of Chiu.

Like the knights of old, cavalry officers were conscious of the fact that their elite status was dependent on the bond between horse and rider. 'The horse makes the cavalry,' noted one lieutenant colonel in 1925, and 'distinguishes cavalry from foot troops […].'[78] Recalling the etymology of 'infantry' given previously—stemming from the idea of servitude, or a footman—the idea that officers of the cavalry could be mistaken for mere 'foot troops' was an unthinkable challenge to the social standing of the saddled soldier. Resistance to mechanisation came chiefly from those with most to lose. Many officers who had themselves fought on horseback appealed to the symbolic, rather than the material, value of the cavalry horse in warfare. While the U.S. was still engaged in the First World War, *JUSCA* reprinted a speech made by the Democratic Representative of Ohio, one Isaac R. Sherwood. In this speech, Sherwood ridicules the 'big display-line prophesies of a horseless age' made by 'machine-motor experts,' as well as the 'predictions of the machine and chemical laboratory war prophets of a horseless war.' The horse, for Sherwood and many cavalry officers who endorsed his views, represented more than just physical prowess, it represented an entire outlook on war itself as a contest with rules, whereby there was no victory if it was not won fairly. Horses in the age of chivalry, Sherwood claims,

> humanized war, inaugurated knightly honor, and did much to eliminate the brutal instincts which before had found vent in the butchery or slavery of soldiers captured in battle. Knightly honor, the

[78] Lieutenant Colonel Clarence Lininger, 'Mobility, Fire Power, and Shock', *The Cavalry Journal*, 34.139 (Apr. 1925), 178.

> growth of chivalry, forbade a knight to kill another knight when he was unhorsed or had dropped his lance or called for mercy.[79]

One would be hard-pressed to find examples of knightly honour in the so-called "Indian Wars" in which the U.S. cavalry took part throughout the nineteenth century, and certainly by the First World War, in which hand-to-hand combat with one's enemy comprised only the smallest fraction of the fighting, this notion of chivalry was replaced by mechanised butchery. Whether there was any material truth in Sherwood's claims or not, what is evident is that even during the First World War, when horses served as little more than draft animals when living and road signs when dead, they still symbolised a 'humanized' idea of war, amidst the mechanised battlefield.

One of the approaches taken by Sherwood in his bid to demonstrate the unsuitability of the automobile to equine duties was to reimagine historical cavalry victories with the horse directly substituted for the car. Recalling the poem 'Sheridan's Ride' (1864) by Thomas Buchanan Read (1822-1872), which celebrated Union General Phillip Sheridan galloping from Winchester to the Battle of Cedar Creek on his horse "Renzi" to rally his troops who were in retreat, Sherwood asks:

> Have you ever stopped to think what would have become of our army that critical day had Sheridan attempted that perilous ride in an automobile with a busted tire? Could he have inspired the boys with courage anew sitting in a pulseless machine, even without a busted tire, instead of a black charger, that with foam on his flanks and nostrils red as blood and eyes flashing fire carried the courage of his great master into the hearts of the musketeers [?][80]

Transplanting the automobile into the place of the cavalry horse, in wartime conditions from more than fifty years previous, Sherwood only succeeded in demonstrating how much battlefield conditions had changed since the Battle of Cedar Creek. Highlighting the

[79] 'Speech in the House of Representatives, January 24, 1918, by the Hon. I. R. Sherwood, of Ohio', *Journal of the United States Cavalry Association* [henceforth *JUSCA*], 28.118 (Apr. 1918), 498-520, 503.
[80] Ibid., 505.

advantages of the horse as a "tried-and-tested" mode of mobility (by suggesting that the automobile was unreliable) and as a living creature with infectious courage (rather than a pulseless machine), Sherwood also misunderstood the roles of both horse and car on the Western Front. Rather than charging forward with eyes flashing fire, a more realistic image of the cavalry horse is that described in Stevenson, bogged down in deep mud (254). The automobile, too, was never seriously considered for combat roles by the AEF in the First World War, for reasons that had much to do with the pushback from influential cavalry officers who thought along the same lines as Sherwood.

Of the seventeen cavalry regiments at U.S. disposal, only one was sent to Europe during WWI—the Second Cavalry—where it was mostly deployed on the 'thankless and uncongenial task of running various remount stations' (a remount station being essentially a wounded horse rehabilitation centre).[81] It was not that the combat duties usually performed on horseback were now being done by automobile drivers (as in Sherwood's imaginary scenario), but simply that the idea of battle whereby two armies line up opposite one other before engaging did not reflect the reality of modern warfare. The armoured automobile had been trialled in various battlefield simulations as early as 1909, and performed well enough to merit further development between 1913-1916, though it proved to be a dead end. As Norman Miller Cary, Jr., argues, however, this may not have been down to the automobile's material shortcomings. 'It is probable,' notes Cary, 'that the threat that such vehicles posed to the traditional reconnaissance and combat roles of cavalry was such as to stir the cavalry of the Army to block a more energetic pursuit of this question.'[82] Such was the influence held by the "Old Guard" of ranking cavalry officers that the move to mechanisation (which was

[81] Major General John K. Herr, cited in Chiu, 159-160.
[82] Norman Miller Cary, Jr., 'The Use of the Motor Vehicle in the United States Army, 1899-1939' (Unpublished PhD Dissertation: University of Georgia, 1980), 70. For more information on the Army's automobile testing programmes see Cary, Jr., 12-16, and 'Automobile Guns in the Massachusetts Manoeuvres of 1909', *Infantry Journal*, 6.3 (Nov. 1909), 375-381.

everywhere in civic society) was resisted by the Army on, essentially, immaterial grounds. As Cary surmises, there was an intellectual appreciation for the value of the motor car, 'but emotionally the real faith of the Army seems to have been in the horse and mule and wagon […].'[83] The horse's symbolic (or emotional) value, then, may have delayed its obsolescence in a military context—exactly the inverse of what was happening in American cities. Ingersoll once chastised those who dismissed the material advantages of the car because of a sentimental attachment to the horse for 'reading romances of the days of chivalry […].'[84] It appeared that this was the case for many cavalry officers.

One such officer was Major General John K. Herr (1878-1955). Herr served as Chief of Staff for the 30th Division in WWI, and went on to become the last ever Chief of Cavalry in 1938. A fierce advocate for traditional horse cavalry, Herr maintained right up until his death in 1955 that the automobile was part of a conspiracy involving other branches of the armed forces to bring down the cavalry. The terminology in which he describes the cavalry merit quoting at length:

> That there was influence brought to bear by certain industries which would profit heavily by the production of the enormously expensive tank and other mechanized vehicles is almost certain. Then, there was the ever-eternal green-eyed monster of jealousy which had been aroused in the breasts of the other services, especially among soft and inactive officers behind desks, over the color and glamour attached to the cavalry, over the good times which the officers of that branch enjoyed in their sports at all cavalry posts, and over the certain indefinable social prestige which the man on horse, the cavalier, the *hidalgo*, the gentleman, has always had over the man on foot.[85]

The transition from horse to horsepower, for Herr, meant the end of an entire social structure symbolised by the horse, a structure described in the high Middle Ages by Jordanus Rufus

[83] Cary, Jr., 83.
[84] E. P. Ingersoll, 'The Soulless Machine and the Spirited Animal', *The Horseless Age*, 1.2 (Dec. 1895), 9.
[85] John K. Herr and E. S. Wallace, *The Story of the U. S. Cavalry, 1775-1942* [1953], (New York: Bonanza, 1984), 253-254 [emphasis in original].

whereby the horse separated its noble rider from the 'lesser people' on foot.[86] 'What is a knight but whan he is on horsebacke?' asked Sir Thomas Malory in the fifteenth century. The answer, based on the despair in Herr's words, is just another footman. It is at moments such as this that we are able to see the extent to which the replacement of horses with automobiles emblematised a much grander cultural shift taking place at the birth of the Modern Age. The automobile promised social and physical mobility—life in the fast lane—while the traditional aristocrat would have to climb down from their high horse. But, of course, it was not that simple.

Through the narratives of Imbrie and Stevenson, I have already demonstrated the privileged position of the motorist on the battlefield, equivalent, in some sense, to the cavalry of old—risking their lives without doubt, but with a better chance than your average foot soldier. These American *ambulanciers* were known collectively as the 'Gentlemen Volunteers,' and were referred to, in some cases, as *chevaliers*. Just as the horse was incorporated, symbolically, into automotive culture through an equine idiom (as seen in Chapter Two), it is possible to see a similar process unfolding in the narratives of the Gentlemen Volunteers. Rather than signifying an abrupt switch in social order, the First World War and the literature from the front suggest that the values associated with 'the cavalier, the *hidalgo*, the gentleman,'[87] were transposed onto a new vehicle. Gijs Mom suggests that it may well have been the 'search for something to replace the horseman in war' that motivated American motorists to volunteer as ambulance drivers. The automobile's changing status from plaything of the rich to a machine with a noble purpose meant that motorists 'could now fantasize about being knights-errant instead of urban flâneurs.'[88] It is in

[86] See note 38.
[87] See note 85.
[88] Mom, 235.

the largely-forgotten accounts of Imbrie, Stevenson, and the other knights on wheels that this transition first appears in American literature.

The Gentlemen Volunteers

When recruiting motorists from the United States to drive ambulances in what was at the time arguably the most dangerous location in the world, with not only their own lives but also the lives of countless French soldiers depending on their skill at the wheel, one would think that driving ability was of paramount importance. Not so. As Robert Whitney Imbrie is thrown into a car upon arrival in Paris and ordered to follow the convoy to his posting, he casually notes in the opening paragraph of *Behind the Wheel of a War Ambulance* that 'this was only the second time in my life I had ever driven an automobile of this type […]' (1). The convoy continues at what Imbrie acknowledges would be a reasonable pace under normal circumstances, 'but to one who did not have a driving acquaintance with his car it seemed terrific' (2). In Stevenson's *At the Front in a Flivver*, too, we soon learn that one of the other new recruits, named Van, 'tried to take a curve sharply, never having handled a Ford, and capsized completely' (29). While very few states required individual driving licences at the time (and none required an official test), it still seems unusual that the Section organisers did not think to test or train its drivers given the already-perilous circumstances they were entering.[89] Imbrie's narrative gives us some hints as to the development of the Section's

[89] Although license plates were required on automobiles nationwide by 1918, only a select few required licenses for individual drivers. Massachusetts was the first state to introduce a mandatory driving test in 1907, but other states took longer to follow suit. In 1924, *Scientific American* conducted a survey of existing automotive regulations across 38 states. At the time of the survey, 26 of those states had no licensing regulations whatsoever, and only 6 required a skills test. Most automobile drivers were taught by car salesmen, friends and family, or organisations such as the YMCA. See 'Traffic and the Law: The Unnecessary Divergence Between the Motor Laws and Customs of the Several States', *Scientific American*, 130 (Jan. 1924), 8-9; and 'Americans Adopt the Auto', *National Museum of American History*, [n.d.] <https://americanhistory.si.edu/america-on-the-move/licensing-cars-drivers> [accessed 08/03/2022]. James Flink notes that, by 1900, Chicago drivers were required to pass an annual examination consisting of eighteen questions about the mechanics of automobile operation. By contrast, the Milwaukee driver of 1904 needed only to be at least eighteen years old and have the

recruitment policy when he lists some of the eclectic 'characters' (10) in his unit (many of whom have connections to horses): 'There was an ex-cowboy from Buffalo Bill's Congress of Rough Riders, big game hunters, […] a former 4th Cavalryman, […] a driver of racing cars, […] two professional jockeys […]' and many more (10). As the war went on, however, Imbrie notes that these characters became few and far between, 'as the tendency became to recruit the Corps almost wholly from college men who became typal' (11). The abundance of former horsemen (cowboys, cavalrymen, jockeys) is suggestive of an overlap between equine and automobile employment on which I will elaborate in the following pages, but that this opportunity to become the mechanised equivalent of knights-errant was soon limited to graduates of elite colleges meant that a certain social prestige was maintained in the ranks of these technological chevaliers.

Both Imbrie and Stevenson were part of Abram Piatt Andrew's AAFS, for whom the main recruiter and fund-raiser was American banker Henry Sleeper. Sleeper's priorities in recruitment were somewhat questionable:

> One might well assume that the best source for manning an ambulance corps would be the garages and repair shops of New England, there to find men schooled in how to make the temperamental machines of that era function. Instead, one would have thought Sleeper was searching out candidates for an extremely exclusive men's club—the criteria for membership not the ability to take apart a manifold but good bloodlines and impeccable manners.[90]

If Americans were going to be exhibited on the world stage, it seemed as though recruiters such as Sleeper were determined to make sure that the U.S. had "proper" ambassadors, compromising on automotive skill in favour of breeding and bloodlines. The overlaps with

use of both arms. More rigorous skill tests were introduced for professional chauffeurs in New York and Philadelphia by 1905, but despite widespread call for official certification of motorists' competence, state governments remained reluctant to take action in the early decades of the twentieth century. See James Flink, *America Adopts the Automobile, 1895-1910* (Cambridge, MA: MIT Press, 1970), esp. 174-178.

[90] George Plimpton, 'Foreword', in Arlen J. Hansen, *Gentlemen Volunteers: The Story of the American Ambulance Drivers in the First World War* (New York: Arcade Publishing, 2011), 6-10, 7. Ebook Central ebook.

the traditional associations of the cavalry, here, are unmistakeable; the idea that some social classes were more inherently suited to noble professions (regardless of experience), and the significance of maintaining bloodlines throughout equine culture indicated that driving automobiles in France was considered a pursuit worthy of a gentleman.

There were a surprising number of *ambulanciers* who went on to have distinguished literary careers (as discussed in my Introduction), including Ernest Hemingway, e. e. cummings, and John Dos Passos.[91] Dos Passos recalls his conversation with the New York lawyer who signed them up for the service talking about 'their being gentlemen volunteers and behaving like gentlemen and being a credit to the cause of the Allies and the American flag and civilization […].[92] There was a sense, then, that these privileged, well-bred men were being sent to Europe in automobiles as ambassadors for the modern United States, portraying a nation that embraced Progressive technology while staying true to the traditional (patriarchal, colonial, elitist) values of the gentleman.[93] The English poet and author John Masefield (1878-1967) praised the efforts of the volunteers, describing them as 'the very pick and flower of American life,' adding that the Allies owed their thanks 'to this company of splendid and gentle and chivalrous Americans […].'[94] If chivalry, and the legacy of the mounted knight-errant, died on the muddy and mechanised battlefields of World War One France, it was not without a rescue attempt from the AAFS—as long as you were male and

[91] For a more extensive list of literary figures who served as ambulance drivers in WWI see Plimpton, 8-9.
[92] John Dos Passos, cited in Hansen, 19.
[93] Kenneth Minogue has explicitly linked the figure of "the gentleman" to the 'long tradition of chivalric tales about heroes,' connecting the gentleman to military equine culture. See Kenneth Minogue, 'The Culture of the Gentleman', *Political Philosophy Today*, 71 (Spring 1983), 97-103, 97. There are many helpful analyses of "the gentleman" in British and American literature and culture, including, but by no means limited to, Harold J. Laski, 'The Danger of Being a Gentleman [1939]', in *The Danger of Being a Gentleman and Other Essays* (London: Routledge, 2015), 13-31; and Robin Gilmour, *The Idea of the Gentleman in the Victorian Novel* (London: George Allen & Unwin, 1981), particularly 1-15.
[94] John Masefield, cited in Hansen, 20.

had the right bloodlines, the social prestige of the *chevalier* could survive the transition from horse to horsepower.

Such ideas were evidently present in the minds of volunteers like Imbrie and Stevenson, and these come through in their descriptions of the driver-automobile bond that develops in the Section, via the equine idiom. The same theriomorphic language is applied to their inert machinery, mirroring the bonds described in literature between horse and rider from the Middle Ages to the U.S. Civil War. In her study of the soldier-horse relationship in the Great War, Jane Flynn explains that the majority of British troops would certainly have considered horses to be individuals with unique personality traits, a description not dissimilar to that in which Robert Sloss described automobiles in his guidebook to the car described in Chapter Two. Flynn notes that soldiers were not

> in the least squeamish about anthropomorphising their horses' actions. These were named individuals, referred to not as 'it,' but as 'he' and 'she.' […] That soldiers named horses, who would otherwise have been identified only by a number, illustrates how these horses were seen as active co-participants in the soldiers' lives. Naming is, after all, part of acknowledging another living creature's somatic existence—its individuality.[95]

While Flynn's study focuses exclusively on British soldier-horse relationships, it is not too much of a stretch to imagine that similar bonds existed between American troops and their horses, especially given the examples of Comanche and other horses of the Civil War discussed earlier. All of the 'anthropomorphising' acts described by Flynn are present in Imbrie and Stevenson's treatment of their automobiles, transformed into theriomorphism. '*She* was my pride' (19—my emphasis), are just a few of the kind words that Imbrie reserves for his car, while Stevenson notes affectionately that his old 'chariot is no ball of fire, but *she* wheezes along somehow' (72—my emphasis). Going further than simple pronouns, however,

[95] Jane Flynn, *Soldiers and Their Horses: Sense, Sentimentality and the Soldier-Horse Relationship in the Great War* (New York and London: Routledge, 2020), 4.

Imbrie's car in particular seems to have a somatic existence of its own, acknowledged in part by its naming. Imbrie recalls fondly when he 'first made the acquaintance of "Old Number Nine," the car assigned to me and which I was destined to command for the next five months' (14). Although the car's name is, essentially, just a number, the idea that 'she' is something with which one can make an acquaintance, or command, suggests that the cars (like the horses described by Flynn) were 'seen as active co-participants' in the drivers' lives.[96] Evidence that "Old Number Nine" was more than a number can also be found in Hansen's comments on naming practices amongst the gentlemen volunteers. 'As a sign of their closeness to the cars,' Hansen claims, 'the drivers gave them pet names such as Maude, Old Number Nine, Hunk-o'-Tin, and Elise.' Richard Norton, of the Norton-Harjes formation, 'named his touring car Lucille, and the Mercedes in his section was called Gabrielle.'[97] What distinguishes these relationships from other human–machine interactions involving nomenclature (ships, for example), is best demonstrated through Imbrie's language after first meeting his car: 'There was about "Old Number Nine," however, an air of rakish *abandon* and dogged *nonchalance* that gave promise of latent powers, a promise she well fulfilled in the months to come' (14—emphasis in original). Just like the Confederate soldier and his horse "Lize" mentioned earlier, Imbrie's connection to his "ride" is deeper than a practical necessity, the key difference being that Lize is capable of such emotions, while a Tin Lizzie is not.

Although there are clear similarities between the soldier-horse and the driver-car relationships discussed so far, one could argue that the examples given from *Behind the Wheel of a War Ambulance* are anthropomorphism as opposed to theriomorphism, as there is nothing relating the automobile descriptions to horses specifically. Comparisons between

[96] Ibid.
[97] Hansen, 134.

military automobiles and horse cavalry, however, were noticed by famed American war correspondent Frederick Palmer (1873-1958) and recorded in *America in France* (1919). Invited personally by General John Pershing, Palmer went to France with the AEF and was accorded the rank of Colonel for the duration. Commenting on a passing column of American soldiers in automobiles and trucks, Palmer claims that it is the roar of motor vehicles

> that takes the place of the clatter of cavalry and the double quick of the infantry, which were sent in the old days to stiffen your breaking line or to add weight against the enemy's line that was breaking […]. The men like it—this "joy-ride" of war. They have something of the feeling for the truck that the mounted infantryman has for his horse. When they debuss to go into battle, something of the impulse of the motor column's movement is imparted to their spirits.[98]

Contrary to the claims of I. R. Sherwood in the *JUSCA* that a 'pulseless machine'[99] could never replace the cavalry horse, Palmer's report suggests not only that the automobile slotted neatly into the hole vacated by the horse cavalry but also that the soldiers could be inspired by the impulse and momentum of horsepower just as much as if Sheridan's black charger had been present. Philip Dana Orcutt, another of the gentlemen volunteers, wrote that the 'rhythmic whir' of the motor ambulances found its way into the spirits of the drivers, who sat 'in their seats with somewhat of an echo of that whir in their hearts.'[100] Figuratively speaking, of course, this machine was far from pulseless.

To understand the extent to which an ethic of car care was instilled in these ambulance drivers, it is necessary to quote the following passage from Imbrie at length. Note that the relationship is described as reciprocal, and how, like an Arthurian knight or a confederate cavalryman, the identity of the driver is bound up with that of his steed:

> It is difficult for one who had not led the life to appreciate just what his car means to the *ambulancier*. […] He drives it through rain, hail,

[98] Frederick Palmer, *America in France* (New York: Dodd, Mead & Company, 1919), 238-239.
[99] See note 79.
[100] Philip Dana Orcutt, *The White Road of Mystery*: *The Note-Book of an American Ambulancier* (New York: John Lane Company, 1918), 19.

> mud and dust, at high noon on sunshiny days, and through nights so dark that the radiator cap before him is invisible. […] He works over, under and upon it. He paints it and oils it and knows its every bolt and nut, its every whim and fancy. When shrapnel and shell *éclat* fall, he dives under it for protection. Not only his own life, but the lives of the helpless wounded entrusted to his care depend on its smooth and efficient functioning. Small wonder his car is his pride. You may reflect on an *ambulancier*'s mechanical knowledge, his appearance, morals, religion, or politics, but if you be wise, reflect not on his car. (14-15)

This is more than just a soldier appreciating the practical value of a piece of machinery, this describes a (one-sided) affective relationship between the ambulance driver and his car. Not only does Imbrie perform the technical maintenance tasks of oiling and painting his vehicle, but he '*knows* its every bolt and nut, its every *whim* and *fancy*' (ibid—my emphasis). The automobile is part of what makes the volunteers more important, more noble, than the average foot soldier. Rather than being forced to compromise their morals by doing any actual killing, the automobile enables the gentlemen volunteers to feel chivalrous without getting their hands dirty, hence, the 'car is his pride' (15). What is the knight without his horse? The same as the *ambulancier* without his car—just another animal.

Imbrie's 'real affection' (72) for his car is translated into theriomorphic language, which not only animates the automobile but renders it in equine terminology specifically. Just like the description of the cavalry officer struggling through the mud in Stevenson's narrative, Imbrie's car 'bucked' when trying to escape from a particularly boggy patch, before it 'stalled, bucked again […]' (194). Rather than driving, the car is described as 'marching' on multiple occasions (37, 45), and from its engine can be heard the 'cough and snort' (90, 158) of mechanical horsepower. Rather than a technical issue, a car's malfunctioning is attributed to an attitude problem, as the automobile was 'not behaving' (243) or even 'refused duty' (223). In Stevenson's *At the Front in a Flivver*, too, the equine idiom can be seen in the language by which the author describes military victories (a

language which harks all the way back to the Trojan horse). It was at the Second Battle of Champagne (September-November 1915), Stevenson informs us, that their unit 'won its spurs' (81). In a literal sense, a spur is a device worn on a rider's boots for pricking the flanks of a horse to encourage it to run faster, but to win one's spurs in a figurative sense is defined by the *OED* as 'to gain knighthood by some act of valour; hence, to attain distinction, to achieve one's first honours.'[101] This definition demonstrates not only the synonymy between the horse and military prowess but also provides further evidence to suggest that the automobile could become a vehicle for the same chivalrous pursuits associated with the mounted warrior—the rider of the ca(r)valry.

As noted by Ortiz-Robles earlier in this chapter, the notion of chivalry was defined by the 'close bonds obtaining between horse and horseman,'[102] an almost symbiotic relationship whereby the mounted knight became something greater than the sum of their individual parts. William Caxton, in his *Ordre of Chiulry* (1484), claimed that the core of knighthood, and the foundation of chivalry, depended on the symbiosis between horse and rider: 'that *he knoweth his hors, and his horse him* […].'[103] This is seen reflected in the *ambulanciers* by the fact that their cars are the pride of the drivers, but, like the 'mechanomorphic centaur[s]' described by Peter Marsh and Peter Collett in Chapter Two,[104] the drivers form a deeper understanding with their cars that depends upon an almost primal survival drive. When driving at the front lines at night, using headlights meant making oneself an easy target for enemy shellfire, thus the volunteers had to navigate the uncertain roads in the darkness. 'Eyes were of no avail,' Imbrie claims, 'one steered by *feel*' (123—emphasis in original). With only an instinctive

[101] *OED* <https://www.oed.com/view/Entry/187954?rskey=TyHTrO&result=1&isAdvanced=false#eid> para. 3 of 11 [accessed 21/01/2022].
[102] See note 35.
[103] William Caxton, cited in Crane, 158 [emphasis in original].
[104] Peter Marsh and Peter Collett, *Driving Passion: The Psychology of the Car* (Boston: Faber & Faber, 1987), 142.

idea of where the road is, man and machine must work together to deliver their quarry of *blessés* back to safety, *feeling* the car by responding to physical sensations, yet also responding to the intangible *feelings* evoked by the experience of driving an automobile in such conditions. The mounted knight would benefit from the horse's natural instincts for self-preservation in this environment, but Imbrie's terminology implies that he is, to some extent, led by the "instincts" of the inert machine when his vision cannot help him. Like the knight and the horse, the car and the driver seemed to act as one being.

The pinnacle moment in which the material and symbolic notions of chivalry and horsepower explored throughout this chapter come together is in the act of veneration described in the opening pages of Stevenson's narrative. Reprinted in full is General Order 189 from the Staff Headquarters of the French Army, issued 5 November 1916, which cites the entire Section as having been awarded the prestigious Croix de Guerre, for 'brilliant courage and complete devotion' (1). Because the volunteers technically are not part of the French Army and have no regimental standard, however, the awarding General states that he has 'the honor of pinning the Croix de Guerre upon this car as representing the Section' (1). That an automobile is an apt representative for the volunteers and their acts of heroism for which the medal was awarded further emphasises the "symbiotic" bond between driver and machine amongst the gentlemen volunteers. Significantly, this act also implies that automobiles can themselves be considered heroic, as if their functioning in battlefield situations was dependent on their *whims* and *fancies*, rather than the mechanical control of their drivers. Although the award was not officially given *to* the automobile, the act of pinning the medal on the machine casts it in the role of a symbolic hero, creating an image of the car to be taken home to the U.S. and entered into the literary history of the First World War via the narratives of the gentlemen volunteers. By way of comparison, no horses received such honours during the conflict, and this was not because the Croix de Guerre was

exclusively reserved for humans (and automobiles). A carrier pigeon named Cher Ami was posthumously awarded the honour for delivering a message that enabled the rescue of the U.S. Army's so-called Lost Battalion, despite suffering wounds to the eye, chest, and leg.[105]

This idea that the automobiles were themselves capable of acts of heroism and sacrifice was shared by the drivers of the Section, and, apparently, by the editor of Stevenson's text. Speaking of the same vehicle on which was pinned the Croix de Guerre after its "retirement," the editor writes:

> One can but regret that the now historic "Ambulance No. 10" will appear no more in the annals of the Field Service. It has done noble work, however, and should have a decent burial in some American War Museum. The celebrated "Flivver," or "Tin Lizzie," as our diarist calls her, should not be allowed to end up on a scrap-heap. Who can estimate the number of lives she has helped to save? She is a veteran, and deserves an honorable ending. We should not be ungrateful to a thing which has served us so faithfully. (xvi)

Removed from the previous references to ambulances and flivvers, it is difficult to believe that the final two sentences of this quotation apply to an automobile, rather than, say, a horse. Completely separate, here, from the achievements of the human driver, the car itself is noble, its service faithful—it is a *veteran*. Consider the grim portrayals of horses in Imbrie and Stevenson, when there was no time to even bury the bodies of those sentient horses forced into the conflict, whose sacrifices cannot even be likened to that of an automobile as there are no points of comparison. While their rotting corpses directed road traffic, this automobile, according to these ambassadors for the modern United States, deserved a decent burial in a Museum back across the Atlantic.

As both Imbrie's narrative and *The New York Times* confirm, this is exactly the treatment several "heroic" automobiles received. After being sent to Paris for servicing,

[105] Brandon R. Katzung Hokanson, 'Saving Grace on Feathered Wings: Homing Pigeons of the First World War', *The Gettysburg Historical Journal*, 17.7 (2018), 83-98, 92.

another of the cars in the Section is shipped 'to New York and there put on exhibition at the Allied Bazaar' (68), notes Imbrie in an entry dated 8 April 1916. Just under two months later, *The New York Times* featured an article announcing the opening night of the '$1,000,000 Allied Bazaar' in Grand Central Palace featuring, among other machines from the front, 'the wrecked American ambulance donated by Mrs. William K. Vanderbilt.'[106] The equine veterans of the war, however, were not so lucky. Despite selling millions of horses to the European Powers and bringing further millions over when they joined the war, the United States safely repatriated a mere two hundred of the horses fortunate enough to survive the conflict. Those in poor health were shot, and those whose bodies remained in acceptable enough condition were sold to slaughterhouses to feed war-ravaged human populations in continental Europe.[107] Thus the seemingly crude pre-war predictions made in journals such as *The Horseless Age* about the loss of 'horse flesh' improving the reception of the automobile were somewhat vindicated.[108] Recalling a similarly damning portent in *The New York Times* from 1915, the automotive spokesperson who suggested that the war would accomplish more toward the banishment of the horse 'than fifty years of peace and propaganda' also had ideas about what should be done with the war's excess horse flesh. 'It will not be surprising,' the spokesperson notes, 'if on the menu of next year will be many dishes made from horse meat. Horses are not bad eating, and in several countries on the Continent of Europe they have long formed a staple article of diet.'[109] Inextricably linked to the increased consumption of automobiles in the United States during and after the First World War was the consumption of horses *as meat*. Horses' absolute corporeality in the eyes of the U.S. Army, who treated them as inert commodities which it did not pay to repatriate, is at odds with the repatriation and veneration of the inert machinery whose accomplishments can only be understood

[106] 'War Bazaar Ready for Opening Tonight', *The New York Times*, 3 June 1916, 11.
[107] Sorenson, 30.
[108] See note 10.
[109] See note 19.

through the figurative equine idiom. Just as an increasing number of former urban draft horses entered into the dog-food canning operations back in the United States (as discussed in Chapter Two), once horses drafted for war had served their purpose they became more valuable in death. While the heroic symbolism of the warhorse and knight-errant was too culturally ingrained to die in the trenches, it was no longer explicitly tied to the equine body, with automobiles considered worthy historical conduits for their drivers' stories.

Les Peaux Rouges

By tracing the stories of physical and figurative horses through the narratives of the so-called Gentlemen Volunteers, as well as numerous other literary-historical sources, I have shown the material and symbolic reasons why the First World War accelerated the transition from horse to horsepower in the United States. A material shortage of horses was brought about by the shipping of millions of equines across the Atlantic for the purposes of war, creating conditions in which formerly-reluctant Americans turned to the automobile to help perform their daily work—all of this generating great profit for U.S. industry. At the same time, the symbolic aura of the warhorse was drawn upon by the government to persuade young Americans to join the fighting, with the promise of adventure, heroism, and the chance to emulate great military victories signified by the horse. This heroic symbolism, however, found no reflection in the dramatically-altered battle conditions of France, and the prestige of the warhorse and mounted cavalryman were shown to be mere nostalgia, as the fleshiness of both human and horse was mercilessly exposed by impersonal modern weaponry. As the narratives of Imbrie and Stevenson demonstrate, however, those who drove ambulances on the front lines incorporated something of the horse's heroic legacy into their writing about automobiles, emphasising the horse in horsepower via the equine idiom and theriomorphic

practices discussed in Chapter Two. That automobiles were accorded more honourable (and humane) treatment than the horses of the U.S. Army in the aftermath of war demonstrates a shift in American perception of the horse and car which emphasised the material animality of the horse, while the automobile became a vehicle for equine symbolism.

To elaborate on the significance of these motorised ambulances being hailed as veterans and war relics, it is helpful to recall Comanche, the famous horse of the plains. Descended from wild mustangs, and carrying the physical marks of conquest and the battle for territory between Indigenous Americans and Euro-Americans, Karen Jones notes that Comanche represents 'an interesting case study in the eco-cultural entanglement of warfare […].'[110] A symbolic link to the terrain of the western frontier, Comanche enabled (certain) Americans to romanticise the landscape which had been not only the site, but also the spoils, of colonial violence. Following the mechanisation of the Seventh Cavalry, Jones continues, 'Comanche became a noble signifier of a past age of warfare and a source of nostalgia to the old guard.'[111] Given the lie at the heart of Comanche's story—that he was the *only* living thing to survive the Battle of Little Bighorn—and the narrative replacement of Custer's defeat with that of the Comanche people via the horse's name, one wonders what story of the First World War would really be told by the automobile veterans of the AAFS, and to what purpose.

The true violence of the Comanche story lies, of course, in the material violence enacted upon the Comanche and other Indigenous Americans by the U.S. government. The symbolic violence, however, lies in the appropriation of the name Comanche, which robs a society of its cultural identity and reattributes that identity to the very colonial forces responsible. Even horses and automobiles were accorded names, as seen in the narratives of

[110] Jones, 180.
[111] Ibid.

the gentlemen volunteers, yet the U.S. consistently failed to recognise the somatic existence of Indigenous peoples. If the name Comanche recalls the colonial heroes of the frontier (as in the horse), rather than the disenfranchised people, this particular war relic only serves to whitewash history. Another overlap between the story of Comanche and the subsequent veneration of the AAFS automobiles is in the fact that Imbrie and Stevenson's Section were also well-known for their appropriation of Indigenous identities. Stevenson recalls a French painter named Tardieu, who designed 'an emblem for the squad' (145) to identify them. Imbrie describes Tardieu's work in more detail:

> He now designed a splendid Indian head, resplendent with feathers, and this was adopted as the Squad's mark and was emblazoned on the sides and back of each car. This head at once caught the fancy of the *poilu* [French infantry]. It soon made the Section well known and thereafter wherever we were, we were hailed as Les Peaux Rouges—the red skins. (109-110)

The appropriation of Indigenous identities in American automotive culture will be covered in detail in the following chapter, but for now suffice to say that while these particular machines may have been on a humanitarian mission in France, the violence they represented is what prompted Modris Eksteins to declare them fitting symbols of modern values post-WWI.

Given the heroic status accorded to the cars of the gentlemen volunteers, it is worth considering what this said about Progressive U.S. values. As was demonstrated in Stevenson's narrative in the section where Imbrie avoids reflecting on a 'fresh-killed horse' (125) by jamming his foot down on the car's accelerator, the automobile is an effective means of evading responsibility, of insulating oneself from the more distasteful aspects of civilisation. In Chapter One of this thesis, this attitude is called the ethics of motoring. Hailing the inert automobiles as heroes in language reminiscent of equine military achievements is yet another way of avoiding reflection on the material realities of animals (including humans) in the landscape of modern, mechanised warfare. In celebrating the

humanitarian "actions" of certain machines, which seem to emblematise the life-saving possibilities of Progressive technology, focus is shifted from the starkly regressive conditions encountered by the human and equine soldiers in the mud of the front lines. On the one hand, the "veteran" automobiles of the AAFS suggest a modern-age evocation of the chivalrous heroes of yore, leading the charge of the United States onto the new world stage. On the other, it should perhaps be concerning that a society's conceptions of heroism could be embodied by a senseless machine emblazoned with an emblem of its most recent colonial victims.

While the post-war United States embraced a new image of the motor car as a highly practical (even heroic) addition to modern life, the equine form of horse power now seemed more like the expensive play thing of the rich. As Major General James G. Harbord lamented in 1926, the United States was once 'a nation of horsemen. Those days are gone. We are becoming largely a nation of mechanics […]. We have exchanged the saddle for the limousine.'[112] With this in mind, the final chapter of this thesis will consider not only the 'horsemen' and 'mechanics' identified by Harbord, but also the idea of a *nation* defined by the transition from horse to horsepower.

[112] Major General James G. Harbord, 'The Part of the Horse and the Mule in the National Defence', *Cavalry Journal*, 35.143 (Apr. 1926), 154-165, 162.

CHAPTER FOUR

A Nation of Mechanics: Animals and Indigenous Automobility in John Joseph Mathews's *Sundown* (1934)

> *His ponies were out in the country, but no one rode horseback any more except the Indians, and many of them were buying cars. Cars were the thing now.*
>
> —John Joseph Mathews, 1934[1]

In *Sundown* (1934), John Joseph Mathews (Osage) tells the story of Challenge 'Chal' Windzer, an Osage-American growing up on the land that became Osage County in 1907, when Oklahoma was admitted as a state. As Chal gets older and attends the state University, exposure to white American customs provokes something of an identity crisis as he struggles to fit in with his white peers while also recognising that he is not a 'fullblood' (7) Osage, to use Mathews's terminology. After serving in the military as a night-flight instructor, Chal returns to The Agency (the federally managed reservation) where he grew up to find the land and the people much changed as a result of increasing encroachment from Euro-American colonisers. Mathews's only novel (among a litany of nonfiction writing) is semi-autobiographical, in that Mathews himself grew up in Pawhuska, Oklahoma, attended Oklahoma State University, and served as a flight instructor in the 25th Aero Squadron, before travelling to Europe where he received degrees from the Universities of Oxford and Geneva. Mathews ultimately returned to the reservation land he grew up on to pursue what became a distinguished writing career, publishing work on Osage tribal history, reflections on the natural environment of Osage lands, and the oil industry.[2]

[1] John Joseph Mathews, *Sundown* [1934] (Norman: University of Oklahoma Press, 1988), 162. Henceforth cited parenthetically.

[2] Mathews's nonfiction includes: *Wah'kon-tah: The Osage and The White Man's Road* (1929), in which he transcribed the memoirs of the Indian Agent Laban J. Miles; *Life and Death of an Oilman: The Career of E. W. Marland* (1951) is a biography Oklahoma multi-millionaire oilman Ernest Whitworth Marland; and in *The Osages: Children of the Middle Waters* (1961), Mathews worked with tribal elders to produce a comprehensive history of the Osage people and their traditions.

In the passage from *Sundown* which serves as this chapter's epigraph, Chal has just returned home from University to find that the deluge of oil discovered beneath Osage land has drastically altered the lives of his friends and family, as well as bringing about an influx of white Americans keen to exploit the oil, the Osage, and the land for all it's worth. Having been forcibly removed from their homeland in Kansas by the U.S. Government in 1870, the Osage tribe had no choice but to settle on the new reservation in Oklahoma, on land which, in Mathews's words, 'no white man would have […].'[3] The Dawes Allotment Act followed in 1887, by which the Government attempted to impose land ownership onto individual Native Americans rather than tribes as a whole (allocating land so as to bring Indigenous peoples under federal laws, encourage farming, and make it easier for individuals to "legally" purchase land from Indigenous Americans). The Osage opposed the Act, and while they failed to prevent its passing, they succeeded in securing a clause which stated that only the surface of their land would be privatised—the Osage nation maintained communal ownership of any mineral resources below ground. Thus, when vast swathes of oil were subsequently discovered beneath the supposedly worthless land the Government had forced on the Osages, the tribe became not only 'the richest Indian community in the world,'[4] but the richest people, per capita, anywhere in the world,[5] with each member of the Osage nation (as listed on the 1906 Census) and their descendants receiving royalties on every barrel of oil removed from the ground—'one sixth of every forty-two-gallon barrel of oil' (78) as Mathews records in *Sundown*. In May 1923, there were 8,360 oil wells on Osage lands, only five of which were dry, 'the smallest proportion ever known in oil drilling operations.'[6] These great riches, however, brought with them great dangers, both from jealous and greedy white colonisers

[3] John Joseph Mathews, *The Osages: Children of the Middle Waters* (Norman: Oklahoma University Press, 1961), 776.
[4] 'Oil Makes Osages of Northern Oklahoma Richest Indian Community in the World', *The New York Times*, 21 May 1923, 1.
[5] Dennis McAuliffe, Jr., *The Deaths of Sybil Bolton: An American History* (New York: Times Books, 1994), 42.
[6] Philip J. Deloria, *Indians in Unexpected Places* (Lawrence, KS: Kansas University Press, 2004), 138.

who sought to part the Osage from their royalties, and the internal turmoil that came with the corruption of traditional Osage ways of life.

This corruption, or "civilisation," of the Osage is exemplified for Chal by the transition from equine to automotive transportation. On returning from the largely white space of the University, Chal decides against going to see his ponies who, as we shall see, played such a significant role in his formative years. Only the 'Indians,' by which Chal refers to the 'fullblood' Osages, ever rode on horseback now and, keen to demonstrate his distance from this side of his heritage, Chal would sooner drive an automobile. Throughout Chal's youth, and during his time at University, he has frequently heard the Osage (and Indigenous people more broadly) described in language suggesting primitivism, or a lack of civilisation compared to the white Euro-Americans (who are doing the describing). I will address the specific significance of these descriptions later in this chapter, but for now it is important to note that Chal's decision not to ride on horseback when he returns home involves a suppression of longing on his own part, motivated by the desire to refute the stereotypes of Indigenous technological ineptitude and a *too-close* bond with nonhuman animals—stereotypes which he is exposed to at University. To be seen riding one of his ponies when even the 'fullbloods' were funnelling their oil royalties back into the automotive industry would be, in Chal's confused view, evidence of his own savagery. Civilisation in the modern United States was moving on from horses—'Cars were the thing now' (162).

As we saw in Chapter Three of this thesis, many traditional cavalry officers were furious at the notion that their patriotic service on horseback was being recast in the wake of mechanisation. 'At one time we were a nation of horsemen,' wrote Major General James Harbord in 1926, but those days, he notes 'are gone. We are becoming largely a nation of

mechanics […].'[7] While Harbord may have seen this development in national character as a negative step, automotive publications such as *The Horseless Age* (unsurprisingly) saw the same phenomenon differently. In an article from 1900, tellingly titled 'The Evolution of the Industry,' Ingersoll claimed that the United States was 'pre-eminently a nation of mechanics,' and that 'the same quickness in searching for and seizing on improvements' is not to be found in 'mechanics [of] any other nation of the world […].[8] The use of the word 'evolution' in this automotive context connects the mastery of machines to the advancement of civilisation, with the figure of the mechanic coming to embody American ideas of progress and national citizenship. Despite the fact that the automobile was a European invention,[9] it was American mechanics, Ingersoll asserted, who completed 'the work which in many respects, it was admitted, the foreign engineers had failed to carry to a satisfactory conclusion.'[10] As we shall see in the following section of this chapter, and throughout Mathews's *Sundown*, the supposed superiority of American engineering became a powerful symbol of Progressive civilisation in the early twentieth century, with the automobile serving as a visible demonstration of such societal evolution.

This final chapter draws together aspects of the previous three to demonstrate the interconnectivity of oil, animality, automobility, and national identity in the modern United States, bringing into evidence those who problematised, and were therefore excluded from, the nation of mechanics. Before analysing *Sundown* in further detail, I will first discuss how, and to what extent, the automobile became a vehicle for ideas of American national

[77] Major General James G. Harbord, 'The Part of the Horse and the Mule in the National Defence', *Cavalry Journal*, 35.143 (Apr. 1926), 154-165, 162.
[8] E. P. Ingersoll, 'The Evolution of the Industry', *The Horseless Age*, 6.1 (4 Apr. 1900), 9-10, 9.
[9] For a summary of the various stages of the automobile's invention, see Paul Ryder, 'The Motorcar and Desire: A Cultural and Literary Reconsideration of the Motorcar in Modernity', *Southern Semiotic Review*, 2 (2013), 1-18, esp. 8-9.
[10] E. P. Ingersoll, 'The Horseless Age', *The Horseless Age*, 1.1 (Nov. 1895), 7-8. 8.

citizenship, with all of its privileges and exclusions. I will then provide historical context as to why stereotypes of technological ineptitude were used to discredit and deny Indigenous modernity, with harmful tropes such as the "ecological" and "vanishing Indian" employed as justification for white America's civilising mission. As my analysis of *Sundown* and the automotive Osage will demonstrate, the symbolic co-opting of Indigenous identities in car culture reflected that of the horse, as both supposedly passed into the past, obscuring the material realities of endemic violence and death that accompanied American civilisation. This is not to equate Indigenous lives with nonhuman animals on my part, but rather to demonstrate the significance of the automobile in Progressive culture as a tool to distinguish the animalic from the civilised. Through the work of John Joseph Mathews, supported by traditional stories of the Osage, I call into question the Progressive logic that equates proximity to nonhuman animals with a lesser state of civilisation.

A Nation of Mechanics

The idea that automobile drivers and mechanics could be hailed as heroes while U.S. horsemen were largely relegated to draft duties corresponds with the views espoused by Harbord in the *Cavalry Journal* and Ingersoll in *The Horseless Age*. Cecelia Tichi's study of the engineer as an American cultural figure between the 1890s and 1920s supports the notion that the national heroes of the modern United States were those that worked with machines.[11] The engineer, for Tichi, is 'in Emerson's sense the representative man for the era, a symbol

[11] While Tichi specifically uses the term 'engineer,' rather than 'mechanic,' throughout their study, it is not used in such a way as to exclude mechanics from this category. The *OED* defines 'engineer' as 'a person who makes engines, structures, or systems,' and 'mechanic' as 'a person who makes, uses, or repairs machines.' With this in mind, I understand Tichi's use of the term 'engineer' to incorporate automotive mechanics. See: <https://www.oed.com/view/Entry/62225?rskey=m4UaKi&result=1#eid> <https://www.oed.com/view/Entry/115543?rskey=m4Y2Sb&result=1#eid> [accessed 04/02/2022].

of efficiency, stability, functionalism, and power. In the imaginative literature of industrialized America he figures as a new hero who enacts the values of civilization.'[12] Tichi's use of the masculine pronoun reflects the realities of the American engineering profession in the early twentieth century; as a masculine hero in an almost exclusively male profession, the engineer's symbolic significance in the United States' transition to a nation of (white, male) mechanics cannot be overstated.[13] As if addressing the concerns of cavalry officers such as Harbord directly, Tichi explicitly notes that in 'the new age, power was in the realm of the engineer and not the equestrian,'[14] a fact that Chal in *Sundown* is all too aware of as he opts for the figurative horses in the car's engine over the ponies with whom he shares an emotional connection.

John Kasson is another to have recognised the significance of the engineer and the machine in shaping American character in the late nineteenth century. Just as we saw in Chapter One with Henry Adams's veneration of the dynamo, Kasson notes that machines were understood 'not simply as functional objects but as signs and symbols of the future of America.'[15] More specifically to my argument, the automobile was itself identified as such a symbol in *The New York Times* in 1924. Following the assembly of the ten-millionth Ford Model T, the reporter claimed that 'many serious-minded people' now recognised the automobile as 'the fullest embodiment of contemporary American civilization.'[16] Combining efficiency of production (constructed on Ford's auto-assembly lines according to Taylor's

[12] Cecelia Tichi, *Shifting Gears: Technology, Literature, Culture in Modernist America* (Chapel Hill: University of North Carolina Press, 1987), 98.
[13] In the late nineteenth and early twentieth centuries, there were a very small number of women enrolled on engineering courses in the United States. Their enrolment was applauded but frequently reported in language reflecting their status as outsiders in a male-dominated profession, exemplified by the headline of a 1920s newspaper which reads: 'Three Coeds Invade Engineering Courses and Compete with Men at Cornell University: Stand Well in Their Studies.' See Amy Sue Bix, 'From "Engineeresses" to "Girl Engineers" to "Good Engineers": A History of Women's U.S. Engineering Education', *NWSA*, 16.1 (Spring 2004), 27-49, 28.
[14] Tichi, 154.
[15] John Kasson, *Civilizing the Machine: Technology and Republican Values in America, 1776-1900* [1976] (London: Penguin, 1982), 25.
[16] 'The Gasoline Age', *The New York Times*, 6 June 1924, 16.

principles of scientific management), dominance over landscape (with the increasingly smooth highways as seen in *Oil!*), individual freedom from timetables (as opposed to rail travel), and a symbolic evolutionary step up from animal-powered societies, the automobile embodied the techo-capitalist priorities of the modern citizen in the republic of drivers. The idea of such a republic is explored at length by Cotton Seiler, who 'asserts automobility as essential to shaping the dominant meanings of "America" and "American" in the twentieth century.'[17] While Seiler's study is primarily concerned with the spread of automobility in the mid to late twentieth century, the roots (routes) of such automotive citizenship were certainly laid in the century's early decades.

Seiler also takes pains to explain that the individualism and supposed freedom symbolised by the automobile actively required that such freedoms be denied to certain people who did not conform to Progressive definitions of modernity. As Saidiya Hartman has argued, the 'universality or unencumbered individuality of liberalism relies on tacit exclusions and norms that preclude substantive equality.'[18] In order for modern American citizens to be considered civilised, there needed to be "uncivilised" groups against which they could be defined—a nation of horsemen against a nation of mechanics. This recalls once again Chal's concern over riding his horse when there is the option to drive an automobile, as one such group against which the modern techno-subject was defined were Indigenous Americans, even though many of them were also embracing automobility. Thinking back to my discussion of the White City exhibit at the 1893 Chicago Exposition, Indigenous American participation in this festival of technology was limited to a tokenistic performance from some schoolchildren. As Rossiter Johnson recalls in his history of the Exposition, '[…]

[17] Cotton Seiler, *Republic of Drivers: A Cultural History of Automobility in America* (Chicago: University of Chicago Press, 2008), 7.
[18] Saidiya Hartman, *Scenes of Subjugation: Terror, Slavery, and Self-Making in Nineteenth-Century America* (Oxford: Oxford University Press, 1997), 122.

even the Indian boys from the Government school at Carlisle, Pa., all joined in marching under the flag of our country.'[19] It is only by falling in step with Progressive colonial civilisation, this display seems to suggest, that the Indian children will find a place under the stars and stripes of the United States. John Bruni has characterised the technological displays in White City as an 'investment in whiteness,' which 'fuels fantasies of national and global dominance through technological mastery.'[20] By claiming that such technological mastery was evidence of higher civilisation, the U.S. was able to justify the "disappearance" of more "primitive" societies, such as Indigenous groups, in the same way that the automobile must inevitably lead to the passing of the horse. The nation of mechanics not only relied on the association of Americans with technological aptitude, but that Indigenous communities were associated with the inverse.

In Chapter Three, Modris Eksteins identified the automobile as symbolic of a new set of cultural values emerging from the wreckage of the First World War. While generalist in nature, these values of speed, newness, power, and progress—of life lived "in the fast lane"—mattered to Americans, who, even in the early decades of the twentieth century, were using automobiles as a means of self-expression.[21] However, as we saw with Comanche and the painted ambulance emblems in the previous chapter, Indigenous people have also been key symbolic elements alongside horses and horsepower in constructing "American" identity. In his study of Native American engagement with technology, historian Philip J. Deloria draws attention to the interconnectedness of automotive and Indigenous symbolism in the twentieth century. 'Symbolic systems surrounding Indians (nature, violence, primitivism, indigeneity)

[19] Rossiter Johnson, cited in David F. Burg, *Chicago's White City of 1893* (Lexington: University Press of Kentucky, 1976), 101.
[20] John Bruni, *Scientific Americans: The Making of Popular Science and Evolution in Early-twentieth-century U.S. Literature and Culture* (Cardiff: University of Wales Press, 2014), 130.
[21] Modris Eksteins, *Rites of Spring: The Great War and the Birth of the Modern Age* (London: Bantam Press, 1989), xiv.

and automobiles (speed, technological advance, independence, identity, progress),' notes Deloria, 'continue to evoke powerful points of both intersection and divergence.'[22] I have offered evidence as to why the symbolic systems of automobility suggested progress and civilisation in American culture, but to understand why "Indians" evoked ideas of nature, animality, and a lack of civilisation, it is necessary to draw on the scholarship of Philip J. Deloria's father, Vine Deloria (Standing Rock Sioux), and the notion of the "ecological Indian."

For Vine Deloria, this notion exists in opposition to the "scientific American," and is maintained by Progressive faith in technological and scientific truth. The goal of Deloria's work, however, is to expose the oxymoron inherent in the notion of *faith* in what is supposedly indisputable *fact*. The stereotypical symbolism surrounding Indigenous Americans identifies them in the Euro-American mind as 'superstitious creatures,' Vine Deloria argues:

> a subhuman species that really has no feelings, values, or inherent worth. This attitude permeates American society because Americans have been taught that "scientists" are always right, that they have no personal biases, and that they do not lie, three fictions that it is impossible to defeat.[23]

Whether or not these "scientists" ever actually claimed that Indigenous people were not (evolutionarily speaking) human beings, Deloria notes that 'their insistence that Indians are outside the mainstream of human experience produces precisely these reactions in the public mind.'[24] Supposedly lacking the ability to recognise and reap the benefits of technology, Indigenous people were (and are) consistently regarded as animals *less than human*. Without machine technology and scientific truth to interpose between themselves and the natural

[22] Deloria, 141-142.
[23] Vine Deloria, Jr., *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (Golden, CO: Fulcrum Publishing, 1997), 7.
[24] Deloria, Jr., 8.

world, Indigenous Americans lacked the pretence that they were somehow separate from that natural world. In 1907, Theodore Roosevelt took aim at those nature writers who he felt did not represent nonhuman animals according to scientific fact, but rather invented 'fancies' about animal abilities which were 'mechanical impossibilities.' Clearly, the 'mechanical' represents the true, scientific basis of fact for Roosevelt, true to Progressive American values. 'As for Indians,' Roosevelt notes in contrast:

> they live in a world of mysticism, and they often ascribe supernatural traits to the animals they know, just as the men of the Middle Ages, with almost the same childlike faith, credited the marvels told of the unicorn, the basilisk, the roc, and the cockatrice.[25]

Associating Indians not only with children, but also with humans from centuries ago, Roosevelt uses this supposedly "unscientific" way of relating to the nonhuman world to imply that white civilization is at a more mature, or advanced, stage than Indigenous peoples, and for any white writer to suggest that humans relate to animals on anything more than a scientific level rendered them a 'nature faker,' closer to Indians and children than white men.[26] A relationship to the nonhuman ecosphere based on sustainable regulation and mutual benefit rather than aggressive expansion and dominance identified "Indians" (from a colonial perspective) as indistinguishable from nature itself. As Michael Harkin and David Rich Lewis explain, this logic was 'the basic justification for conquest of Indian lands,' in that by denying Indigenous people their status *as people*, there existed only a wilderness ready to be civilised.[27] Significant to this chapter's analysis of *Sundown* and Indigenous automobility is the colonial history of equating Native populations with nonhuman animals on the basis of their supposed technological ineptitude. Distinct from contemporary technology, Indigenous

[25] Theodore Roosevelt, 'Nature Fakers', *Everybody's Magazine*, 17 (Sept. 1907), 427-430, 427.
[26] Ibid.
[27] Michael E. Harkin and David Rich Lewis, 'Introduction', in *Native Americans and the Environment: Perspectives on the Ecological Indian,* ed. by Michael E. Harkin and David Rich Lewis (Lincoln and London: University of Nebraska Press, 2007), xix-xxxiv, xxii.

communities were regarded by Progressive Euro-American culture as part of an evolutionary past, as evidence of white civilisational progress from a nation of horsemen to a nation of mechanics.[28]

The notion that Indigenous Americans were a past phenomenon (or a *passed* phenomenon in terms of the race for civilisation), represents another dangerous fiction of Euro-American society. Perpetuating the idea of the "vanishing Indian"—that the Indigenous communities which once occupied certain lands had already disappeared, or become *extinct*—can be regarded as a further process of colonialisation. Michelle Boyer has noted that with the expansion of towns, cities, and road networks came the suggestion that Native populations 'would soon disappear from the new western landscape,' enabling encroachment and dispossession of Indigenous lands to proceed without the need for empathy.[29] Given that Indigenous groups were frequently animalised in Euro-American culture, and that nonhuman animals were symbols of the past in Progressive American society, it is perhaps unsurprising (although nonetheless shocking) to note a similarity in the fictions surrounding both horses and Indians in automotive culture. Both were symbolic of a pre-modern era in American history, and both had allegedly passed into the past, enabling the disavowal of material violence against them.

In 1915, American sculptor James Earle Fraser created what would become one of the most widely-recognisable images of the American West in his 18-foot plaster statue of an Indian on horseback, entitled 'End of the Trail' [Figure 6]. The sculpture depicts a

[28] As noted by Kim Tallbear (Sisseton Wahpeton Oyate), the idea that Indigenous Americans 'represented earlier stages in human evolution was generally agreed upon by 19th-century European and American thinkers […].' See Kim Tallbear, 'Genomic Articulations of Indigeneity', *Social Studies of Science*, 43.4 (2013), 509-533, 513.

[29] Michelle Nicola Boyer, 'Postcolonial Vanishings: Wolves, American Indians and Contemporary Werewolves', in *Werewolves, Wolves and the Gothic*, ed. by Robert McKay and John Miller (Cardiff: University of Wales Press, 2017), 55-69, 56-57.

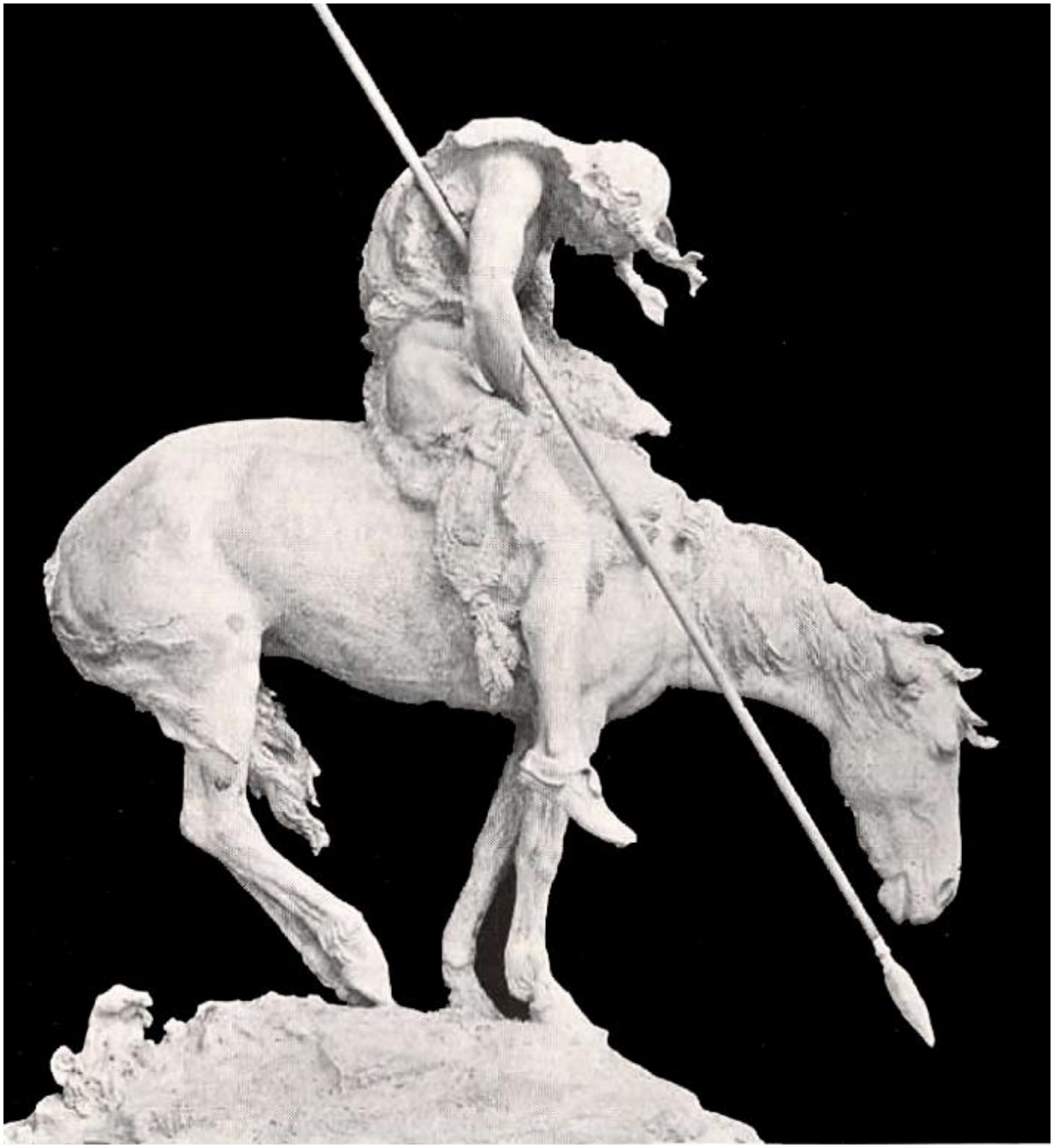

Figure 6: End of the Trail, sculpture by James Earle Fraser exhibited at the Panama-Pacific International Exposition, 1915.

weary Native American man, bare chested and dressed in stereotypical loincloth, hanging limp off his horse at the edge of the Pacific Ocean, having been driven as far as he can go by onrushing white civilisation. Fraser's work has subsequently been reproduced many times over in smaller bronze casts as well as paintings, postcards, and belt-buckles throughout the nation, but the original debuted at the Panama Pacific International Exposition in San

Francisco. As noted in Chapter Two, this exposition was a celebration of the completion of the Panama Canal, a literally ground-breaking example of American engineering prowess, and was also one of the main justifications for the opening of the trans-continental Lincoln Highway, enabling Americans to attend this celebration of technology via their automobiles. That such a sculpture should declare that Indigenous people had reached the end of the trail, so to speak, in the wake of such monumental advancements in Euro-American engineering established technology as the driving force behind the passing of the Indian. That the figure is on horseback, of course, associates the disappearance of Indigenous people with that of the horse, subsumed by horsepower. The end of the trail was at the end of the Lincoln Highway.

There existed a colonial assumption, then, that the coming horseless age would also be an *Indianless* age. The titular concept of *The Horseless Age* as an automotive periodical makes it a valuable historical resource for tracing this disavowal of continuing equine existence in modern society, and its discussions of Indigeneity reveal much about the place (or lack thereof) of Indians in automotive culture. While my extended analysis of *Sundown* will consider Indigenous automobility from a specifically Osage perspective, locating Indigenous people in *The Horseless Age* provides evidence of both the "ecological" and "vanishing Indian" myths in a historical resource that optimises the speciesism at the heart of Progressive mechanisation. The word "Indian" first appears in Ingersoll's periodical in 1905, in an article celebrating the construction of a road—'the first special automobile road in the world'—through the Uintah reservation in Ohio.[30] The article does not even mention the current inhabitants of the land, but rather anticipates the 'thousands who will go to enter the rich Uintah lands that have been held in Indian reservation' until an act of congress in 1904

[30] 'First Special Automobile Road in the World—Opening Up of Uintah Indian Reservation', *The Horseless Age* 16.6 (9 Aug. 1905), 201-202, 201.

'prepared the way for their settlement.'[31] Articles such as this perpetuate an image of uninhabited wilderness just waiting for settlers to arrive by car, even as it acknowledges that these lands were part of an Indian reservation until mere months ago. With total Native populations in the U.S. estimated to be just under 280,000 in 1910,[32] it was not too difficult for white colonisers to imagine that the end of the Indigenous trail was not far away. Following centuries of efforts to that end, it appeared to Virginia Mathews (daughter of John Joseph Mathews) to be the 'fervent hope of the federal government that Indian people would simply disappear entirely […].'[33] This first engagement with Indigeneity in *The Horseless Age*, then, implied that the automobile might offer a return to the landscape of the frontier where *once* lived these 'superstitious creatures.'[34]

As authorities became wise to the potential of auto-tourism, more and more new roads were planned following routes that offered the most spectacular natural panoramas and sights of scenic interest to the motored gentry. Many such plans were reported in *The Horseless Age* in the years surrounding 1910, including one 1908 article claiming that the Rocky Mountain Highway Association of Colorado 'will try to persuade Congress to build a highway from Yellowstone Park to the Grand Canyon of the Colorado River.' Stretching over a thousand miles, this road was specifically planned to 'pass through the Navajo Indian Reservation,' as the 'Moqui cliff dwellers' would be 'a great attraction to touring automobilists.'[35] Descriptions such as this set the tone for viewing Indigenous Americans as natural curiosities,

[31] Ibid., 202. The act of congress in question refers to the approval of 80-acre individual allotments to members of the Uintah and White River Utes of the reservation. The rest of the unallotted lands 'were restored to the public domain to be disposed of under homestead and townsite laws.' See 'Duchesne City Water Rights Conveyance Act', *Congressional Record*, 146 (27 Oct. 2000) 1421-1423, 1421 <https://www.congress.gov/106/plaws/publ370/PLAW-106publ370.pdf> [accessed 09/03/2022].
[32] *1910 Census: Indian Population in the United States and Alaska* (Washington: Government Printing Office, 1915), 10.
[33] Virginia H. Mathews, 'Introduction', in John Joseph Mathews, *Sundown* [1934] (Norman: University of Oklahoma Press, 1988), v-xiv, v.
[34] See note 23.
[35] 'Minor Mention', *The Horseless Age*, 21.16 (15 Apr. 1908), 453.

as part of the landscape to be commodified and consumed by auto-tourists moving down the highway, rather than as fellow citizens. This theme recurs in a 1910-article by Millard H. Newton, who set out from New York City in his automobile determined to stay 'off the much travelled routes' and venture along the network of roads through the 'landscape maze' of Long Island, where the deeper the driver goes, 'the greater is his desire to penetrate its mysteries.'[36] Upon alighting from his car, he reports:

> Scarcely a dozen yards away I picked up a real Indian arrow-head, and before I could believe myself I met an aged native who told me that wild turkeys were […] found in the adjoining woods, and the tribe of Long Island Indians, now almost extinct, regarded the place as the nearest thing to their Happy Hunting Ground.[37]

Dubious as this encounter may seem, it reveals much about the expectations of white automobilists who ventured out to 'penetrate' the landscape. Newton's discovery of a 'real Indian arrow-head' takes the form of an almost archaeological find, a relic of an ancient civilisation (lacking in technology). The 'aged native' proceeds to tell him about the animals in the area, whose lives are entwined with those of the Indians much more immediately than in white society. The tribe themselves are described as being 'almost extinct,' terminology usually reserved for endangered nonhuman animals as opposed to human groups existing in the present. As historian Richard Drinnon has argued, however, the suggestion of an impending Native extinction is another of 'those deadly subtleties of white hostility that reduced native peoples to the level of the rest of the fauna and flora to be "rooted out" in the name of so-called civilization.'[38] They are just more natural 'mysteries' hidden from those who do not possess an automobile.

---

[36] Millard H. Newton, 'Seeking Some of the Out-of-the-Way Spots on Long Island', *The Horseless Age*, 26.21 (23 Nov. 1910), 710-712, 710.
[37] Ibid., 711.
[38] Richard Drinnon, cited in Kevin Hutchings, 'Transatlantic Extinctions and the "Vanishing American"', in *Transatlantic Literary Ecologies: Nature and Culture in the Nineteenth-Century Anglophone Atlantic World*, ed. by Kevin Hutchings and John Miller (London and New York: Routledge, 2017), 58-72, 68.

Numerous other articles like this can be found in *The Horseless Age*, and several demonstrate clearly how automotive culture cast Indigenous Americans as technologically inept and uncivilised. On a 'day trip out from Toledo [Ohio],' one driver passes Fort Meigs, 'a grim reminder of Indian depredation,' and further down the same road notes a monument commemorating those white colonisers who died in combat with Native tribes—'those who paved the way for civilization and made possible the comforts and luxuries of today,' automobiles included.[39] Another article from the same year promises 'a chance to see Indians' as drivers head through Erie County, NY, where the road passes close to the Tonawanda Indian Reservation, and one 'gets a glimpse of the copper-colored individual whose forefathers used to dominate North American affairs.' Earlier in the same paragraph, the author of the article lists several features of the natural landscape that would satisfy the motorist's 'craving for scenic effect,' and the language in which the potential sighting of Indigenous people is relayed—catching a 'glimpse'—identifies them as further scenic delights to be viewed from within the safe space of the automobile. Furthermore, the allusion to the Indigenous 'forefathers' who 'used to' dominate the landscape frames these scenic people as exhibits of America's past, examples of a static, non-Progressive society who surrendered their dominance in the wake of Euro-American technological conquest.[40]

While these examples may seem geographically disconnected, the fact that "Indians" are identified as such regardless of location or tribal identity, and are represented according to the myths of the "ecological" or "vanishing" Native, in a technological publication lends validity to these ideas within a white Progressive society with an underlying faith in technology. As was the case with nonhuman animals such as horses who were also described as "passing" or vanishing in *The Horseless Age*, whilst being figuratively co-opted into

[39] E. F. Baker, 'Pleasure Trip Out of Toledo', *The Horseless Age*, 27.23 (7 June 1911), 959-961, 960.
[40] C. E. Tranter, 'One-Day Automobile Tour From and To Buffalo', *The Horseless Age*, 27.9 (1 Mar. 1911), 393-396, 396.

automotive culture, such symbolic violence toward Indigenous humans at once enabled *and* denied physical violence against them. In corroborating and disseminating the idea that Indigenous people had vanished (of their own accord), automotive stories such as those in *The Horseless Age* had a similar effect to automotive advertisements that suggested that the horse had already passed into the past—essentially denying that there were any victims of Progressive civilising practices. In suggesting that Indigenous people were equivalent to wild animals or natural scenery, these same automotive stories implied that, even if there were any Indigenous people left, violence against them was no worse than violence against nonhuman animals, a practice which is regarded, in Derrida's words, as 'noncriminal putting to death.'[41]

Cary Wolfe uses Derrida's phrasing to explain how such speciesism can be a tool for all forms of violent discrimination, arguing that in any society in which civilisation and humanity are defined against the animal and animality, there is scope for a noncriminal putting to death 'of other *humans* by marking *them* as animal.'[42] While the systematic killing of nonhuman animals that we saw in Chicago's Packingtown in Chapter One is viewed as an acceptable (if distasteful) way to treat other sentient beings simply because of their species, then 'the humanist discourse of species will always be available for use by some humans against other humans as well, to countenance violence against the social other of *whatever* species—or gender, or race, or class, or sexual difference.'[43] Considering this idea alongside the notion that dangerous colonial myths of Indigenous vanishing and inhumanity were perpetuated in early American automotive culture, the remainder of this chapter will examine how such themes play out in John Joseph Mathews's *Sundown*. As a vehicle for Progressive

[41] Jacques Derrida, "'Eating Well," or The Calculation of the Subject: An Interview with Jacques Derrida', in *Who Comes After the Subject?*, ed. by Eduardo Cadava, Peter Connor, and Jean-Luc Nancy (New York: Routledge, 1991), 96-119, 112.
[42] Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago & London: University of Chicago Press, 2003), 6 [emphasis in orginial].
[43] Wolfe, 8 [emphasis in original].

ideals of modern citizenship (which was by definition exclusive), automobility symbolised the antithesis of traditional Osage ways of life. As Mathews's Osage characters struggle to exist between such conflicting social forces, they frequently find themselves in the double-bind of seeking to refute stereotypes of Indigenous technological and financial ineptitude, while maintaining and respecting Osage connections to the natural world.

No Dogs, No Indians

Mathews's decision to write his only novel as a *Bildungsroman*, with the form's emphasis on linear progression and conventionality, has been described as an 'unusual choice' by Hanna Musiol, given that Mathews's literary career to that point had been based in nonfiction, transcribing and collecting memoirs of government agents and the Osage people.[44] As Musiol notes, however, despite its traditional orthodoxy, the *Bildungsroman* is a form that recounts the 'processes of socialization' by which people become subjects. Furthermore, Musiol argues, in the twentieth century, such 'processes of socialization' also became applicable to inanimate cultural agents, articulating 'a growing socialization and politicization of nonhuman matter as well as the social becoming of marginalized human subjects.' While the 'nonhuman matter' in Musiol's argument is oil, this statement could equally apply to the automobile, and thus Mathews's *Bildungsroman* contrasts the ease with which the automobile was incorporated into American social and political life with Chal's lifelong frustrations, satirising the conventions of this literally progressive genre.[45] Given that the progress of the novel's form is integral to its commentary on Progressive American culture, my analysis will

[44] Hanna Musiol, '*Sundown* and "Liquid Modernity" in Pawhuska, Oklamoma', *Journal of American Studies,* 46.2 (2012), 357-373, 364.
[45] Ibid. Musiol also notes that Indigenous American literature does itself have a strong tradition of written and oral 'life histories,' which influenced the composition of twentieth-century *Bildungsromans* by Native American authors. See Musiol, 364-365.

proceed through the text in a largely linear fashion, tracking the conventional assumptions that Chal would progress from Osage to American in the same way that the nation progressed from horsemen to mechanics. My conclusion will demonstrate the very real material consequences of being animalised in automotive culture, before drawing together threads of theriomorphism, the equine idiom, and the ethics of motoring from previous chapters to suggest why animal symbols survive in a civilisation increasingly defined by its remoteness from the animalic.

In her introduction to *Sundown*, Virginia H. Mathews notes that, until the 1960s, it was not uncommon or illegal for restaurants in the United States to display signs proclaiming 'No Dogs, No Indians.'[46] These signs placed Indigenous people on a par with dogs in the sense of being uncivilised, dirty, and animalistic whilst also thoroughly domesticated, the wildness of their ancestors having been tamed and quarantined on reservations by colonial authorities. In the view of white America, Indians were supposed to remain on their reservations, living out their simple lives much as wild animals did, far away from modern civilisation both geographically and temporally. While such notices did not explicitly state that Indigenous people *were* dogs, this canine reference is one that recurs throughout *Sundown* in relation to Osage and Indigenous identity more broadly in both an empowering and derogatory sense. As we shall see, the coyote is of particular significance to Mathews's protagonist Challenge 'Chal' Windzer. Growing up as a 'mixedblood' Osage on a federally managed reservation (known in *Sundown* as The Agency), Chal's internal conflicts are frequently rendered as a battle between embracing and suppressing the common nature he shares with the coyote. The Hunkpapa Lakota leader Sitting Bull (c. 1831-1890) who

[46] Virginia H. Mathews, v.

defeated General Custer at the Battle of Little Bighorn, described the idea of reservation life in animal terms which are pertinent to this chapter's discussion:

> I do not wish to be shut up in a corral. It is bad for young men to be fed by an agent. It makes them lazy and drunken. All agency Indians I have seen were worthless. They are neither red warriors nor white farmers. They are neither wolf nor dog.[47]

Firstly, Sitting Bull's use of the term 'corral' to describe the Indian reservation speaks to the notion that America was once a nation of horsemen. In this formulation, the trapped Indians are the wild horses who ought to be roaming the plains, with the government cast as those that would take away the very freedoms symbolised by the nation's equine history. Alternatively, on a darker yet no less significant note, the holding pens for cattle and pigs in the slaughterhouses of Packingtown were also known as corrals, foreshadowing the industrial violence awaiting animalised Indigenous communities. Focusing on the canines in this statement, it is not the Indians who are dogs (as in the restaurant signs) but the white farmers, while free red warriors are wolves. Mixed-heritage reservation individuals such as Chal, however, fall into neither canine category according to Sitting Bull, and must escape the confines of their corral if they are to avoid a fate of idle, drunken worthlessness.

Both Mathews and the aptly-named Challenge disrupt colonial expectations of Indigenous Americans as lazy, old-fashioned, and technologically inept, moving between the reservation and white civilisation by aeroplane or, in Chal's case, 'long, powerful red roadster' (245). Yet *Sundown* is not simply a story of embracing and being embraced by Progressive society in an unproblematic way, as the symbols of acceptance and civilisation in white society such as money and automobiles ultimately leave Chal and many of his fellow Osages lacking a 'sense of completeness' (297), as they do not experience the same feelings

[47] Sitting Bull, cited in David Rich Lewis, *Neither Wolf Nor Dog: American Indians, Environment & Agrarian Change* (New York and Oxford: Oxford University Press, 1994), epigraph.

of power and freedom these commodities bestow upon the white characters. Stereotype or not, Chal is aware of an appreciation for living nonhuman entities that is an important part of his Osage culture and is incompatible with the colonial narrative of progress and civilisation through the subjugation of nature. Mathews himself was dismissive of his cosmopolitan white readers who claimed to envy his simple, rural lifestyle, claiming that they 'would not last out the week' in the wildnerness, as they worshipped only their own symbols of success and status, caring nothing for the natural world.[48] As *Sundown* shows, the Osage were far from luddites, adopting and devising technologies for the physical world so long as this was not at the expense of the spiritual world. To understand the differences between Euro-American faithful reverence for modern technology and more measured Indigenous responses to its incorporation into traditional Osage ways of life, it is worth considering the following passage from Vine Deloria:

> For much of the first four hundred years of contact, technology dealt Indians the hardest blows. Mechanical devices from the musket to the iron kettle to the railroad made it a certainty that Indians would lose the military battle to maintain their independence. Technology made it certain that no tribe would be able to maintain its beliefs in the spiritual world when it was apparent that whites had breached certain fundamental ways of living in the spiritual world and in this breach had foreclosed even the wisest of their people from understanding the larger arena in which human destiny was being played out. Whites had already traded spiritual insight for material comfort, and once trade of material things came to characterize the Indian relationship with whites, Indians left much of their spiritual heritage also.[49]

As will be seen throughout Chal's journey in *Sundown*, the technology of the automobile, in many ways the apotheosis of commercial materialism in early twentieth-century America, propels its occupants down a single-track road with no destination, and (as per the ethics of motoring) with no thought for the larger arena of human destiny. While many of the Osage in

[48] John Joseph Mathews, cited in Virginia H. Mathews, xiii-xiv.
[49] Vine Deloria, Jr., 4.

Sundown were prepared to make the transition from horse to horsepower, taking advantage of the many practical benefits of the car on the reservation, it is the white Euro-Americans who insist on maintaining a dichotomy between the technological and animal worlds.

Named Challenge by his father John Windzer, that he might 'be a challenge to the disinheritors of his people' (4), Chal wrestles with a vague sense of unbelonging throughout his life, not helped by the fact that even his father 'didn't know what he challenged' (3). A member of the Osage Tribal Council and the Progressive Party who championed the allotment bill, Chal's father at times comes across as desperate to be accepted by the white world, 'the world that had ignored him and taken special trouble to persecute him' (3). Drunkenly reciting verse from Lord Byron's 'Childe Harold's Pilgrimage' (1812) in what he believes to be the voice of patriotic American orator and politician William Jennings Bryan (1860-1825)—'his hero' (3)—John attempts to cast himself as a melancholic Byronic hero while also inadvertently providing the novel's first expression of belonging in canine imagery: 'Perchance my Dog will whine in vain / Till fed by stranger hands; / But long ere I come back again / He'd tear me where he stands' (3).[50] The words of Sitting Bull quoted earlier are not referenced in *Sundown*, but in the image of John Windzer recalling Byron's hungry and abandoned dog there is something of Sitting Bull's reservation Indian, drunk, trapped, and waiting to be fed by an agent. Chal's Osage heritage is on his maternal side, and while his mother is unnamed throughout the novel, she remains a significant presence, as I will demonstrate later in this discussion. John (like Chal) is a mixed-heritage Osage-American of European descent, the offspring of French fur traders who married Osage women when the tribe lived on the Mississippi River. It was these Osage of European descent who first embraced Christianity, and given the increasing tendency of 'mixed-bloods' to

[50] These lines are taken from Lord Byron's 'Childe Harold's Pilgrimage' (1812), I.xii.

marry white Americans, they became ever more aligned with Euro-American, rather than traditional Osage, values.[51] For all his work with the Progressive Party, John is envious of the oratory of 'fullblood' Osage Running Horse, who, as Carol Hunter indicates, is 'undoubtedly Black Dog,' a real-life Osage chief who opposed private land ownership.[52] John's frustration at the unwillingness of Osage elders to embrace Progressive culture is tempered by a confused reverence for the authority and authenticity of Running Horse (Black Dog), and unable to express his mixed emotions with any kind of clarity, it becomes Chal's challenge to find meaning in the human, canine, and equine symbols of his Native and Progressive American identity.

The direct influences of white civilisation in Chal's childhood come primarily in the forms of his father's Christian cousin, known as Cousin Ellen, and his Quaker schoolteacher, Miss Hoover. When the young Chal damages the picture of Christ given to him by Cousin Ellen, she is quick to chastise him as a 'Little savage' (20), an insult with deeper meaning than Chal is able to comprehend. Despite his mixed heritage, he will always be Indian in the eyes of Progressive white society. In fact, the very definition of America's "civilising mission" depended on the assumed savagery of Indigenous people, the colonial implications of which have already been discussed in relation to the "ecological Indian." Miss Hoover has a romantic vision of enlightening 'little Indian minds' (26), but when the Osage children are not immediately receptive to her teaching, she adopts 'the standardized conviction that Indians were Indians […]' (27), incapable of comprehending her Progressive ideas. When she returns home to Philadelphia, however, she delights her peers with stories of the Indians, and with poetic license 'she made the reservation a little wilder than it actually was, and the Osages a little more wild and at the same time more gloriously intriguing' (27). The

[51] Carol Hunter, 'The Historical Context of John Joseph Mathews' *Sundown*', *MELUS,* 9.1 (Spring 1982), 61-72, 64-65.
[52] Ibid., 66.

exaggerated stories told by Miss Hoover (speaking with the patronising authority of someone with direct, though limited, experience of living with the Osage) follow a long-established trend in non-Indigenous narratives about Indigenous people, in which they are often presented as 'wilder,' or less human, than the raconteur. Daniel Heath Justice (Cherokee) claims that, 'in the dominant Abrahamic stories,' the boundary between human and nonhuman is fiercely maintained, and there is even a hierarchy of humanity:

> men are more human than women, European colonisers are more human than Indigenous and other colonized peoples, the rich and titled are more human than the poor and oppressed, Christian capitalists are more human than animist traditionalists, and so on.[53]

Rather than denying and taking great pains to conceal our shared animality, as is prerequisite in Progressive civilisation (see Chapter One), many traditional Indigenous stories, as Brian Hudson (Cherokee) indicates, 'teach us that we should realize with humility our place as one of many species.'[54] In this sense, Indigenous stories go further than simply refuting the notion that Native Americans are less human than their white counterparts; they offer an alternative to the anthropocentric logics which determine Western ways of relating to the nonhuman world.

This willingness to embrace our commonality with other animals is a strong feature of Chal's childhood, and his relation to the nonhuman world of the reservation shapes his character. In his dreams he would play the role of a hero, 'whether in the form of man or animal,' or when he couldn't sleep 'he would be an animal; an indefinite animal in a snug den under the dripping boughs of a tree' (9). Lying in the shade of the blackjack trees, Chal's consciousness drifts freely across species lines, and he 'was not a little Indian boy even then,

[53] Daniel Heath Justice, *Why Indigenous Literatures Matter* (Waterloo, Ontario: Wilfrid Laurier University Press, 2018), 40.
[54] Brian K. Hudson, 'A Seat at the Table: Political Representation for Animals', in *The Routledge Companion to Native American Literature*, ed. by Deborah L. Madsen (New York: Routledge, 2016), 229-237, 230.

but a coyote […].' Attempting to imitate the movements of the animal testing air currents with its nose, Chal does little more than 'make a face,' and yet this serves his purpose: 'he was a coyote' (11). The full significance of Chal's bond with this particular canine will be more fully explored in a later section, but for now it serves as evidence that the young Chal does not respect the strict boundaries of species as expected by his schoolteachers. He frequently talks with birds and other animals of the Osage hills, holding 'regular conversation with the old pinto' (65), his faithful pony who, as we saw in this chapter's epigraph, he will come to shun in favour of an automobile. It is not only other fauna with whom Chal communes, but flora too. The distinctive blackjack trees 'assumed personality' for Chal, standing patiently 'like old women talking of the glories of the past' (65). It is in and under these trees that Chal feels most free to explore his animal self, and as the novel (and white influence) progresses it becomes increasingly clear that his Osage roots are bound up with those of the blackjacks.

Following his father's decision to send him to a predominantly white high school, Chal begins to feel increasingly insecure about his spiritual relationship with the natural world. After a period of intense racist bullying, Chal eventually learns to suppress what he comes to think of as his most primitive traits, until before long he was 'associating himself almost entirely with the white boys […]' (68). Although Chal still enjoys escaping this new "civilised" world by riding out on his pony, he is too ashamed to tell anyone at the high school where he had been, because people 'didn't go out by themselves riding on the prairie, unless they were "riding fence" or on some other business' (68). Chal soon learns that he needs an excuse ready for if any of his white friends should see him on his pinto, and so claims that he was checking on his father's cattle: 'Cattle were practical, and looking after them a perfectly reasonable occupation during the weekend […]' (68-69). Riding his pony because he enjoys the physical and emotional sensation is not an acceptable way of relating

to nonhuman animals in white society. The proper power relation must be established by the practical business of monitoring cattle, who represent not fellow living creatures but financial investment—livestock. As long as the pony and the cattle are performing a subservient function in the mechanics of industrial capitalism, such human–animal contact is permissible. Recalling his pony rides as a child, 'when one's heartbeats are in rhythm with the pulse of the earth,' Chal is still able to find that harmony within himself, 'but during the last three years there had been something else as well' (69). It is during these last three years that Chal has become increasingly exposed to white culture at the high school, and is now periodically unable to simply be in the world, harbouring a 'disquieting thing which flooded him and urged him to some sort of action' (69). These Progressive notions that his relationships to nonhuman animals must be "practical," and that his time needs to be used "productively," are nurtured by his father, who identifies as 'one of the Progressives' (49). John dismisses Chal's old Osage playmates as lacking the 'spirit of the times,' or the 'get-up,' (70) necessary to make something of themselves in the towns now flooded with oil-hungry white businessmen, whose encroachment threatens Chal's environment on both a spiritual and physical level.

All over Osage County, the thousands of black oil derricks that 'sprang up among the blackjacks over night' (78) send oil and nitroglycerine spraying up into the air (73) and down onto the land below. Black mirrors of the blackjack trees, these derricks do not exist in any kind of harmony with the ecosystem, their drill holes sucking the earth dry while polluting the surrounding areas, making them increasingly unsuitable for animal habitation. Listening to the grumbling of the wells, Chal realises that it had been 'several years since he had heard the wild turkeys flying up to roost along the creek, and he could scarcely remember what the howl of a wolf was like' (64). Feeling increasingly isolated from the world he grew up in, Chal is now startled by the yelps of another canid—the coyote (70). At this point, for reasons

unbeknown to himself, he 'envied the coyotes' (71), and their apparently stronger connection to the same moon:

> He stood there, then spread his arms toward the moon. He tried to think of all the beautiful words he had ever heard, both in Osage and English, and as he remembered them he spoke them aloud to the moon, but they would not suffice it seemed; they were not sufficient to relieve that choking feeling. The moon became smaller as it climbed above the treetops. (71)

Unable to make himself understood by the coyotes or the moon, in either English or Osage, Chal is trapped between conflicting ways of relating to the nonhuman world—neither conqueror nor companion, neither dog nor wolf (nor coyote).

Chal's departure from The Agency to attend state University marks a crucial juncture in his character development from questioning his sympathies for the animal world to actively supressing them as signs of his own primitive mind set. This shift is reflected in the increasingly technological language Mathews employs to describe both Chal's actions and those of his white cohort. As he and his childhood friends Running Elk and Sun-on-His-Wings wait to be inducted into a fraternity house, the other white members pull up in a 'long car' (95) and greet them 'with outstretched hands and faces covered in mechanical smiles' (96). Despite struggling to 'see something sincere on those faces,' a voice inside Chal now compels him to find fault with himself, as 'this was the University, and these men were the representatives of civilization' (100). One such representative assigned to greet new arrivals offers Chal and his Osage friends tokens of 'insincere good fellowship,' and the memory of that 'exuberant, soulless hand on his back' makes Chal feel physically sick. He finds himself longing for 'the rounded, still green hills of home; […] the serene blackjacks on the ridges' (88-89), but soon the noise of civilisation—'the screeching mechanism of Progress' (40)—drowns out his thoughts of the Osage trees. When Chal decides to leave the confines of the university campus and takes a walk out to the river—'the first time he had been free since his

arrival (101)—he now finds that he is unable to engage with the nonhuman world as freely as he could back home, feeling watched and judged by a white civilisation that expects him, as an Indian, to behave in an "uncivilised" manner, and treats anything but contempt for nature as a sign of primitivism. Sitting by the stream beneath a road bridge, Chal tries to forget the ordered, disciplined space of the campus and reconnect with his natural surroundings. It is only 'when the cars had passed' that he is able to hear 'the faint, apologetic murmur of the water. For the first time in a week, he felt pleasantly alive' (102). His happiness is short-lived, however, as before he can remove his coat and enter the water 'his hands stopped,' checked by the sudden worry that 'someone should see him […] if someone did see him, they'd think he was crazy.' Even to walk out to the river on his own, without any specific purpose, 'would be humiliating […] but to undress and float around in the water, that would be too much—they'd know he was crazy, and he was not quite sure they wouldn't be right' (103). From this point on, Chal decides that 'he was going to be like other people' (103), which involves the increasing belief that his preference for natural surroundings is, in fact, a sign of his primitive nature, that 'he would never really be civilized' (161).

With his newfound desire to imitate the white men at the university, Chal becomes progressively more frustrated not only with himself but also his Osage friends, Running Elk and Sun-on-His-Wings, 'because they were so backward about taking up civilized ways of talking and acting' (112). Chal's experiences outside the urban space of the university now become fraught with potential humiliation, as he struggles to smother his feelings of unity with the nonhuman world around him in favour of enacting at all times his superiority. It is with horror that he realises that on one of his walks he had unconsciously started running, dodging between trees and ravines as he had done back at The Agency. He 'felt his face grow hot as he realized that for the last few minutes he had been imagining himself a coyote' (133). A recurring canine figure throughout the novel, understanding the special significance of the

coyote in traditional Osage culture opens a window into the authorial techniques Mathews uses to express Chal's inner turmoil. The coyote, as one who (in traditional stories) attempts to imitate others at great personal cost, embodies the contradictory identities that Chal must adopt in order to be accepted in white civilisation—as a human (but not an animal), and a Native (but not an American).

Several of these traditional Osage stories featuring the coyote were collected by the first Indigenous professional ethnologist, Francis La Flesche (1857-1932), born on the Omaha Reservation where he grew up speaking both English and Omaha, 'a language mutually intelligible with Osage.'[55] His father Joseph La Flesche, or Iron-Eye, was chief of the Omaha, and his mother, Ta-in-ne, was also Omaha. Joseph La Flesche (Chief Iron-Eye) was of mixed Canadian Métis, Oklahoma Ponca, and French descent, and had previously been a fur trader before being adopted by former Chief Big Elk of the Omaha. Big Elk taught Joseph La Flesche about the language and culture of the Omaha, before naming him as his successor. Francis La Flesche grew up on the reservation before moving to Washington to work as a translator for the U.S. Senate Committee on Indian Affairs around 1881. Encouraged by American anthropologist Alice C. Fletcher, La Flesche turned his attentions to cultural studies, and began working at the Bureau of Ethnology at the Smithsonian, classifying Omaha and Osage artefacts, while continuing to work as an interpreter and translator. Throughout his career, La Flesche collected information about Osage history, rituals, and culture in general—all of which he translated from Osage to English himself. As Garrick Bailey indicates, his sources for this information 'were among the most knowledgeable Osage religious leaders of their day.'[56] Using Osage sources such as those collected by La Flesche rather than relying on reports from white American anthropologists

[55] Garrick Bailey, 'Introduction', in *The Osage and the Invisible World: From the Works of Francis La Flesche*, ed. by Garrick Bailey (Norman: University of Oklahoma Press, 1995), 3-9, 3.
[56] Ibid.

enables this study to centre Osage stories, not settler ones. Rather than comparing the authenticity of such sources, this section is concerned with understanding the significance of an Osage writer representing an Osage character as becoming coyote through Osage sources.

In 'The Coyote and the Woodpecker,' a coyote visits a red woodpecker and, impressed by his hospitality and red head feathers, invites the woodpecker to his own home in three days' time. When the woodpecker arrives, the coyote has attempted to mimic both the woodpecker's house and head plumage, placing a dead tree trunk inside and attaching a burning branch to the back of his head (both animals are gendered male in the translation). The coyote then proceeds to mimic the woodpecker's behaviour by "pecking" the dead tree with his nose, but the flaming branch on his head sets fire to the tree, and then to the entirety of the house (which is made of grass). The woodpecker flies to safety, but the coyote is burned to death.[57] In attempting to imitate the woodpecker's looks and behaviour, the coyote appears ridiculous before ultimately losing his life.

A similar fate awaits the coyote in 'The Coyote and the Fawn.' In this story, a coyote is envious of the white spots on a fawn's fur. The fawn plays a trick on the coyote, telling him that he acquired his spots by sitting very close to a fire. The coyote proceeds to build a fire and lies with his back against it, waiting for the white spots to appear. But they never come, and instead the coyote's eyes pop out and he, too, burns to death.[58] Once again, in attempting to mimic the appearance of another, the coyote leaves himself vulnerable to manipulation and meets his demise. The fact that the coyote desires *white* spots maps on to Chal's desire to imitate the white men at the university, as if by imitating their outward appearance and actions he can assimilate into white culture. Yet Chal has as much real

[57] 'The Coyote and the Woodpecker', in Bailey (ed.), 147-148.
[58] 'The Coyote and the Fawn', in Bailey (ed.), 148-150.

chance of becoming white as the coyote has of gaining white spots, no matter how much of himself he sacrifices.

In his journalistic writings, Mathews commented on the Osage usage of coyotes in such traditional stories, stories that 'depend on dignity made ridiculous as a basis for humor.'[59] Far from an entirely negative symbolism, however, the importance of the coyote to the Osage is emphasised by Mathews in his weekly column entitled 'Our Osage Hills,' which ran in the Pawhuska *Daily Journal-Capital* between 1930 and 1931.[60] Of all the animals native to the Osage, Mathews writes, the coyote has been the most successful in adapting to the arrival of 'Europeans' to the land. Despite frequent attempts to remove the coyote, they have succeeded where other animals have failed in surviving the influence of white civilisation—the prairie chicken, in contrast, (like the unfortunate chickens in Chapter Two) 'has not yet learned that death can spurt from an automobile.' Often a figure of vanity and humour in Osage tradition, the coyote nonetheless remained for Mathews 'an admirable bandit who contributes something indispensable to the life of the Osage.'[61] Thus, when Chal in *Sundown* feels himself becoming a coyote, Mathews is deliberately invoking both the threat of mimicking white "civilised" behaviour at the university and a will to survive in the face of such civilisation.

For Chal, however, the idea that he could have anything in common with a coyote becomes evidence of his primitivism (and that of his people, who failed to prepare him for life amongst the supposedly civilised). He finds himself dreaming again, on a sunny day by

[59] John Joseph Mathews, cited in A. LaVonne Brown Ruoff, 'John Joseph Mathews's *Talking to the Moon*: Literary and Osage Contexts', in *Multicultural Autobiography: American Lives*, ed. by James Robert Payne (Knoxville: University of Tennessee Press, 1992), 1-31, 19.
[60] Many of these articles have been collected in John Joseph Mathews and Michael Snyder, *Our Osage Hills: Toward an Osage Ecology and Tribalography of the Early Twentieth Century*, ed. by Michael Snyder (Bethlehem, PA: Lehigh University Press, 2020). It is from this source that subsequent article references are taken.
[61] John Joseph Mathews, 'Coyote: Admirable Bandit', in Mathews and Snyder, 160-161, 161.

the river, until he is interrupted by a herd of cows. Reminding him of his father's cattle, and the excuse he used to use for riding his pony, these cows now make Chal feel 'very foolish,' and he needs to prove to them that he 'was there on some practical business,' and not just another animal like them, roaming without a specific purpose. He returns to his dormitory 'disappointed with himself […] that he had somehow reverted' (138). The term 'reverted' here not only denotes Chal's disappointment that he has returned to his former "Indian" self, but also suggests that such a return is (from the social Darwinist perspective associated with white Progressive culture) a reversion to an earlier evolutionary stage of humanity.

The longer he spends in the company of white people, the more Chal learns to hold his own urges in check, and to 'assume that veneer which he believed to be civilization' (13). Though, gradually, his dreams themselves begin to change, and he begins to believe in his own self-importance as a man of the world. Now, when 'the desire to *play the role* of coyote' comes to him, he dismisses such desires with shame—'He was more civilized now and more knowing, and he was ashamed of his recent past' (152—my emphasis). No longer understood as *becoming* a coyote, Chal's desire is now to avoid *playing the role* of one. The distinction may appear small but it is significant. It indicates that Chal's understanding of species is becoming less fluid, and more rigid, moving away from a recognition of the commonality between animals and toward a more recognisably white, scientific model in which one can consciously simulate the behaviour of another species, but any deeper connection is merely childish fantasy—what Roosevelt would call "nature faking." His desire to imitate others (like the coyotes in the traditional Osage stories) leads him to privilege his distinctly human identity and deny the possibility of a lateral shift into coyote consciousness. The only way that he, as a superior being, could embody a coyote would be to play the role of one, but this would be a degrading act. Mastering this desire is vital to Chal's increasing sense that he is 'more civilized,' and with this comes the conviction central to the notion of white

civilisation: that he 'was not some animal […]' (153). Following this proclamation, Mathews subsequently applies the mechanical language of white civilisation to Chal's actions, as he now takes his walks 'mechanically,' suddenly 'oblivious to the [blackjack] trees' (153) which have come to symbolise his Osage home and traditional Osage culture. His thoughts now turn away from spontaneous kinship with nature, and become 'practical,' at which times 'he was sure that he was going to major in economics, to prepare himself for business' (153). This obsession with the practical reflects the 'functionalism' of Tichi's engineer, the hero of modern Progressive America who 'enacts the values of civilization.'[62] It is at this point Chal notices, for the first time, 'the white of the Law and Science buildings […] gleaming' (154) among the trees. The white, gleaming structures echo those of Chicago's White City, the bastion of American Progressive values, emphasising the authority of 'practical' disciplines such as Law and Science in white civilisation. These campus buildings stand in stark contrast to the Fine Arts Building, which, for Chal, appears 'diffident and resigned, as though that which it symbolized has been hopelessly outdistanced by the progress of a people' (127). As Henry Watterson asserted at the opening of White City, good Progressive Americans are 'a race of inventors and workers, not of poets and artists.'[63] Chal is learning that any future citizen of modern America (the nation of mechanics) need not concern themselves with emotional or sentimental subjects such as the Arts, but rather submit their minds to maintaining the mechanisms of progress.

To 'keep his spirit from floating away on the currents of his emotion,' Chal selects certain English words to speak aloud to himself, which serve as 'a kind of weight; something practical and of the earth […]' (156). For reasons unknown to himself, it is the word 'extravaganza' that anchors Chal's consciousness to the so-called real world—that

[62] See note 12.
[63] Henry Watterson, cited in Burg, 107.

measurable, quantifiable, scientific world as conceived by the white people at the university. Although Chal 'didn't know what the word meant,' it is difficult not to read into Mathews's decision to choose a word suggesting extravagant indulgence, or a 'dramatic composition,'[64] given the scenario in which the word recurs in Chal's mind later in the novel as he speeds through the Osage Hills in a drunken automobile frenzy—a point to which I shall return. Having established the tensions between Chal's "ecological" Osage and "technological" white American identities, the remainder of this chapter will demonstrate how these tensions are played out in the transition from horse to horsepower on the reservation, with the automobile threatening to bring about a sundown on Osage connections to the nonhuman world.

From Horse to Hearse

The scenes to which Chal returns on the reservation certainly have the appearance of an extravaganza. With the oil lease sales now reaching 'hundreds of thousands of dollars,' many new (white) faces have been attracted to the county, and it seemed to Chal as though every other man was 'a lawyer, or an automobile salesman' (161). These two vocations, incidentally, were identified by Vine Deloria as 'the two most distrusted professions in our society.'[65] While this is open to debate, it gives some idea of the exploitation Indigenous communities have experienced in legal and technological arenas, and identifies automobility and the capitalist marketplace as inherently untrustworthy and inauthentic—an important point to be expanded in my conclusion. As two professions dominated by white men, such an influx of lawyers and automobile salesmen clearly represents a threat to the Osage, and

[64] *OED* <https://www.oed.com/view/Entry/67147?redirectedFrom=extravaganza&> para. 1 of 3 [accessed 05/03/2021].
[65] Vine Deloria, Jr., 27.

strengthens the association of automobility with colonial authority. With his new-found practical mind set, Chal finds the lifestyles of his old friends Running Elk and Sun-on-His-Wings somewhat 'dull and backward.' Concerned now with the business of progress and making himself a success in the eyes of white people, Chal finds his friends' lack of ambition disappointing, and begins to rue the days he wasted as a child playing with his ponies when 'the little white boys were delivering papers or telegrams, or working in their fathers' stores and offices' (162). To be seen passing time without apparent functional purpose in this increasingly Progressive society is to be wasteful, and while practical get-up-and-go made Tichi's engineer a hero, waste, as we saw in Chapter One, was the 'industrial-era devil.'[66] It is for this reason that Nelson Newburg (son of a white businessman in Osage County) can be seen 'crossing and recrossing the street with a pencil behind his ear and papers in his hand,' pretending 'that he had to be some place immediately, but Chal knew of course that there was no rush about his going' (161). Rather than actually accomplishing anything purposeful in his constant movement, Nelson's exaggerated flitting from place to place in fact disguises his lack of purpose. This restless motion that characterises Progressive industrial modernity has recurred throughout this thesis: in the disassembly lines of Packingtown and the ethics of motoring in Chapter One, where continuous movement in the car prevented consideration of anything passed (in the past); where long, meandering car trips are taken simply for the sake of travelling itself, as in Chapter Two, with little regard for the nonhuman costs of these joy rides; and in the ambulance driver's putting the pedal to the metal to avoid dwelling too long on the fleshy, rather than the flashy, consequences of technological progress. It is at this point in *Sundown* that Chal recognises that he can no longer spend idle time with his ponies, and as Mathews notes in the passage from this chapter's epigraph—'Cars were the thing now' (162).

[66] Tichi, 57.

Just because many of the Indians were buying cars does not, however, mean that they were welcomed into the nation of mechanics. As Philip J. Deloria notes, Indigenous adoption of Progressive technology was a long-term goal of the Christian civilising mission—evidenced in *Sundown* by Miss Hoover's conviction that she is bringing the Osage children 'the gifts of science, like gifts from heaven' (26)—but it was assumed that this would not come to pass for a very long time, when presumably white civilisation would have evolved to the extent that cars seemed as antiquated as horses. The expectation, Deloria explains, 'was that Indians would make all the regular stops on the trail up from savagery, skipping none. In the early twentieth century, that meant animal-powered agriculture, the supposed next stop.' For the Osage to seemingly take a shortcut and move straight from "savagery" to automobility was, for many white Americans who could not themselves afford such luxurious vehicles, evidence of 'cheating nature.'[67] Rather than demonstrating Indigenous participation in modernity, and leading to a reconsideration of colonial "primitive" stereotypes, automobiles became sites of danger and derision for many Native Americans.

It takes Chal some time to locate his old friend Running Elk after he returns home, finally finding him in hospital, 'having wrecked his very expensive roadster,' where he would be confined 'for several weeks' (161-162). Purchasing lavish automobiles only to wreck them due to careless or drunken driving fuelled stereotypical characterisations of the Osage (and Native Americans in general) as wasteful and technologically inept. As Deloria points out, that same white society 'had often claimed to link progress, not only with technology, but with thrift,' and thus the notion of Indians purchasing automobiles when, allegedly, they did not understand how to handle them, 'was irrational waste.'[68] Buying an expensive car (a sign of success and evidence of financial savvy in Progressive America) turned the Indigenous

[67] Deloria, 146. As part of the Government's attempts to "civilise" the Osages, Osage men were forced to take up farming, an occupation they considered 'unmanly.' See Musiol, 362.
[68] Deloria, 144.

motorist into something of a tragic joke, and, like 'the selling of Manhattan Island for twenty-four dollars in beads and trinkets,' was a sure sign of Indian inability.[69] Automobile salesmen would often treble or quadruple their prices when they saw Osage customers approaching, and the fact that these outrageous prices were usually paid without question was taken as evidence of Indian financial incompetence. As government agent W. J. Endecott reported, the 'Indian who purchases a flivver is held to be a spendthrift or of unsound mind or of dishonest habit.'[70] It is in this sense that automobility, as a desirable component in national citizenship, was inherently exclusive—the Indian without a car is primitive, the Indian with a car is foolish.

Evidence of such a narrative framing can be found in *The New York Times*, in an article from 1917 which reports that the Osage named Wah-pah-sha-sah insisted on blowing a great deal of his newly acquired oil-lease profits on a certain expensive car, not realising that it was a hearse. Wah-pah-sha-sah, reportedly 'the richest member of the tribe, more than a millionaire,' is clearly a threat to the balance of power when he enters Kansas City to buy his car, and thus needs to be very quickly taken down a peg or ten by demonstrating his embarrassing lack of knowledge when it comes to selecting a machine. When evaluating the 'automobile hearse,' the Osage's criteria (according to the article) does not include any technical or mechanical specifications, but rather focuses on flippant, superficial details such as the 'fine curtains on its sides' and the 'ample squatting room.' After making his purchase, the article continues in its patronising tone, Wah-pah-sha-sah then had to hire a chauffeur for one week 'to teach him the mysteries of running a car,' as if the inner workings of an automobile could only be conceived of by Indians in a mystical sense. As the Osage and his family drive around in the hearse, the 'strange occupants' draw pitying laughter and derision

[69] Ibid.
[70] W. J. Endecott, cited in Deloria, 145.

wherever they go, with people purportedly coming from neighbouring towns to observe the spectacle. Eventually, Wah-pah-sha-sah is forced to accept the truth—'that the car with the comfortable squatting facilities was intended only for the dead.' Even with this final humiliation, the article concludes by affirming that 'he still does not yet quite understand' his *faux pas*, reassuring the white readers that although the Osage may have accidentally stumbled into a position of financial power, all the money in the world cannot make up for their lack of common sense, and an ultimately more primitive mind-set means that the advantages of luxury automobiles are entirely wasted on the Indian.[71]

The irony of this article in relation to *Sundown* is that, for many of the Osage, whatever car they choose becomes a hearse in one way or another. After growing increasingly estranged from Running Elk, Chal learns of his death second-hand: 'They said he was shot in the head and left lying in his car in the Big Hill country' (258). My conclusion will deal with the historical murder cases of Big Hill in greater detail, but given the vast income being generated by the oil extraction industry, some white settlers were willing to go to extreme lengths in order to gain control of Osage royalties. Stories of Indigenous financial and technological incompetence, like that of Wah-pah-sha-sah and the reports of government agents such as Endecott, were used to justify the assignation of white "guardians"—usually 'local lawyers and business owners'—to any Osage deemed officially 'incompetent,' giving them total control over the Osage's finances and swindling them out of millions of dollars.[72] One morning, Chal receives a telegram informing him that his father had been killed (235). As he and his mother contemplate the news together, she breaks her usual silence to give her views on the white guardians, and their perceived role in John's death. 'One day I was in new car which your father bought, in front of agent's office,' she explains, when she witnessed a

[71] 'Rich Indian Picks Hearse Automobile', *The New York Times*, 25 Nov. 1917, 87.
[72] McAuliffe, Jr., 82.

group of suspicious-looking white men walking inside. She thought, 'That is white man goin' to tell agent that it will be good to let them be guardians of office Indians […].' Despite her "Progressive" husband's insistence while he was alive that the government 'would not let white mans […] cheat Indian,' she recognises that not even he believed it, and that 'his tongue said this so that his heart could hear it' (236). On the day that he was killed, she had warned him that more and more Osages were disappearing, or turning up dead, but he had said 'no, it is a civilized country now.' For all John's faith in the idea of Progressive civilisation, his encouragement of Chal to embrace white culture, and his active participation in automobility, he is still shot dead, and 'those white mans took that new car' (237). John was not wrong in his conviction that Osage County was now civilised—full of 'new paved streets and […] tall buildings,' with a great 'number of cars to be seen in the streets' (237)—his only mistake was to believe that such civilisation cared about the wellbeing of Indigenous people.

Following his father's death, Chal inherits his oil royalties, but such financial largesse eliminates the necessity of practical, productive use of his time, turning him into the drunken, idle reservation Indian dismissed by Sitting Bull as neither dog nor wolf. As the oil payments continue to roll in 'as sure as death' (241), Chal abandons ever more of his Osage traditional customs in favour of joining in with the drunken debauchery of the white folks, embarking on reckless spending sprees because there is little else (as he sees it) to do with all of his money. His newfound theory, 'that anything free was not worth while' (252), demonstrates the extent of his corruption by materialistic white society, a far cry from his happy days as a child playing in the rivers and trees with his pony and his Osage friends Running Elk and Sun-on-His-Wings. He even begins to turn away from his Osage mother, whose refusal to leave the simple old house in the valley, even after he has offered to buy her a new one, is taken as a personal slight. Her adherence to a traditional way of life stands in contrast to those of her

late husband and son, and Chal's increasing frustration at the fact that his white symbols of progress do not bring him the happiness promised is exacerbated by contact with his mother. He does not understand the source of his annoyance at this stage, only 'that his mother had something to do with it' (262). After a particularly heavy alcohol-fuelled binge, Chal reluctantly agrees to attend a traditional Osage sweat lodge with Sun-on-His-Wings. At the lodge is Running Elk's father, Watching Eagle, who still mourns the murder of his son. As Chal listens on, the Osage elder White Deer tells Watching Eagle that because his son followed 'the white man's road' (273), he ought to let him go, and concentrate on ensuring he remembers his own connection to the natural world of the Osage: 'You are Indian. Here are the graves of your grandfathers. You came out of this earth here. The life of this earth here comes out of ground into your feet and flows all over your body. You are part of this earth here like trees, like rabbit, like birds' (274). Although White Deer's words may seem, to Chal, like shameful examples of unpractical sentiment (280), seeming to vindicate the colonial stereotypes of the "ecological Indian," Mathews is, in fact, presenting a challenge to the notion that such an acknowledgement of shared origin is justification for murder at the hands of Progressive civilisation.

Chal, however, progresses ever faster down the white man's road, via the white man's vehicle. At the novel's dramatic climax, he speeds out into the Osage hills in his car, completely drunk, unsure of where he is going, but feeling compelled to go somewhere. 'The great car sped ahead and he was filled with a delightful madness. He passed the car ahead of him so fast that the driver almost lost control; almost drove his car into a ditch' (294). Narrowly avoiding killing another driver, Chal's rampage soon becomes deadly as he smashes through a flock of nighthawks who had settled on the road, killing 'several of them as they flew up before the rush of his car' (295). Interposing between the human driver and the nonhuman world outside, the automobile has no regard for the birds with whom Chal, as a

human being, could have nothing at all in common. Stopping only for periodic gulps from his whiskey bottle, Chal rushes on toward a ridge of his beloved blackjack trees, which throughout Mathews's narrative have served as representatives of Chal's Osage heritage and connection to the nonhuman world. In his mad state, however, 'he was pleased and felt triumphant when the car roared through them, and they were left behind like a thwarted and defeated enemy, bowing to Chal the conqueror' (296). Even now, his terrific demonstration of speed, power, and dominance over his natural surroundings does not grant him the satisfaction that it apparently confers onto his white friends—'it was not fast enough […]' (296).

At this comedown, Chal unexpectedly recalls that word which he associates with civilised order, and starts 'repeating to himself, "Extravaganza," without reason' (296). If Challenge Windzer is unaware of the meaning of the word, John Joseph Mathews is not, and Chal's nightmarish attempt to engage with the exaggerated indulgences of white consumer culture is the very definition of extravagance: 'an irrational excess, an absurdity.'[73] Unlike the white people Chal idolises at the University, Jack Castle and Blo Daubeney, automobility does not instil a sense of power or authority in Chal, rather doubt and despair. For Jack Castle, who was 'by far the richest man at the University' and owner of 'the only car available to the fraternity,' it is the smell and soft sound of his automobile which 'gave him assurance' (95). For Blo Daubeney, the wealthy white girl with whom Chal has an unrequited love interest, automobiles convey a similar sense of assurance and safety, and merely '[t]hinking of cars' is enough to bring 'a warmth […] over her.' Blo goes on to define the aura of authority surrounding Jack Castle as 'that thing that made you drive a great shiny car as though you were unconscious of the car […]' (131). Jack Castle's self-assurance comes

[73] *OED* <https://www.oed.com/view/Entry/67140> para. 3 of 3 [accessed 04/2021].

from the fact that, as a wealthy white man, driving a great shiny car is simply part of the natural order of things. For the mixed-heritage Chal, however, the destructive excesses of automobility only serve to confirm that he is *not* part of this group: that while he may drive a car, attend a university, fly aeroplanes, and occasionally date white women, the Osage side of his heritage ensures that he will never be seen as white.

Repeating the word "extravaganza" and tripping on the running board of the car, Chal is suddenly overcome with the need to dance and sing a tribal song. While the thoughts of cars meant comfort and warmth to Blo, Chal's 'blood became hotter' following his drive, and the emotion inside him is not pleasant but rather 'had begun to choke him,' leaving him 'in pain […].' Desperate for some sort of climax to his auto-powered binge, Chal's dancing becomes wilder as he strives to describe his pain: 'He wanted to challenge something; to strut before an enemy. He wanted by some action or some expression, to express the whole meaning of life; to declare to the silent world around him that he was a glorious male […]' (297). Named by his father to be 'a challenge to the disinheritors of his people' (4), Chal, too, is not aware of exactly who he is supposed to be challenging. In the Windzer family, Chal's mother offers the greatest challenge to colonial dispossession by holding fast to her Osage identity. Both Chal and his father are unable to climb on board the automobile's swift and enthusiastic adoption into American society, as while this inanimate object may have achieved subjectivity (and even accorded certain rights as we saw in Chapter Two), such rights and agency are not extended to Indigenous populations nor nonhuman animals.

As Chal sits, dejected, on the hood of the car, the nonhuman lifeforms of the Osage hills on which he has reeked such havoc now begin to communicate with him again. Even in silence, Chal feels the presence of the blackjack trees, 'standing there as though they were accusing him of something' (298). The 'yapping of coyotes' in the distance are reminiscent

of those in the traditional Osage stories, attempting in vain to become something they are not, at great personal cost. But the animals surrounding Chal in the aftermath of his anticlimactic auto-binge serve more than a metaphorical purpose. Their reactions to him and his car as animals say much about the way the automobile has impacted human–animal relations, particularly for Chal who has always been conscious of the effects of his own presence amongst the other animals of the Osage hills. A curious steer stops near Chal and the automobile, 'staring at that thing on the ground and that large red thing with the shiny eyes; that large thing covered with beads of dew and so out of harmony here' (299). Despite the suggestion that the steer considers the car to be another animal (thus providing something of the animal authentication discussed in Chapter Two), there is no doubt that it does not belong to the same environment as the other creatures that can be heard around them. Birds and squirrels sound warning calls, and Chal gradually becomes aware of the uncomfortable fact that it is not only the car but also *he* that is the perceived threat—he is indistinguishable from the automobile he drives. Becoming 'annoyed with the steer,' Chal curses it and decides to scare it away by sounding the motor's horn. The unnatural 'screaming of the siren' causes the steer to flee, and temporarily silences the other animal voices. When they resume, however, both Chal and the car are still considered threats, and a bluejay is the first to approach, 'his body jerky with nervousness' (301). Gradually more bluejays join the ringleader, and as Chal looks up at them:

> they flew to a more distant tree, but their scolding did not diminish. He felt that they were accusing him of something and he became unreasonably angry. He got up, picked up the empty bottle and threw it into the branches of the tree, and there were many streaks of blue-and-white floating away, each screaming "murder!" (302)

The automobile has turned Chal into a dangerous object, and whether these birds are accusing him of something or not, this violent potential has been realised. His drunk-driving spree which kills sentient creatures and smashes indiscriminately through the sacred Osage

blackjack trees is a mirror image of the thoughtless and mechanised violence inflicted upon Indigenous communities in Progressive American colonialism. Far from challenging the disinheritors of his people, Chal's disregard for Osage spiritual connections to the land in favour of Progressive scientific functionalism serves a colonial purpose, while he is no closer to becoming an American subject.

The Golden Age

As we learn in the final chapter of the novel, however, the true murderers are the white colonisers who moved into Osage communities, following the oil wealth, who found foul ways to acquire Osage oil money. The period 1921-1926, when Osage oil payments reached their zenith, was also an incredibly dark chapter of Osage history known as the "Reign of Terror," during which time over sixty of the original 2,229 recognised members of the Osage Nation were murdered—nearly three percent of the population.[74] The so-called "guardians" mentioned earlier were entitled to receive their Osage ward's allotted land in the event that the Osage (and any close relations) died of unnatural causes. Guardians could also take out insurance on their ward, so that, should accident befall the Osage, the white guardian would not be out of pocket. This created great financial incentive for Osage land-holders to "disappear." Investigative journalist Dennis McAuliffe, Jr., whose work *The Deaths of Sybil Bolton: An American History* (1994) charts his attempts to discover the truth behind his Osage grandmother's death, claims that 'John Joseph Mathews had been too pained by the tribal transformation that took place during the big-money oil years to write about them.'[75] Whilst *Sundown* is clearly evidence to the contrary, the Osage murders were apparently too

[74] McAuliffe, Jr., 123.
[75] McAuliffe, Jr., 82.

harrowing a subject for Mathews to develop in his novel, as they receive only the following acknowledgement in the final pages:

> […] there was a great interest in the fact that a group of citizens in the Big Hill country had been killing Big Hills for several years with the object of accumulating several headrights into the hands of one Indian woman who was married to one of the group. (305)

This, of course, goes some way to explaining the deaths of both Running Elk and Chal's father, John Windzer, deaths which raise surprisingly few eyebrows in the novel itself among the Osage population or the white authorities. The reality, sadly, was that the F.B.I. only became involved in the case after one white man was murdered as part of a "headright" (original Osage claims to oil royalties) dispute, and even when they finally did enter the case, their involvement had to be funded by the Osage Nation.[76] As McAuliffe, Jr., discovered in the official F.B.I. report into the 'Osage Indian Murders' (available at the F.B.I. FOIA Reading Room in Washington, D. C.), few of the Osage guardians would risk getting their hands dirty when it came to murdering their ward. Why would they, when, as the report indicated, 'the going rate to hire a poor white to kill a rich Osage is $500 and a used Roadster'?[77] Recall in *Sundown* that Chal's father was not only killed, but his new car stolen, as if Osage premature transgression into automotive culture, or 'cheating nature' in the words of Philip J. Deloria, was justification enough for white America to simply wipe them out of existence.[78]

There is no doubt that the sudden economic power conveyed on the Osage during the oil-boom threatened the assumed social superiority of white Americans over this Indigenous community. The apparent injustice of Osage wealth was most keenly felt by envious whites

[76] McAuliffe, Jr., 123.
[77] McAuliffe, Jr., 124.
[78] See note 67.

when paraded in the form of expensive commodities, the most conspicuous of which in the 1920s was the automobile. As we have seen from articles in *The Horseless Age*, subsequent studies such as the work of Dennis McAuliffe, Jr., and John Joseph Mathews's novel *Sundown*, Indians were not welcomed into automotive culture by white society, and despite the active adoption of the automobile by the Osage and many other Native American nations, it is still assumed that Indians would sooner jump on a horse than get behind the wheel. The sight of Indigenous people in the pre-eminently modern context of automobility so irked Progressive society because it burst the bubble on one of the most significant cultural fictions of the car in modernity: that despite the immense social, political, and technological upheavals that seemed to surround the modern citizen, they were just a car-ride away from the safety and security of the pre-modern era.

In an early review of John Joseph Mathews's *Wah'Kon-Tah: The Osage and the White Man's Road* (1932), published in *Time* magazine in 1932, the reviewer notes that 'Osage Indians did not always ride in limousines, squat in blankets among Grand Rapids furniture, and generally give a pathetically good imitation of *nouveaux riches* the world over.' Mathews's book, the article claims, focuses on the 'Golden Age' of the Osage, which was between their 'prehistoric' greatness and their 'bloated capitalist' days—'a time when, still poor and still noble, they lived a benevolently restricted life on the Osage reservation.'[79] Clearly for this reviewer, the public were nostalgic for a time when Indians stayed in their place, before they spoiled both themselves and the automotive experience by utilising the wealth foisted upon them as a result of the burgeoning demand for oil. This 'Golden Age,' when all the conveniences of modern technology were available to white citizens yet the pristine areas of wilderness and primitive Indigeneity remained untouched, is an example of

[79] 'Osages Before Oil', *Time*, 7 Nov. 1932, 55.

the *out of sight, out of mind* attitudes discussed in Chapter One. The conspicuous intersection between the "primitive" and the modern that was the Osage Oil Boom demonstrates what happens when the blinders are taken off, and the far-reaching influence of automobility is there for all to see. The automobile was at once symbolic of civilisation's one-track progress into the future, and the apparent corruption of simpler, more traditional ways of life.

In his guide to caring for an automobile, discussed at length in Chapter Two, Robert Sloss included a passage which sums up the contradictory nature of the automobile in Progressive society. Attempting to appeal to the overworked, ever-functional, and in some senses emasculated white-collar workman of the modern city, Sloss presented the following masculine fantasy:

> Gun in hand you forage for your noon-day meal, which you yourself cook over a camp fire […] pitch camp, sup royally, and after a pipe or two, sleep in your tent as only men can sleep after a day in the open. The aroma of brewing coffee on the crisp air awakens you in the morning […]. After a day of delicious idling among the pines you make the swift run home at dusk for a dreamless sleep in your own bed, from which you go, clear-eyed and invigorated, to work again on Monday. […] It all seems like a flight of fancy, yet this and more does the car make possible, even at the very gates of the biggest and busiest city in the Western world.[80]

Appealing to pre-modern heroic figures such as the cowboy (a famous equestrian), whose masculinity was based on pitting themselves against the landscape and coming out on top (in popular fiction, at least), Sloss suggests that the automobile can help reclaim the lost spirit of the frontiersman. This motivation is another reason for the popularity of extended road-trips as seen in Chapter Two, getting back to nature, as it were, via state-of-the-art machinery. The excessive demands of modern working culture necessitated a form of escape at the weekends, but even in Sloss's 'flight of fancy,' there is still the caveat that one must return 'to work

[80] Robert Sloss, *The Automobile: Its Selection, Care and Use* (New York: Outing, 1912), 174-175.

again on Monday' in order to earn the salary to pay for the car. Technological modernity and Taylor's scientific management of time thus provided not only the prohibitive conditions of modern working life, but also, conveniently, the means of temporary respite, creating a kind of feedback loop whereby production and consumption are co-dependent.

This is why, as Philip J. Deloria indicates, automobile adventuring became such a popular pastime in the early decades of the twentieth century. Such trips seemed to offer 'a pleasurable and safe reprise of the classic frontier journey of self-discovery, sans threatening Indians or nature.'[81] With Frederick Jackson Turner's famous assertion that the American frontier had closed in 1890, automobility seemed to offer at least a diversion from the realities of modern encroachment on "virgin" spaces, by providing the means for exactly such an encroachment. The often-disappointing truths behind such automotive symbolism are rendered visible in *Sundown*, when, accompanied by his party of white "friends" who leach off his oil royalties, Chal 'climbed behind the wheel' before deciding that 'he should like to have a beautiful spot in which to drink.' Recalling how he 'used to ride to a round hole of water with elms arching above it' on his pony, Chal shrugs off the suggestions from his party that they stop just anywhere, as that 'was the place he wanted to find now' (250). When they finally stop the car at this nostalgic setting from Chal's childhood, however, it has been invaded by black oil wells,

> and from each a path of sterile brown earth led down to the creek, where oil and salt water had killed every blade of grass and exposed the glaring limestone. Some of the elms had been cut down, and the surface of the water had an iridescent scum on it. (250)

Driving home from their excursion, Chal sits at a red light with his hands on the steering wheel, having drunk even more than usual in an attempt to 'compensate for the unhappiness

[81] Deloria, 163.

which that spot, so dear to his boyhood memories, had caused him' (251). As Mathews demonstrates in this passage, while the automobile may promise a symbolic return to simpler, happier, times, such symbolism facilitates a disavowal of the distasteful material consequences of automobility. The particular significance of the places from Chal's childhood being desecrated by ecologically damaging industry is that the most offensive aspects of modernity are invariably concentrated far from the sight and memory of white civilisation, forcing those who usually have least access to its advantages to pay the highest costs.

Those who truly gain the least from automobility, however, are the nonhuman animals forced to abandon their natural habitats if they are not killed outright. In the oil-ravaged location where Chal and his party sit and drink, the closest thing to another form of life is the automobile that they drove there. Regardless of the references to animals in automotive branding, and the theriomorphism of cars seen throughout this thesis, the automobile cannot deliver on its promise that nothing would be lost in the transition from horse to horsepower. The rationale behind nonhuman metaphors in automotive culture is the same as that which justified the Indian insignia painted on the American ambulances in World War One, the automobile adventure trails named after the tribal lands they bisected, and the appropriation of Indigenous identities for car branding which began with the founding of the Geronimo Motor Company in 1916 and continued with the Pontiacs, Apaches, Cherokees, Cheyennes, Dakotas, Navajos, and Winnebagos to list but a few twentieth-century examples.[82] By recreating the victims of automobility in an accessible form, there was plausible deniability of the fact that what was once considered beyond the scope of human corruption could, in fact, be lost.

[82] For a more detailed analysis of the symbolic function of the Jeep Cherokee, see Deloria, 138.

As we saw with the deliberate incorporation of an equine idiom in early automotive advertising, and the persistence of advertisements which seek to demonstrate animal approval and acceptance of automobility (see Chapter Two), nonhuman animals (horses in particular) provided a certain legitimacy to the horseless carriage. As Deloria argues, Indigenous branding was used to similar effect:

> Indians, it seemed, possessed the community spirit lacking in the city, the spiritual center desired by those troubled by secular science, the reality so missing in a world of artifice. […] Indians evoked a nostalgic past more authentic and often more desirable than the anxious present. By imagining such a past, projecting it onto the bodies of Indian people, and then devising means to appropriate that (now-Indian) past for themselves, white Americans sought reassurance: they might enjoy modernity while somehow escaping its destructive consequences.[83]

Throughout this thesis, I have drawn attention to the discrepancies between the symbolic representations of animality and technology in automotive culture, and their material counterparts. The 'world of artifice' identified by Deloria reflects a recognition on behalf of that portion of modern American society that not everything sacrificed at the altar of Progressive mechanisation could be recreated technologically. As we saw in Tichi's analysis of the heroic engineer in gear-and-girder America, the supposed irrefutability of cold mathematical engineering logic was crucial to allaying anxieties about the rapid changes and social instability of the modern era.[84] This paragon of scientific truth was also important in legitimising the superiority of the early U.S. automobile industry, which, as even *The Horseless Age* acknowledged, was partly 'American bluff.' As one correspondent noted in 1899:

> Nowhere else in the world have so many "fake" inventions and promotion schemes in the motor line been brought out as right here in the United States, and to-day the whole country and the honest

[83] Deloria, 166.
[84] Tichi, 105.

> workers in the field are suffering from the effects of the exaggeration, bluff and, in some cases, dishonesty, which have too often been associated with American motor vehicle promotion in the past.[85]

Fortunately, the writer continues, 'the speculators, bluffers and cranks who brought us into bad odor' have been displaced 'by engineers […] who will show tangible results and convince our foreign friends that the American motor vehicle industry is not all bluff by any means.'[86] While this example of "fake" news in *The Horseless Age* is fairly isolated, and refers to exaggerations in automobile quality rather than anything broader, it draws attention to the fact that automobility, in modern America, cannot always be relied upon to deliver what it promises. In this chapter, we have seen how the automobile became figuratively associated with national identity, as the U.S. progressed from a nation of horsemen to a nation of mechanics, and yet, only those whose citizenship was already indisputable could rely on the car to proclaim their status as an American. For Indigenous drivers like Chal and John Windzer, it is all just American bluff.

The faith in secular science identified by Philip Deloria is critiqued by his father, Vine Deloria, as one of the great myths of American culture. What Indigenous communities have recognised through the various scientific justifications for white violence against them over the centuries, is that 'scientists lie and fudge their conclusions as much as […] lawyers and car dealers.'[87] Despite the association of the impervious engineer with American automobility, it does not alter the fact that, to this day, there is a certain expectation of bluff and exaggeration surrounding cars, an acknowledgement that you are not getting what you truly want. Symbolic representations of animals and animalised Indigenous Americans

[85] 'American Bluff', *The Horseless Age*, 4.22 (30 Aug. 1899), 7.
[86] Ibid.
[87] Deloria, Jr., 27.

maintained another of the paradoxes of automotive culture, in which it is possible for the car to be both the cause of, and solution to, the ills of modern life.

CONCLUSION

Improvements have been coming so quickly that the past is being lost to the rising generation, and it can be preserved only by putting it in a form where it may be seen and felt. That is the reason behind this collection.

—Henry Ford, 1931[1]

For a man who once famously declared that history was 'more or less bunk,' Henry Ford invested a surprising amount of time and resources in an attempt to reconstruct it.[2] The collection he is referring to in the epigraph is that of Greenfield Village, Ford's outdoor museum opened in Dearborn, Michigan, on 21 October 1929, eight days before the stock market crashed. Replicating a small nineteenth-century town, Greenfield contained none of the technological advancements celebrated in White City back in 1893. Electric lights reverted back to gas lamps, skyscrapers receded back into old wooden structures, and the horseless carriages (through which Ford had made his fame and fortune) regained their horses. Despite Ford's many issues with the animal that supposedly did not earn its keep, and his championing of mechanisation and Progressive technology throughout his career, he nevertheless constructed 'a museum town for old objects, attempting to return to an era when everything depended on horses.'[3] Even Henry Ford, the paradigm of techno-capitalist modernity, felt that, for all the benefits of modern life, perhaps there were some things worth preserving. This nostalgic reflection, however, is in stark contrast to the Progressive belief in perpetual forward motion symbolised by automobility, and while Greenfield may have been an attempt to prevent traditional American values becoming subsumed by the machine, the

[1] Henry Ford, cited in J. G. de Roulhac Hamilton, 'The Ford Museum', *American Historical Review*, 36.4 (July 1931), 772-775, 773.
[2] Henry Ford, cited in 'Fight to Disarm His Life's Work, Henry Ford vows', *Chicago Tribune*, 25 May 1916, 10.
[3] Guillermo Giucci, *The Cultural Life of the Automobile: Roads to Modernity*, trans. by Anne Mayagoitia and Debra Nagao (Austin: University of Texas Press, 2012), 47.

wheels were already in motion. As my thesis has demonstrated, Ford's simultaneous veneration *and* suspicion of technological change, his dismissal of physical animal power *and* appreciation of what the horse represented, and his Progressive *and* nostalgic motivations were all bound up in the ironies of automobility—the paradox of Progress.

In each of the four previous chapters, I have evidenced a tension between the literal and symbolic representations of animals and automobiles in American literature and culture, 1895-1935. As the first literary history operating at the intersection of animal, automobility, and American studies, my thesis has approached the question of the animal in modernity from the road less travelled, reflecting the interconnectivity of nonhuman animals, automobiles, and literature in shaping American character and national values at the turn of the twentieth century. That the first automotive periodical in the English language was entitled *The Horseless Age* encapsulates Progressive attitudes towards animals in this period, namely, that human societies of the future would be defined by an absence of everything animalic, or at least a perceived absence. As this thesis has shown, civilisational "progress" was never as simple as substituting the old for the new, the animal for the machine, in automotive culture. Rather, animals remained central to human societies in both metaphoric and material senses: as idioms through which to accommodate novel machines such as the horseless carriage and maintain a sense of connection to time and space; and simultaneously as livestock, roadkill, and fodder for both cannons and soldiers in wartime. Consistently demonstrated through every chapter in this study is the extent to which symbolic representations of both animals and cars mask the material impact of automobility on sentient animal life (human and nonhuman). Interposing between the categories of "human" and "animal," machine technology in the Progressive era was supposed to confirm human exceptionalism by maintaining a physical and ideological barrier between civilisation (defined by its distance from the animalic), and the animals on which this same civilisation

nonetheless depended. The irony of this can be summed up in the fact that there were never more horses in the United States than during the running period of *The Horseless Age.*

The notion of such a physical and ideological screen separating the civilised from the primitive is significant to understanding how Progressive discourses around both machine technology and nonhuman animals enforce a hierarchy of human exceptionalism in which wealthy, white, male humans sit on top, with women, the poor, and racialised groups allowed progressively smaller degrees of separation from nonhuman animality. Those allowed to have such screens are enabled to maintain a cognitive dissonance between what they know to be barbaric truths about the everyday processes of civilised society, and what they choose to see in their own daily lives. Those without such privileges are not only forced to confront and participate in the dirty work of civilisation which frequently involves direct contact with nonhuman animals (as in slaughter), but in doing so are themselves transformed into something less-than-human by direct contact with the animal other, as if physical proximity were somehow linked to evolutionary proximity. These screening mechanisms are a kind of prophylactic layer that keeps the civilised human from being exposed to the animal.

Throughout this thesis, we have seen such moments of interposition and transformation play out within the specific context of automobiles and the nonhuman world. The literal windscreen of Ross's car in *Oil!* shields Bunny and his father from natural elements as they speed along the road, oblivious to the animals they flatten along the way (including Bunny's namesake), and the human pedestrians—the 'Mexicans in tumble-down buggies, who failed to keep out on the dirt where they belonged […].'[4] The nature of driving high-speed automobiles is such that drivers do not have to think about the consequences of their recent decisions on the road, as it only takes a matter of seconds to become physically

[4] Upton Sinclair, *Oil!* [1927] (London: Penguin, 2008), 3.

and psychologically removed from the scene. This facilitates what Ross terms the ethics of motoring—the notion that if one is forever looking forward (through the screen), there is no time to dwell on the past (or the passed). Bunny almost falls into this trap himself as, viewed through the filter of the automobile window, he on first glance mistakes the suffering and toil of his own oil workers for a magical, idyllic scene, devoid of all exploitation. This is the privilege of such screening mechanisms, they permit those at the top of the hierarchy to conveniently forget what is, to recall the words of automobile pioneer Charles Duryea, 'not in evidence.'[5] The same can be said for the wealthy automobile tourists in Chapter Two, who rarely allow themselves to be troubled by the idea of animal death beneath their wheels; so too the gentlemen volunteers in Chapter Three who are simply able to speed away from the sight of the mangled bodies of horses and humans before they have chance to reflect too deeply on what this might mean; and for Chal in Chapter Four who, having temporarily numbed his connection to the nonhuman world with alcohol and fast car, is able to commit violent, destructive acts on Indigenous flora and fauna that he would never have been capable of when it was just him and his pinto. It is only through the interposition of a screening mechanism that these humans are able to insulate themselves from the material consequences of their actions.

Others, however, do not have this privilege. In order to maintain the normal functioning of a Progressive society dependent on the subjugation of nonhuman animals, there must be another category of humans who interact with those animals, suffering the indignity of coming into contact with the animal other, and as such becoming less-than-human themselves. This is the fate of Jurgis and the immigrant labour force in the slaughterhouses of Packingtown as seen in Chapter One, as Jurgis eventually recognises that

[5] Charles E. Duryea, 'Bogies', *The Horseless Age*, 1.10 (Aug. 1896), 4.

he himself is metaphorically transformed into another of the Packer's hogs. This in turn provides another screening mechanism between people such as Ross, who enjoy the pork on their plate without being forced to consider its origin, and those like Jurgis himself, who are the ones to actually perform the morally dirty act of killing. The same can be said for those soldiers on the front lines without the added protection and mobility conferred by an automobile, whose flesh is rendered indistinguishable from that of horses and other animals blown apart by falling shells. The drivers, while still working in perilous conditions, are at least generally afforded the privilege of keeping their humanity intact. As for Chal in Chapter Four, a mixed-heritage Osage American, automobility simply does not confer upon him the same sense of superiority and entitlement as it does to his white counterparts at the University, such as Jack Castle and Blo Daubeney. These screening mechanisms, it seems, cannot raise one's status in the hierarchy of human exceptionalism, they can only protect those who have already positioned themselves at the top from being concerned with the plights of those below.

This plausible deniability, this screening off of the material consequences of one's own self-serving decisions, is enabled by the automobile and the regime of automobility by both literally moving one away from the visible sources of conflict, and providing symbolic distractions from the problems of its own making. As acknowledged by Nicole Shukin, the 'dematerialization' of the automobile only increased as the twentieth century wore on, with more and more capital being directed towards cutting drivers off from their environments, whether through advancements in automobile design, enabling humans to control the sound and temperature of their insulated environment, or through new forms of advertising which focused less on the material features of cars, and more on immaterial idealised perceptions of

the world (frequently through another screen—the television).[6] This accelerated dematerialisation and domestication of the automobile has unquestionably influenced human responses (or lack thereof) to climate change, and the concurrent human-driven crisis of mass extinction, given that so many forces exist to distract people from the material realities of automobility that it has become difficult to look beyond the comforting nostalgia of automotive advertising, in which there is no traffic, no exhaust fumes, no roadkill, no racism, no species loss, no problems. The ability to change, or control, one's own personal climate is, ironically, a key selling point of modern automobiles, so while the world beyond the windscreen burns (in no small part due to automobile emissions), drivers can remain cool in their air-conditioned pods, insulated from the realities of their environment. As Christopher Wells has pointed out, the worst environmental effects of automobility are borne not by motorists as a group, but by the nonhuman animals whose relationship to the conditions of the natural world is not mediated or controlled by a machine.[7] Treating cars as animals, and not engaging with the car's impact on animal life, feeds into the narrative of the "American Dream" in which the American is free to assert dominance over the land by harnessing the power of lesser animals, in this case, horsepower. Part of the power and freedom conveyed in American automobility is in not having to deal with the consequences of one's own selfish actions, rather, forcing these consequences onto someone, or something, else. While these processes of symbolic automotive therio-, anthropo-, and mechanomorphism have become more pronounced in the years beyond the scope of my thesis (from the release of the Ford Mustang in 1965 to the more recent attempts to naturalise the car explored by Shukin and Dennis Sown, among others), this thesis serves as evidence that they have been intrinsic to

[6] Nicole Shukin, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis and London: University of Minnesota Press, 2009), 116.
[7] Christopher W. Wells, *Car Country: An Environmental History* (Seattle: University of Washington Press, 2012), 294.

Americans' relationships with automobiles since the horseless carriage first came onto the scene.[8]

The role of these various -morphisms in relation to humans, animals, and cars is not straightforwardly harmful or harmless, progressive or regressive, natural or unnatural. These responses are, to a degree, predictable in the sense that humans have always sought to metaphorically animate those forces which they do not immediately understand, as discussed by Stewart Elliott Guthrie.[9] Anthropomorphising nonhuman animals can have both positive and negative impacts; as Claire Parkinson has noted, 'anthropomorphism in popular culture engages both human empathy for and misunderstanding of other animals.'[10] While seeing the plight of other animals through a lens of human suffering can help break down the barrier to acknowledging our similarities, such a transformation, argues Kari Weil, 'risks becoming a form of narcissistic projection that erases the boundaries of difference.'[11] Such projection is narcissistic both in the sense that it seems to suggest that a nonhuman animal's worth only exists in relation to how closely it resembles our own, human modes of existence, and also in the sense that it essentialises both "the human" and "the animal," assuming that we are able to project humanity as an agreed-upon set of experiences onto animals.

Theriomorphism, on the other hand, is inherently different, in that it cannot apply to a human–animal relationship as it involves the attribution of nonhuman animal characteristics to something that is not already an animal. There is also a significant reason why, in both the literature analysed in this thesis and automotive branding into the later twentieth and twenty-

[8] See Shukin, 117; and Dennis Sown, 'Road Kill: Commodity Fetishism and Structural Violence', in *Critical Theory and Animal Liberation*, ed. by John Sanbonmatsu (Lanham: Rowman & Littlefield, 2011), 54-66, 63; see also Matthew Paterson and Simon Dalby, 'Empire's Ecological Tyreprints', *Environmental Politics*, 15.1 (Feb. 2006), 1-22.
[9] Stewart Elliott Guthrie, *Faces in the Clouds: A New Theory of Religion* (Oxford: Oxford University Press, 1993), 39-40.
[10] Claire Parkinson, *Animals, Anthropomorphism and Mediated Encounters* (London: Routledge, 2020), 1.
[11] Kari Weil, *Thinking Animals: Why Animal Studies Now?* (New York: Columbia University Press, 2012), 19.

first centuries, automobiles are theriomorphised much more than they are anthropomorphised. Although some automotive advocates may claim it is possible to *know* one's car (as in *The Automobile* handbook by Robert Sloss, or the war narrative of Robert Whitney Imbrie), these machines do not have minds of their own (unlike animals), a fact that was a crucial selling-point of the early automobile for J. Frank Duryea (of the Duryea Bros Motor Company). Unlike the automobile, which apparently responds with 'perfect obedience' to the touch of its human driver, 'the horse himself decides [whether] to go ahead,' rendering him 'a willful [*sic*], unreliable brute,' in the words of the automobile pioneer.[12] In this sense, these horseless vehicles behave as an *ideal* animal should in industrial capitalism: uncomplaining, obedient, existing only to do human bidding, and willing to serve until it can serve no longer. As demonstrated in *The Horseless Age*, while the humane movement of the late nineteenth century inspired some to start treating horses with more dignity and respect, the motor industry saw an opportunity to build a non-feeling horse, reducing the need to reform models of human civilisation based on the exploitation of nonhumans. The subsequent need to theriomorphise these strange machines demonstrates that it is natural for humans to desire a bond between themselves and other animals, but the human–automobile bond is an unnatural imitation of this relationship, born from the incessant requirement of Progressive human civilisation that there be a strict separation, or screen, between the human and the animal, facilitated by machine technology.

As previously noted, these screening technologies not only served to separate humans from acknowledging animal exploitation and death, but also from those other humans deemed somehow less human than the predominantly wealthy, white, male Americans who wielded such technology. Notably absent from this thesis's discussion of racist rhetoric around animals and technology is an engagement with African American literature, and

[12] J. Frank Duryea, 'The Horse an Unruly Motor', *The Horseless Age*, 2.9 (July 1899), 2.

recent critical works addressing the subject such as that by Mia Bay, Zakiyyah Iman Jackson, Bénédicte Boisseron, and Joshua Bennett.[13] In *Becoming Human: Matter and Meaning in an Antiblack World*, Zakiyyah Iman Jackson explains that,

> as conceived by evolutionary theory and Western Enlightenment philosophy, extending into legalistic conceptions of personhood, and rights, antiblackness has sought to justify its defacing logics and arithmetic by suggesting that black people are most representative of the abject animalistic dimensions of humanity, or the beast.[14]

As Iman Jackson argues, however, the primary site of violence in this kind of antiblack thought is less the exclusion of Black people from the category of "humanity" and rather the insistence upon the existence of such a distinct category in the first place. Rather than simply asserting Black humanity, Iman Jackson instead calls for recognition of 'conceptions of being that defy the disparagement of the nonhuman and "the animal."'[15] Joshua Bennett expands upon this point, arguing that 'the black aesthetic tradition provides us with the tools needed to conceive of interspecies relationships anew and ultimately to abolish the forms of antiblack thought that have maintained the fissure between human and animal.'[16] Citing the figure of the horse in the writing of Frederick Douglas—a creature that, like the human slave, is 'constantly moving between the realm of organism and machine […]'—Bennett claims that it is the very existence of the category "animal" which authorises the 'extravagant violence […] necessary in order for white civil society to function at peak performance.'[17] Whilst, as Bennett notes, 'horses are, for [Frederick] Douglas, a bridge par excellence between the human and nonhuman realms,' for Progressives such as Ingersoll their continuing presence in

[13]See Mia Bay, *Traveling Black: A Story of Race and Resistance* (Cambridge, MA: Harvard University Press, 2021); Zakiyyah Iman Jackson, *Becoming Human: Matter and Meaning in an Antiblack World* (New York: New York University Press, 2020); Bénédicte Boisseron, *Afro-Dog: Blackness and the Animal Question* (New York: Columbia University Press, 2018); Joshua Bennett, *Being Property Once Myself: Blackness and the End of Man* (Cambridge, MA: Harvard University Press, 2020).
[14] Iman Jackson, 3.
[15] Ibid.
[16] Bennett, 4.
[17] Bennett, 7.

centres of human civilisation represented a threat to conceptions of the human civilisation, hence the appeal of the prophesised horseless age. These critics open up a potential new horizon for my work on the interconnections between humanity, animality, and technology, based on these points of connection.

As mentioned in the Introduction, the limited scope of this thesis in terms of timeframe meant that many culturally significant automotive texts by African American writers, such as Victor Hugo Green's nonfictional *Green Book* (1936-1966) and Richard Wright's *Native Son* (1939), fell outside of my parameters. The analysis I offer here, then, might be fruitfully extended by work focusing on the middle of the twentieth century, which could consider the period during which the *Green Book* was published (as Mia Bay's chapter on African American automobility seeks to do)[18] from an animal and literary studies perspective. The fact that Richard Wright's protagonist, named Bigger, in *Native Son* is a chauffeur offers a viable route into discussing not only the roles that African Americans were allowed to play in automotive culture (many making the transition from coachman to chauffeur of the wealthy families for whom they worked),[19] but also how these roles were subsequently used as new avenues for racist characterisations of technological ineptitude. As Paul Gilroy notes, commenting on the outcome of the famous automobile race in which Barry Oldfield ultimately beat African American boxer Jack Johnson in 1910, 'the inferiority of the inferior races could now be communicated through the idea that they were bad drivers.[20] Further rationale for beginning such a study of discourses of animality within African American automobility in 1936 is the fact that Detroit opened its first 'Traffic Clinic' that year. Assessing the driving ability of numerous racial demographics over a thirty-year period

[18] Bay, 107-150.
[19] Bay, 111.
[20] Paul Gilroy, 'Driving White Black' in *Car Cultures*, ed. by David Miller (Oxford: Berg, 2001), 81-104, 99-100.

(coinciding with the last issues of the *Green Book*), Daniel M. Albert reports that one-fifth of all Black 'patients' sent to the clinic following motor accidents were officially classified as 'primitive' drivers (a classification almost exclusive to African Americans), and subsequently banned from driving altogether.[21] While the focus of this thesis was necessarily limited to the forty-year period from 1895-1935, the periods of emergence and persistence of the automobile, there is ample scope to expand future studies further into the twentieth century, where a full engagement with the African American automotive literary canon is possible.

*

Driving down memory lane in Ford's Greenfield Village involved taking a single horse power carriage drawn by that single horse. Named after Greenfield Township, the birthplace of Ford's wife Clara, and situated only a few miles from the farm on which Ford grew up (Ford had the farm rebuilt to the exact specifications he remembered as a boy), Greenfield Village provided a refuge from the rapidly-expanding modern metropolis and the Progressive insistence on the separation of civilisation from nature. As Steven Watts points out, however, Ford could work on his village whenever he required a '*temporary* escape from the intensity of modern life,' knowing he could always return to the 'material comforts' made possible by his own production revolution.[22] In this sense, Greenfield's nostalgic presence functioned in much the same way as that of the automobile, enabling the disenchanted modern citizen to temporarily recall what life could be like before it became largely dictated by the machinery of civilisation—only to return to work the next day. Seven years before the opening of Greenfield Village, Henry Ford claimed on the first page of his autobiography that machines, and the 'mechanical portion of life,' gifted humanity the time to 'enjoy the trees,

[21] Daniel M. Albert, 'Primitive Drivers: Racial Science and Citizenship in the Motor Age', *Science as Culture*, 10.3 (2001), 327-351, 341-342.
[22] Steven Watts, *The People's Tycoon: Henry Ford and the American Century* (New York: Knopf, 2005), 95-96 [emphasis in original].

and the birds, and the flowers, and the green fields.'[23] As Guillermo Giucci has noted, however, the more Ford's industrial achievements contributed towards the advancement of Progressive civilisation, the more he attempted to recreate the pastoral ideal upon which such civilisation encroached:

> With demands as exuberant as a natural setting full of birds and flowers, the confidence Ford showed in the future of production returned as a curse. The natural world surrounding the great entrepreneur became zoo-like. Ford, the man who "put American on wheels," imported birds of various species (yellow woodpeckers, green canaries, royal chaffinches, jays, larks, calanders). He needed them for their beauty and as a delight for the eye, as civilization moved on to living in an extensive human pack, marked by constant ambivalence.[24]

Rather than providing Ford with the means to enjoy the 'birds, and the flowers, and the green fields,' his privileging of the mechanical portion of life meant that such natural settings had to be artificially recreated, from the birds and flowers he installed in his reconstructed farm to Greenfield Village itself. It was as if the further Progressive ideology took civilisation away from the animal origin it so feared, the further nostalgic ideology reached desperately back. The early automobile itself stands as an embodiment of these equal but opposite ideological forces, as 'a reminder of the prolonged evolutionary process in mobilization, voluntarily clinging to its animal origin, but in fact detached from it, insistently begging for forgiveness for its historical demolition.'[25] Ford, of course, could not have foreseen the extent of the global environmental damage inflicted by the unchecked proliferation of the fossil-fuel-powered automobile. But even in the 1920s, the decade which saw the fifteen-millionth Model T roll off the production lines, Ford's 'zoo-like' collections of plants, animals, and

[23] Henry Ford and Samuel Crowther, *My Life and Work* [1922] (London: William Heinemann Ltd., 1924), 1.
[24] Giucci, 19.
[25] Giucci, 115.

historical artefacts suggest that he was conscious of the fact that automobility was subsuming traditional ways of relating to the nonhuman world, on the precipice of elephantiasis.[26]

As Ingersoll's New York became progressively more horseless throughout the 1920s, the Brazilian sociologist Gilberto Freyre (1900-1987), who had studied at Columbia University, wrote a letter from New York in 1926 in which he expressed his views on the apparent passing of the horse:

> And when what remains of the animal in the formidable horse of New York disappears in its entirety; when the horse is completely mechanized in the steel horse of this enormous Barnum & Bailey circus that is American civilization; when the machine completely conquers the last horse, usurping Roman sculpture, the strong beauty, the music of trotting, then the memory of the noble animal, a pre-historic species of the Triumphant Machine will persist in the initials "H. P."[27]

In substituting animals for automobiles, human civilisation took a step away from its dependence on equines as prime movers, following the Progressive ideal that the future would be a horseless age. Far from separating humanity from other animals, however, Progressivism only served to emphasise humanity's nostalgic need to maintain some bond, however slight, with civilisation's animal origin. The letters "H. P." will always tell a story of something more than the power of an automobile engine—they recall the horse in horsepower.

[26] Giucci, 20.
[27] Gilberto Freyre, cited in Giucci, 115.

BIBLIOGRAPHY

Anonymous Authors

1910 Census: Indian Population in the United States and Alaska (Washington: Government Printing Office, 1915).

'A Word to the Word Coiners', *The Horseless Age*, 1.3 (Jan. 1896), 1.

'American Bluff', *The Horseless Age*, 4.22 (30 Aug. 1899), 7.

'Americans Adopt the Auto', *National Museum of American History*, [n.d.] <https://americanhistory.si.edu/america-on-the-move/licensing-cars-drivers> [accessed 08/03/2022].

'Annual Report for the Board of Health of the Department of Health of the City of New York for the Year Ending December 31, 1901' (New York: Martin H. Brown, 1902), <http://tlcarchive.org/images/search/archive/1901_020_037.pdf> [accessed 07/03/2022].

'Automobile Guns in the Massachusetts Manoeuvres of 1909', *Infantry Journal*, 6.3 (Nov. 1909), 375-381.

Automobile Registrations, Licenses, and Revenues in the United States (Washington, DC: United States Department of Agriculture, Office of the Secretary, 1915) <https://archive.org/details/automobileregist73unit/page/n1/mode/2up> [accessed 08/03/2022].

Automobile Registrations, Licenses, and Revenues in the United States (Washington, DC: United States Department of Agriculture, Office of the Secretary, 1916) <https://archive.org/details/automobileregist59unit/page/n1/mode/2up> [accessed 08/03/2022].

'Dog at Motor Car Wheel: White Collie Smoking a Pipe Thrills Automobile Row', *The New York Times*, 7 Nov. 1916, 8.

'Dr Charles Dana, Neurologist, Dies', *The New York Times*, 13 Dec. 1935, 25.

'Duchesne City Water Rights Conveyance Act', *Congressional Record*, 146 (27 Oct. 2000) 1421-1423.

'Editor's Note', *The Horseless Age*, 1.4 (Feb. 1896), 28.

'Efficiency Chart', *Journal of Rural Education*, 4 (Nov. 1924), 137.

'Fight to Disarm His Life's Work, Henry Ford vows', *Chicago Tribune*, 25 May 1916, 10.

'First Special Automobile Road in the World—Opening Up of Uintah Indian Reservation', *The Horseless Age*, 16.6 (9 Aug. 1905), 201-202.

'Foul Smells Rouse East Side Residents', *The New York Times*, 8 July 1901, 2.

'G. H. Condict, 72, Engineer, is Dead', *The New York Times*, 11 Apr. 1934, 21.

‘Growing Literature of the War’, *The New York Times,* 20 Oct. 1918, 65-68.

‘Guard Rail for the Dog Motorist’, *Motor Age,* 30 (13 July 1916), 48.

‘Has Your “Society Dog” Got Autoitis?’, *Chicago Daily Tribune,* 22 Oct. 1911, 62.

‘How the War Has Affected the American Automobile Trade’, *The New York Times,* 3 Jan. 1915, 81.

‘Interview with Thomas A. Edison in the New York World’, *The Horseless Age,* 1.2 (Dec. 1895), 7.

‘Joseph Barsaleaux’s Motor Horse’, *The Horseless Age,* 2.10 (Aug. 1897), 9.

‘Minor Mention’, *The Horseless Age,* 21.16 (15 Apr. 1908), 453.

‘New Motor Hound Lives on Car’s Dust: The Bounding Badanga Gets Speed by Inhaling Gas from Automobile’, *The New York Times,* 21 Nov. 1920, 105.

‘No Fair Weather Novelty’, *The Horseless Age,* 1.3 (Jan. 1896), 4-5.

‘Ohio and Jewel Now One’, *The Horseless Age,* 29.5 (31 Jan. 1912), 279.

‘Oil Makes Osages of Northern Oklahoma Richest Indian Community in the World’, *The New York Times,* 21 May 1923, 1.

‘Osages Before Oil’, *Time,* 7 Nov. 1932, 55.

‘Rich Indian Picks Hearse Automobile’, *The New York Times,* 25 Nov. 1917, 87.

‘Rides Bareback on Motor Car: Dog Does Stunts and Obeys Signals like Circus Performer’, *Motor Age,* 30 (3 Aug. 1916), 32.

‘The American Motor League’, *The Horseless Age,* 1.3 (Jan. 1896), 15.

‘The Automobile’, *The New York Times,* 23 Aug. 1897, 4.

‘The City’s Sanitary Work: Inside and Outside Nuisances Considered’, *The New York Times,* 15 Nov. 1880, 8.

‘The Future of the Horse’, *Our Dumb Animals,* 40.4 (Sept. 1907), 55.

‘The Gasoline Age’, *The New York Times,* 6 June 1924, 16.

‘The Horseless Cat’, *Country Life,* 29 (Jan. 1916), 33.

‘The Man From Georgia Wants to Know’, *The Automobile,* 15.24 (13 Dec. 1906), 855.

‘The Twelve-Cylinder Pathfinder’, *The Horseless Age,* 37.3 (1 Feb. 1916), 104-105.

‘Topics of the Times’, *The New York Times,* 3 Jan. 1899, 8.

‘Traffic and the Law: The Unnecessary Divergence Between the Motor Laws and Customs of the Several States’, *Scientific American,* 130 (Jan. 1924), 8-9.

‘War Bazaar Ready for Opening Tonight’, *The New York Times,* 3 June 1916, 11.

‘War Means Replacement of Horse by Truck’, *The New York Times,* 14 Feb. 1915, 81.

‘War’s Effect on Automobile Industry’, *The Horseless Age*, 34.12 (16 Sept. 1914), 438.

‘Woman Whips a Driver’, *The New York Times*, 13 Dec. 1896, 2.

Authors A-Z

Adams, Henry, *The Education of Henry Adams* [1918], ed. by Jean Gooder, (New York & London: Penguin Classics, 1995).

Adas, Michael, *Machines as the Measure of Men*: *Science, Technology, and Ideologies of Western Dominance* (New York and London: Cornell University Press, 2014).

Albert, Daniel M., ‘Primitive Drivers: Racial Science and Citizenship in the Motor Age’, *Science as Culture*, 10.3 (2001), 327-351.

Armstrong, Philip, *What Animals Mean in the Fiction of Modernity* (New York and London: Routledge, 2008).

Bailey, Garrick, ‘Introduction’, in *The Osage and the Invisible World: From the Works of Francis La Flesche*, ed. by Garrick Bailey (Norman: University of Oklahoma Press, 1995), 3-9.

Baker, E. F., ‘Pleasure Trip Out of Toledo’, *The Horseless Age*, 27.23 (7 June 1911), 959-961.

Baker, Steve, *Picturing the Beast: Animals, Identity, and Representation* (Urbana and Chicago: University of Illinois Press, 2001).

Barber, William, ‘Ten Days at Verdun: The Story of an American Ambulance Driver’, *Red Cross Magazine*, 11.10 (Oct. 1916), 335-338.

Basalla, George, *The Evolution of Technology* (Cambridge: Cambridge University Press, 1988).

Bay, Mia, *Traveling Black: A Story of Race and Resistance* (Cambridge, MA: Harvard University Press, 2021).

Beers, Diane L., *For the Prevention of Cruelty: The History and Legacy of Animal Rights Activism in the United States* (Athens, Ohio: Swallow Press/Ohio University Press, 2006).

Bennett, Joshua, *Being Property Once Myself: Blackness and the End of Man* (Cambridge, MA: Harvard University Press, 2020).

Berger, John, *About Looking* [1980] (London: Bloomsbury, 2015).

Berger, Michael L., *The Devil Wagon In God’s Country: The Automobile and Social Change in Rural America, 1893-1929* (Hamden, Connecticut: Archon Books, 1979).

Bix, Sue, ‘From “Engineeresses” to “Girl Engineers” to “Good Engineers”: A History of Women’s U.S. Engineering Education’, *NWSA*, 16.1 (Spring 2004), 27-49.

Boggs, Colleen Glenney, *Animalia Americana: Animal Representations and Biopolitical Subjectivity* (New York: Columbia University Press, 2013).

Böhm, Steffan, Campbell Jones, Chris Land, and Mat Paterson, 'Introduction: Impossibilities of Automobility', in *Against Automobility*, ed. by Steffan Böhm, Campbell Jones, Chris Land, and Mat Paterson (Oxford: Blackwell, 2006), 3-16.

Boisseron, Bénédicte, *Afro-Dog: Blackness and the Animal Question* (New York: Columbia University Press, 2018).

Borg, Kevin, 'The 'Chauffeur Problem' in the Early Auto Era: Structuration Theory and the Users of Technology', *Technology and Culture*, 40.4 (1999), 797-832.

Boyer, Michelle Nicola, 'Postcolonial Vanishings: Wolves, American Indians and Contemporary Werewolves', in *Werewolves, Wolves and the Gothic*, ed. by Robert McKay and John Miller (Cardiff: University of Wales Press, 2017), 55-69.

Breckinridge, Sophonisba P., and Edith Abbott, 'Housing Conditions in Chicago, Ill: Back of the Yards', *American Journal of Sociology*, 16.4 (Jan. 1911), 433-466.

Brereton, J. M., *The Horse in War* (Newton Abbot: Douglas David & Charles Ltd., 1976).

Brinkley, Douglas, 'Introduction: Theodore Dreiser and the Birth of the Road Book', in Theodore Dreiser, *A Hoosier Holiday* [1916] (Bloomington: Indiana University Press, 1997), 3-12.

Brown Ruoff, A. LaVonne, 'John Joseph Mathews's *Talking to the Moon*: Literary and Osage Contexts', in *Multicultural Autobiography: American Lives*, ed. by James Robert Payne (Knoxville: University of Tennessee Press, 1992), 1-31.

Bruce, Robert, 'Motor Car Travel: An Evolution', *The Automobile Magazine*, 7.2 (Feb. 1905), 129-136.

Bruni, John, *Scientific Americans: The Making of Popular Science and Evolution in Early-twentieth-century U.S. Literature and Culture* (Cardiff: University of Wales Press, 2014).

Buettinger, Craig, 'Women and Antivivisection in Late Nineteenth-Century America', *Journal of Social History*, 30.4 (Summer, 1997), 857-872.

Buffum, David, *The Horse: His Breeding, Care and Use* (New York: Outing Publishing Company, 1911).

Burg, David F., *Chicago's White City of 1893* (Lexington: University Press of Kentucky, 1976).

Burk, Kathleen, *Britain, America and the Sinews of War, 1914-1918* [1985] (London and New York: Routledge, 2014).

Burt, Jonathan, 'John Berger's "Why Look at Animals?": A Close Reading', *Worldviews*, 9.2 (2005), 203-218.

Cary, Jr., Norman Miller, 'The Use of the Motor Vehicle in the United States Army, 1899-1939' (Unpublished PhD Dissertation: University of Georgia, 1980).

Casey, Roger N., *Textual Vehicles: The Automobile in American Literature* (New York and London: Garland Publishing, 1997).

Chambers II, John Whiteclay, *The Tyranny of Change: America in the Progressive Era, 1890-1920* [1992], 2nd Edition (New Brunswick: Rutgers University Press, 2000).

Clarke, Deborah, *Driving Women: Fiction and the Automobile in Twentieth-Century America* (Baltimore: Johns Hopkins University Press, 2007).

Classen, Constance, David Howes, and Anthony Synnott, *Aroma: The Cultural History of Smell* (London and New York: Routledge, 1994).

Closser Hale, Louise, *We Discover the Old Dominion* (New York: Dodd, Mead & Company, 1916).

Condict, G. Herbert, 'The Motor Vehicle in Commercial Operation', *The Horseless Age*, 3.12 (Mar. 1899), 14-15.

Crane, Susan, *Animal Encounters: Contacts and Concepts in Medieval Britain* (Philadelphia: University of Pennsylvania Press, 2013).

Crary, Jonathan, *Suspensions of Perception: Attention, Spectacle, and Modern Culture* (Cambridge, Mass. & London: MIT Press, 1999).

Cronon, William, *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton & Company, 1991).

Crunden, Robert M., *Ministers of Reform: The Progressives' Achievement in American Civilization, 1889-1920*, (New York: Basic Books, 1982).

Dana, Charles Loomis, 'The Zoophil-Psychosis : A Modern Malady', *Medical Record*, 75.10 (Mar. 1909), 381-383.

de Roulhac Hamilton, J. G., 'The Ford Museum', *American Historical Review*, 36.4 (July 1931), 772-775.

Deloria, Philip J., *Indians in Unexpected Places* (Lawrence, KS: Kansas University Press, 2004).

Deloria, Jr., Vine, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (Golden, CO: Fulcrum Publishing, 1997).

Derrida, Jacques, "'Eating Well," or The Calculation of the Subject: An Interview with Jacques Derrida", in *Who Comes After the Subject?* ed. by Eduardo Cadava, Peter Connor, and Jean-Luc Nancy (New York: Routledge, 1991), 96-119.

—*The Animal that Therefore I Am* [2006], ed. by Marie-Louise Mallet, trans. by David Wills (New York: Fordham University Press, 2008).

Descartes, René, 'Letter to Henry More (Feb. 5, 1649)', in *Descartes: Philosophical Letters*, trans. and ed. by Anthony Kenny (Oxford: Oxford University Press, 1970).

Despret, Vinciane, *What Would Animals Say If We Asked the Right Questions?*, trans. by Brett Buchanan (Minneapolis and London: University of Minnesota Press, 2016).

Dinsmore, Wayne, 'Military Exports of Horses and Mules', *Breeder's Gazette*, 25 Apr. 1918, 865.

Donovan, Josephine, 'Animal Rights and Feminist Theory', in *The Feminist Care Tradition in Animal Ethics*, ed. by Josephine Donovan and Carol J. Adams (New York: Columbia University Press, 2007), 58-86.

Donovan, Josephine, and Carol J. Adams, 'Introduction', in *The Feminist Care Tradition in Animal Ethics*, ed. by Josephine Donovan and Carol J. Adams (New York: Columbia University Press, 2007), 1-15.

Douglas, Mary, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (London: Routledge and Kegan Paul, 1966).

Dreiser, Theodore, 'Life Stories of Successful Men', *Success*, 1 (Oct. 1898), 1-2.

—*A Hoosier Holiday* [1916] (London: Constable & Co Ltd., 1932).

Duryea, Charles E., 'Bogies', *The Horseless Age*, 1.10 (Aug. 1896), 4.

Duryea, J. Frank, 'The Horse an Unruly Motor', *The Horseless Age*, 2.9 (July 1899), 2.

Eagleton, Terry, *Ideology: An Introduction* (New York: Verso, 1991).

Eby, Clare Virginia, ed., *The Jungle: A Norton Critical Edition* (New York: W. W. Norton & Company, 2003).

Eksteins, Modris, *Rites of Spring: The Great War and the Birth of the Modern Age* (London: Bantam Press, 1989).

Elias, Norbert, *The Civilizing Process* [1939] (Oxford and Malden: Blackwell, 2000).

Federal Highway Association, 'State Motor Vehicle Registrations, by years, 1900-1995' <https://www.fhwa.dot.gov/ohim/summary95/mv200.pdf> [accessed 15/02/2022].

Filene, Peter G., 'An Obituary for "The Progressive Movement"', *American Quarterly*, 22.1 (Spring 1970), 20-34.

Fitzgerald, F. Scott, *The Great Gatsby* [1925] (London: Penguin, 2000).

Flink, James, *America Adopts the Automobile, 1895-1910* (Cambridge, MA: MIT Press, 1970).

—*The Automobile Age* (Cambridge, Mass.: MIT Press, 1988).

Flynn, Jane, *Soldiers and Their Horses: Sense, Sentimentality and the Soldier-Horse Relationship in the Great War* (New York and London: Routledge, 2020).

Ford, Henry, and Samuel Crowther, *My Life and Work* [1922] (London: William Heinemann Ltd., 1924).

Forrest, Susanna, *The Age of the Horse: An Equine Journey Through Human History* (London: Atlantic Books, 2016).

Franklin, Adrian, *Animals and Modern Cultures: A Sociology of Human–Animal Relations in Modernity* (London: Sage, 1999).

Freud, Sigmund, *Civilization and Its Discontents* [1930], ed. by Leo Bersani, trans. by David McLintock (London: Penguin, 2002).

Fudge, Erica, 'A Left-Handed Blow: Writing the History of Animals', *Representing Animals*, ed. by Nigel Rothfels (Bloomington and Indianapolis: Indiana University Press, 2002), 3-18.

Fuller, Henry Blake, *With the Procession* (New York: Harper and Brothers Publishing, 1895).

Gavin, Adrienne E., 'Introduction', in Anna Sewell, *Black Beauty: The Autobiography of a Horse* [1877] ed. by Adrienne E. Gavin (Oxford: Oxford University Press, 2012), ix-xxvii.

Gendzel, Glen, 'What the Progressives Had in Common', *Journal of the Gilded Age and Progressive Era*, 10.3 (July 2011), 331-339.

Giedion, Sigfried, *Mechanization Takes Command: A Contribution to an Anonymous History* (New York: Oxford University Press, 1948).

Gilroy, Paul, 'Driving While Black', in *Car Cultures*, ed. by Daniel Miller (Oxford and New York: Berg, 2001), 81-104.

Giucci, Guillermo, *The Cultural Life of the Automobile: Roads to Modernity*, trans. by Anne Mayagoitia and Debra Nagao (Austin: University of Texas Press, 2012).

Gramsci, Antonio, *Selections from the Prison Notebooks*, ed. and trans. by Quintin Hoare and Geoffrey Nowell Smith (New York: International, 1971).

Greene, Ann Norton, *Horses At Work: Harnessing Power in Industrial America* (Cambridge, Mass. & London: Harvard University Press, 2008).

Grier, Katherine C., 'Provisioning Man's Best Friend: The Early Years of the American Pet Food Industry, 1870-1942', in *Food Chains: From Farmyard to Shopping Cart*, ed. by Warren Belasco and Roger Horowitz (Philadelphia: University of Pennsylvania Press, 2010), 126-141.

Guthrie, Stewart Elliott, *Faces in the Clouds: A New Theory of Religion* (Oxford: Oxford University Press, 1993).

Hansen, Arlen J., *Gentlemen Volunteers: The Story of the American Ambulance Drivers of the First World War* (New York: Arcade Publishing, 2011) Ebook Central ebook.

Harbord, James G., 'The Part of the Horse and the Mule in the National Defence', *Cavalry Journal*, 35.143 (Apr. 1926), 154-165.

Harkin, Michael E., and David Rich Lewis, 'Introduction', in *Native Americans and the Environment: Perspectives on the Ecological Indian*, ed. by Michael E. Harkin and David Rich Lewis (Lincoln & London: University of Nebraska Press, 2007), xix-xxxiv.

Hartman, Saidiya, *Scenes of Subjugation: Terror, Slavery, and Self-Making in Nineteenth-Century America* (Oxford: Oxford University Press, 1997).

Heath Justice, Daniel, *Why Indigenous Literatures Matter* (Waterloo, Ontario: Wilfrid Laurier University Press, 2018).

Hediger, Ryan, 'Animals in War', in *The Palgrave International Handbook of Animal Abuse Studies*, ed. by Jennifer Maher, Harriet Pierpoint, and Piers Beirne (London: Palgrave Macmillan, 2017), 475-494.

Hennessy, Rosemary, *Profit and Pleasure: Sexual Identities in Late Capitalism* (New York: Routledge, 2000), 95.

Herr, John K., and E. S. Wallace, *The Story of the U. S. Cavalry, 1775-1942* [1953], (New York: Bonanza, 1984).

Hoch, Paul, *White Hero, Black Beast: Racism, Sexism and the Mask of Masculinity* (London: Pluto, 1979).

Holtz Kay, Jane, *Asphalt Nation: How the Automobile Took Over America and How We Can Take it Back* (Berkeley and Los Angeles: University of California Press, 1997).

Horkheimer, Max, and Theodor W. Adorno, *Dialectic of Enlightenment* [1947], trans. by John Cumming (New York: Continuum, 1972).

Hudson, Brian K., 'A Seat at the Table: Political Representation for Animals', in *The Routledge Companion to Native American Literature*, ed. by Deborah L. Madsen (New York: Routledge, 2016), 229-237.

Hunter, Carol, 'The Historical Context of John Joseph Mathews' *Sundown*', *MELUS*, 9.1 (Spring 1982), 61-72.

Hutchings, Kevin, 'Transatlantic Extinctions and the "Vanishing American"', in *Transatlantic Literary Ecologies: Nature and Culture in the Nineteenth-Century Anglophone Atlantic World*, ed. by Kevin Hutchings and John Miller (London and New York: Routledge, 2017), 58-72.

Iman Jackson, Zakiyyah, *Becoming Human: Matter and Meaning in an Antiblack World* (New York: New York University Press, 2020).

Imbrie, Robert Whitney, *Behind the Wheel of a War Ambulance* (New York: Robert M. McBride & Co., 1918).

Ingersoll, Edwards Platt, 'The Horseless Age', *The Horseless Age*, 1.1 (Nov. 1895), 7-8.

—'The Bloodless Revolution', *The Horseless Age*, 1.2 (Dec. 1895), 6.

—'The Soulless Machine and the Spirited Animal', *The Horseless Age*, 1.2 (Dec. 1895), 9.

—'The Status of the Race', *The Horseless Age*, 1.2 (Dec. 1895), 5-6.

— 'A Word to the Word Coiners', *The Horseless Age*, 1.3 (Jan. 1896), 5.

— ‘Editor’s Note’, *The Horseless Age*, 1.4 (Feb. 1896), 28.

Jones, Jacqueline, ‘Race and Gender in Modern America’, *Reviews in American History*, 26.1 (Mar. 1998), 220-238.

Jones, Karen, ‘The Story of Comanche: Horsepower, Heroism and the Conquest of the American West’, *War & Society*, 36.3 (2017), 156-181.

Kasson, John, *Civilizing the Machine: Technology and Republican Values in America, 1776-1900* [1976] (London: Penguin, 1982).

Katzung Hokanson, Brandon R., ‘Saving Grace on Feathered Wings: Homing Pigeons of the First World War’, *The Gettysburg Historical Journal*, 17.7 (2018), 83-98.

Kilby, Emily R., ‘The Demographics of the U.S. Equine Population’, in *The State of the Animals IV: 2007*, ed. by Deborah J. Salem and Andrew N. Rowan (Washington, DC: Humane Society Press, 2007), 175-205.

King, Charles Brady, ‘A Timely Suggestion’, *The Horseless Age*, 1.1 (Nov. 1896), 8.

Kistler, J. M., *Animals in the Military: From Hannibal’s Elephants to the Dolphins of the U.S. Navy* (Santa Barbara, CA: ABC-CLIO, 2011).

Knutson, Roger M., *Flattened Fauna: A Field Guide to Common Animals of Roads, Streets, and Highways* (Toronto: Ten Speed Press, 1987).

Kolbert, Elizabeth, ‘Hosed: Is There a Quick Fix for the Climate?’, *The New Yorker*, 16 Nov. 2009 <https://www.newyorker.com/magazine/2009/11/16/hosed> [accessed 07/03/2022].

Laporte, Dominique, *The History of Shit* [1978], trans. by Nadia Benabid and Rodolphe el-Khoury (Cambridge, Mass.: The MIT Press, 2002).

Lee, Jennifer S., ‘When Horses Posed a Public Health Hazard’, *The New York Times Blog*, 9 June 2008, <https://cityroom.blogs.nytimes.com/2008/06/09/when-horses-posed-a-public-health-hazard> [accessed 07/03/2022].

Levin, Jonathan V., *Where Have All the Horses Gone? How Advancing Technology Swept American Horses from the Road, the Farm, the Range and the Battlefield* (Jefferson, NC: McFarland & Company Publishers, 2017).

Levitt, Steven D., and Stephen J. Dubner, *SuperFreakonomics: Global Cooling, Patriotic Prostitutes, and Why Suicide Bombers Should Buy Life Insurance* (New York: William Morrow, 2009).

Lewis, David Rich, *Neither Wolf Nor Dog: American Indians, Environment & Agrarian Change* (New York and Oxford: Oxford University Press, 1994).

Lewis, Grace Hegger, *With Love from Gracie: Sinclair Lewis, 1912-1925* (New York: Harcourt, 1955).

Lewis, Sinclair, *Free Air* [1919] (Mineola, NY: Dover Publications, 2018).

Ling, Peter J., *America and the Automobile: Technology, Reform, and Social Change* (Manchester: Manchester University Press, 1990).

Lininger, Clarence, 'Mobility, Fire Power, and Shock', *The Cavalry Journal*, 34.139 (Apr. 1925), 178.

Lippit, Akira Mizuta, *Electric Animal: Toward a Rhetoric of Wildlife* (Minneapolis and London: University of Minnesota Press, 2000).

London, Jack, *Chicago Socialist*, 6.351 (25 Nov. 1905), 2.

Loring, George B., 'Helpmeet of Humanity—the Horse', *Our Dumb Animals*, 51.10 (Mar. 1919), 151.

Lutts, Ralph H. (ed.), *The Wild Animal Story* (Philadelpia: Temple University Press, 1998)

Lytle, Mark, 'The Progressive Tradition and the Problem of Global Warming', in *Progressivism in America: Past, Present, and Future*, ed. by David Woolner and Jack Thompson (Oxford and London: Oxford University Press, 2018), 165-178.

Marinetti, F. T., 'The Founding and the Manifesto of Futurism [1909]', in *Modernism: An Anthology*, ed. by Lawrence Rainey (London: Blackwell, 2005), 3-6.

Marsh, Peter, and Peter Collett, *Driving Passion: The Psychology of the Car* (Boston: Faber & Faber, 1987).

Maslin, Mark, *Global Warming: A Very Short Introduction* (Oxford and New York: Oxford University Press, 2004).

Mason, Jennifer, *Civilized Creatures: Urban Animals, Sentimental Culture, and American Literature, 1850-1900* (London and Baltimore: Johns Hopkins University Press, 2005).

Mathews, John Joseph, *Sundown* [1934] (Norman: University of Oklahoma Press, 1988).

—*The Osages: Children of the Middle Waters* (Norman: Oklahoma University Press, 1961).

Mathews, John Joseph, and Michael Snyder, *Our Osage Hills: Toward an Osage Ecology and Tribalography of the Early Twentieth Century*, ed. by Michael Snyder (Bethlehem, PA: Lehigh University Press, 2020).

McAuliffe, Jr., Dennis, *The Deaths of Sybil Bolton: An American History* (New York: Times Books, 1994).

McCoy, Matthew G., 'Grinding Gears: The AEF and Motor Transportation in the First World War', *War in History*, 11.2 (Apr. 2004), 193-208.

McHugh, Susan, Robert McKay, and John Miller, 'Introduction: Towards an Animal-Centred Literary History', in *The Palgrave Handbook of Animals and Literature*, ed. by Susan McHugh, Robert McKay, and John Miller (Basingstoke: Palgrave MacMillan, 2021), 1-11.

Melosi, Martin V., *Effluent America: Cities, Industry, Energy and the Environment* (Pittsburgh: University of Pittsburgh Press, 2001).

Miller, Greg, 'Creating Cruise Ships with an Eye on Next Generation', *The Cruise Industry News Quarterly*, 9.37 (Summer 1999), 67.

Minogue, Kenneth, 'The Culture of the Gentleman', *Political Philosophy Today*, 71 (Spring 1983), 97-103.

Mom, Gijs, *Atlantic Automobilism: Emergence and Persistence of the Car, 1895-1940* (New York and Oxford: Berghahn, 2015).

Morris, Eric, 'From Horse Power to Horsepower', *Access* 30 (2007), 2-9.

Morse, Edwin E., *The Vanguard of American Volunteers in the Fighting Lines and in Humanitarian Service, August, 1914-April 1917* (New York: Charles Scribner's Sons, 1922).

Mumford, Lewis, *Technics and Civilization* (London: Routledge & Kegan Paul Ltd., 1934).

Musiol, Hanna, '*Sundown* and "Liquid Modernity" in Pawhuska, Oklamoma', *Journal of American Studies*, 46.2 (2012), 357-373.

Nevins, A., and F. E. Hill, *Ford: The Times, the Man, the Company* (New York: Charles Scribner's Sons, 1954).

Newton, Millard H., 'Seeking Some of the Out-of-the-Way Spots on Long Island', *The Horseless Age*, 26.21 (23 Nov. 1910), 710-712.

Nye, David E., *America's Assembly Line* (Cambridge, MA: MIT Press, 2015).

Orcutt, Philip Dana, *The White Road of Mystery*: *The Note-Book of an American Ambulancier* (New York: John Lane Company, 1918).

Ortiz-Robles, Mario, *Literature and Animal Studies* (London and New York: Routledge, 2016).

Otter, Chris, 'Civilizing Slaughter: The Development of the British Public Abattoir, 1850-1910', in *Meat, Modernity, and the Rise of the Slaughterhouse*, ed. by Paula Young Lee (Durham, New Hampshire: University of New Hampshire Press, 2008), 89-106.

Pachirat, Timothy, *Every Twelve Seconds: Industrialized Slaughter and the Politics of Sight* (New Haven & London: Yale University Press, 2011).

Palmer, Frederick, *America in France* (New York: Dodd, Mead & Company, 1919).

Parkinson, Claire, *Animals, Anthropomorphism and Mediated Encounters* (London: Routledge, 2020).

Parmeter, Irving, 'The Use of Cavalry Through the Ages', *Current History (1916-1940)*, 28.3 (June 1928), 447-452.

Paterson, Matthew, and Simon Dalby, 'Empire's Ecological Tyreprints', *Environmental Politics*, 15.1 (Feb. 2006).

Phillips, Gervase, ‘Writing Horses into American Civil War History’, *War in History*, 20.2 (2013), 160-181.

Plimpton, George, ‘Foreword’, in Arlen J. Hansen, *Gentlemen Volunteers: The Story of the American Ambulance Drivers in the First World War* (New York: Arcade Publishing, 2011), 6-10.

Rae, John B., ‘Why Michigan?’, in *The Automobile and American Culture*, ed. by David L. Lewis and Laurence Goldstein (Ann Arbor: University of Michigan Press, 1983), 1-9.

Regan, Tom, *The Case for Animal Rights* (Berkeley: University of California Press, 1983).

Regier, C. C., *The Era of the Muckrakers* [1932] (Chapel Hill: University of North Carolina Press, 1957).

Roe, Frank Gilbert, *The Indian and the Horse* (Norman, OK: University of Nebraska Press, 1955).

Roediger, David, *Working Toward Whiteness: How America’s Immigrants Became White* (New York: Basic Books, 2005).

Rohman, Carrie, ‘Modernist Animals and Bioaesthetics’, in *The Palgrave Handbook of Animals in Literature*, ed. by Susan McHugh, Robert McKay, and John Miller (Basingstoke: Palgrave MacMillan, 2021), 385-396.

Roop Daugherty, Carroll, ‘The Development of Horsepower Equipment in the United States’, in *Power Capacity and Production in the United States* (Washington D.C.: Government Printing Office, 1928), 11-112.

Roosevelt, Theodore, ‘Nature Fakers’, *Everybody’s Magazine*, 17 (Sept. 1907), 427-430, 427.

Rosenwein, Barbara, ‘Worrying About Emotions in History’, *The American Historical Review*, 107.3 (June 2002), 821-845.

Ross, Kristin, *Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture* (Cambridge, Mass. & London: MIT Press, 1995).

Ryder, Paul, ‘The Motorcar and Desire: A Cultural and Literary Reconsideration of the Motorcar in Modernity’, *Southern Semiotic Review*, 2 (2013), 1-18.

Shaler, Nathaniel Southgate, *Domesticated Animals, Their Relation to Man and to His Advancement in Civilization* (New York: Charles Scribner’s Sons, 1895).

Scharff, Virginia, *Taking the Wheel: Women and the Coming of the Motor Age* (New York: Free Press, 1991).

Scholtmeijer, Marian, *Animal Victims in Modern Fiction: From Sanctity to Sacrifice* (Toronto: University of Toronto Press, 1993).

Seiler, Cotton, *Republic of Drivers: A Cultural History of Automobility in America* (Chicago: University of Chicago Press, 2008).

Seltzer, Mark, *Bodies and Machines* (New York and London: Routledge, 1992).

Sewell, Anna, *Black Beauty: The Autobiography of a Horse* [1877], ed. by Adrienne E. Gavin (Oxford: Oxford University Press, 2012).

Shapiro, Paul, *Clean Meat* (New York: Gallery Books, 2018).

Shepp, James W., and Daniel B. Shepp, *Shepp's World Fair Photographed* (Chicago: Globe Bible Publishing Co., 1893).

Shepherd, William G., *Confessions of a War Correspondent* (New York: Harper & Brothers, 1917).

Sherwood, I. R., 'Speech in the House of Representatives, January 24, 1918', *Journal of the United States Cavalry Association*, 28.118 (Apr. 1918), 498-520.

Shklovsky, Viktor, 'Art as Technique', in *Russian Formalist Criticism: Four Essays*, trans. by Lee Lemon and Marion Reis (Lincoln: University of Nebraska Press, 1965), 5-24.

Shukin, Nicole, *Animal Capital: Rendering Life in Biopolitical Times* (Minneapolis: University of Minnesota Press, 2009).

Simmons, James R., *Feathers and Fur on the Turnpike* (Boston: Christopher Publishing: 1938).

Sinclair, Upton, *The Jungle* [1906] (New York & London: Penguin Classics, 1986).

—'What Life Means to Me', *Cosmopolitan*, 41 (Oct. 1906), 594.

—*Oil!* [1927] (London: Penguin, 2008).

— *The Autobiography of Upton Sinclair* [1962] (London: W. H. Allen, 1963).

Singer, Peter, *Animal Liberation* [1975] (London: The Bodley Head, 2015).

Sloss, Robert, *The Automobile: Its Selection, Care and Use* (New York: Outing Publishing Company, 1910).

Sorenson, John, 'Animals as Vehicles of War', in *Animals in War: Confronting the Military-Animal Industrial Complex*, ed. by Colin Salter, Anthony J. Nocella II, and Judy K. C. Bentley (Lanham: Lexington Books, 2014), 19-35.

Sown, Dennis, 'Road Kill: Commodity Fetishism and Structural Violence', in *Critical Theory and Animal Liberation*, ed. by John Sanbonmatsu (Lanham: Rowman & Littlefield, 2011), 54-66.

Stevenson, William Yorke, *At the Front in a Flivver* (Boston and New York: Houghton Mifflin Company, 1917).

Stibel, Jeff, *Breakpoint: Why the Web will Implode, Search will be Obsolete, and Everything Else You Need to Know about Technology is in Your Brain* (Basingstoke: Palgrave Macmillan, 2013).

Sward, Keith, *The Legend of Henry Ford* (New York and Toronto: Rinehart & Co Inc., 1948).

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

Tallbear, Kim, 'Genomic Articulations of Indigeneity', *Social Studies of Science*, 43.4 (2013), 509-533.

Tarr, Joel, and Clay McShane, *The Horse in the City: Living Machines in the Nineteenth Century* (Baltimore: Johns Hopkins University Press, 2007).

—'The Horse in the Nineteenth-Century American City', in *Beastly Natures: Animals, Humans, and the Study of History*, ed. by Dorothee Brantz (Charlottesville: University of Virginia Press, 2010), 227-245.

Taussig, Michael, *Mimesis and Alterity: A Particular History of the Senses* (New York: Routledge, 1993).

Tichi, Cecelia, *Shifting Gears: Technology, Literature, Culture in Modernist America* (Chapel Hill and London: University of North Carolina Press, 1987).

Tranter, C. E., 'One-Day Automobile Tour From and To Buffalo', *The Horseless Age*, 27.9 (1 Mar. 1911), 393-396.

Tromanhauser, Vicki, 'Inside the "Butcher's Shop": Women's Great War Writing and Surgical Meat', in *Literature and Meat Since 1900*, ed. by Seán McCorry and John Miller (Cham: Palgrave Macmillan, 2019), 19-34.

Truman, Ben C., *History of the World's Fair* (Philadelphia: Mammoth Publishing, 1893).

Vialles, Noëlie, *Animal to Edible* [1987], trans. by J. A. Underwood (Cambridge: Cambridge University Press, 1994).

Vogel, Andrew, ''Change in fixity': Theodore Dreiser's *A Hoosier Holiday* and the commitment to American automobility', *Studies in Travel Writing*, 17.2 (2013), 145-159.

Wade, Louise Carroll, *Chicago's Pride: The Stockyards, Packingtown, and Environs in the Nineteenth Century* (Urbana: University of Illinois Press, 1987).

Watts, Steven, *The People's Tycoon: Henry Ford and the American Century* (New York: Knopf, 2005).

Weil, Kari, *Thinking Animals: Why Animal Studies Now?* (New York: Columbia University Press, 2012).

Wells, Christopher W., *Car Country: An Environmental History* (Seattle: University of Washington Press, 2012).

"West Sider," 'Treatment of a Tired Horse', *The New York Times*, 9 Sept. 1899, 7.

Whiting, Harold, *The Gasoline Motor* (New York: Outing Publishing Company, 1913).

Wik, Reynold, *Henry Ford and Grass-Roots America* (Ann Arbor: University of Michigan Press, 1972).

Wolfe, Cary, ‘Faux Post-Humanism, or, Animal Rights, Neocolonialism, and Michael Crichton’s *Congo*’, *Arizona Quarterly*, 55.2 (Summer 1999), 115-153.

—*Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory* (Chicago & London: University of Chicago Press, 2003).

W.O.S., ‘War Horses Exported’, *Journal of Zoöphily*, 24.4 (Apr. 1915), 54.

Zimring, Carl A., *Clean and White: A History of Environmental Racism in the United States* (New York & London: New York University Press, 2015).

Zirinsky, Michael P., ‘Blood, Power, and Hypocrisy: The Murder of Robert Imbrie and American relations with Pahlavi Iran, 1924’, *International Journal of Middle East Studies*, 18 (1986), 275-292.