

The Rise of Narrative Animal Painting in France and Germany, 1790-1880

by

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ABSTRACT

My dissertation argues that new theories of natural change and evolution in the early to mid-nineteenth century can be related to shifts in the Western European practice of animal painting during the same time period. The genre was fundamentally rethought in the nineteenth century, allowing animals to be featured as protagonists in narrative scenes of a kind once confined to grand-scale history painting. This study interweaves methods of art history and history of science, presenting artistic objects as forms of sensory knowledge that cannot be reduced to their informational content. Scientific illustrations and related media at this time were conversant with the stylistic concerns of academic painting, popular prints and other “non-scientific” imagery. The role played by anatomical instruction, natural history museums and other such institutions in the professional formation of artists whose production was deemed purely “aesthetic” in nature was likewise crucial.

I address these issues in the artistic and intellectual contexts of France and Germany from the French Revolutionary period through the initial rise of Darwinism in the 1860s and 1870s. I contend that animal artists, both painters and illustrators, were operating within a continental print culture steeped in discourses of natural history and animal husbandry. In particular, I demonstrate how pre-Darwinian science, especially German Romantic approaches to natural history and early French iterations of evolutionary theory, embodied a growing preoccupation with species mutability. This fascination with hereditary shifts in organisms (often aided by

human intervention) was prominently visualized in painted and printed depictions of both European livestock breeds and “exotic,” imported species.

Chapter One sets forth the stakes for considering animal painting as a form of scientific knowledge and, conversely, treating scientific illustrations as aesthetic objects. Following this introduction, the four central chapters concentrate on works by animal genre specialists like Rosa Bonheur and Anton Braith, as well as artists such as Théodore Géricault and Adolph von Menzel, who were better known for human subject matter but also produced narrative animal tableaux. Chapter Two examines the relationship between the early professionalization of veterinary science in the late eighteenth century and the artistic preoccupation with the anatomy of horses, the quintessential militaristic, monarchical animal, focusing on Christian Bernhard Rode’s Berlin veterinary theater frescoes (1790) and Géricault’s *Race of the Riderless Horses* (1817) series of oil paintings. In Chapter Three we take up prints and paintings of a less glamorous animal—the cow/bull—whose economic significance was nevertheless vital to the French and German nations, as revealed by the popular cattle paintings of Rosa Bonheur and Anton Braith. Chapter Four considers the relationship of popular nineteenth century scientific book illustrations to the animal painting genre. Like period animal paintings, these illustrations shifted away from blank background specimen displays and towards a more elaborate, ecologically embedded representation of animal life. Chapter Five continues with this theme of the ecologically situated animal, examining the animal paintings of Gustave Courbet and Adolph von Menzel, who showed a deep interest in notions of habitat correspondent with the shift towards a more holistic view of animal life in the zoological sciences of the late nineteenth century.

Chapter 1: Introduction/Capturing Animals

A headless mannequin sits at her desk with perfect, upright posture, her ball-jointed fingers poised as if to hold a paintbrush or conté crayon. Despite an apparent lack of eyes or even a face, she studies an oil sketch of variously posed red deer, grazing or at rest in a nebulous, green-tinged realm. Several of the creatures, like their creator, placidly make do without heads (fig. 1.1). Yet one frontally facing animal gifted with a face evinces a surprising tenderness, its gaze direct and unguarded in the face of human scrutiny. This arrangement forms one of the centerpieces of the newly reconfigured remains of animal painter Rosa Bonheur's (French, 1822-1899) former studio and home at the Château de By in Thomery. The Château was purchased by Katherine Brault in 2017 after several years of closure and neglect. The subsequent renovation has brought with it a renewal of interest in the artist: President Emmanuel Macron and his wife, Brigitte, visited the premises during the September 2019 European Heritage Days.¹ (The Bonheur mannequin is, incidentally, also an improvement on the previous owner's version (fig. 1.2)). The strange accouterments of the artist's life haunt the peripheries: a Native American costume gifted to Bonheur by Buffalo Bill, a police permit for cross-dressing, a rather destitute, taxidermied Scarlet Macaw (fig. 1.3) and, most prominently, innumerable paintings, sketches, prints, sculptures and plaster casts of animals and animal body parts (fig. 1.4) from the most typical of French domestic breeds—the horses of the Camargue, Salers cattle—to multiple sketches of

¹ Claire Bommelaer, "Katherine Brault ou la passion Rosa Bonheur," *Le Figaro*, October 3, 2019, <https://www.lefigaro.fr/culture/katherine-brault-ou-la-passion-rosa-bonheur-20191003>.

lions (fig. 1.5). These comprise the remnants of an apparently unusual, but not entirely singular, artistic practice.

In Germany, in the small Southern town of Biberach an der Riß, a parallel scene manifests itself in the preserved Braith-Mali Atelier. The Munich atelier of the eponymous artists, Anton Braith (German, 1836-1905) and Christian Mali (German/Dutch, 1832-1906) was transposed, almost immediately following their deaths, into Braith's hometown Biberach Museum (fig. 1.6). Visitors to the Braith-Mali atelier can peruse the men's shared studios as well as their furniture and assorted *objets d'art*, including a striking stuffed peacock and a painted sculpture of St. George slaying the dragon perched atop a gilded wooden armoire (fig. 1.7), accompanied by other Catholic devotional objects resonant with the Bavarian setting. As in the case of Château de By, these fairly lavish furnishings were purchased with the proceeds from Braith and Mali's many canvases of sheepherding, goat wrangling and cattle grazing, which line many of the atelier walls (fig. 1.8). The Biberach tourism website claims the Braith-Mali rooms represent the only fully preserved nineteenth-century German artist's atelier in existence.²

To what end had these individuals labored over pigments, preserved deer skulls, plaster horse heads and taxidermied fowls? And why were their effects subject to such careful posthumous preservation? Among Bonheur, Braith and Mali's belongings, we encounter the remnants of a quintessentially nineteenth-century profession: the animal painting specialist. This individual's *métier* was the dynamic depiction of non-human forms--most typically mammalian—in oil and canvas or sculpture. In nineteenth-century Western Europe, the animal painter and sculptor could occupy a well-defined artistic niche by virtue of her skill with creaturely anatomy, expression, temperament and breed, all of which details provoked aesthetic

² "Über das Museum," accessed June 5, 2020, <https://biberach-riss.de/Tourismus-Kultur-Freizeit/Kultur/Museum-Biberach/%C3%9Cber-das-Museum/>.

interest by virtue of their exoticism on the one hand, or of their exacting reproduction of the friendly, familiar domestic companion and agricultural beast of burden, on the other. Animal painters and sculptors were bestowed with their own vocational designations in French-- “*animalier*”--and German--“*T(h)iermaler/Tiermalerin*”-- terms which first received widespread usage in those languages during the nineteenth century.³ The French term is, however, more inclusive, referring to animal artists working in a variety of media, where “*Thiermaler*” literally translates as “animal painter.” In the following, I will be focusing on animal paintings and zoological prints as closely interrelated forms of two-dimensional depiction, leaving animal sculpture outside the scope of the present study.

This dissertation will argue that Western European animal painting and scientific illustration of the long nineteenth century were enterprises structured by paradoxical logics of representation: The animal painter aimed to capture the fundamental alterity of non-human organisms, while also presenting animals as though they were the *dramatis personae* of a history painting or genre scene. Representations of animals both treated their subjects as existing apart from human norms, while also serving as receptacles for raced, gendered, and classed projections about human health, labor and reproduction. The acephalous Bonheur mannequin, able to observe and portray animal life seemingly (but only seemingly) without imposing her human viewpoint, is thus emblematic of a mode of zoological naturalism particular to the time period.

³ Émile Littré’s famous *Dictionnaire de la langue française*, the second edition of which was published between 1872 and 1877, describes the term “*animalier*” as a “neologism.” “Se dit des peintres et des sculpteurs qui représentent des animaux.” Émile Littré, *Dictionnaire de la langue française* (Paris: Hachette, 1872-77), accessed June 20, 2020, <https://www.littre.org/definition/animalier>. Cited usages of “*Thiermaler*” (an antiquated spelling) in the *Deutsches Wörterbuch von Jakob Grimm und Wilhelm Grimm* likewise seem to be derived from late eighteenth or early nineteenth century sources, such as the collected works of Johann Wolfgang von Goethe: “m. der thiere malt: weil ... es auch dem thiermahler auf ein paar schafe mehr oder weniger nicht ankam, so war endlich die weiteste landschaft zu enge. Göthe 24, 172 (gleich darauf der gegensatz menschenmahler); auf einem gemälde vom geschickten thiermaler Peters nisten tauben ruhig im helme des Mars. Matthisson schriften 5, 28.” Jacob and Wilhelm Grimm, *Deutsches Wörterbuch*, accessed June 20, 2020, http://woerterbuchnetz.de/cgi-bin/WBNetz/wbgui_py?sigle=DWB&mode=Vernetzung&hitlist=&patternlist=&lemid=GT03513#XGT03513.

This mode of picturing animals became especially prominent in France, Germany and Great Britain in the mid-century. While the British context and the concomitant influence of Darwinist ideology have received considerable attention from art historians, the centrality of French and German animal representations and scientific practices to the development of the genre has yet to be fully considered on its own terms, despite the status of those countries as European epicenters of both scientific research and animal painting.

Concern with the deepened divisions and destructive relationship between humans and other species has since magnified into its own scholarly sub-discipline in the early twenty-first century, spurred on by the worldwide crises of climate change and industrial farming.⁴ As Alex Potts notes in “Natural Order and Call of the Wild,” a growing ideological separation of human “culture” and animal “nature” in the nineteenth century allowed animals, particularly “wild” species, to be analyzed and perceived as part of a realm of action and interiority fundamentally separate from humanity, as contrasted with eighteenth century natural histories by writers like the Comte de Buffon (French, 1707-1788), who openly prioritized the species deemed most useful to human society (the horse, the cow, the dog) in his publications.⁵ Nonetheless, the role of art and visual representations in nineteenth-century human-animal relations remains under-

⁴ A few of the most representative texts from this turn towards animal studies in philosophy and critical theory include Jacques Derrida, *The Animal That Therefore I am*, trans. David Willis (New York: Fordham University Press, 2008); Donna Haraway, *The Companion Species Manifesto* (Chicago: Prickly Paradigm Press, 2003); Giorgio Agamben, *The Open: Man and Animal* (Palo Alto: Stanford University Press, 2003); and Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species and Posthumanist Theory* (Chicago: University of Chicago Press, 2003). A plethora of historical texts dealing with human-animal relations in Europe has likewise emerged, including Nigel Rothfels, *Savages and Beasts: The Birth of the Modern Zoo* (Baltimore: Johns Hopkins University Press, 2002); Erica Fudge, *Perceiving Animals: Humans and Beasts in Early Modern English Culture* (New York: St. Martin's Press, 2000). However, earlier precursors to these historical texts can also be found in the exceptional writings of Harriet Ritvo--*The Animal Estate: The English and other Creatures in the Victorian Age* (Cambridge, MA: Harvard University Press, 1987) and *The Platypus and the Mermaid, and other Figments of the Classifying Imagination* (Cambridge, MA: Harvard University Press, 1997); and Keith Thomas—*Man and the natural world: a history of the modern sensibility* (New York: Pantheon Books, 1983).

⁵ Alex Potts, “Natural Order and the Call of the Wild: The Politics of Animal Picturing,” *Oxford Art Journal* 13, no. 1 (1990), 12-33.

examined, with some other notable exceptions: Diana Donald's writings on paintings and popular prints of animals in Great Britain of the long nineteenth century, Katie Hornstein's sensitive examination of the surprising significance of French leonine imagery, and Stephen Eisenman's recent survey of the relationship of Western art to a newly emergent discourse of animal rights.⁶ The subject has thus been largely examined, particularly in Anglophone literature, through the lens of developments in British animal painting and the popularization of Darwinisms both "social" and "natural." Other significant points of departure for this dissertation include the writings of Elisabeth Hardouin-Fugier, who has penned encyclopedic entries on individual French nineteenth-century animal painters, and Ellen Spickernagel, who tracks the growing popularity of the animal painting genre from the seventeenth through the nineteenth century in conjunction with the emergence of public zoos and parks in France, England and Germany.⁷ I am likewise indebted to Kai Artinger's carefully researched history of the picturing of "wild" animals in late nineteenth- and early twentieth-century German zoological gardens and menageries.⁸

Compared to these comprehensive monographs, I narrow the focus of my work to closely consider links between animal painting, the production of zoological and agricultural texts, and

⁶ Diana Donald, *Picturing Animals in Britain* (New Haven: Yale University Press, 2007); Diana Donald and Jane Munro (eds.), *Endless Forms: Charles Darwin, natural science and the visual arts* (New Haven: Yale University Press, 2009). This volume was one of several art museum exhibition catalogs released in conjunction with the bicentennial celebration of Darwin's birth in 2009. See also: Fae Brauer and Barbara Larson, eds., *The Art of Evolution: Darwin, Darwinisms, and Visual Culture* (Hanover, NH: Dartmouth College Press, 2009) and Pamela Kort and Max Hollein, *Darwin: Art and the Search for Origins* (Frankfurt: Schirn Kunsthalle, 2009). Katie Hornstein, "From Museum to Menagerie: Théodore Géricault and the Leonine Subject," *Art Bulletin* 101, 2019, Issue 1, 26-47. Stephen Eisenman presents a broad-strokes overview of the relationship of art (both positive and negative) to (mostly European) discourses of animal rights in the past 300 years in *The Cry of Nature: Art and the Making of Animal Rights* (London: Reaktion Books, 2013).

⁷ Elisabeth Hardouin-Fugier, *Le peintre et l'animal en France au XIXe siècle* (Paris: Editions de l'Amateur, 2001); Ellen Spickernagel, *Der Fortgang der Tiere: Darstellungen in Menagerien und in der Kunst des 17.-19. Jahrhunderts* (Cologne: Bohlau, 2010).

⁸ Kai Artinger, *Von der Tierbude zum Turm der blauen Pferde: die künstlerische Wahrnehmung der wilden Tiere im Zeitalter der zoologischen Gärten* (Berlin: Reimer, 1995).

their accompanying illustrations. The relationship of animal painting to the practice of scientific illustration, as well as to scientific discourses outside of Darwinism, has yet to receive its own dedicated study, despite what I argue are vital connections between “scientific” and “aesthetic” modes of animal imaging. Scientific study as a pretense for invasive human activities in nature, particularly in Europe’s colonies, is another facet of animal representation that I examine in greater depth.

Unlike landscape painting, the other prominent genre dedicated to the depiction of non-human forms of “nature,” nineteenth-century animal painting did not possess its own theorist, a Pierre-Henri de Valenciennes (French, 1750-1819) or Carl Gustav Carus (German, 1789-1869) to articulate the genre’s aesthetic aims (though Carus did, in his capacity as a scientist, produce zoological book illustrations). Yet animal painting occupied its own, little discussed, niche in the classical hierarchy of genres formulated by André Félibien (French, 1619-1695) of the French Royal Academy. Félibien considered the painter of animals to be more skilled than a landscape or still life artist due to the mobile nature of his or her chosen subjects. However, he ranked the animal artist below the painter of portraits, history paintings, and other human-focused genres, due to the less intellectually and spiritually “elevated” nature of animals as compared to human beings.⁹ The philosopher Arthur Schopenhauer (German, 1788-1860) also ranked animal painting above landscape with essentially the same logic in mind. He contended that spirited, active

⁹ These stipulations of artistic quality and rank were largely used in service of the monarchy and thus became gradually less relevant following the revolutionary upheavals in eighteenth and nineteenth century France. As Barbara Anderman notes, “the use of the hierarchy was likely imposed from outside the Academy by ministers of state and finance associated with Colbert, rather than stemming from art critical/art theoretical discourses. The hierarchy was thereby intended to promote artistic practices favorable to the monarchy—e.g., allegorical paintings were favored by Colbert’s circle in order “to avoid compromising the outcome of any political maneuver” by explicitly depicting the events of contemporary history.” Barbara Anderman, “Félibien and the Circle of Colbert: A Reevaluation of the Hierarchy of Genres,” in *Ordering the World in the Eighteenth Century* (New York: Palgrave Macmillan, 2006), 145.

animals were inherently more challenging to “capture” than inert vegetal forms.¹⁰ Outside of these various genre hierarchies, the period philosophical frameworks surrounding the animal painting genre were not particularly well defined. I have attempted to address this archival and theoretical challenge through the analysis of other modes of natural historical and agricultural discourse that helped to define intellectual attitudes regarding animal form and animate life at the time.

To this end, I have consulted a wide range of period scientific sources, from natural history encyclopedias such as anatomist and zoologist Georges Cuvier’s (French, 1769-1832) *Le Règne animal* (1817) and Alfred Brehm’s (German, 1829-1884) *Thierleben* (1864-9), to illustrated agriculture and husbandry guides such as agricultural scientist Émile Baudement’s (French, 1816-1863) *Races Bovines* (1862). Recorded speeches and minutes from the many zoological and acclimatization societies that emerged during this era have also been useful in supplementing more typical art historical sources: artist’s letters, reviews from period critics, and art academy archival materials concerning instruction in animal anatomy and related topics. These materials reveal the deep imbrication of animal painters within zoological and agricultural discourses and knowledges and, in a parallel manner, reveal their pictorial contributions to those knowledges.

“Artistic” and “scientific” visualizations of animals frequently overlapped in this historical moment. Rosa Bonheur herself served as an illustrator for agricultural science publications by the likes of Baudement and Louis Gossin.¹¹ Many of her notable animal-painter

¹⁰ Arthur Schopenhauer, *The World as Will and Representation, Vol. 1*, translated by Judith Norman et al. (Cambridge: Cambridge University Press, 2010), 244.

¹¹ Emile Baudement, *Les races bovines au Concours universel agricole de Paris en 1856* (Paris: Imprimerie impériale, 1861-62). Louis Gossin, *L’agriculture française: principes d’agriculture appliqués aux diverse parties de la France* (Paris: Imprimerie de J. Claye, 1858).

contemporaries, including Antoine-Louis Barye (French, 1795-1875), Constant Troyon (French, 1810-1865), Paul Friedrich Meyerheim (German, 1842-1915) and the brothers August (German, 1849-1923) and Friedrich Specht (German, 1839-1909) likewise contributed illustrations to natural history publications. Going one step further, animal painter and illustrator Charles Jacque (French, 1813-1894) penned his own highly detailed guide to raising, breeding and acclimatizing chickens, *Le Poulailleur, monographie des poules indigènes et exotiques* (*Henhouse: Monograph of Domestic and Exotic Fowls*) (1878), a species he also painted with consummate skill (fig. 1.9).¹² Artistic pursuits and animal husbandry were closely aligned in Jacque's mind, as he found great aesthetic satisfaction in the act of raising and observing chickens, which he asserted to be "the most gay, most lively ornaments of a household." The author made extravagant claims for the mental and emotional benefits of poultry possession. The care of these "charming beasts," he wrote, "makes the time pass so quickly, that one could never think of becoming bored with life."¹³ Despite this spirit of frivolity, he did not neglect to extensively discuss the technicalities of different breed types and the effective care of imported species. Nineteenth-century animal art specialists were thereby intimately involved in the sciences of animal breeding and behavior and did not simply, in a passive manner, absorb scientific ideas in wider cultural circulation.

The close viewing of animal form, performed in various capacities by natural historians, veterinarians, animal painters and illustrators, created a common link between artistic and scientific practices related to animals, despite their many divergences. Georges Cuvier dedicated much of his methodological introduction of *Le Règne animal* to outlining the observational

¹² Charles Jacque, *Le Poulailleur, monographie des poules indigènes et exotiques* (Paris: Librairie agricole de la Maison rustique, 1878).

¹³ Charles Jacque, *Le poulailleur*, 7. [Translation from original French my own]

nature of the natural historical enterprise. He distinguished it from other sciences, such as physics, on this very basis. While scientific endeavors involved with chemistry or the physical properties of matter were primarily conducted in the laboratory and were therefore “experimental” in character, the natural historian could only work with the evidence gathered by his own eyes. The anatomical resemblances between organisms, their behavior in the wild, their manner of reproducing—all of these were facts that could be obtained by watching creatures carefully.¹⁴

Lorraine Daston and Peter Galison have rightly documented the rise of “mechanical” modes of visualization during the nineteenth century in their influential study *Objectivity* (2007), but they left out drawn and painted illustrations from the same period, which responded to—and even informed—scientific shifts.¹⁵ This study focuses precisely on those drawn and painted illustrations and contends that they played an integral/seminal role in the conception of natural forms in a branch of science that depended on visual observation. While some scientists did produce their own illustrations (with variable results, as Cuvier and von Humboldt’s published drawings demonstrate) more often, “artistic” and “scientific” forms of expertise were not embodied in the same individual. This has become a problem of attribution, creation and knowledge formation in natural histories, discussed at some length by historians of science like Daston and Galison who nonetheless often occlude the contributions of illustrators and other collaborators.¹⁶ The textual archives of nineteenth century scientists are admittedly far more

¹⁴ Georges Cuvier, *Le règne animal distribué d’après son organisation, pour servir de base à l’histoire naturelle des animaux et d’introduction à l’anatomie comparé* (Paris: Chez Déterville et Chez Crochard, 1829-30).

¹⁵ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007),

¹⁶ This tendency is especially noticeable in popular histories of science such as Andrea Wulf’s *Alexander von Humboldt: The Invention of Nature* (New York: Alfred A. Knopf, 2015) but also appears not infrequently in academic histories of science, wherein the biography and bibliography of the scientist forms the nexus of monographic attention, as in Jonathan Smith’s *Charles Darwin and Victorian Visual Culture* (Cambridge: Cambridge University Press, 2009).

voluminous than the oft-sparse documentation of artists primarily employed as book illustrators and printmakers. Given these archival lacunae, the dissertation focuses on the illustrations themselves as the loci of visual knowledge and affective engagement.

The knowledge presented by natural historical illustrations is apprehended through sensual forms rather than abstracted and separated from them. These practices were closely aligned with those of narrative animal painting, and, as mentioned above, often performed by the same artists. In the following, I argue for the continued significance of drawn and printed illustrations in this historical juncture, particularly in the field of the zoological sciences. The habits and habitats of mobile, creaturely subjects could only be imperfectly captured in static X-rays and posed photographs, necessitating imaginative forms of illustration that fall outside a regime of “mechanical objectivity as defined by Daston and Galison. As they write: “By *mechanical objectivity* we mean the insistent drive to repress the willful intervention of the artist-author, and to put in its stead a set of procedures that would, as it were, move nature to the page through a strict protocol, if not automatically.”¹⁷ This involved using techniques like tracing and photography to “preserve form from the world,” rather than “parting the curtains of experience to reveal an ur-form” or “ideal type” as eighteenth century scientific illustrators often aimed to do.¹⁸ By expanding our understanding of nineteenth-century scientific illustration beyond the realm of “mechanical objectivity” to include what I refer to as ecologically embedded forms of illustration, this project performs an intervention in the history of science and Science and Technology Studies, as well as the history of art.

Animal bodies, since they were often more available to dissection, experimentation, and objectified observation than their human counterparts, were also a privileged site upon which to

¹⁷ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 121.

¹⁸ Ibid.

interrogate the base, material origins of what Foucault would later term “life itself” — the invisible, subterranean impulses and drives, the organic substrate, shared by all organisms.¹⁹

When human beings were made the subjects of similar experiments, it was often permitted by the violent imputation of a subaltern status that implicitly--and more often explicitly--animalized and dehumanized their classed and colonized bodies.²⁰ Painting is a sensual, sensory medium particularly suited (whether intentionally or otherwise) for such meditations on the material body. This was particularly the case, I argue, in the French and German contexts. As Théophile Gautier (French, 1811-1872) wrote with reference to the distinctions between French and British animal painting, the latter exemplified by the tenderly sentimental dogs, deer, and horses of Sir Edwin Landseer (1802-1873):

It is not, however, that we do not have our own remarkable animal painters. Rosa Bonheur, Brascassat, Troyon, Jadin, Philippe Rousseau, Decamps, all create work of an incontestable superiority in this genre, but in a completely different manner and in a contrary spirit. They are determined to perfect the animal’s form, color, pose, fur, the sheen or the stripes of its pelt; but not believing it to have a soul, they have not looked for it. In the matter of animals, the French School is materialist and the English School is spiritualist.²¹

Gautier implies that the “materialism” of French animal painting consists, in part, in the obsessive attention to matters of anatomical correctness, at the expense of expression. The sheen of the fur, the positioning of the limbs, and the overall conformation of form, are all captured with the greatest exactitude, but the underlying metaphysical spark seems to disappear under this

¹⁹ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Routledge, 2001), 139.

²⁰ See Chapter 1.

²¹ “Ce n’est pas cependant que nous n’ayons de fort remarquables peintres d’animaux. Rosa Bonheur, Brascassat, Troyon, Jadin, Philippe Rousseau, Decamps, ont traité ce genre avec une incontestable supériorité, mais d’une manière toute différente et dans un esprit pour ainsi dire contraire...ils se sont attachés à rendre avec le plus de vérité possible sa forme, sa couleur, sa pose, les épis de son poil, la moire ou les zébrures de sa robe; mais, ne lui croyant pas d’âme, ils ne l’ont pas cherchée. En fait d’animaux, l’école française est matérialiste, et l’école anglaise spiritualiste.” Théophile Gautier, *Explication des ouvrages de peinture, sculpture, gravure, lithographie et architecture des artistes vivants étrangers et français, exposés au Palais des beaux-arts ... le 15 mai 1855* (Paris: Michel Lévy frères, 1857), 72-73.

overwhelming accumulation of visual data. I argue that Germanic animal painting of the period, though not directly mentioned in this text, worked within a similarly “materialist” framework that largely eschewed the anthropomorphism of a British practice dominated by Landseer. However, I diverge from Gautier’s assessment that the animals seem to lack a “soul” or personality. The French and German paintings I consider in this study focus not only on animal form, but animal *narrative*, one of the chief components, I argue, setting nineteenth-century animal painting apart from prior iterations of the genre.

Situating their animal protagonists within natural, and naturalistic, dramatic frameworks, nineteenth-century animal painters distinguished their productions from earlier modes of animal-centric painting, the most notable Western instances of which were found in Dutch and Flemish cattle scenes and hunt still lives of the seventeenth century by Paulus Potter (Dutch, 1625-1654) (fig. 1.10) and Frans Snyders (Flemish, 1579-1657) (fig. 1.11). Snyders is often credited as the founder of “animal genre” painting, that is, the portrayal of animals as the primary players in the depicted drama, with few to no humans in sight and no reference made to fables or other fantasized, anthropomorphic settings.²² However, even Snyders’ paintings almost always retained a strong link to the still life genre, with dead game and other bourgeois luxury goods just as prominently situated as the live monkeys, cats, and dogs that accompanied (and often destroyed) them (fig. 1.12). Eighteenth-century painters, particularly George Stubbs (British, 1724-1806) (fig. 1.13) and Jean-Baptiste Oudry (French, 1686-1755) (fig. 1.14) increased the prestige of

²² As Susan Koslow writes in her monographic treatment of Snyders’ oeuvre: “Animal painting emerged as an independent genre shortly after 1600, at about the same time as still life, and like still life, it does not attain theoretical recognition until later in the century...Official recognition was given to animal painting as an independent category by André Félibien in 1667, when he wrote ‘that in this art [painting] there are workers who apply themselves to different subjects...he who paints living animals is more worthy than he who represents dead and inanimate things.’” She then credits Snyders as the first artist to depict animals as central subjects, typically dogs, cats and monkeys that have been left alone with a still life-esque pantry of food (usually to disastrous results) while the servants have momentarily left the household. Susan Koslow, *Frans Snyders: The Noble Estate, Seventeenth Century Still-Life and Animal Painting in the Southern Netherlands* (Antwerp: Fonds Mercator Paribas, 1995), 201.

individual animal portraits, particularly of aristocratic horses, hunting hounds and exotic, princely menagerie specimens.

By contrast, in nineteenth century animal paintings, creatures were increasingly presented as actors with motivations to be deciphered by human viewers, rather than simply functioning as the inert trophies of the hunt or the aristocratic property of the stable, kennel, or menagerie. The nineteenth-century animal painting genre grew to encompass narrative scenes of agricultural beasts of burden painted by the likes of Bonheur and Braith, the noble stags and comedic dogs of Landseer, and the violent bestial conflicts of Antoine-Louis Barye (French, 1795-1875) and James Ward (British, 1769-1859), not to mention artists heavily preoccupied with narrative animal scenes who were not, however, classified as animal painters, like the equine enthusiasts Franz Krüger (German, 1797-1857) and Théodore Géricault (French, 1791-1824) and, as I will examine in greater detail in Chapter 5, Gustave Courbet (French, 1819-1877) and Adolph von Menzel (German, 1815-1905). As Gautier hinted, these portrayals showed a heightened interest in the physical being of the animal. However, while the subjects in German and French animal painting may not present the readily readable emotions of the sheepdog mourning its master in a Landseer (fig. 1.15), they nevertheless appear to be strongly impelled by their own deep-seated creaturely motives, specific to their particular embodied experience. They possess a form of tacit interiority not directly analogous to a human “soul.” The creature acting within its natural habitat, or the confines of its agricultural labors, became the chief subject of interest.

Bonheur, for instance, attuned the viewer to the muscular power of humble oxen, sheep, and draft horses, moving among the pristine provincial fields cleared by their labors. In the 1854 *Ploughing Scene* (fig. 1.16), we stand behind the plow team at work, consisting of two oxen and a man, watching them pull the instrument with shared pains and purpose. The strain apparent in

the left-hand ox's hind haunches, the pivoting muscles and bones discernable beneath its brown fur, weights the scene with tangible gravity, a sense of slowly expended force. The evenly lit, heat-stricken landscape—its stillness, the inert vigil of the trees and haystacks—bespeaks paused time and ruminant mindfulness. The human figure is ancillary at best compared to the stark physical tension of the animals. Elsewhere, Bonheur has privileged the farm animal with a kind of double portrait bust, in *Two Goats* (ca. 1896) (fig. 1.17). The pair of animals pensively gazes outward, off canvas, pupils visible and alert, what appears to be a misty mountain pass at their backs. The black goat's expression is particularly bright and knowing. Neither a specimen image nor an aristocratic pet portrait, the anonymous goats do not engage in Landseer-esque antics or pay us any particular mind. They seem to exist purely for themselves.

A similar attention to the embodied experience of animal life can be found in Realist and Naturalist German painting of the period, a tendency exemplified by Menzel. Menzel, in an early painting, *Falcon attacking a pigeon* (1844) (fig. 1.18), has left behind the terrestrial realm altogether. The viewer, perspectively airborne, hovers among the titular birds. No falconers or hunting dogs remain in sight. The sweeping dash of the falcon's attack from behind is rendered in all its calculated fury. In a flurry of brown feathers and brushy clouds, the raptor's body forms an arrow, precision-aimed. Its victim, a pigeon as starkly white as the sunlit clouds behind its wings, propels its chubby frame forward with considerably less speed and force, its form static where the falcon's is frenetic. As evidenced by the artist's letters, the painting was originally produced as a shooting target, though it was apparently never put to use.²³ That such finely rendered animal forms were used for marksmanship indicates their comparatively objectified status (it is difficult to imagine an oil portrait utilized in the same manner). However, given its

²³ Claude Keisch, *Adolph Menzel, 1815-1905: Between Romanticism and Impressionism* (New Haven: Yale University Press, 1996), 175.

present-day condition, now on display in the Alte Nationalgalerie, it seems it was left relatively intact.²⁴ Like later works by Menzel discussed in Chapter 5, the canvas fully embeds us within the animal's environment. In the sky, in flight, the classic Western painterly orientation of solid ground, horizon line and vanishing point is abandoned. We see the highly imaginative work of which animal painters were capable, placing the viewer in unfamiliar phenomenological worlds. While this early foray into animal subject matter may have been oriented towards the hunt, Menzel's later works persisted in this destabilization of anthropocentric perspective. In the *Kinderalbum* gouaches (1863-1883), we scuttle about at ground level among Berlin rats and gutters (fig. 1.19), perch in dense tree cover with songbirds (fig. 1.20) and push through a stand of bamboo, directly meeting the eye of an imposing yak (fig. 1.21). These nineteenth-century French and German artists, I argue, have variously attempted to render animal life on its own terms, an endeavor bolstered by scientific frameworks that permitted a study of animal being that attempted to steer away from tropes of anthropomorphism (however unavoidable and inevitable these might ultimately prove to be, given the limitations of embodied human knowledge) and towards a consideration of the particularities of creaturely being as it was located within economies and ecosystems.

The newly public discourses and displays dedicated to animals in Western Europe—from the natural history museum and the public zoological garden to the international agricultural exhibition—further allowed creatures to be conceived of according to the particularities of their breed, behavior, and comportment. The French Revolution was crucial to the development of such sites, as the *Jardin des plantes* zoological garden was founded upon the remnants of the

²⁴ Menzel, ashamed of what he perceived to be a youthful and amateurish early work, wrote to the owner of the painting that he wished it had been riddled with bullets, rather than left in more or less pristine condition. Ibid, 175.

French Royal menagerie and transferred from Versailles to Paris in 1792.²⁵ The German-speaking world similarly preceded the English in their opening of a partially public zoological garden at Schönbrunn in Vienna in 1752, often considered the first public zoo in Europe.²⁶ By contrast, the first British zoo, The Regent's Park Zoo in London, was established in 1828 for scientific study by the Zoological Society of London, and later opened to the public in 1847, though The Tower of London and other venues had offered less “scientifically” organized wild animal displays to Londoners in prior centuries.²⁷

Yet the seemingly benign democratization of animal displays was in large part advanced through the violent extraction of natural resources and exploitation of foreign economies. Global trade and travel were perpetual drivers of artistic and scientific “discoveries” for European observers—indeed, the expansion of “knowledge” was one alibi for continued colonial incursions. The import of new species was all too often facilitated by these depredations, accelerated in the closing decades of the century by the entry of Germany into the “scramble for Africa” and the creation of a worldwide “exotic” animal trade, the most prominent representative of which was merchant and zoological entrepreneur Carl von Hagenbeck (German, 1844-1913). Hagenbeck often paired zoological exhibitions with the display of imported human subjects from the colonies, further contributing to their dehumanization by their equation with animals.²⁸

The increasingly elaborate practices of animal husbandry and pedigree breeding similarly satisfied the desire for novel creaturely forms. The burgeoning production of husbandry guides,

²⁵ For more on the history of public zoological gardens, see Eric Baratay and Elisabeth Hardouin-Fugier, *Zoo: A History of Zoological Gardens in the West* (London: Reaktion Books, 2002).

²⁶ The Tiergarten Schönbrunn's own publicity proclaims it to be the oldest continuously operating zoological garden in the world. Tiergarten Schönbrunn, “The World's Oldest Zoo,” accessed June 4, 2020, <https://www.zoovienna.at/en/zoo-and-visitors/welcome-worlds-oldest-zoo/>.

²⁷ Harriet Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* (Cambridge, MA: Harvard University Press, 1987), 205-6.

²⁸ Eric Ames, *Carl Hagenbeck's Empire of Entertainments* (Seattle: University of Washington Press, 2008).

with the pictorial panoply of “improved” breeds achieved through cross-breeding, better feed and exercise, presented the possibility of evolutionary and economic expansion on a national level and later proved influential for the development of Darwin’s theory of natural selection.²⁹ Much like the zoological displays, these principles of husbandry were eventually translated to the anthropological and medical study of human beings, with particularly damaging consequences in the case of the eugenics movement.

In this study, I historically ground the timely preoccupation with Darwinism and the human/animal divide by focusing on earlier scientific developments in the French and German contexts in the first half of the nineteenth century. Theories of species transformation had already emerged at the turn of the century in the writings of French natural historians such as Jean-Baptiste Lamarck (1744-1829) and Étienne Geoffroy Saint-Hilaire (1772-1844) and German Romantics like Carus, who worked variously as a painter, zoological illustrator and trained gynecologist. Deviations from a God-given “Chain of Being” were already being postulated in both scientific and artistic thought of the turn of the century.

As evident from this overview, I work throughout the following chapters to avoid sweeping, ahistorical pronouncements about the supposedly essential qualities of “human” and “animal” subjects. The latter category, as Jacques Derrida notes, conflates an impossibly wide range of different species with one another, collapsing the world’s animate biodiversity into a homogeneous, non-human “other.”³⁰ As he observed, the scientist, in many respects, provides a more nuanced treatment of animals than philosophical counterparts like Descartes and Heidegger, in that he or she regards the bodies and habits of disparate species with a greater degree of granularity. The natural histories, agricultural manuals, and proto-ecological writings

²⁹ See Charles Darwin, *The Variation of Animals and Plants Under Domestication* (London: J. Murray, 1868).

³⁰ Derrida, *The Animal That Therefore I am*, 31.

of the long nineteenth century, rather than attempting a holistic formulation of the essence of animal being, considered species and breeds on an individualized basis. Where the philosopher attempts a conceptualization of the “animal” writ large, the scientist seeks an ever-widening taxonomic databank.

The Comte de Buffon’s *Histoire naturelle* might be considered the ur-example of this tendency, with its moralizing assessments of different creatures. In a later nineteenth-century instance, *Brehms Thierleben* showed an intimate interest in the interiority and sensory makeup of widely divergent species, from locusts to lions. The accompanying illustrations of the respective texts, in almost all cases devoted to a single species per plate, furthered this sense of individuation—indeed, emphasized diversity as one of the central fascinations of the encyclopedic project. The gallery of unique animal appearances, the promise of ever more variety and visual pleasure, compel the reader’s leafing hand. These massive and massively popular, multi-volume projects relied on the seeming infinitude of natural forms to compel the continued purchase of successive installments by an educated bourgeoisie. Buffon’s *Histoire* contained 36 volumes published during his lifetime and eight more released posthumously, while the later editions of the comparatively restrained *Thierleben* consisted of 10 volumes. Even for those less inclined to the reading of erudite tomes, many of the lithographic plates of the *Thierleben* were available for purchase in loose-leaf sets for decorative home display or placement in albums.³¹ Yet the above-mentioned colonial incursions and agricultural breeding projects were constant enablers of this increased knowledge of planetary diversity, tethering the expansive sense of wonder and possibility—and its attendant representations—to the proprietary

³¹ See my discussion of the *Thierleben* loose-leaf print set in the Berlin Museum für Naturkunde library archives in Chapter 4.

impulse to discover and accumulate as many natural resources as possible. Capitalism and colonialism were nothing if not completist.

The encounter with the individual animal structured the process of animal painting itself. However, given the difficulty of posing animal sitters, the models utilized often included taxidermy mounts, dead game and the dissected and dismembered bodies of deceased zoo animals and slaughterhouse victims. Paintings, prints and drawings remained the primary visual media for these portrayals. (Animals were not particularly cooperative for extended photographic exposure times and were thus mostly confined to motion studies by practitioners like Eadweard Muybridge [British-American, 1830-1904] in the era of early photography). The final painted animal was a composite body borne of these varied methods of study. Certain artists, perhaps most famously Rosa Bonheur, did have their own tricks for securing their subjects' compliance. Bonheur invented various devices for holding animals in place for prolonged periods of time. Her associate and fellow artist, Frederick Goodall (British, 1822-1904), described her methods: "She had a wonderful contrivance for keeping them still, a kind of yoke of wood or iron fastened in a post in the ground, which went round the animal's neck with a lock."³² He went on to assure the reader that her methods were very humane and that she always treated her "sitters" with the utmost gentleness. The faithful representation of a particular animal was, for Bonheur, of sufficient importance to justify such unorthodox techniques. Her evident ability to still live animals was so fabled that her life partner, Nathalie Micas, was said to contribute to Bonheur's

³² Frederick Goodall, *The Reminiscences of Frederick Goodall, R.A.* (London: Walter Scott Publishing Co., 1902), 132.

work through her skill in “animal whispering” and hypnotism.³³ Beyond the posing of individual subjects, the animal painting as a final product more and more involved the coordination of multiple creatures in lively interactions that could be simultaneously construed as fictive and naturalistic. Animals are particularly recalcitrant subjects for visual representation: more motile than plants and geological formations, less tractable to verbal commands than human portrait sitters. As German ornithologist Hermann Schlegel (1804-1884) remarked, even when animal painters and zoological illustrators observed live organisms, the animals’ movements and behavior were limited by their placement within a human environment. Artists were thus unable to observe animals engaged in the attitudes in which they would most like to depict them.³⁴ Imaginative adjustments were required to achieve a sense of “genuine” animal being. In the following, I explore the economic, scientific and aesthetic impulses that might have led artists to this degree of obsessive exactitude and creative maneuvering in the depiction of animals.

My dissertation opens at the turn of the nineteenth century, with a case study of two history painters, Christian Bernhard Rode (German, 1725-1797) and Théodore Géricault (French, 1791-1824). I have selected these artists in order to examine the ways in which animal anatomy entered the field of academic artistic training and became a subject of dramatic interest in its own right. Equine subjects, as cavalry mounts and aristocratic animals, were central to the maintenance of military and monarchical power and, accordingly, took their place within officially commissioned forms of artistic representation such as battle painting (without, in most cases, being treated as the chief subject matter). The anatomical study of other animals,

³³ “One of the myths surrounding Nathalie’s contribution to Rosa’s work was that she was able to ‘hypnotize’ animals so they would keep still while Rosa painted them—something Rosa always denied.” Rose Collis, *Portraits to the Wall: Historic Lesbian Lives Unveiled* (London: Bloomsbury Publishing, 2016), 77.

³⁴ Hermann Schlegel, “Zweck und Eigenschaften Naturkundlichen Abbildungen,” in Claus Nissen, *Die zoologische Buchillustration: ihre Bibliographie und Geschichte*, Bd. 2 (Stuttgart: Anton Hiersemann, 1978), 231.

associated with “lesser” genres such as still life, received comparatively little attention in the history painter’s education. Rode and Géricault’s works present important divergences from those tendencies that, I argue, helped set the stage for dramatic animal genre painting in the later decades of the century. The second chapter thus centers around Rode’s decorative program in the Berlin *Tieranatomisches Theater* (1790) and Géricault’s *Race of the Riderless Horses* (1817) sequence, both of which feature a juxtaposition of nude or nearly nude Neo-Classical male anatomy with the musculature of large-scale animal figures. The animal dissection theater in Berlin, built as part of the newly founded Prussian veterinary school, engages in an equation of animal and human figures in the decorative program of friezes encircling the central dome. These depict classicized male figures wrestling a variety of domestic animal species: disease-ridden cattle, cavalry horses, hunting dogs, boars, sheep and goats figure prominently. Designed and executed by Rode, then head of the Prussian Academy of Art, the activities of animal culture appear in the timeless space of Greco-Roman allegory. Those responsible for the wellbeing of livestock were, it is implied, also responsible for the health of Prussia’s agriculture, economy and military. Though the men dominate the animals, they also coexist with them in a naked, primeval state. The artist thus created a visual equivalence between the human and animal bodies to be treated, asserting the comparable status of veterinary science and human medicine and the normatively masculine nature of the bodies under examination. Géricault’s *Race* series depicts an interspecies struggle between lower-class grooms and their steeds taking place during the preparations for the annual ritual of racing unmounted horses throughout the closed-off streets of Rome during Carnival. I argue that the overall picture of human-animal relations that emerges from Géricault’s paintings is neither a battle for the survival of the fittest, nor an unproblematic natural unity; rather, it suggests ambivalence about the definition of both “natural” and “human”

history in the French Restoration period. As the Géricault series centers around an act of temporary de-domestication, the anatomical theater looks back to domestication's beginnings, while also referencing contemporaneous concerns, such as the expansion of the Prussian military and the persistent economic problem of bovine plague (*Rinderpest*). The creaturely body, as a subject of medical and artistic study, appears in these works as a site of material force, mysterious contagion and precariously maintained human control.

In Chapter 3, I move forward into the mid-nineteenth century, during which time animal painting as a genre reached peak popularity. The practice of narrative animal painting was further disseminated through printed reproductions of cattle and draft horses by Rosa Bonheur and domestic animal paintings by Edwin Landseer. In Germany, the most renowned animal painters worked in a related pastoral mode. In particular, Anton Braith (German, 1836-1905) was lauded for his precisely executed scenes of Bavarian cattle and sheep herding. His paintings intermixed breeds and species, both for visual variety and maximal display of the country's rich animal husbandry. I argue that Bonheur and Braith's naturalistic depictions of newly standardized cattle breeds normalized modern, industrial agricultural innovations and their placement in the national landscapes of France and Germany. I discuss how Braith and Bonheur presented more provincial, comfortably domestic forms of animal life than their Romantic era counterparts, without, however, completely divesting their subjects of their untamed "otherness." This domestic animal life was typified by the figure of the cow, considered by many period natural historians as the "most important" agricultural animal due to its combined usefulness as a source of milk, meat, and physical labor. Yet the desire for a return to the land could also embody a political attempt to return to a supposedly autochthonous past. The seeming fixity of specimen types that illustrated representations embodied was later used to damaging effect in

Nazi attempts to “breed back” the aurochs during the 1920s and 1930s through the use of antique illustrations.

As the overlaps between agricultural illustration and cattle painting indicate, the mid-century animal painting genre was closely connected to the imagery of scientific publications both technical and “popular,” the focus of the fourth chapter. Throughout the chapter, I examine the manner in which the dramatic narrative tropes of animal genre painting were increasingly incorporated into zoological illustrations, frequently with the use of recently developed chromolithographic technology, while continuing to coexist alongside more diagrammatic specimen images. In this manner, the relatability of other species—often more so than that of other human beings—was highlighted, though not uniformly across species. In France, illustrated zoological publications, from the Comte de Buffon’s *Histoire naturelle* (1749-1804) onwards, were purchased and consumed at an enthusiastic rate. This trend is evidenced by the competition between the publishers Curmer and Dubouchet over the release of illustrated encyclopedias of the *Jardin des plantes* during the 1841 Christmas season. In the following decades, similar guides to the *Jardin zoologique d’acclimatation* (established in 1860) were widely released. These zoological garden guides often included both standard, blank background specimen illustrations as well as narrative tableaux of animals and caricatures of their human observers, blurring the distinctions between dramatic entertainment and scientific education. By incorporating typologies of the human visitors not unlike those found in period *physiologies*, the guides initiated their readers into hierarchies of both species and social class. In the 1860s and 1870s, natural histories with printed illustrations, which often espoused Darwinian ideas, were also becoming increasingly popular with middle-class reading publics in Germany. Their success was due in large part to the promotional efforts of zoologists like Alfred Brehm and Ernst

Haeckel (German, 1834-1919), whose writings were even more widely read in their home country than those of Darwin himself. I argue that the *Thierleben* project allowed its readers to comfortably consume Darwinian ideology through Brehm's articulation of a scientific racism that, while asserting the animal ancestry of all human beings, placed certain colonized, so-called "primitive" races beneath white Europeans. The reader vicariously experienced the psychology and life ways of a huge variety of species across the continents, all the while being tacitly reassured of her evolutionary superiority by the very act of consuming bourgeois scientific texts and images that, for Brehm, defined the apex of humanity. Popularized Darwinist ideas were visually supplemented through the illustrations found in books and journals aimed at the educated bourgeoisie, including both general interest publications such as *Illustrierte Zeitung* (1843-1944) and *Die Gartenlaube* (1853-1944) and more specialized popular science journals like *Der Zoologische Garten* (1859-1922). Brehm's *Thierleben* was one of the most prodigious sources of such images, a ten-volume encyclopedia of the animal kingdom that contained 170 chromolithographs and countless black and white woodcuts by a suite of artists that included Robert Kretschmer (German, 1812-1872), Gustav Mützel (German, 1839-1893) and the brothers Specht. The animals of the *Thierleben* are actors living in lushly rendered habitats, viewed as though chancely encountered "in the wild." Brehm, as a proudly proclaimed "field" naturalist, insisted on written and drawn depictions of animals that captured their behavior and psychology and not simply their anatomical components.

In the fifth and final full chapter, I discuss how the unsettling sense of creaturely embodiment and alterity was investigated by Adolph von Menzel (German, 1815-1905) and Gustave Courbet (French, 1819-1877). In his deer paintings, Courbet utilized the monumental format characteristic of history painting to lend a psychologically charged dramatic significance

to the infighting and rutting of the central figures. Courbet pictured an expansive range of human-animal relations in these canvases through a deft play on the viewer's perspectival positioning. The bystander of the enormous *Spring Rut* becomes deeply imbricated in, rather than distantly preoccupied with, the non-human world, placed far closer to the life-size male deer's infighting than hunterly discretion would usually allow. By contrast, Menzel's *Kinderalbum* (1863-1883) series consists of intimately sized gouache paintings viewed in a horizontal album format. These images engage in a reversal of the typical human-animal viewing relationship by positioning the observer *inside* birdcages, chicken coops and zoological displays and placing her under the scrutiny of other human spectators. In each case, the viewer finds herself an inextricable part of the non-human world, in line with early theories of ecology. But in contrast with the Géricault and Rode paintings of the opening chapter, the human figure is visually evacuated from the painted space, apart from this implicit insertion of the observer. I conclude by asking what these paintings might suggest about the increasingly scientific, positivist outlook on human embodiment and animality in the closing decades of the century.

In the epilogue, I consider the afterlife of animal painting and its tropes in present-day wildlife photography, reflecting on the comparatively distant approach to animal forms now permitted by modern technology like the camera trap. While the practice of animal painting in many ways seems a bygone profession, I argue that the structuring narrative tropes of the predatory hunt, the peaceful cattle scene and the lush, exotic animal tableau continue to recur in today's most popular forms of nature imagery.

The perceived separation between "humanity" and "nature" found in nineteenth-century animal painting feels ever more pronounced in the technologically mediated and urbanized twenty-first century. Given the urgency of ecological crisis confronting us now, the examination

of the historical roots of this attitude takes on an added importance. The ethical balance of acknowledging the alterity of other species, without thereby distancing ourselves from their concerns, might be productively thought through in the medium of images, wherein this dynamic presents itself in an especially visceral form.

Figures:



Figure 1.2: Rosa Bonheur (and decapitated Rosa Bonheur mannequin), *Deer Studies*, oil on board, Château de By, Thomery, Photograph by the author, August, 2019).



Figure 1.2. Rosa Bonheur mannequin, various materials, Château de By, Thomery, photograph by the author, (August 2014).



Figure 1.3. Post-rehab Bonheur studio Scarlett Macaw, taxidermy, Château de By, Thomery, photograph by the author (August 2019).

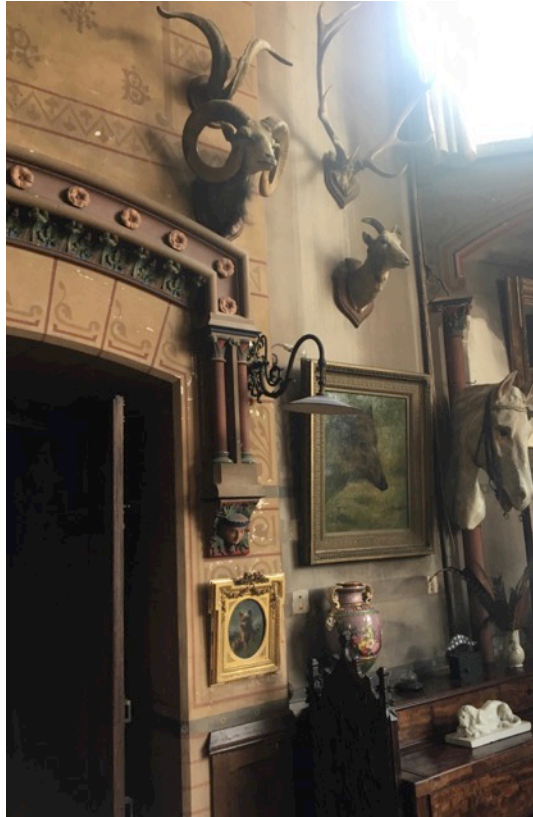


Figure 1.4. Château de By wall, photograph by the author, (August 2019).



Figure 1.5. Rosa Bonheur, *An Old Monarch*, etching, 1879, Château de By, Thomery, photograph by the author, (August 2019).



Figure 1.6. The Braith-Mali Atelier, Braith-Mali Museum, Biberach an der Riß, photograph by the author (December 2017).



Figure 1.7. St. George Slaying the Dragon, Braith-Mali Atelier, Biberach an der Riß, photograph by the author, (December 2017).



Figure 1.8. Braith-Mali Atelier, detail, photograph by the author, (December 2017).



Figure 1.9. Charles Jacque, *Le Poulailier*, oil on canvas, 19th century, Photograph courtesy of Museo Nacional de Bellas Artes, Buenos Aires.



Figure 1.10. Paulus Potter, *The Young Bull*, Oil on canvas, 1647, Photograph courtesy of the Mauritshuis, The Hague.



Figure 1.11. Frans Snyders, *Still Life with Dead Game, Fruits, and Vegetables in a Market*, Oil on canvas, 1614, Photograph courtesy of the Art Institute of Chicago.



Figure 1.12. Frans Snyders, *A Larder*, Oil on canvas, before 1636, Photograph courtesy of Museo del Prado.



Figure 1.13. George Stubbs, *Mares and Foals in a River Landscape*, oil on canvas, ca. 1763-8, Tate Britain, London.



Figure 1.14. Jean-Baptiste Oudry, *Rhinoceros*, oil on canvas, 1749, Getty Museum, Los Angeles.



Figure 1.15. Edwin Landseer, *The Old Shepherd's Chief Mourner*, oil on canvas, 1837, photograph courtesy of the Victoria and Albert Museum, London.



Figure 1.16. Rosa Bonheur, *Plowing Scene*, oil on canvas, 1854, Walters Art Museum, Baltimore.



Figure 1.17. Rosa Bonheur, *Two Goats*, oil on canvas, ca. 1896, Milwaukee Art Museum, photograph by the author.



Figure 1.18. Adolph von Menzel, *Falcon attacking a pigeon/Falke attackiert Taube*, oil painting, 1844, Alte Nationalgalerie, Berlin.



Figure 1.19. Adolph von Menzel, *The Rat in the Gutter/ Die Ratte im Rinnstein* from the *Kinderalbum*, Gouache on vellum, 1863-83, Photograph courtesy of Kupferstichkabinett, Berlin.



Figure 1.20. Adolph von Menzel, *The Kingfisher in the Arbor/ Die Blauspecht im Laub* from the *Kinderalbum*, Gouache on vellum, 1863-83, Photograph courtesy of Kupferstichkabinett, Berlin.



Figure 1.21. Adolph von Menzel, *Yak Steer in Bamboo/Der Yak-Stier im Bambus* from the *Kinderalbum*, Gouache on vellum, 1863-83, Photograph courtesy of Kupferstichkabinett, Berlin.

Bibliography:

Agamben, Giorgio. *The Open: Man and Animal*. Palo Alto: Stanford University Press, 2003.

Ames, Eric. *Carl Hagenbeck's Empire of Entertainments*. Seattle: University of Washington Press, 2008.

Anderman, Barbara. "Félibien and the Circle of Colbert: A Reevaluation of the Hierarchy of Genres." In *Ordering the World in the Eighteenth Century*, edited by Diana Donald and Frank O'Gorman, 143-162. New York: Palgrave Macmillan, 2006.

Artinger, Kai. *Von der Tierbude zum Turm der blauen Pferde: die künstlerische Wahrnehmung der wilden Tiere im Zeitalter der zoologischen Gärten*. Berlin: Reimer, 1995.

Baratay, Eric and Elisabeth Hardouin-Fugier. *Zoo: A History of Zoological Gardens in the West*. London: Reaktion Books, 2002.

Baudement, Emile. *Les races bovines au Concours universel agricole de Paris en 1856*. Paris: Imprimerie impériale, 1861-62.

Bommelaer, Claire. "Katherine Brault ou la passion Rosa Bonheur." *Le Figaro*, October 3, 2019. <https://www.lefigaro.fr/culture/katherine-brault-ou-la-passion-rosa-bonheur-20191003>.

Brauer, Fae and Barbara Larson, eds. *The Art of Evolution: Darwin, Darwinisms, and Visual Culture*. Hanover, NH: Dartmouth College Press, 2009.

Collis, Rose. *Portraits to the Wall: Historic Lesbian Lives Unveiled*. London: Bloomsbury Publishing, 2016.

Cuvier, Georges. *Le règne animal distribué d'après son organisation, pour servir de base à l'histoire naturelle des animaux et d'introduction à l'anatomie comparée*. Paris: Chez Déterville et Chez Crochard, 1829-30.

Darwin, Charles. *The variation of Animals and Plants Under Domestication*. London: J. Murray, 1868.

Derrida, Jacques. *The Animal That Therefore I am*. Translated by David Willis. New York: Fordham University Press, 2008.

Donald, Diana and Jane Munro, eds. *Endless Forms: Charles Darwin, Natural Science and the Visual Arts*. New Haven: Yale University Press, 2009.

- Donald, Diana. *Picturing Animals in Britain*. New Haven: Yale University Press, 2007.
- Eisenman, Stephen. *The Cry of Nature: Art and the Making of Animal Rights*. London: Reaktion Books, 2013.
- Foucault, Michel. *The Order of Things: An Archaeology of the Human Sciences*. New York: Routledge, 2001.
- Fudge, Erica. *Perceiving Animals: Humans and Beasts in Early Modern English Culture*. New York: St. Martin's Press, 2000.
- Gautier, Théophile. *Explication des ouvrages de peinture, sculpture, gravure, lithographie et architecture des artistes vivants étrangers et français, exposés au Palais des beaux-arts ... le 15 mai 1855*. Paris: Michel Lévy frères, 1857.
- Goodall, Frederick. *The Reminiscences of Frederick Goodall, R.A.* London: Walter Scott Publishing Co., 1902.
- Gossin, Louis. *L'agriculture française: principes d'agriculture appliqués aux diverse parties de la France*. Paris: Imprimerie de J. Claye, 1858.
- Grimm, Wilhelm and Jakob. *Deutsches Wörterbuch*. http://woerterbuchnetz.de/cgi-bin/WBNetz/wbgui_py?sigle=DWB&mode=Vernetzung&hitlist=&patternlist=&lemid=GT03513#XGT03513.
- Haraway, Donna. *The Companion Species Manifesto*. Chicago: Prickly Paradigm Press, 2003.
- Hardouin-Fugier, Elisabeth. *Le peintre et l'animal en France au XIXe siècle*. Paris: Editions de l'Amateur, 2001.
- Hornstein, Katie. "From Museum to Menagerie: Théodore Géricault and the Leonine Subject." *Art Bulletin* 101 (2019): 26-47.
- Jacque, Charles. *Le Poulailleur, monographie des poules indigènes et exotiques*. Paris: Librairie agricole de la maison rustique, 1878.
- Keisch, Claude. *Adolph Menzel, 1815-1905: Between Romanticism and Impressionism*. New Haven: Yale University Press, 1996.
- Kort, Pamela and Max Hollein. *Darwin: Art and the Search for Origins*. Frankfurt: Schirn Kunsthalle, 2009.
- Koslow, Susan. *Frans Snyders: The Noble Estate, Seventeenth Century Still-Life, and Animal Painting in the Southern Netherlands*. Antwerp: Fonds Mercator Paribas, 1995.

Littre, Émile, *Dictionnaire de la langue française*. Paris: Hachette, 1872-77.
<https://www.littre.org/definition/animalier>.

Potts, Alexander. "Natural Order and the Call of the Wild: The Politics of Animal Picturing," *Oxford Art Journal* 13, no. 1 (1990): 12-33.

Ritvo, Harriet. *The Animal Estate: The English and other Creatures in the Victorian Age*. Cambridge, MA: Harvard University Press, 1987.

Ritvo, Harriet. *The Platypus and the Mermaid, and Other Figments of the Classifying Imagination*. Cambridge, MA: Harvard University Press, 1997.

Rothfels, Nigel. *Savages and Beasts: The Birth of the Modern Zoo*. Baltimore: Johns Hopkins University Press, 2002.

Schlegel, Hermann. "Zweck und Eigenschaften Naturkundlichen Abbildungen." In *Die zoologische Buchillustration: ihre Bibliographie und Geschichte vol. 2*, edited by Claus Nissen, 231-239. Stuttgart: Anton Hiersemann, 1978.

Schopenhauer, Arthur. *The World as Will and Representation, Vol. 1*. Translated by Judith Norman et al. Cambridge, UK: Cambridge University Press, 2010.

Spickernagel, Ellen. *Der Fortgang der Tiere: Darstellungen in Menagerien und in der Kunst des 17.-19. Jahrhunderts*. Cologne: Bohlau, 2010.

Tiergarten Schönbrunn. "The World's Oldest Zoo." Accessed June 4, 2020.
<https://www.zoovienna.at/en/zoo-and-visitors/welcome-worlds-oldest-zoo/>.

Thomas, Keith. *Man and the Natural World: a History of the Modern Sensibility*. New York: Pantheon Books, 1983.

"Über das Museum." Accessed June 5, 2020. <https://biberach-riss.de/Tourismus-Kultur-Freizeit/Kultur/Museum-Biberach/%C3%9Cber-das-Museum/>.

Chapter 2: Creaturely Classicism: Christian Bernhard Rode's *Tieranatomisches Theater* Frescoes and Théodore Géricault's *The Race of the Riderless Horses Series*

Following a French archaeological mission (*l'Expedition Morée*) to Greece in 1829, the natural historian Étienne Geoffroy Saint-Hilaire (French, 1772-1844), who served as a member of the team, gave an address to the Parisian *Académie des Sciences* concerning its findings. Most significantly, the mission had uncovered fragments of the Temple of Zeus at Olympia. The sculpted bas-reliefs on metopes, which the team then attributed to the sculptor Alcamenes, depict the labors of Heracles.³⁵ Geoffroy wondered aloud to the Academy why there had not been further speculation about the breed, species and other biological characteristics of the creatures depicted in the cycle, despite their mythical origins:³⁶

I return to the impressions that I received before the fragments of the bas-relief, which were first deposited at the Ministry of the Interior. What are the animals represented at the time of Phidias and Alcamenes, this Nemean Lion, this Lernaean Hydra, this Cretan Bull, this Erymanthian Boar, etc.? In what degree was animal nature consulted? There are many breeds or species of lions, of boars, of bulls, of large serpents. To the present day, popular sentiment has been content with the ideas vaguely expressed by these generic names, and has not attached to them any importance... Why should the zoological outlook, become in our days more profound and powerful, not be newly employed at researching, at uncovering that which may be true or

³⁵ The sculptures are currently attributed to an unknown "Master of Olympia." The fragments discovered in 1829 by an expedition led by A. Blouet and J.J. Dubois are now located in the Louvre; a second series of digs at the Olympia site by a German-led team between 1875 and 1881 uncovered additional fragments that are now displayed at the Olympia Museum in Greece. "Les sculptures du temple furent réalisées vers 460 av J.C., sans que l'on puisse mettre un nom sur la personnalité du <<Maître d'Olympie>> qui fut chargé de la conception de ce programme. Les études les plus récentes tendent à y voir un sculpteur d'origine lacédémonienne, travaillant avec de nombreux collaborateurs, et largement ouvert aux influences des autres grands ateliers de sculpture grecque de son temps." Marianne Hamiaux, *Les Sculptures Grecques 1. Des origines à la fin du IV^e siècle avant J.C.* (Paris: Éditions de la Réunion des musées nationaux, 2001), 111.

³⁶ Étienne Geoffroy Saint Hilaire, "Essai pour servir à la détermination de quelques animaux sculptés dans l'ancienne Grèce, et introduits dans un monument historique enfoui durant les désastres du troisième siècle," (Paris: J.Didot L'ainé, c. 1830), 2.

borrowed from the imitation of nature, in these picturesque conceptions, in the most mannered products of art?³⁷

In this passage, Geoffroy questioned a seemingly agreed upon separation between the studies of the natural historian on the one hand and the analysis of art and Classical society on the other. Even though the creatures portrayed were partly or fully fantastical in their bodily conformation (certainly there was no archaeological record of an actual hydra), Geoffroy nevertheless asserted that ancient artists could not produce forms wholly unknown to them and that the zoologist might therefore extrapolate useful knowledge from these depictions. He anticipated the criticism from archaeologists that the cycle, which they interpreted as an allegory of the twelve signs of the Zodiac, derived from Indian cosmology, might form a poor basis for a “Greek zoology.” He questioned whether the Greeks had in fact adopted these Indian fables and proceeded in the rest of his speech to speculate on the species and breed of the Cretan Bull, Erymanthian Boar and Nemean Lion (figs. 2.1-2.3), whose very appellations, he pointed out, referenced Hellenic geography. The various tales involve Heracles either killing beasts or taming them into submission to be brought back to civilization. The zoologist therefore read them as mythologized representations of historical human struggles to contain animal populations--a history he was careful to confine within Western, European boundaries.

³⁷ Ibid, 3. “Qu’ étoient les animaux représentés au temps de Phidias et d’ Alcamène, ce lion de Nemée, cette hydre de Lerne, le taureau de Crète, le sanglier d’ Érymanthe, etc? Dans quelle mesure la nature animale d’ alors avoit-elle été consultée? Il y a plusieurs races ou espèces de lions, de sangliers, de taureaux, de grands serpents. Jusqu’ à present le sentiment populaire s’ étoit contenté des idées un peu vagues exprimées par ces noms generiques, et l’ on n’ y avoit attaché aucune importance. Pourquoi le sentiment zoologique, devenu de nos jours plus profound et plus puissant, ne seroit-il pas de nouveau employé à chercher, à démêler ce qu’ il peut y avoir de vrai, ou simplement d’ emprunté à l’ imitation de la nature, dans ces conceptions pittoresques, dans les produits les plus maniérés de l’ art?” (All translations unless otherwise noted are my own.)

Geoffroy conceded that the reliefs were in many respects not anatomically accurate by present-day standards. The Nemean lion has, he observed, teeth more closely resembling those of a horse, whether to seem more menacing (the average adult horse has more teeth than a lion) or simply because equine dentition was more familiar to the artistic practitioners of the time.³⁸ He nonetheless utilized other traits to designate species, confidently declaring the Bull to be the extinct aurochs and the Lion to be a relative of a still extant Syrian variety.³⁹ He concluded that artists from this period were bound to a different sense of verisimilitude, were less faithful copyists than conveyors of an animal's personality and vitality, its "poetic essence."⁴⁰ In this manner, Geoffroy's analysis involved an intriguing combination of rigorous taxonomic attribution and sensitivity to differing historical notions of representational naturalism. He offered the customary praise of Classical sculpture as an art historical touchstone while arguing for a more scientific approach to the subjects it represented. The artistic renderings of these animals, which received Geoffroy's commendation in spite of the above-noted peculiarities, were treated not only as aesthetic exemplars but natural historical documents of defunct or endangered species, of human-animal relations. Such objects could, it was implied, be used to historicize nature, to assert its fundamental changeability.

Perhaps not coincidentally, the speech was delivered only a year after the famed Cuvier-Geoffroy debates of 1830. That series of conversations between the two eminent natural

³⁸ Geoffroy possessed considerable expertise on the topic of mammalian dentition, as manifested in an entire monograph dedicated to the subject: *Système dentaire des mammifères et des oiseaux, sous le point de vue de la composition et de la détermination de chaque sorte de ses parties, embrassant sous de nouveaux rapports les principaux faits de l'organisation dentaire chez l'homme* (Paris: Crevot, 1824).

³⁹ Ibid, 10. Geoffroy referenced Herodotus' account of the times of Xerxes, during which lions could still be found in Thrace and Macedonia.

⁴⁰ Ibid, 16. "...car ce qui a pu contenter cet artist [Alcamene] selon les idées de son temps, nous paroît passer à des effets d'indifférence pour l'exactitude. D'autres moeurs nous ont fait aujourd'hui les homes de la précision. Nous voulons laisser aux faits tous les enseignements de leurs conditions matérielles, quand on ne vouloit retirer d'eux autrefois que la manifestation de leur essence poétique."

historians also occurred at the weekly Monday meetings of the *Académie des Sciences* and addressed the disputed validity of species mutability, with Geoffroy staunchly defending an evolutionary theory of nature against Cuvier's objections.⁴¹ The animal species surrounding mankind could thus possess as much of a history as the nineteenth century French intellectuals who defined themselves against an ancient Hellenic past. Humans and animals alike became subjects of narrative progress, a progress that could be allegorized in a series of overcomings like the labors of Heracles.

Geoffroy's treatment of the reliefs was also in line with an increasingly archaeological, scientific approach to antiquity following the famous eighteenth century discoveries of the Herculaneum and Pompeii. Close examination of excavated material remnants, both natural and man-made, rather than exclusive reference to ancient texts, began to define the study of the Greco-Roman past and its presumed influence on Western society.⁴² This intellectual environment made it possible to subject the arts of antiquity to a zoological reading. Geoffroy presented a form of natural and human history inscribed in the portrayals of the animals. Genus and geographic origin is written in their coats, dispositions and skeletal structures, as mediated by the sculptor.

Classicizing motifs similarly inflected eighteenth and nineteenth century European artists' depictions of human-animal relations and the imagined history thereof, as this chapter will address. In the decades prior to Geoffroy's speech, classical and scientific ideals of creaturely bodies formed intriguing representational alliances and tensions in painting, particularly in works by practitioners not usually designated as animal genre painters. Themes of

⁴¹ For a comprehensive historical discussion of the debate, see Toby Appel, *The Cuvier-Geoffroy Debate: French Biology in the Decades Before Darwin* (Oxford: Oxford University Press, 1987).

⁴² For more on these developments, see Noah Heringman, *Sciences of Antiquity: Romantic Antiquarianism, Natural History, and Knowledge Work* (Oxford: Oxford University Press, 2013).

animal domestication and its precarity were adopted in an especially striking manner by Théodore Géricault (French, 1791-1824) in his *Race of the Riderless Horses/ Course des Chevaux Libres* (1817) sequence of oil paintings and Christian Bernhard Rode's (German, 1725-1797) decorative program in Berlin's first veterinary anatomy theater, the *Tieranatomisches Theater* (1790). Both series feature animal and human bodies intertwined in unresolved conflict, juxtaposing nude (or nearly nude), Neo-Classical male anatomy with the imposing musculature of the creaturely bodies.

In the works examined in this chapter, the artists primarily turned their attention to the animal form, a subject which received far less consideration in a history painter's training as compared to the study of the prototypically masculine human nude (*académie* in French, *Akt* in German) exhaustively documented in accounts of period art academies.⁴³ While classical male nudes (or partial nudes, in the case of Géricault) do appear in these works, they remain ancillary to their animal counterparts, who, I argue, function as the protagonists of the scenes of contagion and containment. The creatures constantly threaten to escape their keepers and the space of the paintings, effectively taking center stage. In the case of Rode's veterinary frescoes, these human-animal entanglements are further structured by the incalculable element of pathogens such as bovine plague (often referred to by its German name, *Rinderpest*) a disease that decimated both domestic animal populations and the domestic economies dependent upon their contributions. The professionalized dissection of the animal body promised to be a revelatory act, exposing the inner workings of illness and offering students new insights for potential treatments. Similarly, the horses of Géricault's paintings seem driven by inner impulses only poorly understood by the

⁴³ Thomas Crow, in *Painters and Public Life in Eighteenth Century Paris* (New Haven: Yale University Press, 1985) among many other monographs, notes the especial emphasis placed on the study of the male nude for history painting in the eighteenth and early nineteenth century Continental art academies.

grooms that restrain them, as well as the viewer. They are about to be sent off into an urban realm temporarily evacuated for equines only, violently goaded on by their human overlords. Invisible animal vitality infuses Rode and Géricault's tableaux with motion and power, while remaining less legible than the human motivations of known historical subjects. The closely grouped animal bodies of these paintings exceed the limits of both the frame and contemporaneous norms of representation. The mysteries of animal interiority structure Rode and Géricault's depictions. The revelations to be gleaned from animal innards were the literal purpose of the *Tieranatomisches Theater's* construction, while the unknown nature of the equine psyche lends the *Race* paintings their unsettled, and unsettling, force.



Creation and Contagion: Bernhard Rode's *Tieranatomisches Theater* Frescoes

In the Berlin veterinary anatomy theater, the usually mundane activities of animal culture are placed in a literally and figuratively elevated space of Greco-Roman allegory. Designed by architect Carl Gotthard Langhans (German, 1732-1808) (of subsequent Brandenburg Gate fame) and built as part of the newly founded Prussian veterinary school, the *Tieranatomisches Theater* equates animals and humans in the decorative program of trompe l'oeil grisaille friezes encircling the central dome, as envisioned and painted by Rode. Each of the eight narrative panels portrays nude (or lightly draped) men bookending and thereby confining animal groups arranged by species. These muscular men prime cavalry horses for battle (figs. 2.4-2.5) and prepare to kill plague-stricken cattle (fig. 2.6), in addition to participating in more peaceable scenes of herding goats (fig. 2.7), sheep (fig. 2.8), dogs (fig. 2.9) and wild boars (fig. 2.10) and attending a calf's birth (fig. 2.11). Rode thereby presented an acknowledgement of human civilization's troubled basis in animal materiality as ennobled through classicizing aesthetics.

During the artist's lifetime, the frescoes were among his most celebrated accomplishments. As Prussian sculptor Johann Gottfried Schadow (1764-1850) discussed in *Kunstwerke und Kunstansichten*, enumerating his colleague's most notable public commissions: "From B. Rode: The Altar paintings in our Churches, the honorary paintings of four generals in the garrison church and the group of grisaille frescoes in the King's Veterinary School, are the most successful products of his paintbrush and palette."⁴⁴ While monographic studies of Langhans' architectural scheme for the theater have emerged, comparatively little has been written about Rode's decorative program.⁴⁵

In the following, I argue that Rode sanctified the often socially denigrated practices of animal medicine and agriculture through the deployment of antique motifs and an illusionistic ceiling fresco format, while simultaneously challenging classical ideals touting the preeminence of the human form. Though the men in the fresco panels dominate the beasts in their care, they also coexist with them in a naked, primeval state. The artist thus created a visual equilibrium between the human and animal bodies that emphasized the commensurate nature of human and animal medical practices. The represented creatures' prominence in comparison to the men instills a sense of their power and gravitas, even as the actual bodies dissected in the veterinary theater were perhaps not treated with the same sense of inviolability that surrounded the Christian human form. Moreover, the incursion of the animal corpus into human medicine was still the source of some discomfiture among eighteenth century Prussians. Notably, the use of animal-derived serums for the treatment of smallpox was met with controversy. The absorption

⁴⁴ Johann Gottfried Schadow, *Kunstwerke und Kunstansichten* (Berlin: Deckerschen, 1849).

⁴⁵ The most expansive recent monograph on the subject of the *Tieranatomisches Theater* remains Jens-Oliver Kempf's *Die Königliche Tierarzneischule in Berlin von Carl Gotthard Langhans: eine baugeschichtliche Gebäudemonographie* (Berlin: Gebr. Mann, 2008). This publication only dedicates a brief section to Rode's decorative program, with the vast majority of the text devoted, as the title suggests, to an architectural history of the building and Langhans' career and influences.

of animal substance into the human bloodstream was viewed by some scientists as a dangerous desecration. While cowpox and smallpox were understood to possess similar characteristics and origins, especially given the observed immunity of milkmaids to the smallpox virus, the interspecies intermixture of secretions provoked unease, even repulsion.⁴⁶ Yet while the practice of animal healing on the part of farmers, farriers and other lower-class subjects was often treated dismissively by medical doctors, members of the professional and amateur scientist ranks, even including so eminent a figure as Johann-Wolfgang von Goethe (German, 1749-1832) recreationally attended animal dissection demonstrations put on by private societies of scientific and humanistic intellectuals at the turn of the nineteenth century. An intellectualized, Enlightenment interest in the workings of the body could apparently override visceral disgust.⁴⁷ The class coding of the study of the animal body contributed strongly to its social prestige in the case of the anatomy theater and the intellectual societies, and its denigration in the instance of the informally trained, rural animal healer.

However, Rode's contemporaries, and the art historical literature, have frequently remarked upon the anatomical inaccuracies in his artworks, making him an unusual choice to decorate a building dedicated to the study of the body.⁴⁸ The frescoes preceded the institution of animal anatomy courses and the later development of the narrative animal painting genre in the

⁴⁶ Hannah Lotte Lund, "Fließig Anatomisiert," in *Tiefe Einblicke: das anatomische Theater im Zeitalter der Aufklärung* (Berlin: Kulturverlag Kadmos, 2018), 133.

⁴⁷ Lund, 144. For more on Goethe's study of animal anatomy, see Andrew Piper, "Vertiginous Life: Goethe, Bones and Italy," in *Marking Time: Romanticism and Evolution*, ed. Joel Faflak (Toronto: University of Toronto Press, 2017), 173-199.

⁴⁸ Helmut Börsch-Supan, *Die Deutsche Malerei von Anton Graff bis Hans von Marées, 1760-1870* (Munich: C.H. Beck, Deutscher Kunstverlag, 1988).

Germanic states in the mid-nineteenth century.⁴⁹ They thus grapple awkwardly with how best to center mammalian subjects in publicly commissioned painting.

The fresco figures, in their unruly actions and bodily excesses, deviate from Prussian reinterpretations of Greco-Roman ideals then in wide circulation. Johann Joachim Winckelmann (1717-1768), as the preeminent German spokesman of the antique tradition, posited “stillness” and “tranquility” as the essence of artistically rendered beauty, a beauty that he felt reached its apex in ancient Greek art, particularly sculpture. Per Winckelmann, the perfection of godly figures was manifested through their youthful lack of visible “nerves and tendons,” which functioned as “an expression of divine sufficiency, which has no need for those parts dedicated to nourishing the body.”⁵⁰ The immortal bodies that signaled Classicism’s greatest achievements thereby seemed to possess none of the organs and conduits that formed the dissection theater’s primary object of study. Yet, as Winckelmann noted, each organism has its own correspondent aesthetic appeal, an appeal that he however did not theorize in the case of bestial forms, which he only defined negatively with relation to the human. According to his writings, the closer a human being’s apparent resemblance to an animal, the more his physical “harmony” and “unity” were disturbed, disturbances that he troublingly postulated as “deviations” from a white, European physical “norm.”⁵¹ Indeed, the very act of dissection as then practiced in the Germanic states was premised on distancing its objects from any perceived sense of humanity. Deceased animals could be examined without the same moral qualms that surrounded human dissections, which were, in turn, generally performed on subaltern subjects. Capital punishment victims, suicides,

⁴⁹ Kai Artinger, *Von der Tierbude zum Turm der blauen Pferde: die künstlerische Wahrnehmung der wilden Tiere im Zeitalter der zoologischen Gärten* (Berlin: Dietrich Reimer Verlag, 1995), 17-19.

⁵⁰ Johann Joachim Winckelmann, *History of the Art of Antiquity*, trans. Harry Francis Mallgrave (Los Angeles: Getty Publications, 2006), 202.

⁵¹ Winckelmann, *History of the Art of Antiquity*, 193-194.

the poor, the psychiatrically hospitalized, and unwed mothers who died in childbirth were among the legally acceptable sources of dead bodies for public dissection in eighteenth century Prussia.⁵² Laws permitting the use of unclaimed and unburied bodies, usually of the impoverished, became widespread throughout eighteenth-century continental Europe when the supply of deceased criminal bodies (the most typical source prior to this period) proved insufficient for universities and medical academies. Nevertheless, the act of public dissection was still perceived to be a source of shame, given its long association with criminal punishment.⁵³ The creaturely corpse, unburdened by Christian concerns around the sanctity of the human body and its burial, could serve the causes of medicine and artistic education with comparatively little controversy. Nonetheless, all the animal bodies depicted by Rode remain unopened and intact, their grisaille tones implying figures made of stone rather than fur or flesh. The intact nature of the figures in Rode's paintings better accorded with the classicizing style outlined by theorists like Winckelmann, while also deviating from that author's primary emphasis on the idealized, normative male human form, which has been literally and figuratively sidelined in the fresco panels.

The representational elision of the dissected body may also be explained by the fact that the artist did not have occasion to witness many animal dissections in the first place. The establishment of the anatomy theater allowed subsequent generations of academically trained artists to receive this kind of state-sponsored instruction in the animal form in a manner less widely available in Rode's lifetime. A "Klasse für Tierzeichnen" (Course for animal drawing) was first instituted at the *Preußische Akademie der Künste* in 1827. The first professor of the

⁵² Marian Mieke, in *Tiefe Einblicke: das anatomische Theater im Zeitalter der Aufklärung*, 27-28.

⁵³ Sanjib Kumar Ghosh, "Human Cadaveric Dissection: a Historical Account from Ancient Greece to the Modern Era," *Anatomy and Cell Biology* September 2015 48 (3): 153-169.

“Tierklasse”, Friedrich Bürde, was also employed as an instructor at the Berlin veterinary academy (*Tierarzneischule*) and received his full salary through that school’s funds.⁵⁴ In the Art Academy’s discussion of Bürde’s appointment in February of 1827, he was tasked with teaching “*Tiermalerei, nicht ausschliesslich für Pferde*” (“animal painting, not exclusively for horses”) reflecting the priorities of the *Tierarzneischule*’s founding. As this statement implies, earlier instruction at the *Akademie*, when it did manage to include animal anatomy, almost exclusively focused on the depiction of horses for the purposes of training artists in the production of battle painting and equestrian portraiture of the royalty and nobility.⁵⁵ Prussian government officials, during the founding of the *Tierarzneischule*, similarly felt the need for a broader-based curriculum in animal anatomy than that offered by other European veterinary schools.⁵⁶ The Berlin institution in particular was established to address the lack of formalized instruction surrounding bovine anatomy and diseases.

Existing European veterinary schools, themselves a recent development, devoted the majority of their coursework to the upkeep of horses, the model aristocratic animal. However, the massive spread of epizootics (animal epidemics) throughout eighteenth-century Europe, especially *Rinderpest*, led to government-sponsored efforts to scientifically professionalize the

⁵⁴ Artinger, 18-20.

⁵⁵ For an extended discussion of artistic training in equine anatomy in nineteenth century Prussia, especially as compared with England and France, see Bernhard Maaz, “Ross und Reiter: Franz Krüger und seine Zeitgenossen,” in *Der Maler Franz Krüger 1797-1857: Preussisch korrekt, Berlinisch gewitzt : Eine Ausstellung der Stiftung Preussische Schlösser und Gärten Berlin-Brandenburg und der Nationalgalerie und des Kupferstichkabinetts der Staatlichen Museen zu Berlin-- Stiftung Preussischer Kulturbesitz*, ed. (Berlin-Brandenburg: Deutscher Kunstverlag, 2007), 78.

⁵⁶ “Protokolle der Sitzungen des Akademischen Senats und Abschriften der Schreiben des Akademischen Senats an das Kultusministerium 1827.” Preussische Akademie der Künste 0075.

long scorned vocations of farriers, “cattle leeches” and other assorted laborers who cared for sick livestock. A general disparity was noted between generally lower human mortality rates and the devastation wrought by animal epidemics in France, leading to the royal sponsorship of veterinary medicine under the rule of Louis XV (reigned 1715-1774). Claude Bourgelat (French, 1712-1779) was thereby awarded the king’s authorization to found the Western world’s first official veterinary school in Lyon on August 4, 1761. This school was formed on the basis of Bourgelat’s existing military riding academy, which was already concerned with the treatment and general good upkeep of cavalry mounts. In this manner, the needs of the military and aristocracy were, from the beginning, prioritized over those of agriculture.⁵⁷ A contemporaneous German text on the Berlin anatomy theater even employed separate terms to refer to horse physicians (*Pferdeärzte*) and veterinarians trained to deal with a variety of animals (*Thierärzte*).⁵⁸ In any event, Bourgelat’s venture proved successful enough to warrant the establishment of a national veterinary school (1765) in Alfort, then on the outskirts of Paris.⁵⁹

The stark bias towards equine medicine in France was noted by two Prussian trainee physicians (*Chirurgi*) sent by King Friedrich II to study at Bourgelat’s academy in 1763. The king hoped the men might learn veterinary techniques that would curb the rapid spread of *Rinderpest* in the war-torn Germanic states. The disappointed *Chirurgi* reported upon their return that they had seen “not a single bit of bovine anatomy; only horses were discussed.”⁶⁰ The limitations of this “horse doctor” curriculum inspired the royal commissioning of a Prussian

⁵⁷ Robert Dunlop and David J Williams, *Veterinary Medicine: an Illustrated History* (St. Louis: Mosby, 1996), 320-323. Dunlop and Williams, both professors of veterinary medicine, have written an encyclopedic treatment of the veterinary profession that includes extended references to, and analysis of, artistic representations of animal care throughout human history.

⁵⁸ Berlin travelogue writer Johann Daniel Friedrich Rumpf makes reference to both “Thier-und Pferdärzte” being trained at the Berlin veterinary school. *Berlin und Potsdam : eine Beschreibung aller Merkwürdigkeiten dieser Städte und ihrer Umgebungen*, vol. 2 (Berlin: G. Hayn, 1823), 104.

⁵⁹ Dunlop and Williams, 320-23.

⁶⁰ Kempf, 22.

veterinary academy in 1767.⁶¹ However, the plans encountered some difficulties with the scientific establishment. Friedrich II's personal physician, Christian Andreas Cothenius (1708-1789), submitted his recommendations for the construction of a purpose-built veterinary theater and the appointment of two to three professors for anatomical lectures. While the treatment of cattle was the most pressing concern, he advocated for course offerings that covered the anatomy "not of the cow alone, but also the horse, pig, sheep, yes even poultry."⁶² If specially appointed professors could not be found, he offered the alternative of employing anatomy professors from the *Königlich Preussischen Akademie der Wissenschaften* (The Prussian Royal Academy of Sciences), a suggestion roundly rejected in a statement from that institution. The study of animal anatomy, the statement suggested, would siphon away precious time and resources from the nobler pursuit of human medicine ("eine edlere Untersuchung sind, als daß man diese durch Thier-Sectiones hindern sollte"). In particular, they objected to the prospect of their professors "burrowing into stinking carrion" in the summer months ("den Sommer über aber, in dem Aas der Thiere zu wühlen").⁶³ It was thus decided in further discussions that the professors of a prospective veterinary school should be offered generous salaries, in order to compensate for their "disagreeable work" ("solcher unangenehmen Arbeit").⁶⁴ Due to such considerations, as well as the delayed submission of architectural plans, the project stalled under Friedrich II's rule and was only completed in 1786-90 under the commission of Friedrich Wilhelm II and the planning of Langhans.

⁶¹ Ibid.

⁶² Ibid, 22.

⁶³ Ibid, 23.

⁶⁴ Ibid.

The dissection theater became the architectural centerpiece of the completed school, the first freestanding veterinary anatomy theater in history.⁶⁵ The elegant design of the building and the classicized frescoes, as well as the idyllic riverside location, served to uplift the denigrated practice of animal healing.⁶⁶ This promotion of the profession evidently extended to the broader public, as the building received mention in multiple period tourist guides to Prussia.⁶⁷

The *Tieranatomisches Theater* was thus established in a moment of shifting attitudes surrounding the anatomical examination of non-human species. It was consecrated by both royal government sponsorship and recourse to styles of Neo-Classical architecture and painting that signified and promoted this official imprimatur. Langhans and Rode produced a space uniform in appearance with other recent Berlin royal architecture, as they were responsible for the decoration and design of numerous other structures constructed around the same time period. Most prominently, Rode also drew preliminary compositions for the relief sculptures executed by Schadow to decorate the Brandenburg Gate (constructed between 1788 and 1791). One of the first major public structures of the Neo-Classical style in an eighteenth century Berlin previously dominated by French baroque and rococo fashions, the gate was accordingly ornamented with the quintessentially Greco-Roman motif of the labors of Heracles/Hercules. The panels of Heracles grappling with the man-eating horses of Diomedes (fig. 2.12) and the Cretan bull in

⁶⁵ Horst Bredekamp, *Die Wissenschaft als Bauherr? Skizzen zur Architekturgeschichte der Humboldt-Universität*, <https://edoc.hu-berlin.de/handle/18452/3154>, 2000.

⁶⁶ “War es schon bei der Grundstückswahl deutlich, daß keine Kosten gescheut werden, so erkennt man in der Beauftragung Langhans endgültig, mit welcher Großzügigkeit die Gründung der Schola Veterinaria durchgeführt werden soll.” Schröder, 159.

⁶⁷ The lecture theater, as well as Rode’s paintings, receive mention in Johann Daniel Friedrich Rumpf, *Berlin und Potsdam : eine Beschreibung aller Merkwürdigkeiten dieser Städte und ihrer Umgebungen*, vol. 2; *Almanach zur Kenntnis der Preußischen Staaten für Reisende und Einheimische von 1795* (Berlin: Spener, 1795) and Friedrich Nicolai, *Beschreibung einer Reise durch Deutschland und die Schweiz* (Berlin and Stettin, 1796).

particular recall the frescoes in the *Tieranatomisches Theater*.⁶⁸ In Rode's drawing of the horses, Heracles, who remains nude apart from the Nemean lion pelt cloaking his shoulders, tenses arms, calves and buttocks in an attempt to hold three of the horses, which form a layered, recessional group, at bay. The palpable physical tension between the captive animals and the human beings restraining them is likewise the recurrent theme of the *Tieranatomisches* frescoes, albeit with a more direct connection to the pragmatic purposes served by the building.

Rode's paintings cover the entire surface of the dome, which shelters a lecture hall of raised, circularly arranged benches, from which dissections and other anatomical demonstrations could be viewed. The seating arrangement closely followed that of the contemporaneous Berlin medical anatomy theater, *Theatrum anatomicum berlinense* (fig. 2.13) and accommodated approximately 140-150 students, forty of whom were taking part in a three year training course for military veterinarians.⁶⁹ Other students interested in learning about veterinary science could visit the lectures for a fee and usually another thirty to forty civilians were present in the hall during demonstrations. To accommodate these demonstrations, an ingeniously designed moveable platform, modeled on those found in period theatrical stages, was installed in the floor such that heavy horse and cow cadavers could be elevated from the basement level into the theater. By the 1820s, rooms located alongside the central anatomical theater contained a library, as well as displays of skeletons, taxidermied animals, wet and dry preserved remains, surgical instruments and horseshoes. The veterinary school grounds also provided housing for

⁶⁸ Jens-Oliver Kempf draws this comparison in his monograph on Carl Gotthard Langhans' design of the Berlin veterinary academy. *Die Königliche Tierarzneischule in Berlin von Carl Gotthard Langhans: eine baugeschichtliche Gebäudemonographie* (Berlin: Gebr. Mann Verlag, 2008), 181.

⁶⁹ Kurt Schröder, ed. *Veterinärmedizin in Berlin, 1790-1965; Geschichte, Lehre und Forschung heute, der Tierarzt im Sozialismus* (Berlin: Humboldt Universität, 1965), 162.

students, professors, grooms and other relevant staff members; a smithy; structures housing warm, therapeutic horse baths; botanical gardens and stalls for cattle, sheep, pigs and dogs.⁷⁰

Rode's frescoes have been extensively repainted on multiple occasions as part of building restoration, but the theater as a whole remains essentially true to Rode and Langhans' initial plans.⁷¹ A trompe l'oeil garland is hung over the windows and held aloft by the human figures and bull skulls (*bucrania*), encompassing the full circle of the dome (fig.2.14). The separate painted panels, punctuated by arched Palladian windows on each side, are thereby united into a composite program. The *bucranium* perched atop the center of each window references a common architectural element in Doric entablatures alluding to ancient sacrificial rituals. The remains of the bulls sacrificed to the gods (typically Mars, Apollo or Jupiter, who, like many Greco-Roman deities, required sacrifices of a particular species and sex) were often placed in altars. These actual, physical remains were later referenced in ancient temple friezes. The bulls or oxen were sometimes represented as skulls, sometimes presented with furry heads still intact. The Temple of Vespasius and Titus (ca 80 AD) in the Roman Forum was perhaps the most famous example of this trope. The ornaments from this structure were depicted in prints from Antoine Desgodete's *Les Édifices Antiques de Rome* (1682), which became a frequently consulted source for Continental architects and artists working in a classicizing mode.⁷² Andrea

⁷⁰ Johann Daniel Friedrich Rumpf, *Berlin und Potsdam : eine Beschreibung aller Merkwürdigkeiten dieser Städte und ihrer Umgebungen*, vol. 2 (Berlin: C.G. Flittnersche Buchhandlung, 1823), 100-106.

⁷¹ Kempf, *Die Königliche Tierarzneischule*, 183. For a conservator's account of the most recent restoration efforts surrounding the reopening of the *Tieranatomisches Theater* in 2012 under the auspices of Humboldt University, see Thomas Wieckhorst, "Tieranatomisches Theater Restaurierung des von Carl Gotthard Langhans entworfenen Tieranatomischen Theaters der Humboldt-Universität in Berlin" *Bauhandwerk: Das Profimagazin für Ausbau, Neubau und Sanierung*, https://www.bauhandwerk.de/artikel/bhw_Tieranatomisches_Theater_1628730.html, 04/2013.

⁷² Calder Loth, "Bucranium: Classical Comments," modified June 13, 2013, <https://www.classicist.org/articles/classical-comments-bucrania/>. For further discussion of bucrania and sacrificial motifs in ancient art, see George Hersey, *The Lost Meaning of Classical Architecture* (Cambridge: MIT Press, 1988).

Palladio also incorporated *bucrania* into his revival of the Doric order, which served as a direct inspiration to Langhans, who designed the theater with Palladio's Villa Rotonda (1566/7) in mind (figs. 2.15-2.16).⁷³

The men in Rode's friezes, doubling as caretakers and atlases/telamons (the male equivalent of caryatids), present a more or less homogenous array of nude male bodies. Traditional attributes of masculinity, including beards and exaggerated musculature in the chests, arms, legs and buttocks, are on full display--save for the genitalia, which remain decorously covered by drapery and various weapons and farming implements. The generic representation of humanity is thus muscled and male. Women are wholly absent from the decorative program. The muscular, corporeal excess of the figures is further distorted by the curvilinear surface upon which they are painted. Human hips and animal haunches bulge outwards towards the viewer (fig. 2.17). The men exceed their allotted panels, limbs and drapery spilling onto window frames. Bodies repeatedly resist spatial confinement. Despite their evident strength, the men seem overwhelmed by the quantity and energy of the animals. Dogs lick their faces, boars laconically pile themselves at their feet, cows and horses crowd them to the margins of the panels. The herders in the pig and cattle scenes cover their faces with their hands, as though exhausted by their labors, by the dual effort of upholding the garlands and keeping the creatures at bay. At the same time, animals and humans appear inextricably intertwined, atop and astride one another, pushing, pulling, kicking, attributes and appendages falling to the side.

The anatomical distortions reveal a seeming lack of internal structure, a boneless malleability. The dead and dissected animal bodies that provoked so much disgust in the *Tierarzneischule's* critics are neither directly portrayed nor implied in the frescoes, apart from

⁷³ Kempf.

the *bucrania* and the clubbed cow at the foot of the bovine plague scene. In this panel, another cow sways in its death throes alongside the bludgeoned animal. The stolid, Herculean bulk and firmly planted feet of the bearded men who enclose the cattle exert a gravitational pull on the elevated scene. These are not heavenly bodies; the men are weighted down by their labors as much as the animals are by their illness. The men, pressed upon by the weight of the garland and the tools of slaughter appear indifferent to creaturely suffering, their energy discharged into pure physical activity, the cattle serving as mere material supports for their wearied legs. The two cows hovering above their dead companion are its only mourners. Perhaps they await a similar fate themselves.

Across the frescoes, physical containment, as well as anatomical accuracy and legibility, are perpetually compromised by the sheer size and number of the painted figures. Organisms lose their individuality in a space devoted to the investigation of their singular forms. The grisaille style, meant to mimic the appearance of relief sculpture, places the images at an even further degree of remove from scientific examination of specimens. The paintings provide the illusion not of colorful animal bodies, but rather paintings imitating sculptures imitating artworks of the classical past. Any distinctions of breed or individual form are elided by the gray tones and the broadness of Rode's style. The animals are representationally distanced from the mundane, rural sphere to which they were usually consigned, entering the realm of Roman temple sculpture and Christian ceiling painting.

Only the centrally located animals do not participate in the upholding of the painted architectural elements; their placement in the program is of a purely narrational, rather than fictively functional, nature. The building exists for their care and their posthumous dissection. The prominence afforded horses and cattle clearly illustrates the priority placed on those animals

and their study at the Veterinary Academy, which was founded in large part to strengthen the Prussian cavalry and combat widespread bovine diseases, which in turn were often attendant upon military conquests and the massive displacements of people and livestock those events brought about. The arrangement of the frescoes around the dome further emphasizes their centrality to the veterinary anatomy project: the horse frescoes are visible once the viewer steps through the main entrance, while the cattle scenes are located along the theater's transverse axis, with the bovine plague scene also visible upon entry.⁷⁴ The goat and sheep herding panels are also on a transverse axis, with the remaining dog and pig frescoes relegated to the space above the back exit. This was in spite of the fact that shepherding remained the most significant and lucrative form of animal culture in the Germanic states at this time, alongside which cattle herding played a secondary (though still highly important) role.⁷⁵ Mitigating the economic devastation wrought by *Rinderpest* was placed at the forefront of the early veterinary school's training.

These animal subjects furthermore possessed an ethical component for Rode. As a member of the Berlin Enlightenment circle, he contributed to a genre of history paintings and etchings known as *Moral-und Sittenstücke*: moral subjects that presented the viewer with guidelines for an ethically exemplary life guided by reason. Though few of his paintings survive, the artist's etchings repeatedly return to certain creaturely themes, including the rectitude of an agricultural life and the brutality of ancient pagan animal sacrifices.

⁷⁴ Kempf, 180-1. This order might have been changed in the most recent restoration effort by Rudolf Weinrich in 1970. The paintings, due to frequent water damage, have been subjected to numerous restorations from the nineteenth century onwards, beginning with the painter Pelliccia in 1821. As such, their current condition may not fully reflect Rode's initially envisioned program. Kempf, 178.

⁷⁵ Rainer Struwe and Dieter Lötsch, "Die Entwicklung der Tierarzneischule von der Empirie zur Wissenschaft," in Volker Deutrich, *Von der Königlichen Tierarzneischule zur Veterinärmedizinischen Fakultät der Humboldt-Universität zu Berlin* (Munich: 1990), 29.

Despite the thematic of animal care and maintenance found in the *Tieranatomisches* frescoes, Rode also seemed to draw heavily on imagery of ancient Roman animal sacrifice, a motif that has not been remarked upon in existing scholarship on the program, beyond mentions of the *bucrania*. Yet, I argue, these are only the most prominent of the sacrificial references, which can be traced back to the artist's earlier etchings. In *Taurobolium, or Consecration of the Priests of Cybele under Antoninus Pius-Taurobolia Montfaucon/Taurobolium, oder Weihung der Priester der Kybele unter Antoninus Pius (Taurobolia Montfocon)* (fig. 2.18) Rode depicts an ancient Roman ritual cattle sacrifice performed by the cult of Cybele.⁷⁶ As the title suggests, his portrayal is derived from a description of the practice by the French monk and archaeological scholar, Bernard de Montfaucon (1655-1741). In his fifteen volume *Antiquité expliquée et représentée en figures* (1719-1724), Montfaucon discussed an inscription discovered in Lyon in 1705 commemorating the sacrifice of a steer at that site under the rule of Caesar Antoninus Pius in 160 AD. Rode hewed faithfully to the text's representation of antiquity, showing the bovid victim bleeding to death over a platform of planks covered in holes.⁷⁷ Imperial Lictors (guards of the magistrate), carrying their emblematic fasces and standing behind the central sacrificial group, provide a clear indication of the Roman Empire setting. The burly, bare-chested figure at the far left studiously holds the ox's head to the side in order to insert a knife into its neck. The animal responds to this action with a subtle but unsettling expression of agony, its tiny eye wide open, its tongue bloating forth from its mouth. An axe leans against its stomach, hinting at earlier

⁷⁶ Interestingly, the remaining sources documenting the *taurobolium* are almost exclusively textual, comprising commemorative inscriptions uncovered by archaeologists and a smaller number of literary texts, mostly by Christian apologists condemning the pagan practice. Scholarly studies of the ritual first appeared at the beginning of the eighteenth century. As Robert Duthoy writes, "When in the fourth century of our era the struggle between paganism and Christianity was at its fiercest and it was gradually becoming clear that the new religion would be victorious, the *taurobolium* was one of the weapons the worshippers of the old gods made use of." Duthoy, *The Taurobolium, Its Evolution and Terminology* (Leiden: E.J. Brill, 1969), 1.

⁷⁷ Renate Jacobs in Büttner, 41.

violence. Its head is decked in a celebratory garland, not unlike those found in the theatrical program *bucrania*. The animal's blood pours through gaps in the platform onto the face of a priest, baptizing him with the purifying, vitalizing properties supposedly contained in that humor. Indeed, in the print, the blood flow resembles a waterfall, a tumbling cascade gushing over the stone structure. The priest, his upturned head in profile and his draped arms outstretched, appears anxious, lest he lose a single drop of the life-giving elixir. After receiving this rite, he was considered fully prepared to discharge his holy duties. Animal blood became a force of nature unto itself.

A similar scene was depicted by Rode in the etching *King Attalus during a sacrifice presses two words into the liver of the slaughtered animal/ König Attalus drückt beim Opfer der Leber des geschlachteten Tieres zwei Worte ein* (1780) (fig. 2.19). This time, Attalus, ruler of the Ancient Greek city of Pergamon, is represented at a bovine sacrifice. The sacrificial steer appears at the center of the scene, which here ends at the bottom of the platform. The creature lays prostrate, its tongue lolling out of its mouth and eyes shut. A bearded figure much like the male central figure in *Taurobolium* wears a knife in a scabbard around his waist and kneels with an axe propped by his side, repeating the figures and implements of the *Taurobolium* etching. The laurel-crowned King Attalus writes an inscription in Greek on the creature's liver while his guardsmen and cohort look on, bundles of wood cast to the side, perhaps for a ritual burning of the animal's body. A more unusual take on this pagan sacrificial motif, this time with a horse as the central victim, can also be found in *Saint Boniface fells the holy oak/St. Bonifazius fällt die heilige Eiche* (1781) (fig. 2.20). These scenes bear a significant resemblance to the bovine plague painting of the *Tieranatomisches Theater* (fig. 2.6), particularly the dying cow at the bottom of the panel. Indeed, the position of this figure's head, the curly, tufted mane, small

curved horns and tongue-lolling expression make it appear like a less finely detailed version of the steer in *König Attalus*. In the fresco, however, the sacrifice of the animal is a reluctant last resort, meant to impede the spread of illness to the rest of the herd. Rather than freely availing themselves of an animal's spent life force, the men club it to death to preserve the remaining members of its kind. The health of the Prussian economy was at stake.

The men in the anatomy theater paintings appear to violently keep hostage the animals to whose care the veterinary school was purportedly devoted. Nonetheless, their actions in this case are framed as protective. The men whip the horses with towels in the cavalry-training scene (fig. 2.4) in order to prepare the naturally skittish creatures for the jolting horrors of battle.⁷⁸ The second cavalry scene shows the men, their spears and helmets in the foreground, awkwardly holding their horses in place with the limbs that remain unoccupied with the garland. Their excessively muscled figures, only covered by perfunctory drapery at the shoulders, resemble Heracles in their general form. In the cattle-herding scene, the left-hand man even sports a small scabbard similar to those worn by the central male figures in *Taurobolium*, *König Attalus* and *St. Bonifazius*. Yet they practice an enlightened violence. The centrality of the lifeless animal form to the architectural space is gestured towards by ancient sacrificial references that are given a new symbolic valence. The animals dissected on the central platform of the anatomical theater have offered up their bodies to the greater good of veterinary medicine. This killing would in turn protect the financial and material interests of human agriculturists, whose livelihood was

⁷⁸ A discussion with veterinary medicine professor, Prof. Dr. Beutling in Kempf, notes that this was an ancient technique utilized in the training of military mounts. Beutling also dismisses the mythological horse taming reading put forward by Bredekamp on the basis of these details of cavalry life, asserting that the horses in the second scene were meant to be military draught animals that the men are attempting to awaken into action. The length of the animals' manes is provided as further evidence of their domestic breeding, as wild horse breeds possessed shorter, upright manes. However, whether an artist working in the 18th century would have been aware of this distinction remains uncertain. Kempf reads the works as a timeless commentary on the nobility of the collectively undertaken, everyday activities of animal husbandry that form a central part of human civilization. The animals are not tamed by a single hero, but rather are held in common.

completely decimated by the spread of the bovine plague in Prussia in the wake of the Austrian Wars of Succession and the Seven Years' War.⁷⁹

In his oil paintings and etchings of agricultural subjects, Rode favored the trope of rulers and nobility engaged at oxen-drawn plows, participating in practices that might otherwise be considered unsuited to someone of their station. These subjects include a small etching of Cincinnatus being summoned from his farm to serve as the Roman dictator during a period of invasion, another etching of Odysseus, king of Ithaca, plowing the fields with his ox, and a pair of Orientalized oil paintings on canvas depicting the Emperor of China working the first furrows of the season in ceremonial honor of agriculture (fig. 2.21) and the Empress of China plucking mulberry leaves in tribute to silk culture. The Chinese emperor at the plow is evidently drawn, either directly or secondarily through other European intermediaries, from a longstanding trope in Chinese painting. The ceremonial plowing of a furrow at the Altar of Agriculture regularly performed by the Chinese emperor was upheld by Enlightenment writers like Voltaire as an instructive example for European rulers, who, they implied, might be induced to show a similar level of interest in the economic activities and well-being of their citizens.⁸⁰ The maintenance of laboring animals and cultivated fields is presented as the essential basis of the state's health, wealth, and overall happiness, as guided by the figure of the sovereign. The simultaneously ennobling and humbling nature of agricultural practice is asserted by these images, and is even further emphasized by their contrast with the cruel irrationality exhibited in the pagan animal sacrifices, wherein the spilling of bovine blood appears not only as a wanton waste of life but an uneconomical expenditure of resources. The redeployment of these sacrificial tropes in the

⁷⁹ Kempf, 22.

⁸⁰ Lothar Ledderose, "Chinese Influence on European Art," in *China and Europe: Images and Influence in the Sixteenth to Eighteenth Centuries*, ed. Thomas H.C. Lee (Hong Kong: Institute of Chinese Studies, The Chinese University Press, 1991), 230.

Tieranatomisches frescoes honors a more scientifically reasoned disposal of animal bodies.

While the sovereign plowing scene does not make an appearance, the respect due to caretakers of the bovine body emerges as one of the theater's central themes. The atlases practice a pragmatic violence.

The centrality of the lifeless animal form to the architectural space is thus gestured towards by ancient sacrificial references that are given a renewed symbolic valence. The animals dissected on the central platform of the anatomical theater have offered up their bodies to the greater good of Enlightenment veterinary medicine. The bloodlessly pure white walls and the elegant ceiling frescoes could thus provide a sense of civic duty to the students ascending the steps of the anatomy theater. There was a practice based neither in ancient superstition nor in the unscientific, lower class labors of the farrier or the cattle leech. Even once their backs were turned to the paintings and their eyes directed to the less savory spectacle of the livestock bodies being dissected, they were enveloped by the Neo-Classical structure, watched over by allegorical guardians of animal health and husbandry. Yet Rode's animals constantly threaten to escape their keepers and the confinement of the fresco panels, effectively taking center stage in conjunction with the animal corpses that once formed the focal point of veterinary students' visual attention. The painted creatures remain undissected and therefore physically unified, while their unmastered vitality still implies the mysterious internal workings that the anatomy theater sought to unveil. The visual predominance of the animal figures, both real and represented, disrupts the insistent symmetry of the spherical theater, as well as the staid, humanistic harmony associated with the Winckelmannian classical ideal.



Gallopers Gone Wild: Théodore Géricault's *The Race of the Riderless Horses*

In the animal subjects of Rode and Géricault, a constant slippage between antique and scientific anatomical models occurs. Such a slippage recalls the typical progression of academic artistic training, wherein plaster casts and copies of antique sculpture gave way to taxidermy, then live models, in the student's educational advancement.⁸¹ Both artists also spent extended periods living in Rome as part of the training then considered proper to an ambitious painter's social advancement.⁸² They thereby drew heavily on an antique artistic vocabulary of human struggles with, and sacrifices of, animals. The visual and textual literacy achieved thereby is indicated through the aforementioned works in Rode's oeuvre, including his etchings of ancient pagan horse and cattle sacrifices and his designs for the Labors of Heracles relief cycle.⁸³ Indeed, at the height of his fame he was especially praised for his meticulous study and representation of historical subjects.⁸⁴ Similarly, Géricault's sketches and oil studies contain many scenes drawn

⁸¹ Kai Artinger, *Von der Tierbude zum Turm der blauen Pferde: Die künstlerische Wahrnehmung der wilden Tiere im Zeitalter der zoologischen Gärten* (Berlin: Reimer, 1995). Artinger notes that artistic training in animal anatomy at the turn of the nineteenth century in France and the Germanic states was primarily geared towards learning equine anatomy for battle paintings and other history subjects.

⁸² Géricault was based in Italy on his own funds from 1816-1817. The dates of Rode's stay in Italy are less certain, but it is estimated that he was in the country for about two years, from 1754-56. Frank Büttner, ed., *Kunst im Dienste der Aufklärung: Radierungen von Bernhard Rode 1725-1797, mit einem Gesamtverzeichnis aller Radierungen des Künstlers im Besitz der Graphischen Sammlung der Kunsthalle zu Kiel* (Kiel: Jens Christian Jensen, 1986), 13.

⁸³ Horst Bredekamp argues for a mythological interpretation of the frescoes as scenes of the initial domestication of the animals based in the Herculean imagery that the artist also deployed in the designs for the Brandenburg Gate.

⁸⁴ Büttner. Contemporary scholarship on Rode has been sparse at best; aside from the aforementioned survey of the artist's etchings, there exists another survey of his prints: Renate Jacobs, *Das graphische Werk Bernhard Rodes (1725-1797)* (Munster: Lit, 1990); a dissertation from the 1920s: Anna Rosenthal, *Bernhard Rode, ein Berliner Maler des 18. Jahrhunderts* (Berlin: E.S. Mittler, 1927); and a handful of exhibition catalogs, including *Turmbewohner: Entwurfszeichnungen von Daniel Chodowiecki and Bernhard Rode für den Gendarmenmarkt*. The

from related Classical motifs, particularly the bull killings (*tauroctonies*) of the Cult of Mithras.⁸⁵ The absorption of such examples into the memory's repertoire was then considered an integral part of the history painter's development, a title to which Géricault and Rode aspired. Yet both artists seemed more committed to the preservation, rather than the annihilation, of the creatures they depicted.

In particular, Géricault's *Race of the Riderless Horses* oil sketches were marked by a persistent, ambivalent shifting between Neoclassical and modern models of the animal form. Thus an ever-present tension marks the relations of humans and animals in *The Race of the Riderless Horses*. The horses are the heroes of the *Race* paintings, unusually so by contemporaneous artistic standards. As in Prussia, French art academies typically emphasized the study of equine anatomy for the purposes of producing battle paintings and portraits of the royalty and nobility. In such works, the horse served as the bodily substrate of state power rather than the central subject of representation. As Lorenz Eitner notes, while horses were "grudgingly tolerated" in monuments and as background figures in narrative painting, promoting them to the status of central actors would have been considered either scandalous or laughable, pointing to the mockery contemporary French critics leveled at the oversized equine figures in Carle Vernet's (French, 1758-1836) (a former instructor of Géricault) painting of *Austerlitz* (1808).⁸⁶ By showing horses in an *unmounted*, yet restrained, state, Géricault literally placed them on a level with the grooms who hold them at bay, destabilizing social and species hierarchies.

respect accorded the artist during his tenure as the head of the Prussian Academy seems to have rapidly diminished after his death at the turn of the nineteenth century.

⁸⁵ Both Wheelock Whitney and Lorenz Eitner note the similarity of sketches and gouaches by the artist to the Mithraic motif, as I will discuss in greater detail later in the chapter.

⁸⁶ Lorenz Eitner, *Géricault, His Life and Work* (London: Orbis, 1983), 134.

The *Race* paintings, like the *Tieranatomisches* frescoes, allegorize animal domestication and temporary de-domestication. However, unlike Rode's paintings, these oil sketches were not necessarily conceived of as a series or unit, nor were they commissioned by the state. The picturing of the horses released into the Roman streets during Carnival was, as far as scholars have found, an unfinished, idiosyncratic, personal project. Géricault produced the paintings during a trip to Italy financed by his independent wealth.⁸⁷ Accordingly, the paintings did not necessarily have to conform to the norms of publically commissioned and displayed art.

Nonetheless, Géricault was not alone among his contemporaries in his overwhelming fascination with the unusual subject and the attendant difficulty of its artistic transfiguration. Writing of his experience of the Roman Carnival during his "second residence in Rome," in February 1788, Johann Wolfgang von Goethe (German, 1749-1832) remarked upon the disorienting quality of the whole experience, which cast doubt in his mind as to his ability to write about it:

In undertaking a description of the Roman Carnival, we cannot but fear the objection being raised that such a festival is a subject not properly admitting of description. So vast a throng of sensible objects would, if it may be represented, require to pass in review immediately before the eye—would require to be personally seen and comprehended in his own way by each person wishing to obtain any idea of it.⁸⁸

The innumerable activities and objects of the Carnival presented to Goethe, who was usually at no loss for words, a spectacle that strained his capacity for verbal representation. Later in the text, he pushed past this fear to undertake a detailed description of the Carnival and its participants: the cross-dressers male and female, the masquerade ball-goers, the elegant upper-class spectators perched in their carriages. The most compelling figures of all, however, were not

⁸⁷Charles Clément, *Géricault, étude biographique et critique avec le catalogue raisonné de l'oeuvre du maître* (Paris: L. Laget, 1973).

⁸⁸Johann Wolfgang von Goethe, *Goethe's Travels in Italy, Together with his Second Residence in Rome and Fragments on Italy*, Translated from the German by A.J.W. Morrison and Charles Nisbet (London: G. Bell, 1883), 485.

human: the small, lithe “Barberi” horses that punctuated the end of each festival day with a riderless race through the Corso. These animals, specimens mostly imported from North Africa, allowed viewers to witness the de-domestication of what had long been considered by Europeans to be the “most noble” domestic creature. Indeed, as the author notes, entering a prize-winning horse into the races was once considered an honor for the “first Roman houses,” though this honor had lately been demoted by the democratization of the celebration and “the desire to acquire reputation by horses has percolated down into the middle, nay into the lowest class of the people.”⁸⁹ This uneasy social distinction was further projected onto the horses themselves, who could be viewed as the proxies for various marginalized individuals once included in the Carnival contests. As Wheelock Whitney notes, “The Corso, formerly Via Lota, took its modern name from these races (corse), which initially included contests not only for horses, but also for children, old men, Jews (until 1688), donkeys and buffaloes.”⁹⁰ The equine races took on their modern shape in the eighteenth century, a format that was maintained up until the 1880s, when they finally came to an end.⁹¹

The distinguished antiquity of the practice is nonetheless presumed by Goethe and the social distinction of horse racing is confirmed by Classical authors. Lucius Junius Moderatus Columella (ca. 1 AD), writing of agricultural practices under the Roman Empire, recommended a more “assiduous care, feeding and supervision of horses,” as compared with other livestock and specified that horses raised for the contests, Sacred Games, and circus should be derived from “noble bloodstock.” These animals were viewed as all the more valuable for the difficulty of their breeding and sexual containment. Columella observed that “horses beyond all animals are

⁸⁹ Ibid, 489. “Each Carnival evening, as we have noticed, closes with a horse-race. The horses kept for racing are mostly little, and, on account of the foreign extraction of the best of them, are called ‘Barberi.’”

⁹⁰ Wheelock Whitney, *Gericault in Italy* (New Haven: Yale University Press, 1997), 89.

⁹¹ Ibid.

excited by the fury of their lust. (Hence the term ‘horse madness’ is given to the poison which kindles in human beings a passion like the desire in horses.)”⁹² He went on to insist upon the careful seasonal breeding of noble mares and stallions, preferably during the spring equinox. This practice was meant to siphon off the animals’ prodigious lust into the production of offspring and superstitiously avoid the self-impregnation of mares by the wind.⁹³ The ungovernable sexuality of the creatures posed a risk to human designs, while also imbuing them with a compelling energy. Such a perceived vitality was all the more valued in racehorses. “Barbarian horses” imported from other nations were preferred for this purpose in the late Imperial period, particularly those of the “Huns” and “Burgundians,” though African steeds were also noted for their speed.⁹⁴ The exoticism of the horses contributed to a sense of their purported wildness, their capacity temporarily to run free. These ancient perceptions of imported horse breeds seemed to have purchase in later centuries, in which public contests continued under the Catholicized guise of events such as Carnival.

This unbridled horsepower, or, rather, the nascent stages thereof, is depicted with particular vividness in the *Riderless Horses* series. However, it is struggle, not sexuality, which impels the equine figures of the paintings. Géricault’s widely variable pen, oil and wash approaches to the races speak to the difficulty he faced in satisfactorily capturing such mobile and multifarious subjects.⁹⁵ This problem was thus encountered in both visual and verbal form. Many commentators on the race studies remark on their supposedly incomplete nature, tantalized

⁹² Lucius Junius Moderatus Columella, *On Agriculture*, trans. E.S. Forster and Edward H. Heffner (Cambridge, MA: Harvard University Press, 1968), 189-191.

⁹³ Virgil was perhaps the most notable perpetrator of this theory which was, however, surprisingly widespread in the ancient world, from Greece to Egypt to Japan. Conway Zirkle, “Animals Impregnated by the Wind,” *Isis* 25 (May, 1936): 95-130.

⁹⁴ K.D. White, *Roman Farming* (Ithaca: Cornell University Press, 1970), 289.

⁹⁵ Eighty-five existing paintings and drawings by Géricault document the races, in addition to nine lost works described by Clément. Whitney, 92.

by biographer Charles Clément's (French, 1821-1888) suggestion that Géricault was planning a Salon machine of the subject that remained unfinished.⁶⁶ Existing readings of the paintings repeatedly posit the race as an "impossible" subject for a history painting scaled canvas, a subject whose abandonment was essentially inevitable. Animal figures, even the noble horse, could not be the central figures of such a painting at that time, a piece of wisdom the artist would undoubtedly have realized for himself and moved on to more critically viable projects. However, some scholars, like Régis Michel and Sylvain Laveissière, cast doubt on the theory that Géricault intended the race paintings as preliminary studies for an eventual large-scale Salon submission. They dispute the favoring of Neo-Classical over genre aesthetics in secondary literature on the paintings from Clément onward and the persistence of arguments claiming that the series "evolved" from genre specificities to lofty classical generality.⁶⁷ This hypothesis is usually based in the assumption that the oil study now located in the Baltimore Museum (fig. 2.22) represents the first, least stylistically developed link in a series that culminates in, depending on the author, the Louvre, Metropolitan Museum, or Getty studies.⁶⁸

Clément's reading nonetheless focuses on the sheer singularity of Géricault's depiction of the equine figure as a defining feature of the paintings. He wrote:

His [Géricault's] horse belongs to him alone. It is not the admirable horse of Phidias; it is not the horse composed of beautiful yet decorative and abstract forms of Raphael; even less is it the colossal, apocalyptic chimera of Rubens. It is a living animal, superb and real.⁶⁹

⁶⁶ Clément, 103-104. Clément refers to a lost canvas of some thirty feet upon which the subject of the *Race* was supposedly sketched.

⁶⁷ As Clément wrote, "Ce ne sont plus les Barberi de la place du Peuple et les paysans de la campagne de Rome qu'il voit; ce sont de nobles coursiers aux prises avec jeunes homes, des éphèbes, des héros forts et beaux dans leur nudité." Charles Clément, *Géricault, étude biographique et critique avec le catalogue raisonné de l'oeuvre du maître* (Paris: L. Laget, 1973), 97.

⁶⁸ Michel and Laveissière, 98.

⁶⁹ "Son cheval lui appartient absolument. Ce n'est pas le cheval admirable de Phidias; ce n'est pas celui d'un si beau choix de formes, mais abstrait et décoratif, de Raphaël; pas davantage le colosse chimérique, apocalyptique, de Rubens. C'est un animal vivant, superbe et vrai." Clément, 106.

Géricault's horse was thus both quintessentially his "own," while also existing as a perfect replication of "a living animal, superb and real." Clément went on to lament the presumed abandonment of the project, remarking that it would have been a "splendid work and worthy of being placed alongside the most beautiful pieces of all time."¹⁰⁰ This narrative of a lost masterpiece was perpetuated by other nineteenth century authors. The historian and editor of the *Revue des Deux Mondes*, Henry Houssaye (French, 1848-1911) wrote in reference to the *Race* studies that they served as preparation for what "perhaps could have been his masterpiece, but was never made." Houssaye presented the Getty oil sketch as the most fully realized culmination of the project, this "final composition, with the absolute beauty of a bas-relief by Phidias."¹⁰¹ Nonetheless, he denied the possibility that Géricault could have been familiar with the Parthenon frieze, despite the placement of the Elgin Marbles in the British Museum in 1816, one year before Géricault started the series.

To begin with, the Baltimore study (fig. 2.22) identified as one of the earliest oil studies by Lorenz Eitner, presents its subject matter more lucidly than subsequent works. We are allowed to see the starting line rope, the spectators in the stands, the fully uniformed grooms outfitted in breeches, stockings and red caps and the bayonet-wielding senatorial guards who preceded the race—documentary elements rendered invisible or unrecognizable by later studies.¹⁰² The painting depicts *la mossa* or the beginning of the race.¹⁰³ There is no central figure or group of figures, though the horse in the far right corner does draw the attention of the viewer, with its white-streaked muzzle and front hooves leaping forward, requiring the intervention of two

¹⁰⁰ Ibid.

¹⁰¹ Henry Houssaye, *Théodore Géricault: dieux, hommes, cheveux* (Paris: L'Amateur, 2010).

¹⁰² Eitner, 117.

¹⁰³ The Italian term *la mossa* referred to a covered loge that served as a point of departure for the race. The recovery of the horses at the end of the race was referred to as *la ripressa*. Usually about a dozen horses participated. Régis Michel and Sylvain Laveissière, eds., *Géricault, ouvrage collectif* (Paris: Documentation française, 1996), 98.

grooms, one positioned on each side. The emptied foreground space likewise anticipates the action to come. This open ground contributes to the neatness of the diagonal, three-tiered composition, building from the Corso to the gathered horses to the audience in the stands. The pink fabric on the stands, the stately, swan-necked horses and the colorful livery of the guards clearly indicate the occasion as sportive and festal, with little of the ambiguity of the Louvre or Getty paintings.

The Metropolitan Museum study (formerly housed in the Lille Palais des Beaux-Arts) (fig. 2.23) similarly presents the action in neat, tripartite divisions, with the space of the painting divided evenly between the exiting man in blue robes, the central red-shirted groom and white horse, and the green-shirted groom and rearing brown horse at the far right. The composition is sharply cropped: the man in blue's arm is cut off by the left-hand edge, a horse's front is hidden behind the opened gate and sketchy upturned faces appear bodiless in the shadows. In the background the manes and feathers of the horses blur into one another like wave crests, moving against the stark geometry of the white buildings. The central groom grasps his horse's muzzle with both hands, grabbing at the mouth in a gesture nearly identical to that of the other four grooms depicted. The spectators remain a spectral presence in the upper right hand corner, crowded above the scene and bathed in dusky yellow light. The Metropolitan iteration thus places a greater emphasis on the equine figures, obscuring the details of human costume and custom that overwhelm the Baltimore painting. This trend continues in the Getty and Louvre studies.

In the Getty version (fig. 2.24), the most explicitly classicized rendering of the event, partially and fully nude grooms restrain the horses at the starting line before a backdrop of Doric columns, ancient architecture replacing the impromptu audience stands of other versions. As in

the Louvre and Metropolitan canvases, kicked-up dust and stark shadows obscure much of the action, while the central equine bodies remain vital and vivid. The upper left-hand corner dissolves in a cloud of dirt, while the right-most grooms and steeds are cast into a tenebrous space of barely suppressed violent motion. Diagonally cast shadows travel from the right to the left hand sides of the image. A homogenous palette of ivories, tans and browns, with brief respites of green in the far background landscape and in the uniforms of the men, resembles the (then presumed) colorless world of antique relief sculpture. This monotonous palette of highlights and shadows, appearing sculptural in the central figures, shifts to a painterly chiaroscuro on the painting's peripheries. The action is almost exclusively located on the frontal plane, with little sense of recession into deep space. The claustrophobic containment of the people and animals is highlighted by our own inability to see much outside the confines of the starting line. We have little sense of the wide, open, (yet still cordoned off) streets of Rome into which the creatures will eventually be released. This relief quality is further emphasized by the processional placement of figures in three groups, moving from left to right, as noted by Whitney.¹⁰⁴

The skin tone of the central groom is barely distinguished from the fur and mane of the horse held in his embrace. This resemblance is extended to the respective poses of the figures. The position of the left-hand hock of the horse mirrors the thigh of the man, as does the curvature and placement of the equine and human buttocks. The horse's rearing, partly upright posture even approaches a bipedal stance. They move with shared purpose, rather in opposition, as seen in almost all the other groom-horse pairings, both in this study and others. This human-animal resemblance is extended to their shared lack of clothing. Houssaye referred to the horses

¹⁰⁴ Whitney, 141-142.

as “nude and free” (“nus et libres”), evidently pointing to their lack of saddles, bridles and the other equipment that usually denoted domestication.¹⁰⁵

In the Louvre version (fig. 2.25), Géricault has replaced the tri-partite division of the Metropolitan study with surging forward motion from left to right, with virtually all figures facing in this direction, all gazes oriented to a point off-canvas. This time, greater space and emphasis is given to the group at the starting line. The shadowed background horse rears away from the bludgeon of a partly unseen groom, who exercises the violence only implied by the rest of the painting. Nonetheless, this threat remains ever present. Black, intensely contrasted shadows appear to be thrown by the foreground buildings. The audience stands are placed directly behind the horses. A light, misty dust plume in the upper left-hand corner, colored in harmony with the distant, pastel blue mountains, offer the only visual respite from the dark, mud-caked, earthen color scheme of the painting’s foreground. The receding perspective from the foreground to the landscape is blocked by a wall and so the figures occupy their own claustrophobic universe, caged in by the composition, cut off from the glimpses of antique columns and idyllic blue mountains in the middle ground. The audience, however, is left to its own peaceful public sphere. The fearful look of the center-left steed is more expressive, elicits more empathy, than any other figure in any other version of the series. The directness with which the animal gaze confronts the viewer lends a disturbing force to the canvas.

Géricault had hereby lent gravity to a subject that, as part of the Carnival, was often considered mere sport. The sensationalism of its rituals was infamous enough to earn an entry in an 1833 edition of the *Encyclopedia Britannica*, where the race is described in some detail (while downplaying its anti-Semitic connotations):

¹⁰⁵ Houssaye, page.

Then at a given signal begins the running of the *barberi*, or riderless horses. Some ten of them are led to the starting place in the Piazza del Popolo, with loosely hanging little spiked machines, contrived to act as spurs, hanging to their sides, and crackers attached to them, which are fired at the moment of starting. A gun gives the signal for the compact crowd in the Corso to make a lane for the horses to run through. By the aid of the police and soldiers this is more or less satisfactorily accomplished, and the horses dash through it, the crowd closing behind them as they run. Rarely, or perhaps it would be accurate to say never, does a Carnival pass without two or three accidents, frequently fatal ones, in consequence of incautious persons getting knocked down by the rushing horses. The race is run in about two minutes. The winning “post” is a sheet hung across the street at the spot hence called *Ripresa dei Barberi*, in the Piazza di Venezia... The price of these prizes was formerly furnished by the Jews, as has been seen. And popular tradition says that the Jews were permitted to furnish the horses and prizes as a concession to humanity, in lieu of running themselves in *propria persona*. It is undoubtedly true that they were so compelled to run. But it would seem that they did not do so *exclusively*, other categories of persons, as the boys, the youths, the old men, having done the same.¹⁰⁶

Anglo-Irish writer Oliver Goldsmith (1730-1774) also discussed the *barberi* race in an extended footnote on horseracing in *A History of Earth and Animated Nature*:

A Roman horse-race is, however, a very different thing from an English one. Instead of a contest in which the skill and boldness of man are as much to be admired as the speed and vigour of the animal he rides, the Roman course presents nothing but the horse, which runs without any rider. It is not, however, left entirely to its own spirit and emulation; if it were, the sight would be more interesting, as showing the natural character of the animal; but it is started by noise, and goaded on by contrivances quite as artificial as the whip and spur of our jockeys... To a girth which goes round the body of each, are attached several loose straps from which issue sharp steel points,-- the motion imparted to these straps by the animals' running keeps up a continual spurring on their flanks and bellies. Sheets of thin tin, stiff paper or some other substance that will make a rustling or rattling noise when agitated, are also fastened on the horses' backs.¹⁰⁷

The humans thus exerted control by proxy, via implements of distraction and pain analogous to the “whip and spur” of the English jockey. Man thereby still exerted control over “nature,” albeit through subterfuge and deceit. Yet the grooms entrusted with these abuses likewise faced

¹⁰⁶ T.S. Baynes, “Carnival,” in *Encyclopaedia Britannica* (New York: Charles Scribner’s Sons, 1833), 124. See also Thomas Crow, *Restoration: The Fall of Napoleon in the Course of European Art, 1812-1820* (Princeton: Princeton University Press, 2018).

¹⁰⁷ Oliver Goldsmith, *A History of the Earth and Animated Nature, Volume 1* (London: Blackie and Son Limited, 1855), 248.

the threat of injury and possible death, overwhelmed by the excessive number and strength of the steeds.

The paintings are similarly bounded and excessive, with their overcrowded figures trapped within the confines of the canvas and the starting/finishing lines. The number of men and horses is obscured by rising dust in the Getty study and by the heavy shadows of the Metropolitan and Louvre paintings—a darkness oppressively imposed on the numerous but clearly delineated forms of the Baltimore study. The activities occur in the half-light of dusk, when clarity gives way to obscurity. This shift in representation occurs in seeming opposition to the measurability of man as individual, with the faculties and capabilities proper to his own unified body.

As discussions of the race's origins indicate, the male racers replaced by the horses occupied similarly marginal positions of subjectivity and masculinity, at least as placed against the supposed averages of age, religion and race at the time: they were too old or too young or did not subscribe to the proper Abrahamic sect. The event nonetheless bestowed a certain grandiosity on the grooms, as indicated by Goldsmith:

The Trasteverini and many of the peasantry in the neighborhood of Rome are remarkably fine, muscular men; and as they generally go to work with their arms and necks here, and as they have frequently to maintain a struggle of downright strength with their excited horses, the action of their limbs and muscles, and other circumstances, offer a useful exhibition to the sculptor or painter.¹⁰⁸

Presciently, Goldsmith observed the artistic exemplarity of their peasant bodies, their conformity in appearance (if not identity) to classical painterly ideals. They present the mobilization of the will into action in their musculature, embodying the athletic, active, masculine ideal favored by current European taste.

¹⁰⁸ Goldsmith, 1855, p. 248.

Additionally, the grooms commit violence against the animals usually left in their care. They do not brush and saddle but prod and pull back and so engage in a violent double movement of goading and restraint. Their muscles contort and their faces become unreadable, yet there is still an implied dynamic of inner will and outer action. Their physicality is made palpable and even further emphasized by Géricault's thick, dark brushwork. This conception of life as activity and discharge is nonetheless linked to masculinity, as so many figures in Géricault's oeuvre attest. In this series, like much of the artist's work, one is struck by the dearth of female figures.¹⁰⁹ Indeed, any women that might have been present in the spectator stands of the Baltimore study have been blurred into invisibility in the other iterations. The uncertain nature of the relationship between the men and horses is left unresolved in Géricault's work. The horses are released from their usual instrumental duties without breaking free from human control; the human subjects are symbolically dismounted and dethroned and physically threatened without fully relinquishing power.

The horses herded together at the starting line participate in a domain of containment and contained ferocity, of de-domestication and re-domestication—horses must be provoked and scared by their masters to become 'wild' for the race, but they must, at this point in time, remain restrained behind the line. The bodies of both horse and groom enter into new configurations both within the scenes of each oil painting taken individually and across the sequence of representations of the race.

The treatment of human-animal conflict in Géricault's oeuvre was, however, not confined to horses. The artist, particularly during the year spent in Italy, seemed to take a particular interest in the subject of bull fighting, bovine slaughter and sacrifice. In *The Bull Tamer* (1816-

¹⁰⁹ Linda Nochlin, "Géricault, or the Absence of Women," *October* Vol. 68 (Spring 1994), 45-59.

1817) (fig. 2.26), a sketch reminiscent of Rode's sacrificial scenes, as well as the Getty version of the *Race*, a nude male with a shoulder-mounted cape wrestles a bull to the ground by the horns. The torsion of his pose and the sweep of the cape impart a compelling dynamism to the rough sketch. His face turned away, the man's effort and tension can be read in his twisted spine and clenched buttocks. The bull kneels on the ground, one foreleg propping up the front of its body and back legs buckling, barely able to sustain its considerable weight. Without further narrative cues, the bull and its tamer are figures of pure muscular resolve, without apparent thought or affect. Another, even rougher sketch, *Two Men Killing a Bull* (1816-1817), shows nude men clubbing the animal to death in the manner only hinted at in the *Tieranatomisches* frescoes.

Existing scholarship has noted the resemblance of this and other bull taming scenes by the artist to the imagery of the cult of Mithras, numerous sculptures of which had recently been acquired by English and French collectors and museums at the turn of the nineteenth century. The prominent sale of a Mithraic statue group from the Villa Borghese to the Napoleonic Museum was recorded in 1807 (fig. 2.27); Géricault was therefore likely to have been familiar with the motif even before his visit to Rome.¹⁰⁰ The mystery cult, whose exact practices remain obscure, was understood to be a "closed, hierarchical community of exclusively male initiates who honored the god Mithras in private at sites of worship known as mithraeum."¹⁰¹ The final remains of the cult could be found through the fourth century AD, after the increasing adoption of Christianity. The figure of Mithras, shown restraining and possibly killing a bull in his most well known representations, appeared in numerous sculptures and reliefs known as tauroctonies, after the Greek term for bull killing. In the Louvre sculpture, Mithras, with head upturned

¹⁰⁰ Philippa Adrych, et al., *Images of Mithra* (Oxford: Oxford University Press, 2017), 19.

¹⁰¹ *Ibid*, 24.

towards the viewer, clothed in flowing garments and Phrygian cap, holds the sacred bull by the mouth with one hand and drives a knife into its shoulder with the other. He is flanked by the torchbearers Cautes and Cautopates. A dog and a snake lurk at the site of the wound, beneath the bull's stomach, while a scorpion preys upon its genitals. The animals manifest an eagerness for the bull's blood and life-giving organs not unlike that displayed in the taurobolia.¹¹² The elaboration of the bovine sacrifice motif in Géricault's pen, ink and gouache study, *Ancient Sacrifice* transfigures the bull killing, imagined in a fantastical register by the Mithraic imagery, into a scene of openly brutal violence closely resembling the *Farnesse Bull*, as observed by Whitney.¹¹³ At least three bulls stand to be sacrificed and appear reluctant to acquiesce. The central bull's head rears back under the restraint of the men holding it at bay, alongside a second, smaller beast, apparently already deceased, slung over the improbably strong shoulders of another man. The right foreground reveals a man about to concuss a bull, restrained by his knee, into unconsciousness. Meanwhile, two goats are brought forward as further sacrifices. The scene appears to take place prior to the sacrificial ceremonies proper, existing in an ambiguous space of ruthless slaughter.

Elements of the gouache reemerged in the later oil study, *Cattle Market* (1817) (fig. 2.28), a work perhaps inspired by scenes witnessed by the artist upon his return to Paris at butcheries in the rue de la Pépinière.¹¹⁴ Once again, classicized references dramatize a thoroughly mundane and modern activity. The stinking Paris slaughterhouses are transposed to villas in a

¹¹² Ibid, 19-24.

¹¹³ Whitney, 82. Whitney notes that a Roman copy of the Farnese Bull would have been prominently on display in the royal collection in Naples at the time of Géricault's visit to that city in the spring of 1817. Whitney and Lorenz Eitner also remark upon the resemblance of *Ancient Sacrifice* to Raphael's tapestry, *Sacrifice at Lystra*, which also depicts a bovine sacrificial subject and would have been hanging in the Sistine Chapel during the artist's time in Rome.

¹¹⁴ Clément asserted in his biography that despite the apparent resemblance to works completed in Rome, *The Cattle Market* depicted a Parisian scene, citing as evidence the cattle's lack of resemblance to the Roman breed. Clément, 40.

tranquil, blue-tinged mountainscape. As in the *Race* paintings, Géricault juxtaposed classically nude figures with those clad in modern plainclothes with distinctive primary colors. The Herculean figure at the far left and the kneeling man in the foreground, their genitals hidden, present an impractical nudity comparable to David's *Intervention of the Sabine Women*, their bodies exposed to battle with the horned oxen and ravenous dogs. The grey ox, its leg draped over the fence, possesses a head and expression nearly identical to that of the central bull in *Ancient Sacrifice*, with the position of the restraining figure reversed. In this composition, a felled ox also occupies the foreground plane. Amidst the chaos, a grey bull attempts to mount a reddish brown mate in the center of the canvas, gesturing towards a reproductive function of animal husbandry that goes almost completely unreferenced in animal subjects of the period. The rutting (or the appearance thereof) amidst the general slaughter, functions as the one potentially generative moment in a universe of homosocial destruction. This activity seems to be curtailed by the presence of the single clothed figure, who holds the grey animal back and wields his spear menacingly, breaking apart both the animals and the generally earth-toned composition with his gold, red and green dressed presence.

The intensely embodied *Race* grooms and their cattle-wrangling counterparts are fully enmeshed in a universe of inter-species strife. They lack identifying attributes beyond slight differences in position and attire; with their brightly colored uniforms, shadowed brows, turned figures and classicized male features, they are hardly more individuated than the horses, seeming "all the same," much as the sexual dimorphisms and subtle markings of other species often appear to us. The effect is only accentuated when the men are divested of their clothing. Furthermore, the prototypical subject of Restoration France was, to a large extent, still a member of the noble, or at very least bourgeois, classes, rendering the lower-class Italian workers' status

as “subjects” unstable. The decision to center such individuals, as well as the animals, in a history painting-esque melodrama is indicative of Géricault’s (at the time) unconventionally egalitarian representational tendencies. The mental patients promoted to the status of dignified portrait sitters in the *Monomania* (ca. 1820) (fig. 2.29) series and the black man who serves as the hero at the pinnacle of humanity in *Raft of the Medusa* (1819) (fig. 2.30) were granted a status as equal subjects in the realm of Géricault’s paintings that they did not generally enjoy in contemporaneous French society. The horse and cattle paintings, though less redemptive in character, likewise appear to question the fixed, hegemonic nature of the Restoration social order.

Early in the nineteenth century, theories of evolutionary change were often linked to heterodox political beliefs and the notion that social hierarchies and societal conditions were similarly mutable. Adrian Desmond, a historian of science, has noted that the political connotations of the theories of evolution developed in the early nineteenth century by Etienne Geoffroy Saint-Hilaire, Jean-Baptiste Lamarck (French, 1744-1829) and leftist factions in the British medical profession were decidedly more democratic in character than the Malthusian narrative of survival later promoted by Darwin.¹¹⁵ Indeed, conservative physiologists and physicians in both England and France viewed Lamarck’s doctrine, which held that natural forms could “improve themselves” without the intervention of a higher power, as a dangerous democratization of natural history. Similarly, the republican ideas of Romantic *Naturphilosophie*,

¹¹⁵ Writing in reference to L.S. Jacyna’s work on British radical science, Desmond observes: “...for the radical physiologists of the Regency period, matter was imbued with active powers and the mind was a function of organization; this explains their belief in a morality deduced from the laws of nature rather than from the canons of Christianity. Such a self-empowered physiology also sustained their faith in a democratic self-determining society, free of all spiritual or aristocratic leadership imposed from ‘above.’ If continuously evolving life could be formed through the cooperative efforts of individual atoms and cells, then society might similarly be ruled by the collectively organized will of the ‘people.’ Adrian Desmond, *The Politics of Evolution: Morphology, Medicine and Reform in Radical London* (Chicago: University of Chicago Press, 1989), 19.

which proved influential for the development of zoology and cell theory in Britain and France, were often considered suspect by monarchs in the German states. Accounts of nature that emerged from German Romanticism and more radical strains of natural history practiced in post-Revolutionary France sought to move away from pragmatically, theologically conceived research towards an investigation into the primordial origins of humanity and life itself. Carl Gustav Carus (German, 1789-1869) and Friedrich Schelling (German, 1775-1854) moved away from Buffon's study of visible, macro-anatomical structures towards a search for the most fundamental components of human and animal life, components shared by complex organisms and their less fully evolved counterparts (the cell, the leaf, the single vertebra). These components were viewed as the building blocks of more complex organisms, which emerged from "initially more lowly" life forms through a process of "transformation."¹⁶ This ideology positioned human beings as both products and privileged observers of the natural world, made from the same organic matter as other beings yet evolved to a higher degree of self-consciousness. In this political milieu, history and natural history could no longer be treated as categorically separate, as they were in the Comte de Buffon's (French, 1707-1788) Enlightenment conception of nature. In Buffon's schema, natural history is itself subsumed under human concerns. Much of the *Histoire naturelle* is devoted to the animals with the greatest use value for mankind; the author thus gives priority to the horse and the dog as the most thoroughly domesticated and devoted creatures in the animal kingdom. The human-horse hierarchy often taken for granted by Enlightenment writers has been thoroughly upended in the *Race* paintings. Unlike the atlases of the Rode frescoes, the grooms do not contain the horses for their own good or health, but to promote a gruesome entertainment. Unlike Rode's sacrificial scenes, the humans

¹⁶ Robert J. Richards, "The Impact of German Romanticism on Biology in the Nineteenth Century," 13.

do not appear uplifted by or separated from the bestial by their mistreatment of the animals. Horse and man have become equally poised combatants, masses of flesh and muscle in contest. The role reversals enacted during Carnival season only serve to heighten this sense of destabilized hierarchy.

The Carnival was a site of contained excess, wherein the play of transgression was bounded. The festivities occurred over a certain number of days prior to Lent with a prescribed series of annual rituals. Practical jokes, masques and cross-dressing were encouraged but criticism of the current political order (e.g., by costuming as clerics) was forbidden. Particularly striking was the perceived equivalency of various marginal “categories of persons”—Jewish, young, elderly--and their apparent interchangeability with the horses. As in Rode’s dissection theater, visible boundaries that typically separated humans and domesticated animals, such as clothing, are temporarily dissolved. Human control of other creatures is not a foregone conclusion. Who maintains dominance in the *Race* paintings is not entirely clear, with the horses exhibiting superior strength and size. The Getty figures, foregoing clothing, begin to physically resemble the horses under their supposed supervision, bringing their very roles as “grooms” and “keepers” under question. The uniform *grisaille* palette in the Rode frescoes likewise lends the men and beasts an appearance of shared substance. The human beings that were once required to race were, like the human subjects of dissection, implicitly animalized, reduced to mere bodies. The human racers and the dissected human body, while not directly depicted by Géricault and Rode, do seem to haunt their paintings. The perceptible discomfort around the embodiment shared by humans and animals nonetheless manifests in the persistent sense of breathless tension and violent suppression in the man-animal struggles.

...

The problem of the animal figure's role in the context of history painting and the educational formation of history painters is brought to the forefront of Rode and Géricault's tableaux. For both history painting and veterinary science, equine anatomy was a central priority, with other animal forms given lesser consideration. As an essential element of cavalry units and the animal that most preoccupied the European aristocracy, the horse was afforded a privileged status in painterly representation and medical care. Both artists thus position that animal prominently in their works, albeit with Rode affording greater attention to bovids. While Géricault was also intrigued by the bovine sacrifice motif, as numerous Roman period drawings, paintings and prints attest, this was a less pressing concern than the ceaseless preoccupation with horses that animated his artistic career and was the ultimate cause of his death.

Even as the animals in these paintings appear domesticated, and thus dominated, by their human keepers, this domestication is precariously maintained, literally figured as cross-species struggle. Painted during the emergence of veterinary science and in the aftermath of pan-European wars, the threat of animal contagion, and the subsequent loss of control of animal populations, inflects these panels. Theories of natural mutability and species change could only further destabilize the sense of man's indisputable dominance and control of other beings, a dominance that was being constantly both reasserted and destabilized by the scientific establishment. The management of animal bodies in both the military and agriculture that became a governmental concern at the turn of the nineteenth century emerges as a painterly thematic. However, the artistic treatments do not provide the solutions that scientists purported to devise, instead reflecting on the disturbing and ultimately unresolved tensions that underpinned domestication and veterinary science.

Figures:



Figure 2.1. Master of Olympia, "Heracles and the Cretan Bull," Marble Sculpted Relief from the Temple of Zeus at Olympia, 5th-4th c. BCE, Musée du Louvre.

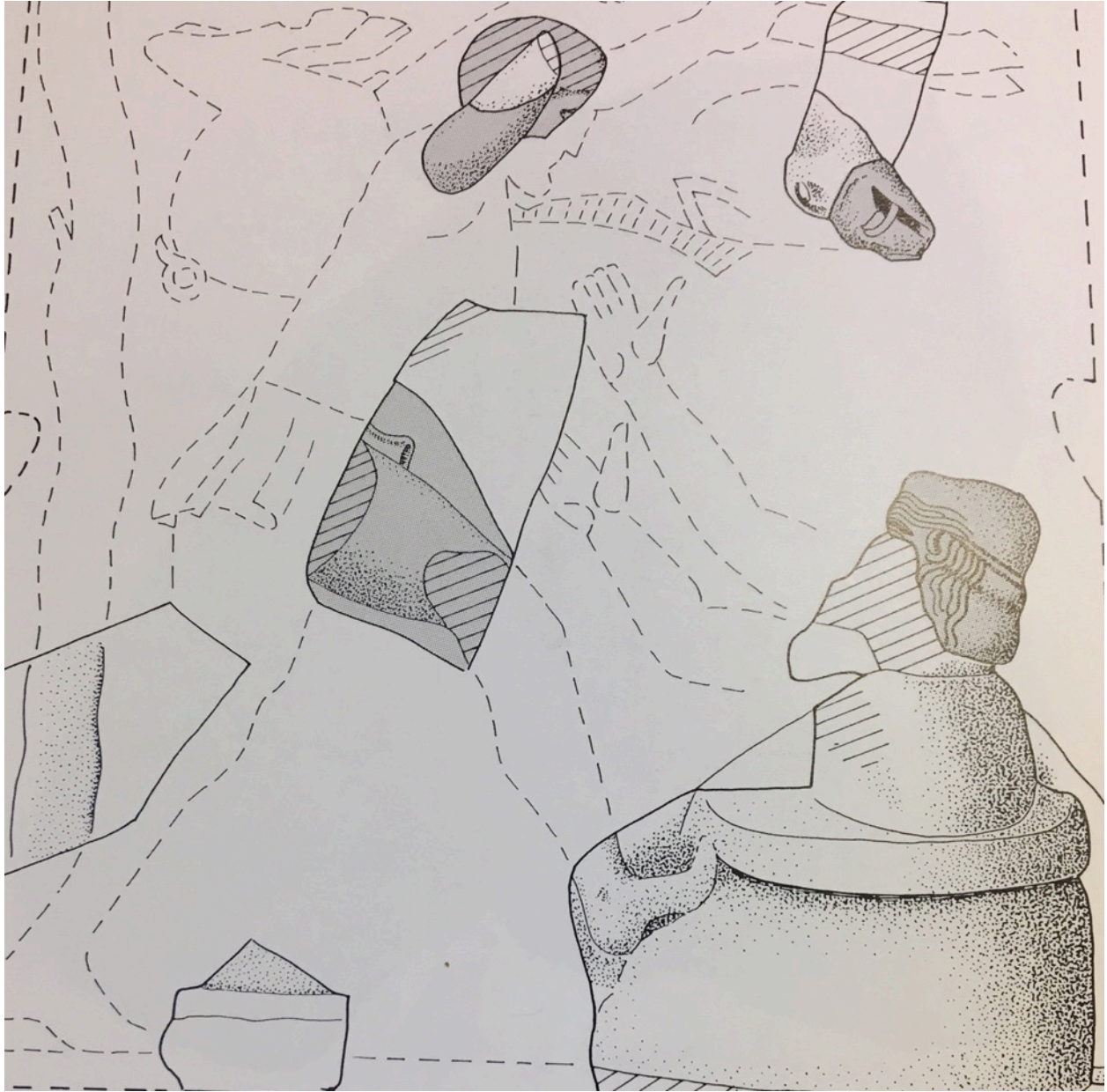


Figure 2.2. Speculative reconstruction of Master of Olympia, "Heracles and the Erymanthian Boar,"
Marble Sculpted Relief from the Temple of Zeus at Olympia, 5th-4th c. BCE, Musée du Louvre.

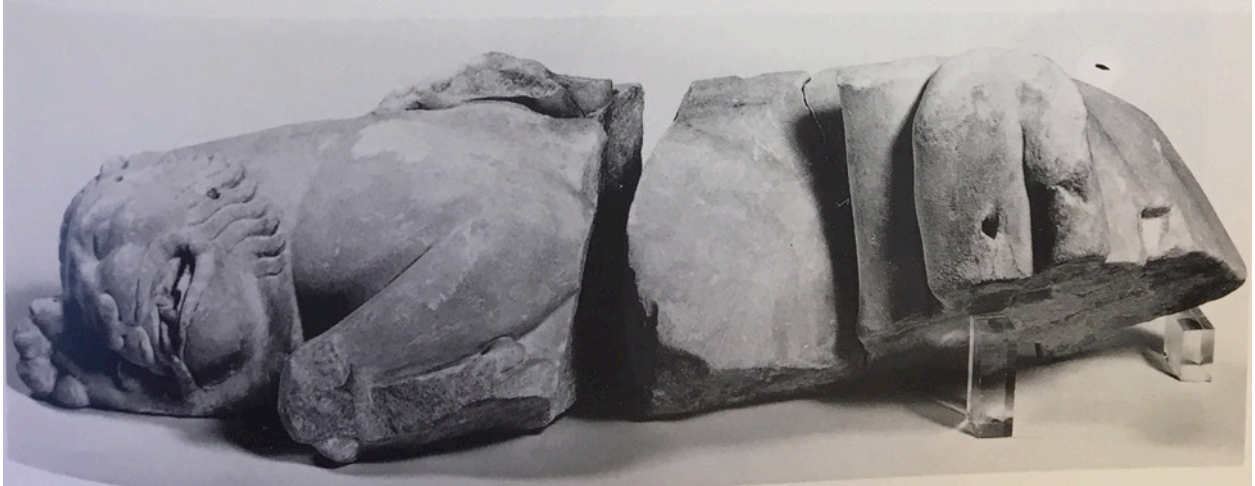


Figure 2.3. Master of Olympia, “The Nemean Lion,” Marble Sculpted Relief from the Temple of Zeus at Olympia, 5th-4th c. BCE, Musée du Louvre.



Figure 2.4. Christian Bernhard Rode, *Cavalry Training*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin (all photos of the Theater are my own).



Figure 2.5. Christian Bernhard Rode, *Cavalry Training*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.6. Christian Bernhard Rode, *Bovine Plague*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.7. Christian Bernhard Rode, *Goatherds*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.8. Christian Bernhard Rode, *Shepherds*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.9. Christian Bernhard Rode, *Hunting dogs*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



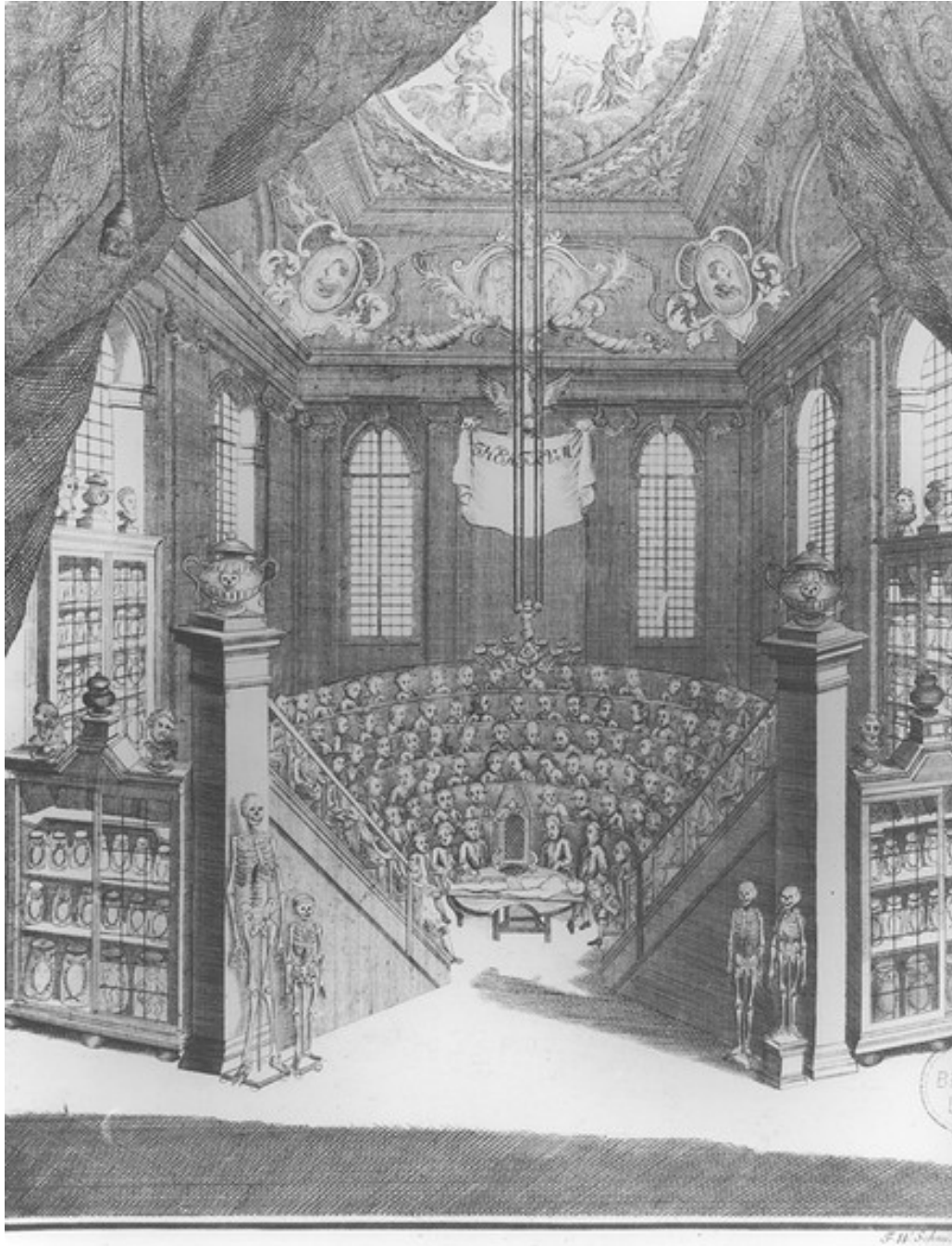
Figure 2.10. Christian Bernhard Rode, *Boar herders*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.11. Christian Bernhard Rode, *Calf Birth*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.12. Christian Bernhard Rode, *Heracles and the Horses of Diomedes*, ink and wash on paper, Sketch for relief on the Brandenburg Gate, 1792. 18th century.



Theatrum anatomicum Berolinense.

Figure 2.13. Ferdinand Gottfried Leygebe, *Theatrum anatomicum Berolinense*, 1830.



Figure 2.14. Christian Bernhard Rode, *Bucranium*, detail from *Berlin Tieranatomisches Theater frescoes*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.15. Andrea Palladio with modifications by Vincenzo Scamozzi, Villa Rotonda (formerly Villa Capra), near Vicenza, Italy, 1566-1590s (photo: Nico Brooks).



Figure 2.16. Carl Gotthard Langhans, *Tieranatomisches Theater exterior view*, c. 1790, Humboldt Universität zu Berlin.



Figure 2.17. Christian Bernhard Rode, *Calf birth*, detail from the *Tieranatomisches Theater* frescoes, c. 1790, Humboldt Universität zu Berlin.



Figure 2.18. Christian Bernhard Rode, *Taurobolium, oder Weihung der Priester der Kybele unter Antoninus Pius (Taurobolia Montfocon)* [Taurobolium, or Consecration of the Priests of Cybele under Antoninus Pius-Taurobolia Montfaucon, Etching, 18th century.



Figure 2.19. Christian Bernhard Rode, *König Attalus drückt beim Opfer der Leber des geschlachteten Tieres zwei Worte ein* [King Attalus during a sacrifice presses two words into the liver of the slaughtered animal], Etching, ca. 1780.



Figure 2.20. Christian Bernhard Rode, *St. Bonifazius fällt die heilige Eiche* [Saint Boniface falls the holy oak], Etching, 1781.



Figure 2.21. Christian Bernhard Rode, *The Emperor of China Plows the First Furrows in Honor of Agriculture/Der Kaiser von China zieht die erste Furche zu Ehren des Ackerbaues*, oil on canvas, ca. 1771.



Figure 2.22. Théodore Géricault, *Race of the Riderless Horses*, oil on paper mounted on canvas, 1817, The Walters Art Museum.



Figure 2.23. Théodore Géricault, *Race of the Riderless Horses*, Oil on paper mounted on canvas, 1817, Metropolitan Museum of Art, New York.



Figure 2.24. Théodore Géricault, *Race of the Riderless Horses*, Oil on paper mounted on canvas, 1817, Getty Museum, Los Angeles.



Figure 2.25. Théodore Géricault, *Race of the Riderless Horses*, Oil on canvas, 1817, Musée du Louvre.



Figure 2.26. Théodore Géricault, *The Bull Tamer*, Pen and ink drawing, Musée du Louvre.



Figure 2.27. Mithras killing the bull, Marble, 100-200 AD, Musée du Louvre.



Figure 2.28. Théodore Géricault, *The Cattle Market*, Oil on paper mounted on canvas, 1817, Harvard Fogg Museum.



Figure 2.29. Théodore Géricault, *The Woman with Gambling Mania*, oil on canvas, ca. 1820, Louvre Museum, Paris.



Figure 2.30. Théodore Géricault, *The Raft of the Medusa/Le Radeau de la Méduse*, oil on canvas, 1819, Louvre Museum, Paris.

Bibliography:

Adrych, Philippa et al. *Images of Mithra*. Oxford: Oxford University Press, 2017.

Almanach zur Kenntnis der Preußischen Staaten für Reisende und Einheimische von 1795. Berlin: Spener, 1795.

Appel, Toby. *The Cuvier-Geoffroy Debate: French Biology in the Decades Before Darwin*. Oxford: Oxford University Press, 1987.

Artinger, Kai. *Von der Tierbude zum Turm der blauen Pferde: die künstlerische Wahrnehmung der wilden Tiere im Zeitalter der zoologischen Gärten*. Berlin: Dietrich Reimer Verlag, 1995.

Baynes, T.S. "Carnival." In *The Encyclopaedia Britannica*. New York: Charles Scribner's Sons, 1833.

Börsch-Supan, Helmut. *Die Deutsche Malerei von Anton Graff bis Hans von Marées, 1760-1870*. Munich: C.H. Beck, Deutscher Kunstverlag, 1988.

Bredenkamp, Horst. *Die Wissenschaft als Bauherr? Skizzen zur Architekturgeschichte der Humboldt-Universität*. <https://edoc.hu-berlin.de/handle/18452/3154>, 2000.

Büttner, Frank, ed. *Kunst im Dienste der Aufklärung: Radierungen von Bernhard Rode 1725-1797, mit einem Gesamtverzeichnis aller Radierungen des Künstlers im Besitz der Graphischen Sammlung der Kunsthalle zu Kiel*. Kiel: Jens Christian Jensen, 1986.

Clément, Charles. *Géricault, étude biographique et critique avec le catalogue raisonné de l'oeuvre du maître*. Paris: L. Laget, 1973.

Cogeval, Guy et al. *Masculin, masculin: l'homme nu dans l'art de 1800 à nos jours*. Paris: Flammarion, 2013.

Columella, Lucius Junius Moderatus. *On Agriculture*. Translated by E.S. Forster and Edward H. Heffner. Cambridge, MA: Harvard University Press, 1968.

Crow, Thomas. *Painters and Public Life in eighteenth century Paris*. New Haven: Yale University Press, 1985.

Crow, Thomas. *Restoration: The Fall of Napoleon in the Course of European Art, 1812-1820*. Princeton: Princeton University Press, 2018.

Desmond, Adrian. *The Politics of Evolution: Morphology, Medicine and Reform in Radical London*. Chicago: University of Chicago Press, 1989.

Dunlop, Robert, and David J. Williams. *Veterinary Medicine: an Illustrated History*. St. Louis: Mosby, 1996.

Duthoy, Robert. *The Taurobolium, Its Evolution and Terminology*. Leiden: E.J. Brill, 1969.

Eitner, Lorenz. *Géricault, His Life and Work*. London: Orbis, 1983.

Geoffroy Saint-Hilaire, Étienne. *Essai pour servir à la détermination de quelques animaux sculptés dans l'ancienne Grece, et introduits dans un monument historique enfoui durant les désastres du troisième siècle*. Paris: J. Didot L'ainé, c. 1830.

Geoffroy Saint-Hilaire, Étienne. *Système dentaire des mammifères et des oiseaux, sous le point de vue de la composition et de la détermination de chaque sorte de ses parties, embrassant sous de nouveaux rapports les principaux faits de l'organisation dentaire chez l'homme*. Paris: Crevot, 1824.

Ghosh, Sanjib Kumar. "Human Cadaveric Dissection: a Historical Account from Ancient Greece to the Modern era." *Anatomy and Cell Biology* September 2015 48 (3): 153-169.

Goethe, Johann Wolfgang von. *Goethe's Travels in Italy, Together with his Second Residence in Rome and Fragments on Italy*. Translated by Morrison and Charles Nisbet. London: G. Bell, 1883.

Goldsmith, Oliver. *A History of the Earth and Animated Nature, Volume 1*. London: Blackie and Son Limited, 1855.

Hamiaux, Marianne. *Les Sculptures Grecques 1. Des origins à la fin du IVE siècle avant J.C.* Paris: Éditions de la Réunion des musées nationaux, 2001.

Heringman, Noah. *Sciences of Antiquity: Romantic Antiquarianism, Natural History, and Knowledge Work*. Oxford: Oxford University Press, 2013.

Hersey, George. *The Lost Meaning of Classical Architecture*. Cambridge: MIT Press, 1988.

Houssaye, Henry. *Théodore Géricault: dieux, hommes, cheveux*. Paris: L'Amateur, 2010.

Jacobs, Renate. *Das graphische Werk Bernhard Rodes (1725-1797)*. Munster: Lit, 1990.

Jacyna, L.S. "The Romantic Programme and the Reception of Cell Theory in Britain." *Journal of the History of Biology* 17 (Spring 1984): 13-48.

Kempf, Jens-Oliver. *Die Königliche Tierarzneischule in Berlin von Carl Gotthard Langhans: eine baugeschichtliche Gebäudemonographie*. Berlin: Gebr. Mann, 2008.

Ledderose, Lothar. "Chinese Influence on European Art." In *China and Europe: Images and Influence in the Sixteenth to Eighteenth Centuries*, edited by Thomas H.C. Lee, 221-249. Hong Kong: Institute of Chinese Studies, The Chinese University Press, 1991.

Loth, Calder. "Bucranium: Classical Comments." Modified June 13, 2013.
<https://www.classicist.org/articles/classical-comments-bucrania/>.

Lund, Hannah Lotte. "Flüssig Anatomiert." In *Tiefe Einblicke: das anatomische Theater im Zeitalter der Aufklärung*, edited by Johanna Bleker, Petra Lennig and Thomas Schnalke, 127-145. Berlin: Kulturverlag Kadmos, 2018.

Maaz, Bernhard. "Ross und Reiter: Franz Krüger und seine Zeitgenossen." In *Der Maler Franz Krüger 1797-1857: Preussisch korrekt, Berlinisch gewitzt : Eine Ausstellung der Stiftung Preussische Schlösser und Gärten Berlin-Brandenburg und der Nationalgalerie und des Kupferstichkabinetts der Staatlichen Museen zu Berlin-- Stiftung Preussischer Kulturbesitz*, 77-89. Berlin-Brandenburg: Deutscher Kunstverlag, 2007.

Michel, Régis and Sylvain Laveissière, eds. *Géricault, ouvrage collectif*. Paris: Documentation française, 1996.

Michel, Régis and Sylvain Laveissière, eds. *Géricault*. Paris: Réunion des Musées Nationaux, 1991.

Mücke, Marian. "Das Theatrum anatomicum Berolinense als zentraler Ort heilkundlicher Lehre in der ersten Hälfte des 18. Jahrhunderts." In *Tiefe Einblicke: das anatomische Theater im Zeitalter der Aufklärung*, edited by Johanna Bleker, Petra Lennig, and Thomas Schnalke, 19-35. Berlin: Kulturverlag Kadmos, 2018.

Nicolai, Friedrich. *Beschreibung einer Reise durch Deutschland und die Schweiz*. Berlin and Stettin, 1796.

Nochlin, Linda. "Géricault, or the Absence of Women." *October* Vol. 68 (Spring 1994): 45-59.

Preussische Akademie der Künste 0075. "Protokolle der Sitzungen des Akademischen Senats und Abschriften der Schreiben des Akademischen Senats an das Kultusministerium 1827."

Richards, Robert J. "The Impact of German Romanticism on Biology in the Nineteenth Century." In *The Impact of Idealism: The Legacy in Philosophy and Science*, edited by Nicholas Boyle, 235-42. Cambridge: Cambridge University Press, 2013.

Richards, Robert J. *The Romantic Conception of Life: Science and Philosophy in the Age of Goethe*. Chicago: University of Chicago Press, 2002.

Rosenthal, Anna. *Bernhard Rode, ein Berliner Maler des 18. Jahrhunderts*. Berlin: E.S. Mittler, 1927.

Rumpf, Johann Daniel Friedrich. *Berlin und Potsdam: eine Beschreibung aller Merkwürdigkeiten dieser Städte und ihrer Umgebungen*, vol. 2. Berlin: G. Hayn, 1823.

Schadow, Johann Gottfried. *Kunstwerke und Kunstansichten*. Berlin: Deckerschen, 1849.

Schröder, Kurt, ed. *Veterinärmedizin in Berlin, 1790-1965; Geschichte, Lehre und Forschung heute, der Tierarzt im Sozialismus*. Berlin: Humboldt Universität, 1965.

Struwe, Rainer and Dieter Lötsch. "Die Entwicklung der Tierarzneischule von der Empiric zur Wissenschaft. In *Von der Königlichen Tierarzneischule zur Veterinärmedizinischen Fakultät der Humboldt-Universität zu Berlin*, edited by Volker Deutrich. Munich: 1990.

White, K.D. *Roman Farming*. Ithaca: Cornell University Press, 1970.

Whitney, Wheelock. *Gericault in Italy*. New Haven: Yale University Press, 1997.

Wieckhorst, Thomas. "Tieranatomisches Theater Restaurierung des von Carl Gotthard Langhans entworfenen Tieranatomischen Theaters der Humboldt-Universität in Berlin." *Bauhandwerk: Das Profimagazin für Ausbau, Neubau und Sanierung*. Last Modified April 2013. https://www.bauhandwerk.de/artikel/bhw_Tieranatomisches_Theater_1628730.html.

Zirkle, Conway. "Animals Impregnated by the Wind," *Isis* 25 (May, 1936): 95-130.

Chapter 3: Bovine Reproductions: The Cattle Paintings and Prints of Rosa Bonheur and Anton Braith, 1848-1880

Agricultural scientist Louis Gossin (French, b. 1817), in an 1875 pamphlet, noted an inverse relationship between the improved quality of France's livestock and farmlands under newly developed scientific techniques on the one hand and the rapid deterioration of the nation's "human stock" on the other. The "conditions of rural prosperity have become far greater than forty years ago," he proclaimed. And yet human beings, who had moved from rural to urban areas in increasing numbers, had, he asserted, become weak and degenerate because of this very disconnect from the land. "This weakening," he wrote, "is one of the principal signs of the decadence of a people and this because it affects society at the very sources of life."¹¹⁷ He contended that formerly robust family lines, whether from the aristocracy or the peasantry, had decayed into obscurity and death in the cities, necessitating the perpetual renewal of urban populations by successive waves of emigrating country laborers and scholars. It is "their vigorous blood that is endlessly called upon to regenerate humanity."¹¹⁸ Politicians, scientists and psychiatrists in late nineteenth century France had reached a state of moral panic induced by the

¹¹⁷ "Engrais, instruments, bétail, en un mot, tout le matériel de la ferme s'est amélioré... A leur tour, les voies ferrées ont ouvert aux produits du sol de nouveaux et vastes débouchés... En somme les conditions matérielles de prospérité rurale sont devenues beaucoup plus grandes qu'il y a 40 ans. Cependant, en dépit de tant de circonstances favorables, la terre baisse de prix et la population de nos villages diminue rapidement... Cet affaiblissement est un des principaux signes de la décadence des peuples, et cela parce qu'il affecte la société aux sources même de la vie." Louis Gossin, *Les Universités libres et l'enseignement supérieur de l'agriculture*, (Imprimerie C. Moisand [s.l.], 1875), 1-2.

¹¹⁸ "A mesure que, par suite de cette extinction, les rangs de la population urbaine s'éclaircissent, les vides se remplissent par de nouvelles émigrations sorties du sein des classes rurales. Les habitants des campagnes constituent donc la réserve de la population tout entière. C'est leur sang vigoureux qui est sans cesse appelé à régénérer l'humanité." Louis Gossin, *Les Universités libres*, 2.

nation's decreased birthrate, which was low even compared with that of other European industrialized countries. The panic was further augmented by the comparatively low level of *male births* within reported datasets. While livestock seemed more productive and reproductive than ever before, the French masses appeared insufficiently fertile and virile. As historian Robert Nye has observed, discourses of sex and reproduction at this time were treated as virtually "inseparable" from notions of national "health."¹⁹ The contrast between the physical improvements Gossin attributed to French *bétail*—a term that, significantly, connotes both "livestock" in the general sense and more particularly, "cattle,"—with the declining birthrate and allegedly declining quality of the human population, was implicitly validated by nineteenth century visual arts production, which often placed more pride and emphasis on the robust animal inhabitants of the countryside than the decreasing number of human laborers who maintained them. When those peasant subjects were depicted by Realist and Naturalist artists of the period, it was frequently to commiserate with the poverty of their hard-working lives, conveyed in somber tones and sparse landscapes by the likes of Max Liebermann (German, 1847-1935) and Jean-François Millet (French, 1814-1875) (figs. 3.1-2).

Gossin accordingly employed prominent animaliers (animal artists) to illustrate his encyclopedia of French Agriculture (*L'Agriculture Française*) (1858), most notably the siblings Rosa (French, 1822-1899) and Isidore Bonheur (French, 1827-1901) (fig. 3.3). Those artists lent a decided prestige to the enterprise, particularly given Rosa's contemporaneous fame. As one period reviewer remarked in *The Dublin University Magazine*:

M. Louis Gossin, Professor at the Normal Agricultural Institute of Beauvais, has recently published a work which creates an epoch in the literature of Agriculture. It is nothing short of an

¹⁹ Robert Nye, *Masculinity and Male Codes of Honor in Modern France* (New York: Oxford University Press, 1993), 72.

Encyclopedia of Agriculture applicable to the whole of France, and comprising all the principles which appeared to the author essential elements of a normal course of instruction in agriculture. The author is no mere theorist. He has literally put his hands to the plough. In other words, during eight years he and his brother took as active a part in the manual labour of a farm as any of their farm-servants. The only fault we can find with this sumptuous book will seem a testy piece of hypercriticism. We mean that it is fitter for a drawing room table than for a farmer's parlour. This will readily appear when we mention that the forty plates representing various breeds of horses, cattle, pigs, sheep, goats, etc., are drawn by Isidore Bonheur, and his famous sister, Rosa Bonheur... The work thus addresses itself to two classes of readers, or at least of purchasers. The dilettante, the artist and the bibliophile will indulge their several tastes by getting one of the handsomest works which has ever issued from the French press, illustrated by one of the greatest artists that ever adorned the French nation; while the more practical tiller of the soil will seek to gather from the text some of that shrewd advice and accurate information which the author seems thoroughly capable of imparting.¹²⁰

Gossin himself rhapsodized on the exalted vision of French agriculture that Rosa Bonheur presented in the famous *Plowing in the Nivernais* (fig. 3.4). As he wrote in his encyclopedia: "Muse of pastoral painting, you who so effectively revived on the canvas the laborer of the Nièvre and his steer, please multiply your masterpieces so that posterity might once again familiarize itself with our present work, as if the old plow never ceased to traverse the

¹²⁰ "Our Foreign Courier," in *The Dublin University Magazine: a Literary and Political Journal*, Vol. LIII, (January to June, 1859): 107.

fallow land.”²¹ The painting was appealing in its ability to suspend the passage of time, to encapsulate a fantasized, bygone vision of country life. The solidity and hyper-naturalism of Bonheur’s cattle is the unquestionable focal point of the canvas, each animal identifiable as both an individual and a breed specimen, while the men that accompany them appear virtually indistinguishable from one another, faces hidden under broad-brimmed hats. The beasts have thick, luxuriant fur that shines under the cloudless sky; their bodies are fat and muscular, yet imbued with grace. At the same time, the large scale utilized by the artist allows the animals to appear simultaneously heroic and absurd. When approaching the canvas more closely, the viewer will note the animals’ vacant, wide-eyed stares and drool-coated snouts (fig. 3.5). The brilliant, sunlit tones both allow for a highly detailed display of the artist’s considerable skill with bovine anatomy and a reassuring vision of contented animal labor. The cow serves as a figure of plenitude, where the Frenchman (especially the man) was in threat of irreversible deterioration.

A primary point of comparison for the agricultural, social and moral well being of the French nation in the mid- and late-nineteenth century was Germany, especially following the staggering French defeat in the Franco-Prussian War. The competition that played out in the militaristic realm extended to the economic, as the nations regularly compared their regional livestock breeds in pan-European agricultural competitions and World’s Fairs. The richness of Bavarian milk cow culture was most notably represented by German animal painter Anton Braith (German, 1836-1905), whose life-size, full frontal cows are atypical in the history of pastoral painting, wherein bovine figures more frequently functioned as relatively small, component parts of a landscape (fig. 3.6). Braith was often deemed the “German Bonheur” by period critics,

²¹ “Muse de la peinture champêtre, vous qui faites si bien revivre sur la toile le laboureur de la Nièvre et ses boeufs, multipliez donc vos chefs-d’oeuvre, afin que la postérité puisse encore se familiarizer avec nos travaux actuels, si jamais l’antique charrue cesse de sillonner nos guérets.” Louis Gossin, *L’agriculture française: principes d’agriculture appliqués aux diverse parties de la France* (Paris: Imprimerie de J. Claye, 1858), 90.

though his subjects were in many respects distinct from that artist's oeuvre. Where Bonheur conveyed the physical strength of her laboring animals, Braith represented emotive, passive, usually female, bovine bodies. Nonetheless, both artists were committed to a pastoral, naturalist style of painting that centered their large-scale livestock subjects.

In the following, I want to account for the now somewhat confounding prominence of cattle painting in this historical moment. I will track the representational status of ideally bred bovine bodies from the 1848 revolutions through the years following the Franco-Prussian War and into the National Socialist period in Germany. At the time, even noted artists not trained as animal painting specialists, such as Gustave Courbet (French, 1819-1877), produced epically scaled bovine tableaux (fig. 3.7). The "breeding forward" of improved breeds and newly acclimatized species on the one hand, and the "breeding back" of no longer extant animals on the other, helped create ruminant bodies that registered major shifts in human history. In the practices of Braith and Bonheur, the cow, often discussed as a figure of aesthetic stasis, actually served to mark significant temporal shifts brought about by colonialism, industrialization and competitive global trade. The bovine bodies that so often functioned in the history of art as landscape staffage or illustrated zoological specimens appeared in their paintings as central protagonists rich in fur, fat and muscular force. They show the seemingly anodyne, mundane cow to be symbolically charged. Braith and Bonheur's representations of domestic European cattle and their exotic counterparts, particularly the yak, embodied ecological superabundance. They pointed toward the improvements in commercial farming and subsistence agriculture that crossbreeding and species importation could provide. The works of these artists, particularly those of Bonheur, have not been thoroughly addressed in the context of period agricultural and zoological science, despite strong links to their illustrations and economic concerns. Even

through the mid-century, France and Germany remained primarily agricultural economies dependent on such developments (a third of the German population was employed in some form of agriculture by the end of the century, while about two-thirds of the French population was still located in rural areas by 1871).¹²²

In this era, the cow was granted a central place in the march of agricultural progress by academics and agriculturists alike. The first known text to attempt a complete overview of French cattle breeds was published in 1789 by a M. de Francourt.¹²³ Similarly, bovine breeds were only rigorously standardized in the German states in the second half of the nineteenth century. Prior to this time, a range of brown, red, red-gold and piebald types roamed the pastures of Prussia, Saxony and Bavaria, with many unrelated, but similar-looking, stocks existing simultaneously in different parts of the country.¹²⁴ Scientists such as the agriculturist, Émile Baudement (French, 1816-1863), expressed anxiety about the project of crossbreeding and the quality of mixed (*métis*) livestock, a fear associated with a movement focused on the breeding of autochthonous French cattle.¹²⁵ German cattle farmers were similarly obsessed by a need to compete with English and French husbandry innovations, as indicated by their preoccupation with perfecting the Simmenthaler breed.

The bovine was also a central figure in artistic debates, particularly those concerning the “Flemish/Dutch style” and the merits of contemporary Realist painting that treated of similarly “unelevated,” everyday subject matter. Large-scale painting was traditionally utilized for history painting subjects and thus associated with a certain traditionalism, dignity and political import in the European academies. The presence of life-size portraits of cows in academic art exhibitions

¹²² Linda Nochlin, *Realism*, (Middlesex: Penguin Books, 1971),113.

¹²³ Denis, *Les vaches ont une histoire*, 5.

¹²⁴ Schäfer, 42.

¹²⁵ Bernard Davis, *Les vaches ont une histoire* (Paris: Delacahux et Niestlé, 2016), 6.

was a comparatively new development in the nineteenth century, though there were a handful of precedents in Western art—the best known at the time being Paulus Potter’s (Dutch, 1625-1654) life-size *Bull* of 1647 (fig. 3.8). The relative aesthetic merits of that painting, which features the titular bull alongside a cow, three sheep, a man and a prominently foregrounded piece of cow shit, were, tellingly, the subject of considerable disagreement among leading nineteenth century critics. While author Théophile Gautier (French, 1811-1872) lavished praise on the work’s life size format, art critic Charles Blanc (French, 1813-1882) was disconcerted by it, convinced that the overwhelming scale deprived the animals of the intimate charm that he associated with Potter’s smaller canvases.¹²⁶

Throughout this chapter, I argue that Braith and Bonheur’s naturalistic depictions of the bovid body, carrying associations of abundance and ecological equilibrium, normalized agricultural innovations and their placement in the national landscape. Their works were closely connected to the agricultural illustrations found in texts like the aforementioned Gossin

¹²⁶As recounted by Amy Walsh, et al., during the Napoleonic Wars, the painting was looted from Prince Willem V’s picture gallery in the Hague and installed in the Louvre. The painting gained as much (and perhaps more) critical and popular attention than the Titians and Raphaels that surrounded it at the time. Viewers remarked upon the uncanny verism of the titular bull, presented in a life-size format highly unusual for seventeenth century animal subjects. In 1815, the canvas was restored to its country of origin, accompanied by a military escort and the pealing of church bells. Amy Walsh, Edwin Buijsen and Ben Broos. *Paulus Potter: paintings, drawings and etchings* (The Hague: Mauritshuis, 1994), 74. Even in the middle of the nineteenth century, well after the painting’s return, *The Bull* continued to be referenced regularly by French critics, particularly when discussing animal paintings by their contemporaries. In *Les Maîtres d’Autrefois: Belgique-Hollande*, painter and critic Eugène Fromentin (French, 1820-1876) remarked that *The Bull*, along with Rembrandt’s *The Anatomy Lesson of Doctor Tulp* (1632) and *The Night Watch* (1642), was among the most famous and celebrated paintings in Holland. Eugène Fromentin, *Les Maîtres d’autrefois: Belgique-Hollande* (Paris: E. Plon et Cie, 1876), 209. Gautier (French, 1811-1872) confidently dubbed Potter the “Raphaël of the stables” after viewing the painting in La Haye. James Kearns, *Théophile Gautier, Orator to the Artists: Art Journalism in the Second Republic* (London: Legenda, European Humanities Research Center, 2007), 55. However, the initial fervor which greeted the painting had also died down somewhat in the mid-century: prominent commentators like Blanc took a decidedly more critical approach to the bovine subject, declaring the earlier enthusiasm to be overheated. Blanc, while expressing a mostly favorable opinion of Potter’s body of work, felt that the life-size format robbed the canvas of the usual charm of the painter’s style. While the ‘realism’ of Potter’s smaller paintings contributed to their miniature grace, he argued that the experience of *The Bull* was too easily conflated with a mundane, real-life encounter with the animal. The scale of the animals troubled Blanc to the point where his praise of Potter’s style no longer applied in the case of the artist’s larger canvases. Charles Blanc, “Paul Potter,” in *Histoire des peintres de toutes les écoles. École hollandaise* (Paris: Jules Renouard, 1863), 7-8

encyclopedia, as well as Baudement's *Races Bovines* (1861) and Adolf von Rueff's (German, 1820-1885) *Racen des Rindes* (1877), not to mention numerous generalist natural histories that devoted considerable space to the cultural and economic significance of domestic cattle and their wild ancestors. As noted above, Bonheur herself contributed to *Races Bovines* and similar publications. Rueff, Gossin and Baudement's works offered the reader comprehensive illustrated catalogues of European cattle breeds, annotated with scientific commentary. The serial visualization of types, each receiving its own illustration, concurred with the spatial juxtaposition of different breeds found in many cattle paintings. In both print and painted media, the miniscule, even debatable, marks of difference between the breeds could only be established through this manner of active comparison.

Moreover, these types were not immutable, as frequent crossbreeding with more popular breeds (*Races* in French and *Rassen* in German) such as the Charolais in France or the Simmenthaler in Germany, led to the ultimate disappearance of more esoteric regional variants. At the same moment, the appeal of exotic and wild bovine species came to the forefront. The French acclimatization movement was particularly invested in the project of domesticating the multipurpose Tibetan yak in Europe. Meanwhile, German zoologists were increasingly preoccupied with the extinct aurochs, the presumed wild ancestor of the modern domestic cow and an avatar of the primeval Germanic forest. This fascination culminated in the Heck brothers' racially charged attempts to "breed back" the species in the National Socialist period. In each case, scientists, landowners and breeders dedicated themselves to integrating newly introduced bovines into the respective nation's (agri)cultural landscape. They were concerned with the animals' literal and symbolic *domestication*.



Bovine Equilibrium: Acclimatization and Domestication in France (1849-1880)

The societal importance attributed to the cow at this time in Europe cannot be underestimated. In volume IV of the *Histoire naturelle* (1753) the Comte de Buffon ruminated at length on the various useful byproducts to be derived from cattle. In particular, he emphasized the creature's crucial role in the advancement of human tool-making:

The horns of this animal are the first vessel from which one drank, the first instrument through which one blew to augment the sound, the first transparent material used to make windows and lanterns, and the first that one softened and molded to make boxes, combs, and a thousand other objects: but let us finish, because natural history must end where history of the arts begins.¹²⁷

Why might the cow, among all domesticated species, stand at the frontier where natural history ends and history of the arts begins? And why *must* this barrier be placed between the two disciplines? As these contributions of the cow, however involuntary, demonstrate, the history of human creation can never be fully separated from raw animal materiality. On the most literal level, the illustration of natural history was made possible in part by the use of stillborn calfskin (vellum) as a material support; the French royal vellum collection was and is one of the greatest European repositories of botanical and zoological illustrations from the seventeenth through the early twentieth century.¹²⁸ Pragmatically, the categorical distinction made between the study of man-made and divinely created objects presented the reader with distinct discursive domains, allowing Buffon to narrow the scope of his already massive undertaking (he produced thirty-six

¹²⁷ George Louis Leclerc, comte de Buffon, *Histoire naturelle par Buffon: quadrupedes* (Paris: Firmin Didot, 1799), 197. "La corne de cet animal est le premier vaisseau dans lequel on ait bû, le premier instrument dans lequel on ait soufflé pour augmenter le son, la première matière transparente que l'on ait employé pour faire des vitres, des lanternes et que l'on ait ramollie, travaillé moulée pour faire des boîtes, des peignes, et mille autres ouvrages: mais finissons, car l'Histoire Naturelle doit finir où commence l'histoire des arts."

¹²⁸ Pascale Heurtel and Michelle Lenoir, *Les vélins du Museum national d'Histoire naturelle* (Paris: Coedition Museum-Citadelles & Mazenod, 2016).

quarto volumes of the *Histoire naturelle* over the course of his working lifetime). As he explains in the general introduction to his project:

The sciences might thus be divided into two principal classes which would contain all that is suitable for man to know. The first class encompasses the history of man in society, and the second, natural history. Both are founded upon facts which it is often important and always pleasant to know. The first is the study of statesmen, and the second that of philosophers. And although the usefulness of the latter may not be as immediate as that of the former, it is certain that natural history is the source of the other physical sciences and the mother of all the arts.¹²⁹

Here, natural history figured as the “mother of the arts,” furnishing representational inspiration for human pursuits. In this case, the “arts” seem to be interpreted broadly, as any activity involving human invention. While Buffon observed the interconnection between these human and natural spheres, it was based on their shared divine provenance.¹³⁰ Yet curiously, it was not nature, but *natural history*, that was put forth as the progenitor of the arts. Man must first interpret nature—her physiology, her actions and habits—before he can produce his “grossly executed imitations.” Buffon hereby acknowledged the already mediated character of nature as represented by human beings.

Despite this essential relation between natural and human productivity, the study of natural history was treated as a gentlemanly pursuit, its “usefulness” and political significance less firmly established than that of the historical studies of “statesmen.” In Buffon’s conceptual schema, natural history is itself subsumed under human concerns. Much of the *Histoire naturelle* was devoted to the animals with the greatest use value for mankind; the author thus gave priority to the horse, dog and cow as the most thoroughly domesticated and devoted creatures in the animal kingdom. Nevertheless, he limited his discussion of the *uses* made of these animals in the text, placing such concerns beyond his natural historical purview.

¹²⁹ John Lyon, “‘The Initial Discourse’” to Buffon’s *Histoire naturelle*: The First Complete English Translation,” *Journal of the History of Biology* 9 (Spring 1976), 159-60.

¹³⁰ Ibid.

The complete dependence of (Western) human society on the cow is revealed in Buffon's eloquent formulation. Items derived from the animal serve to augment sound (the horn), increase visibility (window glass), transport objects (boxes) and otherwise prosthetically enhance human capacities. The cow is placed at the very origins of civilization, providing humans with their first utensils and instruments. It is the "ideal animal" in Buffon's estimation because it provides the most benefits to its human keepers, and the earth in general, for the least amount of accumulated environmental damage. It only eats the uppermost shoots of grass, leaving the roots undamaged and able to regrow. The food it consumes is then returned to the earth in the form of nutrient-rich fertilizer (of superior quality, as compared to that of other barnyard beasts). Castrated bulls are pliable draft animals and the females of the species provided milk. Mature animals that have reached the end of their working lives give their masters beef, leather and tallow. Even in zoological gardens they managed to serve as both subjects of display and food for carnivores.

In Buffon's vision of nature, in which a state of total and permanent equilibrium must be maintained, the cow is a morally exemplary creature. It gives to the Earth more than it takes, in contrast with human beings and other carnivorous species that relentlessly consume and conquer fellow organisms, while offering little in return (they are not usually sources of meat or milk, for example). Yet the supposedly inexhaustible resources of the bovine could also justify an ever-more elaborate manipulation and exploitation of its breeding later in the nineteenth century.

Though the Cuvier and Saint-Hilaire families came to dominate French natural history practice in the first half of the nineteenth century, Buffon's influence continued to be felt strongly and the *Histoire Naturelle* remained a frequently reprinted and referenced text. This discussion might be illustrated by a color lithograph from nearly a century later, found in the

Journal des mères et des enfants: La revue de l'éducation nouvelle (fig. 3.9). The review, published in Paris from 1848-54 under the direction of Jules Delbruck, a follower of utopian socialist Charles Fourier, targeted mothers interested in educating their own children. The wide range of subjects covered, from silk manufacturing to geological time to marine vessels, indicates the degree to which modern scientific and technological studies could be considered part of a liberal, republican education. In line with the familial theme of the journal, the cattle print presents a central image of a bovine nuclear family. A cow nuzzles her calf while the presumed father looks on from a distance. The animals are framed above, below and on each side by pictures of cow byproducts and their uses in everyday French society. The image in the top left corner shows cows being milked by milkmaids, flanked on the right by an image of a dairy processing this milk. On each side of the family portrait, one finds a massive array of items produced with the animals' assistance: piles of manure, leather shoes, boots and suitcases, "oil of bull's feet," buttons, combs, horns, boxes, dominoes, brushes and tallow candles. The lower register shows a simple country luncheon among mothers and small children juxtaposed with a scene of male servants preparing an elaborate aristocratic supper, revealing how the animal could benefit all social strata.

The diagram is accompanied by several pages of fictitious dialogue between the aptly named M. Bonchamp, his daughter Louise, and her band of school-age friends as they stroll through the countryside. Bonchamp, upon encountering a cow and calf in a neighboring farm, sees an opportune teaching moment and takes the children aside for a lesson on the species' many benefits to the nation. As he solemnly proclaims: "You see how valuable the cow is as a domestic animal; often, her products are the sole resource of an entire family of good peasants.

[The cow] would be an animal quite valuable to man, even if it gave him nothing but milk.”¹³¹

The children, uncommonly inquisitive about the specificities of dairy processing, allow their guide to furnish them with a primer on livestock economics. As the accompanying text reveals, the crudely drawn bull is meant to represent a Durham male, representative of the superior state of livestock breeding in England. The breed, known for its high quality beef, was imported to France in increasingly large numbers in the mid nineteenth century, as Bonchamp informs his attentive charges. French agriculturalists were convinced that breeding Durham specimens with native French cattle would result in improved stock. They were in large part unaware of the care and feeding techniques that more crucially contributed to England’s preeminent status in livestock breeding.¹³²

That such specialist concerns would enter into this elementary text is indicative of their significance for the Second Republic (France, 1848-52). The emphasis placed on the animal’s use value for the average peasant seems particularly apposite to the political moment. Significantly, Bonheur’s *Plowing in the Nivernais*, a Republican government commission and painterly ode to French cattle breeding, was produced in the same year (1849). The canvas was exhibited at the Salon to clamorous acclaim and purchased by the state for display at the Musée du Luxembourg in Paris. The painting famously depicts the first breaking of the soil in autumn; the oxen appear to be of various breeds. The red and white piebald steer (third from the right) represents the Morvan breed, which was quickly being replaced by the Charlois variety and now no longer exists. As veterinary science professor André Sanson (1826-1902) wrote after viewing

¹³¹ “Vous voyez, combien la vache est un animal utile; souvent son produit est presque la seule ressource de toute une famille de bons paysans. Ce serait donc un animal déjà bien précieux pour l’homme, quand bien même il ne lui donnerait que du lait.” Maitre Cam, “La Vache,” in *La revue de l’éducation nouvelle à Paris* 1 (February 1849): 55-56.

¹³² Denis, *Les vaches ont une histoire*, 6.

the painting, the Morvan cow, “will live in the memory for as long as works of art are conserved” thanks to the Bonheur’s meticulous efforts to replicate its appearance and place it in its native agricultural milieu.¹³³ Bernard Denis, a contemporary zootechnician (a scientist studying animals from the perspective of agricultural economy) at l’École Nationale Vétérinaire de Nantes, echoes this sentiment: “Morvanelle cattle have completely disappeared and were only seldom represented; one can thus imagine of how much use and value Rosa Bonheur’s painting is to the zootechnician.”¹³⁴ Denis goes on to remark on the other breeds he hypothesizes to be in the painting: the cream-colored animals are most likely Fémelins, another working breed found in the nineteenth century but no longer extant today. The white steers are pronounced to be Charolais-Nivernais crosses, a proclamation made with more confidence by the author, as the Charolais breed remains a source of high-quality beef in present-day France.¹³⁵ Presciently, the stark whiteness of these animals immediately draws the eye and seems to overwhelm the other figures.

This level of attention to regional varieties would, most likely, have been a recent development in French representations of cattle. As Denis observes, the nineteenth century saw the introduction of standardized breeds. While provincial differences in bovine stock were noted in earlier epochs, the breeds were not exhaustively tabulated and maintained through husbandry

¹³³ Marie Borin, *Rosa Bonheur: une artiste à l’aube du féminisme* (Paris: Pygmalion, 2011), 123.

¹³⁴ “Les bovins Morvandiaux ont totalement disparu et n’ont été que fort peu représentés: on imagine donc combien cette toile de Rosa Bonheur est utile au zootechnicien.” Bernard Denis, “Les races d’animaux domestiques dans l’oeuvre de Rosa Bonheur,” in *Rosa Bonheur (1822-1899)*, ed. Francis Ribemont (Bordeaux: Musée des Beaux-Arts de Bordeaux, 1997), 147. Problematically, the zootechnical evaluations performed by Denis were done using mostly black and white photographic reproductions, as the author acknowledges at the beginning of the text: “Nous avons travaillé surtout à partir des reproductions en noir et blanc qui figurant dans les ouvrages d’Anna Klumpke, de L. Rogers-Milès et l’album Braun. L’absence de couleur prive naturellement d’une importante source d’information mais, nous l’espérons, sans conséquence grave pour une étude générale.”

¹³⁵ *Ibid.*

practices the way they were in post-Revolutionary France.¹³⁶ However, even among non-specialists, the “accuracy” of Bonheur’s Nivernais oxen was lauded. As a critic writing under the pen name F. Lagenevais observed in the *Revue des Deux Mondes*: “Nothing simpler than this motif, which finds all its grace in the faithfulness of its details. Mademoiselle Bonheur paints the animals in a distinguished fashion, and must be praised for having chosen a subject so well suited to her talents. The oxen are very skillfully drawn; they form a harmonious ensemble, pulling with shared purpose and vigor.” Though his review is largely favorable, he does make wry note of the idealism of Bonheur’s bovine specimens: “One might reproach the rather too exquisite rendering of their figures, but perhaps they are from a model farm, better combed and cared for than ordinary oxen.”¹³⁷ The perfection with which Bonheur depicts the breeds can appear as both the height of verism and a form of idealism: much like an ambitious practitioner of animal husbandry, she has attempted to reproduce the best possible livestock.

The quantity and quality of animal painting observed by Lagenevais at the Salon of 1849 prompts him to the conclusion that, “in truth, since our painters have become so adept at representing dogs, cats and chickens, we [humans] have been less well-treated.” He then goes on to complain about the relative paucity of good portraits at the exhibition.¹³⁸ The cows, as figured by Bonheur, were thus presented as the ultimate boon to the French peasantry and economy at a

¹³⁶ Denis, 6.

¹³⁷ “Rien de plus simple que ce motif, qui tire toute sa grace de la fidélité des détails. Mlle Bonheur peint les animaux d’une façon distinguée, et il faut la louer d’avoir su choisir un sujet qui lui permettait de déployer ses moyens. Ses bœufs sont très habilement dessinés ; ils se groupent bien, tirent avec ensemble et vigoureusement. On pourrait bien leur reprocher un soin trop exquis de leur personne, mais ce sont peut-être des bœufs de ferme-modèle, mieux étrillés que des bœufs du commun. F. de Lagenevais [Henry Blaze de Bury], “Le Salon de 1849,” *Revue des deux mondes* 3 (1849): 559-593.

¹³⁸ Ibid.

moment when the representation of human beings, particularly the newly vaunted working classes of the Second Republic, was deeply disputed and fraught.¹³⁹

Bonheur was also an avid collector of beasts wild and tame. When speaking of the menagerie possessed by herself and her life companion, Nathalie Micas, she emphasized emotional proximity to the animals, as well as an instrumental interest in their breeding and upkeep. Describing a typical day among her creatures on a trip to Nice (naturally she couldn't travel without some of them), Bonheur wrote to her sister: "Ratata (the she-monkey) is in her fine cage out in the sun and is rolling herself in the hay. Gamine (the dog) puts on her lordly air as soon as she gets to Nice. My little bull-finch is singing his ditty...while Green Cocotte (the parrot) is swearing in Spanish."¹⁴⁰ For her more exotic specimens, she relied on the diplomatic gift economy and network of colonial imports that supplied the *Jardin des plantes* and similar institutions with their animals. Still others were acquired by the artist at markets and fairs on her travels in England, Scotland, Germany and throughout the French countryside. By 1859, the artist had completely abandoned her Parisian dwellings to live in the Château de By, a villa located near the forests of Fontainebleu. She thereby accommodated even more such purchases. There, her creaturely comrades included a deer named Jacques, Margot the mare, Kiki the stag and Fatma the lion.¹⁴¹ However, as both an artist and collector, she was especially fond of bovids, the family of cloven-hoofed, ruminant mammals comprised of antelopes, sheep, goats and, most significantly for her purposes, domestic cattle.

She owned entire flocks of goats and sheep, as well as Saint-Girons cows, Scottish Highland cattle and most peculiarly, a yak (fig. 3.10) She acquired this Asiatic creature through

¹³⁹ For further discussion of art production in the wake of the 1848 revolutions, see T.J. Clark, *The Absolute Bourgeois: Artists and Politics in France, 1848-1851* (London: Thames and Hudson Ltd, 1982).

¹⁴⁰ Theodore Stanton, *Reminiscences of Rosa Bonheur* (New York: D. Appleton and Co., 1910), 204.

¹⁴¹ Judith Cernogora, *Rosa Bonheur: l'eloge du monde animal* (Rouen: Éditions Point de vues DL, 2015), 15.

the assistance of her agent, Ernest Gambart, who directly delivered the creature to By, greatly alarming the artist's doorman on its arrival.¹⁴² The animal subsequently made appearances in sketches and illustrations by the artist.

Bonheur was so closely associated with bovines in the public imagination that she appeared alongside a bull in one of her most famous portraits (created by the appropriately named Edouard Louis *Dubufe*) (fig. 3.11) The portrait sitter was called upon to finish painting the bull herself and was duly compensated by the English collector who ultimately purchased the work. Dubufe refused the full payment of 15,000 francs, insisting that the canvas was a collaboration. Bonheur thereby received 7,000 francs of this sum “pour le taureau.”¹⁴³ The painting represents a notable departure from earlier portraits of women with their animal companions, the resolute, pensive Bonheur standing proudly alongside a large beast of burden where past feminine portrait subjects would be accompanied by, at most, a cat or a miniscule lap dog (one recalls the many portraits of Madame de Pompadour and her canine companions) (fig. 3.12). Bonheur's association with a male beast of burden and the telegraphing of her profession through the *porte-crayon* (pencil case) and portfolio held in her arms affirm the masculinized persona adopted by the artist, which formed a focal point of public fascination with her life. Bonheur, like the bull/ox, is a laboring subject. Occupying nearly a third of the canvas and angling its head to gaze out towards the viewer, the bull's fuzzy, affable face and soft, shining snout render its presence palpable. The imposing heft and perplexed expression of the animal draw the viewer's eye away from the putative portrait subject towards the manifestation of her talent.

¹⁴² Marie Borin, *Une artiste à l'aube du féminisme* (Paris: Pygmalion, 2011), 252.

¹⁴³ Borin, 159.

Though in her lifetime she was among the most popular living French artists, Bonheur's practice has recently become less central to surveys of nineteenth century art. Even twentieth-century attempts by feminist art historians to restore her place in the canon have rested almost exclusively on her biography: in particular, her unusual professional success as a woman artist in an era when most women could, at best, adopt painting as a genteel, unpaid hobby, her unconventional gender presentation and her successive intimate partnerships with other women.¹⁴⁴ Bonheur was in a long-term, co-habiting relationship with her childhood friend Nathalie Micas, who lived with her in Paris and later at the artist's personal chateau in By. Following the death of Micas in 1889, Bonheur corresponded with American artist Anna Klumpke, a woman over thirty years her junior. Klumpke was a lifelong admirer of Bonheur. As the story goes, she possessed a Rosa Bonheur doll in her childhood upon which she evidently imprinted, given that after an initial meeting with Bonheur during her artistic training in Paris in 1889, they struck up a lively overseas correspondence. Shortly after she visited Bonheur to paint her portrait at the Château de By in 1898, she became her steadfast live-in companion until the artist's death.

Queer identity as it is understood in the Western sphere today was nascent in a way that makes it more difficult to map directly onto the paintings than early queer liberationist scholars like James Saslow would have it seem.¹⁴⁵ The discourses that did exist around sexuality were taking place largely in a medicalized, scientific context. Sexologists, first in Germany and later

¹⁴⁴ Representative instances of this literature include Dore Ashton, *Rosa Bonheur: A Life and a Legend* (New York: The Viking Press, 1981); Danielle Digne, *Rosa Bonheur ou l'insolence: histoire d'une vie* (Paris: Denoël/Gonthier, 1980); James M. Saslow, "Disagreeably Hidden: Construction and Constriction of the Lesbian Body in Rosa Bonheur's Horse Fair," in *The Expanding Discourse: Feminism and Art History*, ed. Norma Broude and Mary Garrard (New York: Harper Collins, 1992), 187-205; and Gretchen van Slyke, "The Sexual and Textual Politics of Dress: Rosa Bonheur and Her Cross Dressing Permits," *Nineteenth-Century French Studies*, 26, nos. 3 & 4 (Spring Summer 1998): 321-335.

¹⁴⁵ James Saslow, "Disagreeably Hidden: Construction and Constriction of the Lesbian Body in Rosa Bonheur's *The Horse Fair*," in *The Expanding Discourse: Feminism and Art History*, eds. Norma Broude and Mary D. Garrard (New York: IconEditions, 1992).

in France, often wrote about gender nonconformity and same sex desire as pathological conditions rather than accepted social identities. Bonheur herself claimed to be chaste for the duration of her life (And her relationships, in a nineteenth century era of “romantic friendships,” could have been interpreted as such). This is not at all to deny Bonheur’s same-sex desires and affinities. Yet I would argue that the very disconnect between the artist’s work and her biography might partially account for the paucity of discussion surrounding the paintings themselves. The marginality of the masculine, woman-loving woman would seem, by present day, Western understanding of queer identity, to be at odds with the taxonomic, reproductive logic that structured depictions of animal husbandry, very much including those of Bonheur. The radical aspects of her life appear virtually undetectable in the artworks, which bore little affinity with more avant-garde artistic tendencies such as Impressionism, Post-Impressionism and Symbolism.

Indeed, while Bonheur expressed a form of egalitarian sisterhood with her animal compatriots, she also contributed to the economy of importation, acclimatization and “experiments” particular to Second Empire France. Notably, she participated as a *Dame Patroness* in the *Société zoologique d'acclimatation*.¹⁴⁶ (Women were not allowed to be full members or attend meetings but could offer financial support). The *Société zoologique d'acclimatation* (1854-present) was founded by the natural historian Isidore Geoffroy Saint-Hilaire (French, 1805-1861) in order to expand the range of species used in French agriculture, hunting and textile production. To this end, both wild animals and already tame foreign species were imported to Europe. The organization placed great emphasis on the import and crossbreeding of bovines, particularly the yak. Similar scientific efforts were made to better adapt European animals (human and otherwise) to colonial outposts, particularly in tropical

¹⁴⁶ Société impériale zoologique d'acclimatation, *Guide du promeneur au Jardin zoologique d'acclimatation* (Paris: January, 1865), 7.

regions considered inimical to the Caucasian races. The society's membership was internationally open, including interested individuals from the French colonies, Asia, Africa and other European nations. Many German naturalists, agriculturists and landowners were enthusiastic participants, until the Franco-Prussian War irreparably strained scientific, as well as diplomatic, relations between the countries. Berlin-based acclimatization research thus continued on its own course in the newly formed German nation.¹⁴⁷

During the second half of the century, natural historians were increasingly interested by the relationship between livestock and the environment in which they were raised. This concern was perhaps most starkly embodied by the project of the *Société d'acclimatation* and the successive international branches of the movement. Under the auspices of the society, the *Jardin d'acclimatation*, which served as a site of display for species targeted for acclimatization, was opened in the Bois de Boulogne in Paris in 1860. (The space continues to exist today in the form of a children's amusement park and petting zoo) (fig. 3.13). The *Jardin* was privately owned but enthusiastically patronized by Napoleon III, who donated many diplomatic gifts of exotic animals and plants to the venture. Geoffroy Saint-Hilaire was thus given extensive government support for his project. His cause was no doubt bolstered by his formidable natural history

¹⁴⁷ Michael Osborne, *Nature, the Exotic and the Science of French Colonialism* (Bloomington: Indiana University Press, 1994). For more on the acclimatization movement, particularly as it related to the hygienic maintenance of white colonizers in Africa and the tropics (most of this literature addresses the maintenance of human imports/exports with only occasional references to animals), see Warwick Anderson, "Climates of Opinion: Acclimatization in Nineteenth Century France and England," *Victorian Studies* 35 (Winter 1992): 135-157; Pascal Grosse, *Kolonialismus, Eugenik und bürgerliche Gesellschaft* (Frankfurt am Main: Campus Verlag, 2000); Pascal Grosse, "Turning Native? Anthropology, German Colonialism, and the Paradoxes of the "Acclimatization Question," 1885-1914" In *Worldly Provincialism: German Anthropology in the Age of Empire*, edited by H. Glenn Penny and Matti Bunzl (University of Michigan Press, 2003); Eric T. Jennings, *Curing the Colonizers: Hydrotherapy, Climatology and French Colonial Spas* (Durham: Duke University Press, 2006); and David N. Livingstone, "Tropical Climate and Moral Hygiene: The Anatomy of a Victorian Debate," *The British Journal for the History of Science* 32 (March 1999): 93-110.

pedigree: his father was Étienne Geoffroy Saint-Hilaire, famous for his defense of evolutionary theory in a widely publicized series of debates with Georges Cuvier in 1830.¹⁴⁸

In contrast with his theoretically minded father, Isidore was chiefly preoccupied with pragmatic applications of zoology, as reflected by the activities of the *Société*. The organization was composed of an internationally based group of professional scientists, doctors, veterinarians, landowners and interested amateurs. Meetings were held in Paris, but affiliated publications and meeting notes were distributed throughout Europe and the colonies. Other countries and the French provinces had their own regional acclimatization societies with which the Paris branch collaborated—affiliates were found in locales as wide-ranging as Alexandria, Sicily, Moscow, Berlin, and the colonies in Algeria, Martinique, Guadeloupe and French Guiana.¹⁴⁹ Landowning members were encouraged to contribute to the acclimatization process by raising and breeding species acquired by the *Société* on their private farmland. In turn, they were expected to report back to the society on the animals' health and reproductive activities—failure to do so would result in the revocation of further animal borrowing privileges.¹⁵⁰

In the preface to *Acclimatation et domestication des animaux utiles* (1861), Isidore Geoffroy summed up the ways in which this project distinguished itself from natural historical practices of the kind conducted at the *Muséum national d'Histoire naturelle* (where his father was employed). He declared that observations of animal physiology, which formed the descriptive aim of earlier natural history, should be capitalistically applied to produce “resources, powers, new riches.” Unlike the animals in the *Jardin des plantes*, the creaturely inhabitants of

¹⁴⁸ See Toby Appel, *The Cuvier-Geoffroy Debate: French Biology in the Decades Before Darwin* (Oxford: Oxford University Press, 1987).

¹⁴⁹ Michael Osborne, *Nature, the Exotic and the Science of French Colonialism*, 1994.

¹⁵⁰ Azur Dutil (ed), *Le Jardin d'acclimatation illustré, par une réunion de savants et d'hommes de lettres. Dessins de Riou. Gravures de nos plus célèbres artistes paraissant les 5 et 20 de chaque mois* (Paris: 1863).

the *Jardin d'acclimatation* were not only raised and bred for scientific and recreational observation but for commercial, agricultural purposes. Nonetheless, they certainly fulfilled a spectacular function as well: located in the wealthy, fashionable Neuilly-sur-Seine neighborhood, the gardens were a popular site of upper-class leisure.¹⁵¹

Though Bonheur made few official contributions to the Société, she received favorable mention in its monthly bulletin from February 1862. The author of the text noted that her letter of thanks for her newly appointed *Dame Patroness* status was read aloud to the assembled members in Paris and that she pledged to assist the society through the use of her pencils.¹⁵² She was already well known by then for her extensive documentation of French regional breeds, including the Salers oxen of Cantal (fig. 3.14), the Percheron horses of Normandy (fig. 3.15) and the aforementioned Charolais and Morvan cattle of *Plowing in the Nivernais*.¹⁵³ Her illustrations for Gossin and Baudement likewise demonstrated a sensitivity to forms of representation desired by agriculturists. Such skills, could, it was hoped, be applied to animals that the *Société* wished to adapt to a French setting. As revealed in a period illustration (fig. 3.16), the acclimatization gardens combined aspects of the traditional zoological garden with the anthropological exhibition, displaying colonized subjects alongside the animals in the full spirit of dehumanized exoticism. The white bourgeois zoo couple gawps at the African men riding camels and steering the ostrich-driven carriage in much the same manner that they observed the caged beasts.

Bonheur's works likewise play upon such tropes, as she evinced a particular fascination with Buffalo Bill's Traveling Show and the Native tribes of the Western United States, which

¹⁵¹ For more on the class demographics of visitors to the Jardin des plantes and Jardin d'acclimatation, see Jean-Michel Derex, *Les zoos de Paris: histoire de la mémagerie du Jardin des plantes, du Jardin d'acclimatation et du zoo de Vincennes* (Prahecq: Éditions Patrimoines et médias, 2012).

¹⁵² *Bulletin mensuel de la société impériale zoologique d'acclimatation* (Paris: Imprimerie de L. Martinet, 1862), 236-237.

¹⁵³ Bernard Denis, "Les races d'animaux domestiques dans l'oeuvre de Rosa Bonheur," in *Rosa Bonheur (1822-1899)*, ed. Francis Ribemont (Bordeaux: Musée des Beaux-Arts de Bordeaux, 1997), 147.

she first encountered at the Paris World's Fair of 1889. There, she sketched both Native subjects and their animal companions. She even appeared in an exceedingly strange advertisement (fig. 3.17) alongside the very much deceased Napoleon Bonaparte and Buffalo Bill, further solidifying her affiliation with empire, colonialism and the power that her representational role as an artist could exert within these hegemonic tendencies—"art perpetuating fame," as the poster proclaims.

In 1863, Rosa Bonheur's illustration of yaks appeared in the *Jardin d'acclimatation illustré*, a publication on the activities of the *Société* aimed at a lay audience. In her representation, as engraved by Edouard Riou, three of the animals appear in their full-figured, fluffy glory. A piebald yak is shown in standard natural historical illustration profile view in front of two resting white companions. The generic background implies the potential for acclimatization—the animals could be anywhere. In this respect the image strongly contrasts with what was then the most notable depiction of the species in Western art: George Stubbs's portrait of Warren Hasting's yak (fig. 3.18) of 1791. This painting located the animal in an imaginary version of the landscape surrounding Punakha Dzong, the summer palace of Bhutan. Sumptuous and sinuous, the blue-tinged mountains and luxuriant palace emphasize the creature's exoticism. The landscape elements even threaten to overwhelm the yak's pictorial centrality. In this way, Stubbs strongly evoked the animal's native landscape, even though the yak resided at the time in England with Hastings, a former official in the colonial government in India.¹⁵⁴ Conversely, Bonheur's yaks inhabit an ambiguous space of potential adaptability. Their abundantly shaggy bodies are the visual focal points, tantalizing the viewer with their possible use in textile production and farm labor. No doubt this is in part due to the different conventions

¹⁵⁴ Judy Edgerton, *George Stubbs, Painter* (New Haven: Yale University Press, 2007), 520.

of painting and natural history illustration, the latter characterized by its blank backgrounds. Nevertheless, Bonheur's familial grouping of the animals and attention to their postures adds an element of personality otherwise missing in many strictly "scientific" images. The lovingly detailed textures entice the viewer to pet and prod the animals, making them seem comfortably familiar.¹⁵⁵ Given the particularly high hopes pinned on the acclimatization of the yak, the employment of a well-known artist like Bonheur for its illustration may well have served a promotional purpose. (Possessing her very own yak specimen no doubt helped.) This seems particularly likely given that almost all other illustrations in the 1860s run of the *Jardin d'acclimatation illustré* were solely produced by the far less famous Riou.

One of the pet projects of the *Société d'acclimatation*, the introduction of the yak species from China was seen as having potentially wide-ranging effects on France's agricultural production. The first issue of the *Jardin d'acclimatation illustré* (1863) made this clear through its extended, breathlessly eager discussion of the species, which, until that point, was, the publication falsely claimed, "little studied by [Western] naturalists." It was brought to the attention of scientists by the French consul in Shanghai, Charles de Montigny (1805-1868), who had twelve of the beasts sent to his home country in 1854, underwriting the costs with the assistance of Napoleon III's half-brother, Charles-Auguste-Louis-Joseph, duke de Morny.¹⁵⁶ This group had, through breeding, expanded to thirty animals nearly a decade later. The creature was praised for its ability to serve as a beast of burden, source of fur for textiles, mount, and fount of abundant milk, all while consuming relatively little in the way of food or other resources. It was thus, naturalists judged, ideally suited to becoming "the cow of the impecunious, just as the donkey is the horse of the poor," especially in the Alpine countryside. There, it could serve as

¹⁵⁵ Osborne.

¹⁵⁶ Osborne, 29.

“horse, sheep and cow” all in one, reducing the number of animals which peasant farmers would need to raise and maintain. In reality, the breeding project was largely a failure and the species never saw widespread use in France. Following its introduction into the Parisian *Jardin d’acclimatation*, many of the specimens were moved to the more suitable climes of Grenoble, where they unfortunately also failed to thrive.¹⁵⁷

The project was later a source of derision and disillusionment in the notion of acclimatization, as several sneering Germanic accounts suggest. In *Die Naturgeschichte des Thierreichs* (1859), German zoologist Christian Giebel (1820-1881) mockingly cited the hyperbolic claims of French scientists: “The silk-furred steer of the Asiatic mountains, the yak of the Tartars, would become our only transport and pack animal, would bring us clothing, nourishing milk, fatty butter and flavorful meat.” The animal even possessed the appearance of a “steer in sheep’s clothing” (“Die äußere Erscheinung des Yak führt uns einen Stier im Schafspelze vor.”) He goes on to dispute journalists’ claims about the lack of previous Western documentation on the yak, noting that Marco Polo himself had written about the animal during his travels.¹⁵⁸ The yak, in Giebel’s comically exaggerated discussion, becomes the only necessary mammalian livestock, predicted to surpass, and even replace, all other domestic bovids and equines. The promise of the yak thus traveled beyond the borders of France, though in reality the project never truly gained purchase, even in its country of origin. As Giebel noted, the animal’s use value decreased in lowland areas, where the harsh sunlight caused it to lose both its fur and its hardy temperament. He concluded that the species became too degenerate in a European

¹⁵⁷ Azur Dutil, *Le Jardin d’acclimatation illustré*, 84-86.

¹⁵⁸ Christopher Gottfried Giebel, *Die Naturgeschichte des Thierreichs. Erster Band: Die Säugethiere mit 926 Abbildungen* (Leipzig: Verlag von Otto Wigand, 1859), 430-431. “Vor einigen Jahren ging von Frankreich aus die frohe Botschaft durch Europa, daß ein neues Hausthier eingeführt sei, welches Pferd und Rind zugleich ersetze, ja das mehr als beide zusammen nütze und doch weniger zu seinem Unterhalt erfordere als jedes derselben. Der seidenhaarige Stier der asiatischen Hochgebirge, der Yak der Tartaren sollte unser einziges Zug und Lastthier werden, uns Kleidung, nahrhafte Milch, fette Butter und schmackhaftes Fleisch liefern.”

climate to truly replace the domestic cow.¹⁵⁹ Similarly, in *Brehms' Thierleben*, Alfred Brehm (German, 1829-1884) asserted that even in mountainous areas, there were already domestic species of cow and goat sufficiently adapted to local conditions to render the addition of the yak a senselessly costly project.¹⁶⁰ At the date of publication (1877), he wrote of the acclimatization attempt as a failed endeavor, though he did include a particularly charming illustration of a luxuriantly black-coated mother yak and her calf, happily ensconced in a snow-capped mountain-scape (fig. 3.19) They no longer appear as the agricultural curiosities depicted in Bonheur's illustration, but rather an exotic species best left to the chilly terrain of their Asian homeland.

The yak was thus seen as exotic, while also possessing many commonalities with the domestic cattle breeds more frequently depicted by Bonheur. The bovine figure, as described by naturalists and rendered in pastoral painting, appeared as a creature of abundance, of the continual enrichment of the earth and France's agricultural bounty. The presentation of the yak as a consummately efficient animal, providing returns even greater than the labor and costs invested in its upkeep, echoes the Comte de Buffon's discourse on the steer/cow ("*le boeuf*") in volume 4 of the *Histoire naturelle*. These sentiments about the cow were echoed in the *Jardin d'acclimatation illustré*, where it was once again pronounced the "most useful" domesticated species.¹⁶¹

The importance of bovine agriculture and its detailed illustration can be further demonstrated through the life work of the noted French Professor of *Zootechnie* (applied animal science), Émile Baudement. While natural history, as previously noted by Buffon, "ended"

¹⁵⁹ Ibid, 431.

¹⁶⁰ Alfred Edmund Brehm, *Brehms Thierleben: Allgemeine Kunde des Tierreichs. Erste Abtheilung--Säugethiere, Dritte Band* (Leipzig: Verlag des Bibliographischen Instituts, 1877), 384.

¹⁶¹ Azur Dutil, *Le Jardin d'acclimatation illustré*, 84-86.

where the study of human arts and industry began, *zootechnie* was dedicated to studying the relationship between human activities and animal physiology. Its primary aim was to promote profitable improvements to animal husbandry. Just as natural history was concerned with the observation of animal anatomy and habits in and for themselves, the field of *zootechnie* focused on the complex intertwinings between human industry, economics and the animal world. The term can be traced back as early as 1834, when it appeared in an essay by André Marie Ampère, better known for his invention of the electrical telegraph and studies on electromagnetism. In “Essai sur la philosophie des sciences ou Exposition analytique d’une classification naturelle de toutes les connaissances humaines” Ampère defined *zootechnie* as the science “related to the usage or agreement we obtain from animals, from whose work and upkeep we procure the first raw materials from the animal kingdom.”¹⁶² In this respect, he wrote, *zootechnie* is to zoology what agriculture is to botany: an applied science of practical human uses of nature, as opposed to nature’s theoretical observation. The term was widely popularized in an agricultural treatise written by the comte de Gasparin in 1843, in which the author presented agricultural science (pertaining to crops) and *zootechnie* (pertaining to animals/animal husbandry) as two distinct fields, thereby recusing himself from treating of animal subjects in his text.¹⁶³

Baudement, appointed the first chair of *zootechnie* at the *Institut national agronomique* at Versailles in 1849, was assigned to his post in the hopes of improving the quality of agricultural education in France. In 1861-2, he published his masterwork, an encyclopedic guide

¹⁶² “la science relative à l’utilisation ou à l’agrément que nous retirons des animaux, aux travaux et aux soins par lesquels nous nous procurons les matières premières tirées du règne animal.” Roland Jussiau, Louis Montméas and Jean-Claude Parot, *L’élevage en France: 10,000 ans d’histoire* (Dijon: Educagri Editions, 1999), 361.

¹⁶³ Ibid.

to European cattle breeds, *Les races bovines au concours universel agricole de Paris*.¹⁶⁴ In this text, written during the first agricultural contests held by the French imperial government in 1856, the author described breeds of cattle from Great Britain, Holland, Denmark, Switzerland, Germany, the Austrian Empire and France. The first volume discusses bovine physiology and husbandry; the second contains the illustrations. An additional volume of writing on each individual breed was left unfinished by the author's early death. Baudement's text is significant not only for the thoroughness with which it documented domesticated breeds (it was, per Baudement's obituarist, "the most precious atlas in its genre") but also for the careful consideration that went into the commissioning and production of its illustrations, all planned meticulously by the author.¹⁶⁵ The list of artists included such luminaries as cattle painter Constant Troyon (1810-1865) and animal sculptor Antoine-Louis Barye (1795-1875) (figs. 3.20-21) as well as Rosa Bonheur and her brother, Isidore. The effort to include France's best-known *animaliers* is a strong indication of the importance that the visual arts played in the enterprise.

As Baudement wrote, "The descriptive part of this work requires illustrations which allow the reader to form an idea of the diverse breeds and to compare them with one another." To this end, the author commissioned eighty-seven illustrated plates. Though he discussed other breeds in the text, the illustrations only show those specimens exhibited at the *concours*, such that he and the participating artists could physically measure and study them firsthand. The project presented European breeds of cattle, organized by nation, with the aim of informing the reader about the agricultural economies from which they emerged. The goal of the zootechnician, he proclaimed, was to classify and describe the different breeds, thereby

¹⁶⁴ Emile Baudement, *Les races bovines au Concours universel agricole de Paris en 1856* (Paris: Imprimerie impériale, 1861-62).

¹⁶⁵ *Notice sur la vie et sur les travaux d'Emile Baudement, professeur au Conservatoire imperial des arts et métiers* (Paris: Imprimerie de Bourdier, 1864), 12.

providing the agriculturalist with a creaturely user's manual for each type. The tracking of regional variations was thereby explained by the author in terms of utilitarian interest; he wanted to classify the breeds according to their value in each "area of use"—milk production, meat, and farm labor—and each sort of "milieu."

The exhibited breeds in *Les races bovines* are presented in engraved and *heliogravure* plates (a photochemical reproduction technique), the majority of which were based on photographs taken by Adrien Tournachon, also known as "Nadar jeune." (As his moniker implied, Tournachon was the younger brother of the more famous portrait photographer, Nadar, and ran his own successful photography studio, such that the use of the "Nadar" moniker ultimately became the subject of a lawsuit between the siblings.¹⁶⁶) The role Tournachon played in the *Races bovines* project was significant enough to merit the inclusion of his name on nearly all of the published engravings. In order to capture faithful images of the reluctantly posed beasts, the photographer employed Auguste Nicolas Bertsch's "instantaneous" collodion process.¹⁶⁷ To maintain a sense of mathematical uniformity and the comparative sizes of the different breeds, Baudement ordered that all of the photographs be taken on the same scale ("75 millimètres pour 1 mètre"). This exactitude would, he hoped, provide the illustrators with tracings ("calques") that would prevent them from straying too far from the "raw data" ("renseignements bruts") of the original photographs.¹⁶⁸ However, he felt that this photographic work could best be supplemented through the sketches and observations of "skilled artists."

¹⁶⁶ The elder Nadar ultimately succeeded in claiming sole ownership of the name. Félix Nadar, *When I Was a Photographer*, trans. Eduardo Cadava, Liana Theodoratou (Cambridge: MIT Press, 2015), 230.

¹⁶⁷ Bernard Marbot, *After Daguerre: Masterworks of French Photography (1848-1900) from the Bibliothèque Nationale* (New York: Metropolitan Museum of Art, 1980), 168.

¹⁶⁸ Baudement, LXXIII.

Significantly, Baudement regarded the animal body as a “machine,” though in a decidedly different sense than earlier authors like René Descartes.¹⁶⁹ The machinic character of the animal was emphasized for the sake of economical efficiency, rather than, as in Cartesian philosophy, a means of proving the singularity of divine human souls in an otherwise purely material, clockwork nature. Per Baudement, the animal offers products (milk, meat, physical force) for a certain expenditure (feed, lodging, overall care).¹⁷⁰ The English, he claimed, were particularly skilled at a new, “industrial” form of raising cattle. Rather than using the animals for multiple purposes, as French farmers often did, breeds were specifically cultivated to perform one function, the most notable example being the Durham cow, famed for its ability to put on weight and resultant high quality beef. Thus, while the yak represented an all-purpose animal amenable to subsistence agriculture, breeds like the Highland and Durham cow were vaunted for their commercial viability as specialized breeds.

Based on this and similar examples, Baudement argued that the superior level of English livestock production could be primarily attributed to that nation’s greater degree of industrialization, not in the sense of modernized machinery or greater financial means, but rather in the notion of compartmentalized specialization that an industrial society engendered. The animal that was raised for a single purpose, rather than several, would be able to fulfill that purpose to its utmost, as breeding techniques and treatment were attuned to the encouragement of the most desired traits.¹⁷¹ The cow, like the human industrial laborer, was selected to perform a single task. In this respect, Baudement’s ideas thoroughly corresponded with Darwin’s theories on selective breeding, as well as nascent capitalist ideologies.

¹⁶⁹ Ibid, 8. René Descartes, *Discourse on Method*, trans. Desmond M. Clarke (New York: Penguin Books, 1999).

¹⁷⁰ Baudement, IV.

¹⁷¹ *Notice*, 8.

In many cases, the *animaliers* hired for the *Races bovines* project were likewise specialized, depicting the breeds for which their artworks were best known. Rosa Bonheur, for instance, furnished representations of the Salers and West Highland bulls (fig.3.22) and cows (fig.3.23). The artist had previously produced many canvases depicting the latter breed, inspired by her six-month visit to Scotland, arranged by her agent Ernest Gambart to coincide with the touring British exhibition of her acclaimed painting *The Horse Fair* (1853-55) in 1856.¹⁷² The final *Races bovines* prints indicate the degree of exactitude with which the artist was able to depict the creatures. Whorls of light and dark fur intermingle on the bull's staunchly posed body. Like the Angus cattle depicted by Barye, the Highland breed was primarily raised for its meat and is shown to be suitably stout. A longer horned specimen lurks forebodingly in the background, directly facing the viewer and thereby providing her with a frontal view of the animal. Bonheur repeated this trick in the image of the cows, which similarly uses the inclusion of multiple animals to provide the observer with both frontal and profile views. The udders and testes of the creatures are made deliberately visible in spite of their abundant fur, emphasizing the importance of distinguishing sex, as well as breed, to Baudement's project. The preoccupation with sex and breeding is made particularly apparent by the preponderance of

¹⁷² As Frances Fowle notes, "From 1857 until 1868, she [Bonheur] painted on average at least one Scottish subject a year, culminating in a minor retrospective at the Salon of 1867, when she exhibited five Scottish works: *The Highland Shepherd* (1859), *A Highland Raid* (1860), *Ponies of Skye* (1861), *Changing Pasture* (1863), and *Oxen and Cows* (1867)." Many of these Scottish tableaux featured the West Highland breed as central figures. The popularity of these works, particularly in Britain, was furthered by extensive printed reproductions. Per Fowle: "Significantly, the majority of works engraved in Britain were of Scottish subjects and by 1875 Bonheur's most important Scottish paintings were all available as prints. These included *Morning in the Highlands*, engraved by Charles G. Lewis in 1857; *Denizens of the Highlands*, produced by Thomas Landseer in 1860, with a smaller version by Lewis; and *A Highland Shepherd*, engraved in 1861 by Lewis, who also produced *A Highland Raid* (with a smaller version by Charles Mottram) in 1862. There followed a thirteen year gap in production, when only one print was produced, in 1867, when H.T. Ryall engraved *Changing Pasture*... Then, in 1875, Thomas Landseer engraved *A Stampede* and Mottram *The Straits of Ballachulish*. Despite the decline in production, the prints continued to sell and in 1882 the *Magazine of Art* commented that 'so popular are the themes handled by Rosa Bonheur, that most of them are engraved in two sizes.'" Frances Fowle, "Picturing the Highlands: Rosa Bonheur's Grand Tour of Scotland" in *Journal for the Scottish Society for Art History* 18 (2013): 44-45.

taureaux (bulls) as opposed to *boeufs* (oxen/castrated males) in both the textual descriptions and the illustrations.

Where the Barye bulls and cows appear as statuesque masses, the Bonheur animals are sketched more delicately, immersed in the grey tones of imagined Highland grasses. Most of the animals in the album stand in front of what appear to be their native landscapes, rather than the more pedestrian backdrops furnished by the agricultural *concours*. A comparison between the original photograph of the West Highland cow and Rosa Bonheur's depiction in the print reveals that the context of the fair has been completely eliminated in her final illustrations (fig. 3.24). In each print, the original Parisian setting gives way to a lightly delineated regional landscape, reasserting the animals' status as expressions of distinctly nationalized approaches to the management of zoological resources.

Furthermore, Baudement used his choice of artists as yet another proof of the high degree of representational accuracy found in his publication. Whatever mechanical "objectivity" might be achieved via photography could only be enhanced through the trained eye of the dedicated *animalier*. These artists could, in his words, capture the "profound verity" of each animal. Baudement openly rejected any attempt at correcting perceived "defects" in order to achieve the picture of an ideal specimen type.¹⁷³ The artists seem to have fully complied, presenting cattle bristling with veins, misshapen musculature and folds of fat overhanging their necks and haunches. Their appearance is nevertheless regal, statuesque, the rural landscapes mere pedestals for their imposing forms.¹⁷⁴

In this respect, Baudement's work conformed with the notion of "mechanical objectivity" that Lorraine Daston and Peter Galison attribute to much late nineteenth century scientific

¹⁷³ Ibid.

¹⁷⁴ Ibid.

imagery. Producers of “mechanically objective” illustrations took as their ultimate goal the presentation of the object as a unique individual, rather than an ideal specimen through which to measure and classify all other objects of the same genre. As Daston and Galison write, “By *mechanical objectivity* we mean the insistent drive to repress the willful intervention of the artist-author, and to put in its stead a set of procedures that would, as it were, move nature to the page through a strict protocol, if not automatically.”¹⁷⁵ This involved using techniques like tracing and photography to “preserve form from the world,” rather than “parting the curtains of experience to reveal an ur-form” or “ideal type” as eighteenth century scientific illustrators often aimed to do.¹⁷⁶ However, the authors are careful not to conflate this regime of image making with the invention of photography, noting that similar procedures were employed in lithography and other reproductive techniques. Baudement’s text, appearing in the middle of the century before many of these trends in scientific illustration completely took hold, seems a prescient example of such objectivity. At the same time, the employment of trained *animaliers* suggests a continued interest in a kind of aesthetic perfectibility, or alternatively, a sense that the *animalier* possessed her own form of specialized zoological knowledge that straightforward engraved reproductions of photographs could not convey. As Baudement wrote,

I have attempted, in a word, to obtain faithful portraits, in which one will first notice the individual animal, then its breed. The artists, who would agree with these views, have produced drawings that reveal all the virtuosity of their pencils, and a profound sentiment of especial verity, which it was their task to convey. When I mention Mademoiselle Bonheur and Messieurs Barye, Troyon, Van Marcke, Mélin, Isidore Bonheur, and Villamil, it will be admitted that I could not employ talents more proven and illustrious.¹⁷⁷

¹⁷⁵ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 121.

¹⁷⁶ Ibid.

¹⁷⁷ “J’ai essayé, en un mot, d’obtenir des portraits fidèles, où l’on retrouvât l’individu d’abord, puis la race sous l’individu. Les artistes, qui ont bien voulu accepter ces vues, ont produit des dessins où se révélait toute l’habileté de leur crayon, et un sentiment profond de la vérité spéciale qu’il s’agissait de traduire. Quand j’aurai nommé, avec Mademoiselle Bonheur, MM. Barye, Troyon, Van Marcke, Mélin, Isidore Bonheur et Villamil, on avouera que je ne pouvais ambitionner le concours de talents plus éprouvés et même plus illustres.” Emile Baudement, *Les races bovines*, LXXIII.

The artists were not only illustrators, but rather, Baudement implies, participants in the process of zootechnic classification, “translating reality” with their pencils.

Nonetheless, Baudement was cautious in attributing too great a role to human agency in the process of breed development. He altogether rejected the traditional distinction, often made by period agricultural writers and natural historians, between “natural” and “artificial” breeds, the latter term designating animal types that only exist in captivity. Man can only watch over the actions of nature and mate animals according to his knowledge of observed scientific laws. Thus, he merely guides nature rather than “designing” new breeds or species.¹⁷⁸ Yet, given recent developments fostered by agriculture, industrialization and urbanization, Baudement argued that a pure “state of nature” no longer existed (“l’état de nature n’existe plus”) and thus the notion of a purely “natural” species was likewise problematic. He wanted to substitute for the natural-artificial dichotomy one of “primitive” and “industrial” breeds. While “primitive” breeds are left largely to their own devices, industrial breeds have been carefully monitored by humans and harnessed for their use. In essence, Baudement replaced a cultural-geographic distinction with a progress-based chronology amenable to nineteenth-century European capitalist growth. In parallel with contemporaneous colonialist ideology, “primitive breeds” could, Baudement insinuated, become “industrial” through societal and scientific advances.

This industrialized vision of agricultural development was decidedly less sentimental than the picture of the cultivator’s life found in Louis Gossin’s *L’agriculture française* (the first edition of which appeared in 1858, just a few years prior to *Races Bovines* in 1862). In this text, Gossin extolled the benefits of farm life for familial harmony and personal fulfillment: women worked in the home and men in the fields, as “nature intended;” having numerous children was a

¹⁷⁸ Baudement, v.

source of additional labor rather than “mouths to feed” as was often the case in French cities; the cultivator of the earth functioned as the ideal patriarch (“père de famille”).¹⁷⁹ As the author asserted in the introduction to his manual, every educated “man” should take an interest in agriculture as the practice that sustains human life and forms the core network of social relations.¹⁸⁰

As indicated by the examples of Gossin and Baudement, agriculture in Second Empire France (1852-1870) was viewed as both preserving the past organic unity of the family, threatened by urbanization and the movement of rural workers into cities, and as a means and object of industrial improvement for a more efficient and better-ordered future society. Despite the different tones and moral frameworks with which they approached the subject, the authors concurred on the importance of public instruction, both within the university system and through the publication of specialist texts, to agricultural progress in France. Furthermore, they both utilized the talents of major *animalier* artists to bolster the prestige of their projects. Rosa Bonheur, whose unconventional lifestyle appears to be thoroughly at odds with the stringently heteronormative values of Gossin, nonetheless presented a conception of French agricultural labor in her paintings and prints that deeply aligned with his desire to preserve a continually renewed state of idealized rural stasis. The painted cattle of *Plowing in the Nivernais*, frozen in forward motion, maintain their perfectly bred appearance for posterity. However, the added factor of scientific education and improvements was required to bolster the French nation’s

¹⁷⁹ Louis Gossin, *Agriculture française* (Paris: C. Delagrave, 1874), 1-2.

¹⁸⁰ Ibid.

competitive status with respect to other countries, particularly Germany, where programs of agricultural education were generally instituted in the universities far earlier than in France.¹⁸¹



“Breeding Forward” and “Breeding Back” in Unified Germany

The emphasis placed on agricultural education was also growing among Germanic scientists who were, like the French, particularly envious of English advances in animal husbandry and industrialization. In the aforementioned *Die Naturgeschichte des Thierreichs*, Giebel wondered at the limited knowledge of educated men about common domesticated species. It was, he chided, “as if they had never *seen* the animals in question.” Lamenting this state of affairs, the author presented a large, illustrated section on both agriculturally cultivated cattle and wild bovids to a lay audience, hoping to alleviate their ignorance of “God’s creation.” While filling these lacunae in common knowledge, the author also took time to note the most useful and aesthetically appealing of the bovine breeds. This seemingly superficial approach was, Giebel remarked, the only one presently available to the natural historian. While there had been prior attempts to scientifically order cattle breeds, they had, in his estimation, met with little success. Therefore, he wrote, “we must, as with other domestic animals, limit ourselves to exhibiting the visual variety (*Formenspiel*) of the breeds, without any speculation as to their natural development and evolution.”¹⁸² To this end, he provided extended descriptions of the fur,

¹⁸¹ As Gossin observed: “liberal instruction has, just until this point, remained completely foreign in our country in that which is the most liberal in the world, agriculture. One knows, however, that the German universities have, for more than a century, provided courses in rural economy; that similar chairs exist in the universities of Edinburgh, Cambridge, Oxford, Liège, Pisa (created in 1845), in all the great schools of Ireland and in the Portuguese universities.” Louis Gossin, *Les Universités libres*, 3.

¹⁸² Giebel, *Die Naturgeschichte des Thierreichs*, 421. “Die Rassen wissenschaftlich zu ordnen ist zwar schon versucht worden, allein mit wenig befriedigendem Resultat. Wir müssen uns daher wiederum wie bei andern Hausthieren

form and other outward physical properties of the most significant German, English and French breeds. Amongst the Germanic varieties, the highest praise was reserved for Swiss/South German cattle, particularly the Simmenthaler variety: “The Simmenthaler cows are considered the most beautiful, displaying red, red-gold or black and white coats” (fig. 3.25).¹⁸³

The struggle to define and classify the country’s many different strains of cattle which were, prior to the nineteenth century, only vaguely distinguished from one another, is quite literally illustrated in *Beschreibung der Racen des Rindes* (1877), penned by Dr. Adolf von Rueff, then director of the Stuttgart veterinary academy.¹⁸⁴ Rueff, who was present at the 1855 agricultural exposition in Paris and thus participated in the milieu of *zootechnie* and agricultural improvement to which Baudement dedicated his work, wanted to present readers with a comprehensive guide to the most important German breeds, as well as relevant French and English varieties. Published in Bavaria, the work was primarily concerned with the South German and Swiss varieties particular to that region. The author went on to classify established systems of bovine classification in a lengthy excursus meant to explain his methodology, as well as the ordering of the text’s thirty-two chromolithographic plates. The disparate methods described evidence the considerable ambivalence and controversy surrounding which elements of the animal’s appearance and physical conformation should be emphasized in order to define its *Race* (a term that Rueff uses to denote breed, with an identical denotation to the French *race*).

Rueff decried the use of what he deemed surface-level, insignificant markers for the categorization of bovine stock, the reliance on “certain colors and markings, on single pieces of

darauf beschränken, das Formenspiel der Rassen darzulegen, ohne eine Einsicht in dessen natürliche Entwicklung eröffnen zu können.”

¹⁸³ Als die schönsten gelten die Simmenthaler Kühe, welche sich roth, rothgelb oder schwarz-und weißfleckig tragen.” Ibid, 422.

¹⁸⁴ Dr. Adolf v. Rueff, *Beschreibung der Racen des Rindes. Deren Entwicklung, Verbreitung und Nutzungen* (Stuttgart: Verlag von Eugen Ulmer, 1877).

fur, the form, position and color of the horns.”¹⁸⁵ Before he launched into his description of individual breeds, he wanted to refer back to earlier European bovine classification systems, largely based in coloration and outward appearance. He noted that coat color could be very easily modified through selective breeding of a wide variety of animals and thus serves as an unreliable marker of breed. He first mentions the common topographical system used by a number of prominent earlier agriculturists like Sturm, Schmalz, and Thaer. In this schema, the breeds are subdivided into three categories: 1) “Gebirgsracen” (Mountain breeds), 2) “Niederungsracen” (Plateau/lowland breeds) and 3) “Mittlerracen/Hochlandsracen “ (Highland breeds). Next, he references the (also tri-partite) color-based schema that divides domestic European cattle into 1) “Graue Race von Ost-Europa/Slavische Racen” (Grey Slavic breeds) 2) “Bunte Rind von Mittel- und West-Europa/Germanische Race” (multicolored Germanic steer of middle and western Europe), 3) the seemingly all encompassing category of “die schwarzen, braunen, gelben, bis weissen, nicht gefleckten Racen von Mittel-Europa/Romanische Racen” (the black, brown, yellow, white, non-piebald breeds of Middle Europe). However, he does not give much credence to this latter method, as he notes that coat color can be very easily modified through selective breeding of a wide variety of animals. Nonetheless, the animal’s coloring was considered a significant enough feature to warrant the use of color lithography, despite the considerable expenses it created for his project. Rueff thus grappled with, but did not wholly resolve, the problem of establishing a visual nomenclature and its criteria.¹⁸⁶

In the illustrations, the bodies of the cattle are colored, usually with just one or two tones. All of the represented specimens are female, in keeping with the German prioritization of milk production above other bovine vocations. The backgrounds remain mostly black and white, for

¹⁸⁵ Rueff, 2.

¹⁸⁶ Rueff, 3-13.

purposes of both simplicity and cost-effectiveness. Color serves purely as an identifying characteristic, unnecessary for background details. Aesthetic flourishes have no place in the topography of these images, which do not contain artist or lithographer signatures. All animals appear in profile view, at the same distance from the viewer. Receding landscapes in the background contain small, generic references to the animal's country of origin: the Holland cow appears alongside windmills (fig. 3.26); the Hereford cow tarries in front of a thatched English cottage (fig. 3.27). The regionalized pastorals are occasionally juxtaposed with stable scenes, which, as Rueff observed, were specially requested by the publisher to more fully display current agricultural conditions and techniques.¹⁸⁷ Only these hints of coloration and background serve to differentiate one image from the next, the cattle seeming to exist in a manufactured series.

The illustration of the Simmenthaler cow, also referred to as the *Fleckvieh* or dappled cow (fig. 3.28), shows the animal in its namesake landscape of origin, the plateaus of the mountainous Alpine regions (Simmenthal refers to the “Thal der Simme,” the valley of the Simme river in Bern). Its reddish-brown body is solidly colored and crisply foregrounded, the texture of the color lithograph mimicking a sleek bovine coat. The animal's moody, impassive stare is obliquely directed at the viewer. Its evenly horizontal body criss-crosses the diagonal of the right-hand mountain, its bulk forcefully superimposed on the diffuse texture of the distant landscape. The local population of the Simmenthal dedicated most of their labor to cattle raising. The region's nearly exclusive dedication to *Viehzucht* (cattle-breeding) made it the site of agricultural pilgrimage, as farmers from both Switzerland and foreign countries prized the

187 Rueff, IV. “Die mit so grossen Geschick und Geschmack behandelte Umgebung der Thiere soll zur weiteren Charakterisierung der Racentypen beitragen. Wenn auf einzelnen Bildern die Thiere in Stallungen eingestellt wurden, so geschah dies auf besonderen Wunsch des Verlegers, um doch nebenbei Andeutungen über landestübliche oder empfehlenswerthe neuere Einrichtungen zu geben, wobei freilich eine präzise bildliche Darstellung kaum möglich und eingehende Berücksichtigung im Texte nach Massgabe der eigentlichen Aufgabe nicht wohl thunlich war.”

region's livestock. Rueff praised the high level of milk production these farmers achieved with relatively little feed, a "*günstig*" (efficient) output to input ratio. Rueff noted the finely tuned *Blick* (eye) that the Simmenthaler people possessed for well-bred bovinds. The perfection of a single breed prized by Baudement was thus similarly prioritized in Germanic animal husbandry practices. However, in stark contrast with the specialization advocated by Baudement, the Simmenthaler *Race* was especially valued for its ability to serve equally well as a beast of burden, source of meat and milk-producer. Many agricultural specialists thus considered the breed to be Germany's bovine future, the "Zukunftsvieh für Deutschland."¹⁸⁸ In the Simmenthaler, efficiency, health and visual pleasure were inextricably linked.

As Rueff wrote in his Introduction, only a limited palette could be used for the illustrations, requiring him to bring together a number of "barely related" breeds that happened to have similar coloration in his illustrations. Because he did not know whether the initial color plates could be followed by many more, he selectively focused on representing the breeds "which most interested Southern German livestock breeders and farmers."¹⁸⁹ Thus the Simmenthaler is the second breed featured in the text, as it is elsewhere acknowledged to be one of the most important and attractive Germanic breeds (Giebel in particular praises its beauty). Nonetheless, Rueff expressed concern that the Simmenthaler did not compare favorably enough with English and French breeds at international agricultural expositions.¹⁹⁰ The future perfectibility of the breed, its "breeding forward," was therefore crucial to maintaining its status as a subject of Germanic agricultural pride.

¹⁸⁸ Rueff, 25.

¹⁸⁹ Rueff, III.

¹⁹⁰ Giebel, 422.

A particularly striking example of the breed appears in an oil sketch by Anton Braith from 1868, *Kuh im Licht* (Cow in Light) (fig. 3.29). This work demonstrates both the creature's elegant conformation and the artist's skill in bovine anatomy. It appears to be the portrait of a Simmenthaler, based on the inward curvature of the horns and brown-gold coloring punctuated by a white face, stomach and legs. The artist devoted meticulous attention to the dynamic play of highlights and shadows on the animal's static form. The marked contrasts, particularly around the shoulders, rump and soft pink muzzle, function as both painterly plays of light and careful delineations of a specimen's coloration and outline. The placidity of the animal, its inertial placement in space, lets its form to be all the more fully captured. The artist adopted a frontal view that allows for a sense of direct confrontation not permitted in the profile views of Rueff's illustrations. Its calm, unreadable face both invites and deflects the viewer's attention. The painting, created shortly after Braith exhibited at the Paris World's Fair of 1867, clearly shows the influence of Bonheur, whose works he encountered during his time at the Exposition. The expressive, naturalistic painting style, coupled with close focus on the animal's interaction with outdoor lighting, echoes the simultaneously glorious and mundanely drooling cattle of *Labourage Nivernais*.¹⁹¹

These animals appeared frequently in the works of Braith, who was based in Bavaria, near the Swiss-German border and was particularly known for his depictions of the Simmenthaler and *Braunvieh* cattle native to that region.¹⁹² He was widely considered the most popular and skilled animal painting specialist in the Germanic states in the middle of the nineteenth century. Particularly following the display of his works at the Bavarian Pavillion of

¹⁹¹ Uwe Degreif, *Anton Braith: Tiermaler in München*, 91.

¹⁹² Gottfried Schäfer, "Von der Weide auf die Leinwand. Ein Blick aus Sicht des Tierzüchters" in *Anton Braith: Tiermaler in München* ed. Uwe Degreif (Lindenberg im Algäu: Kunstverlag Josef Fink, 2005), 43.

the 1867 Paris World's Exposition, critics often treated him as the Germanic counterpart of Rosa Bonheur and Constant Troyon. Born to a humble farm manager in the village of Biberach an der Riß, the artist's background bears comparison to Bonheur's modest middle-class origins. Also like Bonheur, he was raised in the constant presence of the sheep, cattle and goats that would become the chief subject matter of his oeuvre.⁹³ He trained in Stuttgart and later moved to Munich in 1860 to establish his practice in a city with a growing reputation as a center of artistic activity in Europe. His paintings, recognized for their naturalistic depiction of various Germanic livestock breeds, most often represented these animals in herding and grazing scenes. They intermixed breeds and species, both for visual variety and maximal display of the country's rich animal husbandry. In a typical work, multiple breeds of Bavarian cattle intermingled with goats, sheep, ducks and donkeys, sometimes accompanied by sketchily depicted cattle herders, milk maids and stable boys. At other times, Braith's animals confront no human figures other than the viewer herself. In the middle of his career, the artist inserted these groupings into floods and storms to lend a dramatic tension to the typically peaceable herd scenes.

In a representative example from this subgenre, *Kühe vor einem vom Gebirgsbach zerstörten Steg* (Cows before a footbridge destroyed by a mountain stream) (1873) (fig. 3.30) a group of cattle accompanied by a miniature donkey and two goats, encounters a stream blocked

⁹³ Degreif, *Anton Braith*, 91. Anton Braith, though renowned in his own time, has been the subject of relatively little recent scholarship. The most comprehensive catalog, *Anton Braith: Tiermaler in München* (ed. Uwe Degreif) was published in 2005 on the centenary of the artist's death. As noted in the Degreif catalog, the artist's work was regarded as outmoded by advocates of the German adoption of Impressionist tendencies at the end of the nineteenth century. Art historical scholarship has followed suit, favoring artists associated with the Müncher and Berliner Secessions. The favoritism the artist evidently received under the Nazi regime may have also played a role in his posthumous reception (or lack thereof). A handful of straightforward biographical monographs dedicated to Braith were published in German prior to the catalog. These include Hans Peter Buehler, *Anton Braith, Christian Mali; Tiermalerei der Müncher Schule* (Mainz: von Zabern, 1981), concerning Braith and his lifelong partner in painting, Christian Mali and a brief pamphlet produced under the National Socialist regime for the 100th anniversary of the artist's birth, *Anton Braith 1836-1936: Ehrung zu seinem 100. Geburtstag am 20. September 1936 in Biberach an der Riß* (Biberach an der Riß: Stadtverwaltung, 1937).

by a destroyed footbridge. A thunderstorm looms in the background, obscuring the rest of the herd. The artist was evidently quite preoccupied with the subject or received multiple commissions for it, as he produced at least five versions. What appear to be a Holländer or Frieburger cow and calf, based on the prominent black markings on their white coats, carefully examine the remains of the footbridge. Their familial relationship is emphasized by the near identical coloring and positioning of their heads and similarly wide-eyed expressions, their attention directed at the same object. Two Simmenthaler specimens stand behind a white cow, who groans in alarm at her compatriots' discovery. The brilliance of her yellow-white fur against the charcoal mist and darkened mountainside focalizes this call of distress, mimicked by the goat to her immediate right. The Fleckvieh appear impassive, apparently still unaware of the impediment facing their peers. Braith thus captures a range of bovine expression and form. The intense highlighting of the foreground animals gives way to a muddled, cloud-bedecked group of indeterminate size, receding into the faraway valley. The animals' coats are richly patterned by the overhead cloud cover and the faint sliver of sunlight that has managed to wedge through it. They are thus intimately enmeshed in the landscape, while also being too thoroughly domesticated to ford rivers or otherwise cope with the perils it presents to them. The cowherd is nowhere to be seen, obscured by cloud cover or distance (or simply absent). The scene's action exclusively centers on the animal figures. The viewer becomes a proxy caretaker, made to feel concern for the creatures' predicament.

In a similar tableau from five years later, *Viehherde am Gatter* (Herd of livestock at the gate) (1878) (fig. 3.31) the painter again shows cattle distressed and incapacitated by another obstacle, in this case a storm-damaged fence. A herd of sheep presses against the gate, and each other, en masse, while a goat and two brownish-black cattle rubberneck. The central

Simmenthaler simply gapes and stares, its feet uncertainly planted in a puddle. Its body is brilliantly stage-lit, in contrast with the black-brown cattle and the low-hanging clouds. Without human mastery or guidance in sight, the animals once again revert to troubled inaction, apparently longing for the succor of enclosure. In another, more peaceful scene from the same year, *Kühe an der Tränke* (Cows being watered) (fig. 3.32) Braith confronts the viewer with the gazes of four cattle, their mass and the directness of their gaze imposing on our attention. Their trust is implicit, our gaze returned without the slightest hesitation.

The bovine figures in Braith's works thus appear as either passive or reactive, but seldom as initiating agents. They flee thunder, lightning and overflowing streams, accept the proddings and feedings of *Hirtinnen* (herdswomen) and panic at the presence of dogs, squirrels and other species more lively than themselves. They are, for the most part, not the hard-laboring beasts of Bonheur's plowing scenes, though Braith did produce a few exceptional works in this genre, such as *Ochsengepann im Hohlweg* (Team of oxen in a ravine) of 1878.¹⁹⁴ The sheen of their coats and the direction of their eyes reflect their earthy immersion in the surrounding landscape, animated vehicles of milk and manure. Their eyes widen with bewilderment, faced by a natural world whose workings seem to alarm their limited understanding. Braith's cattle appear as sluggish, inert matter newly imbued with sensation, continuously in awe and confusion of the stimuli that provoke them. They are gentle, affable, contained. Their wildest transgression is an unauthorized entry into the cabbage patch in *Kühe im Krautacker* (1868) (Cows in the cabbage patch).¹⁹⁵

Later in *Beschreibung der Racen des Rindes*, Rueff noted a newly developed approach of categorizing cattle according to their skeletal structure. He considered this method as having

¹⁹⁴ Degreif, 189.

¹⁹⁵ Degreif, 132-3.

little use for the agriculturist, as it could only be utilized on deceased specimens and thus served little purpose for purchasing and breeding live animals.¹⁹⁶ In reference to these skeletal studies, Rueff mentioned the scholarship of Ludwig Rütimeyer (1825-1895), a Swiss zoologist and archaeologist. Rütimeyer, then a professor at the University of Basel, was a founding father of the field of zooarchaeology, the study of animal remains discovered in the context of excavated human settlements. His research was particularly focused on the pre-historic ruins of the *Pfahlbauten* (stilt houses) in Switzerland. There, he studied the remains of animals found in former settlements, agricultural and hunting sites. The origin of the modern European cattle breeds was a subject of particular fascination for Rütimeyer, who dedicated large swathes of *Die Fauna der Pfahlbauten der Schweiz* (1861) to establishing what he considered the three primary breeds from which all contemporary domestic ruminants derived (fig. 3.33). The origins of the cow were now an object of empirical, scientific investigation. Moreover, the studies of Georges Cuvier on species extinction allowed for the possibility that no longer extant species or breeds could have genetically contributed to present-day livestock. The domestication of animals was thereby given a history and a pre-history.

Rütimeyer discovered three separate breeds of domestic cattle, in addition to the remains of wild aurochs. He posited that only one of the three uncovered breeds could have derived from these aurochs, with the others stemming from a different wild bovine. The domestic breeds included what he termed the *Brachyceros Race*, from which he claimed the modern Swiss Braunvieh (one of the varieties favored by Braith) was derived. The author assigned a second *Race* distinction, the now extinct *Trochoceros*, to the bones of large, strong specimens found near the newer *Pfahlbauten* settlements. He speculated that this breed originated in Italy and

¹⁹⁶ Rueff, 11.

traveled elsewhere during the earliest periods of human migration, but ultimately disappeared, possibly through crossbreeding with the aurochs. Finally, Rüttimeyer described a third, tame breed that he presumed to be the direct descendent of the aurochs, on the basis of its size, strength and skull formation.¹⁹⁷ Through archaeology and natural history, the cow's background could be traced deep into ancient human civilization.

The generation, cross-pollination and extinction of breeds produced temporal layers; the bovine body was a hereditary palimpsest. It bore the traces of breedings, extinct ancestors, geographic migrations, milkings and manual labors. With the acknowledgement of extinction came the attendant possibility of a significant alteration of “nature” and the life forms found within it. While focusing on no longer extant cattle breeds, Rüttimeyer's text nonetheless sought to reveal the profound continuity between the agricultural past and present in Europe. The breeds as they appear in Rueff's manual and Braith's paintings thus represented the accumulative byproducts of centuries-worth of husbandry practices, an awareness made all the more palpable at this time by archaeological findings. The peaceable nature of the domestic cow so frequently and lucratively portrayed by Braith and other late nineteenth century German artists was, however, increasingly contrasted in natural historical texts with the nobility and intractability of its wild aurochs predecessors.



Coda

¹⁹⁷ Ludwig Rüttimeyer, *Die Fauna der Pfahlbauten der Schweiz* (Basel: Verlag von Bahnmeier's Buchhandlung, 1861). Rueff, 10-12.

After introducing the more familiar German, English and French varieties, Christian Giebel, writing in 1859, turned to a discussion of the elusive wild ox or “Aurochs” (*Bos urus*). He treated this species as still extant, with isolated herds living under special protection in the Lithuanian woods, though subsequent accounts, such as that found in *Brehm’s Thierleben* a decade later, document the last known specimen dying off in 1627 in Poland.¹⁹⁸ Giebel went on to speculate about whether the animal once existed in Germany. Its common name, translating roughly as ancient/original ox (it also received the even grander designation of *Urtier* or “original/primeval animal”), indicated its presumed role as ancestor to contemporary domestic cattle.

Giebel then compared the fate of the rapidly disappearing bison in North America to that of the aurochs in Europe, even referring to the buffalo as the “nordamerikanische Aurochs.” The American landscape could help furnish the reader’s imagination with a model for the “primitive” state of Europe’s forests and plains. (“The bison can still be met with in herds of up to 20,000 head, in the vast plains of the Mississippi and Missouri basins and can be found wandering as far as Mexico and California and up to the sixty-ninth parallel.”¹⁹⁹) However, its numbers were already dwindling, presaging an eventual disappearance of wild bovines in the United States, an event only narrowly averted through later conservation efforts.

In the *Thierleben*, Brehm similarly devoted a considerable portion of his chapter on “Rinder” to the extinct aurochs and the problems encountered by natural historians who wanted to distinguish between it and the bison. The terms were at times used interchangeably by naturalists and laypeople alike, creating uncertainty as to whether they were separate species at

¹⁹⁸ Heinz Heck (trans. Winifred Felce), “The Breeding-Back of the Aurochs,” *Oryx* 1, no. 3 (September 1951): 119.

¹⁹⁹ Giebel, *Die Naturgeschichte des Thierreichs. Erster Band: Die Säugethiere mit 926 Abbildungen* (Leipzig: Verlag von Otto Wigand, 1859), 434.

all. This confusion continued into the twentieth century, when Lutz and Heinz Heck, respectively employed at the Berlin and Munich zoological gardens from the Weimar through the National Socialist periods, made separate but concurrent attempts to “breed-back” the aurochs. One of the primary goals of the project was to display the aurochs alongside bison at zoological gardens, thereby dispelling any confusion about the shared identity of the two species. The bred-back aurochs would thus serve as a living natural historical illustration, an object lesson for zoo visitors. The brothers were strikingly confident about their ability to exactly reconstruct the animal’s appearance, in spite of the fact that the last known specimen died in the seventeenth century. As Heinz Heck, in his capacity as director of the Tierpark Hellabrunn-Munich, wrote,

We know exactly what the aurochs looked like since its skeletal remains have frequently been found. From these we see that it had longer legs and bigger horns than its tame descendent and that in size it was as big as the largest breeds of to-day such as the Hungarian steppe cattle and when on favourable feeding grounds was even larger than these...We know how they were coloured because there are in existence a considerable number of contemporary paintings depicting it, and also some detailed descriptions. The other kind of European wild cattle, the European Bison or Wisent, is utterly different in appearance. In this species both sexes are of the same brown colouring, the coat is long and woolly, and the brown horns are small. The very high withers make the animal appear tall in front and low at the back.²⁰⁰

The loss of the aurochs through hunting and integration into domestic cattle species was deeply regretted by Heck, who mourned its extinction as “the end of one of the finest animals...an animal to which mankind owes much, since our civilization can hardly be imagined without its most important domesticated animal, the cow.”²⁰¹ Yet he assured the reader that the history that seemingly “closed 300 years ago” was not, in fact, at an end; as he asserted, “no animal, however, is utterly exterminated, as long as some of its hereditary factors remain...what is hidden may be brought to light again.” What had once disappeared could be made visible again through selective breeding of specimens most closely resembling the original aurochs in physical

²⁰⁰ Heck, *The Breeding-back of the aurochs*, 118-119.

²⁰¹ Ibid.

appearance and temperament. As Heck noted, all of the “physical characteristics are still present and to be seen.” They have simply been “divided” across many different breeds, “one having preserved a good aurochs horn, another its build, while a third has the characteristic colouring, and so on.”²⁰² Thus, beginning in 1921, Heck crossed “all kinds of races of cattle in a way that,” he acknowledged, “would have horrified a pedigree breeder.”

At the same time, his older brother Lutz, director of the Berlin Zoological Gardens, was conducting his own experiments with a different set of breeds. He believed the appearance of Camargue cattle from Southern France, coupled with the unbridled aggression of Spanish fighting bulls and details added from yet other breeds, would eventually yield a return to the aurochs. The elder Heck, who would later work closely with heads of the Nazi Party and was an intimate associate of Hermann Göring, helped to “restore” the animals to Polish forests like Bialowieza, recently seized by the German military forces. As the site where the creatures were last seen alive, the “repopulation” of these forests signaled a return to an idealized Germanic past of hunting in the landscapes of Europe, prior to what the Nazis perceived as their Slavic “desecration.”²⁰³ In this role, Lutz was particularly fixated on collecting visual precedents that might allow for the aurochs’ full reconstitution:

Contemporaneous descriptions and images give a good reference point [for the aurochs’ appearance]. I will only mention the large, richly illustrated animal book by Konrad Geßner, published in 1555 in Basel, and a famous aurochs picture found in Augsburg and based on a missing sixteenth century original, as well as many engravings, carved images and the like (fig. 3.34). In the course of this aurochs hunt, I have come into the possession of a Meissen porcelain group by the renowned sculptor Kändler from 1730. He has naturalistically depicted two hunting dogs, a Packer that bites into the head of the aurochs, and a high jumping Bracke,

²⁰² Ibid, 119-120.

²⁰³ Clemens Driessen and Jamie Lorimer, “Back Breeding the Aurochs,” in *Hitler’s Geographies: The Spatialities of the Third Reich* (Chicago: University of Chicago Press, 2016). As the authors note, the Heck brothers believed that the process of domestication could be reversed through back breeding, allowing for the rewilding of Europe’s forests. Driessen and Lorimer argue that this project was integrated into attempts by Göring to expand “non-human Lebensraum.” While Lutz remained closely integrated with the Nazi elite and actively participated in these projects, his brother Heinz had more ambiguous political beliefs, though he continued to receive state patronage.

who runs barking and hunting alongside this group; and just as realistically as these dogs is the aurochs formed by the artist in porcelain. Even the painting of the old group corresponds to the old documents, such that the work functions overall as an artistic record.²⁰⁴

After two pages describing the various art historical references utilized in his project, Lutz devoted a mere two sentences to the fossilized remains that also served as scientific evidence.

While the Heck brothers' experiments have been subject of many recent publications, both scholarly and popular, the use of art historical precedents to 'breed-back' the animals in question has received comparatively little discussion. The belief in the unmediated ability of these images to provide a replica of the aurochs and thus allow for its reconstitution and replication in the present points to an implicit faith in the ability of natural history illustrations, animal paintings, and even decorative porcelain to identify and truly *know* a species type, a belief that carried well into the early twentieth century. The image of a specimen as an aspirational ideal for husbandry took on particularly disturbing implications in the National Socialist context, as eugenics practices were all too often based in the attempts to achieve idealized domestic animals.

One is struck by the visual references for the aurochs used by the Heck brothers and other natural historians and the degree of confidence placed in their unerring accuracy. An engraving of an illustration of a painting from a thrift shop is treated as reliable testimony. Natural history illustrations and animal painting served as phenotypic records, providing details of coloration, coat and bearing that could not be deduced from fossilized remains. In the case of the

²⁰⁴ Lutz Heck, *Tiere- mein Abenteuer: Erlebnisse in Wildnis und Zoom* (Vienna: Ullstein, 1954), 161. "Zeitgenössische Beschreibungen und Bilder geben gute Anhaltspunkte dafür. Ich nenne nur das große, mit zahlreichen Holzschitten ausgestattete Tierbuch von Konrd Geßner, erschienen im Jahre 1555 in Basel, und ein berühmtes, aus dem 16. Jahrhundert stammendes, in Augsburg aufgefundenes, inzwischen im Original wieder verschollenes Auerbild, das sogenannte "Augsburger Bild," sowie viele Stiche, geschnitzte Bildwerke und dergleichen. So besaß ich von einer Aurochsenhatz eine Meißner Porzellangruppe, des bekannten Bildhauers Kändler, aus dem Jahre 1730. Naturgetreu hat er darauf zwei Jagdhunde verschiedner Rasse, einen Packer, der sich in den Kopf des Ures verbeißt, und eine hochläufige Bracke, die lautgebend neben dieser Gruppe herjagt, dargestellt; und ebenso naturalistisch wie diese Hunde ist auch der Urstier von dem Künstler in Porzellan geformt. Selbst die Bemalung der alten Gruppe entspricht den alten Überlieferungen, so daß sie durchaus den Wert einer künstlerischen Urkunde hat."

“Augsburger Bild” (Augsburg picture), the original source appears to be an illustration by British artist Charles Hamilton Smith from Edward Griffith’s English edition of the *Animal Kingdom* by Baron Cuvier, 1827 and not, as the Heck brothers claimed, a painting from the sixteenth century.

As Gossin’s praise of *Plowing in the Nivernais* indicates, the artistic depiction of the bovine form could preserve breed types for posterity and fulfill the desire for a return to a supposedly autochthonous past. The breeding back of the originary figure of the aurochs represents only the most extreme and disturbing instance of this tendency. If the cow, as Buffon asserted, stood at the origin of human civilization, it might also represent the capacity for restoration of a glorified past. With the aurochs experiments, we see a latter day instance of nineteenth century breeding paradigms based purely in visual types, where now scientists would concentrate their efforts on the hidden genetic workings of DNA.

In Europe of the long nineteenth century, the cow, often discussed as a figure of aesthetic stasis and natural equilibrium, actually served to mark significant temporal shifts brought about by colonization, capitalism and industrialization. The seemingly anodyne bovine figure, a standard element in landscape and animal painting, was, in fact, symbolically charged. The yak was meant to literally bring home the advantages of globalized trade and diplomacy through the importation of Chinese specimens and their adaptation to French subsistence farming. The continued cultivation of the Simmenthaler allowed the Germanic states to compete with the English and French, presenting a cow of both optimized efficiency and appearance. The aurochs is considered, even by some contemporary scientists of the Tauros Programme in the Netherlands, as a candidate for the “rewilding” of Europe’s forests, able to reestablish a lost

ecological balance left by the virtual extinction of large ruminant species in those regions.²⁰⁵ The Highland cow, the Simmenthaler and their “exotic” counterparts, the yak and the aurochs, embodied ecological superabundance—of the future possibilities of industrialized farming, peasant-class subsistence and a renewed European forest. Imported and “improved” bovinds were meant not only to inhabit, but renew, the continental landscape. This was only further emphasized by the particular degree of naturalistic exactitude with which Bonheur and Braith depicted these animals. Their figures are imbued with a sunlit nostalgia and expressive faces that belie their instrumental function. While Bonheur’s beasts of burden actively transform the landscapes they plough, Braith’s South German milk cattle effect more gradual alterations through their feedings, waterings and antic wanderings. The artists represented bovines as the well-fed creaturely engines of both economic progress and environmental redress. The (over)production of bovine imagery provided one of the models that allowed for the perfection of form and function that so preoccupied farmers and scientists of the mid-nineteenth century. The relentless impetus of capitalist industrialization, international competition and colonialism could thus seem to comfortably coexist with a preservation of familiar agricultural folkways and rediscovery of the continent’s environmental past.

²⁰⁵ Per the project’s website: “The aurochs is the ancestor of all cattle and thereby the most important animal in the history of mankind. It is also a keystone species for many European ecosystems, but was hunted to its extinction in 1627. However, its DNA is still alive, but distributed among a number of the ancient original cattle breeds. “The Tauros Programme” aims to bring back the aurochs as a functional wild animal, by back-breeding the closest relatives of the original aurochs. Grazing the landscapes of Europe, the auroch [sic] – Europe’s original wild bovine species – once played a vital role in maintaining biodiversity. Today, nearly four centuries after the animal’s extinction, pioneering efforts by Rewilding Europe and the Tauros Foundation are seeing this beneficial [sic] herbivore brought back to life.” Rewilding Europe, “The Tauros Programme,” accessed March 25, 2020, <https://rewilding-europe.com/rewilding-in-action/wildlife-comeback/tauros/>.

Figures:

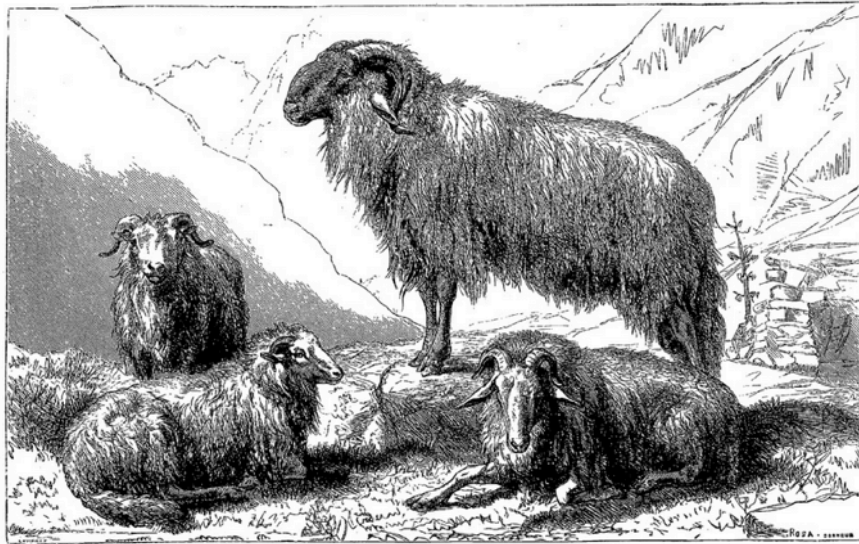


Figure 3.1. Max Liebermann, *Woman and Her Goats in the Dunes*, Oil on canvas, 1890 (Image source: Wikiart).



Figure 3.2. Jean-François Millet, *Des glaneuses/The Gleaners*, Oil on canvas, 1857, Musée d'Orsay, Paris.

Pl. 51.



DESSINÉ PAR ROSA BONHEUR

IMPRIMERIE J. CLAYE

GRAVÉ PAR A. LAVIEILLE

Figure 3.3. Rosa Bonheur (designer), Engraved by A. Lavieille, *Pyrenees Sheep*, in Louis Gossin's *L'Agriculture Française*, 1858, BnF, Paris.



Figure 3.4. Rosa Bonheur, *Labourage Nivernais/Plowing in the Nivernais*. 1849, Oil on canvas. 1.34x2.6 m. Musée d'Orsay, Paris. Image courtesy of Google Art Project.



Figure 3.5. Detail from *Plowing in the Nivernais*.



Figure 3.6. Carl Teufel, *Anton Braith in his Munich Studio*, Photograph, 1889, Braith-Mali Museum, Biberach.



Figure 3.7. Gustave Courbet, *La sieste pendant la saison de foins/ Siesta During the Haying Season*, Oil on canvas, 1868, Petit Palais, Paris.



Figure 3.8. Paulus Potter, *De stier/The Bull*, Oil on canvas, 1647, Mauritshuis, The Hague.

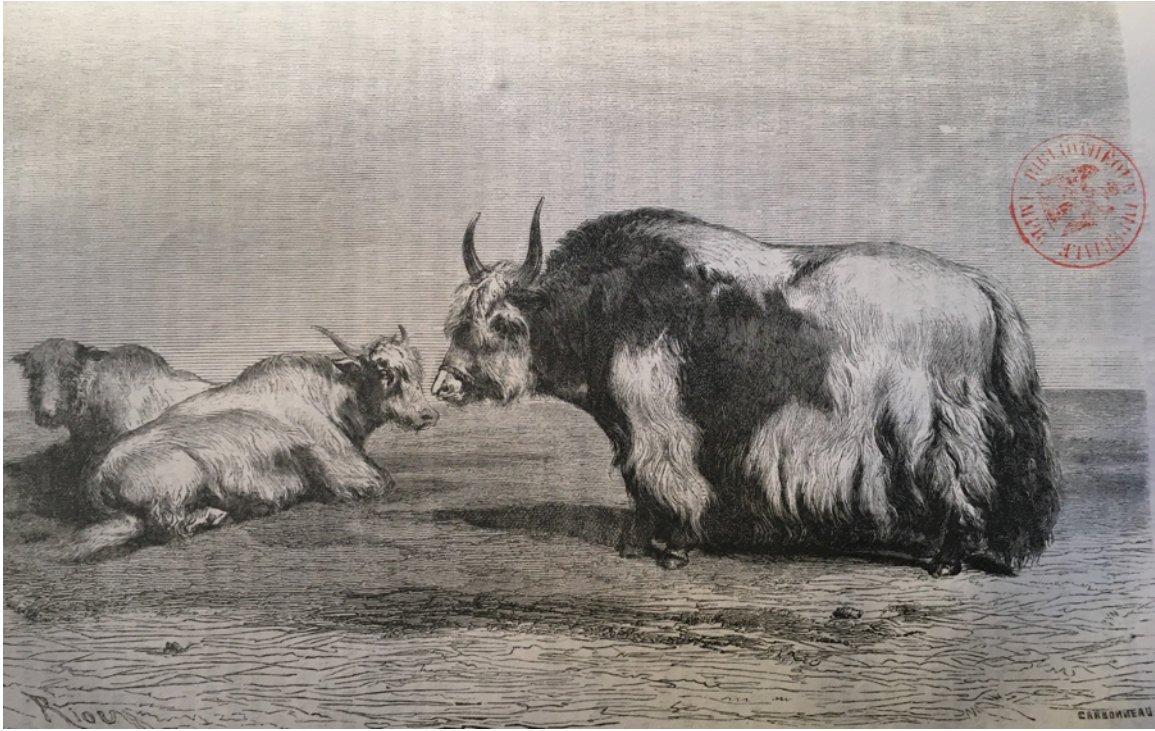


Figure 3.10. Drawing by Rosa Bonheur, print by Edouard Riou, *Les Yaks*, *comminqué par M. Montigny*, c. 1860.



Figure 3.11. Edouard Louis Dubufe and Rosa Bonheur, *Portrait of Rosa Bonheur*, Oil on canvas, 1857.



Figure 3.12. François Boucher, *Madame de Pompadour*, Oil on canvas, 1759, Wallace Collection, London.



Figure 3.13. *Jardin Zoologique d'Acclimatation/Acclimatization Gardens, Bois de Boulogne, 1872.*



Figure 3.14. Rosa Bonheur, *La Fenaison en Auvergne*, Oil on canvas, 1855, Château de Fontainebleau, Fontainebleau.



Figure 3.15. Rosa Bonheur, *Marché aux chevaux/The Horse Fair*, Oil on canvas, 1852-55, Metropolitan Museum of Art, New York.



Figure 3.16. Drawing by Lançon, *Promenades au Jardin d'Acclimatation du Bois de Boulogne*, Lithograph(?) c.1873.



Figure 3.17. Napoleon, Bonheur and Buffalo Bill (Poster for *Buffalo Bill's Wild West and Congress of Rough Riders of the World*), 1898, Reproduced in *Rosa Bonheur: All Nature's Children*, ed. Gabriel Weisberg.



Figure 3.18. George Stubbs, *Warren Hasting's Yak*, Oil on canvas, 1791, Private collection.



Fig. 3.19. Gustav Mützel, *Yak*, Engraving in *Brehms Thierleben*, 1877.



Figure 3.20. Antoine Louis Barye. *Taureau Angus*. Engraving, 1861-62. Bibliothèque Nationale de France, Paris.



Figure 3.21. Antoine Louis Barye, *Vache Angus*, Engraving, 1861-62. Bibliothèque Nationale de France, Paris.



Figure 3.22. Rosa Bonheur, *Taureau West Highlands*. Engraving, 1861-62. Bibliothèque Nationale de France, Paris



Figure 3.23. Rosa Bonheur, *Vache West Highlands*. Engraving, 1861-62. Bibliothèque Nationale de France, Paris.



Figure 3.24. Adrien Tournachon, *West Highland vache*, ca. 1860. Photograph. Found in Bernard Davis, *Les Vaches ont une histoire*, 2016.



Figure 3.25. C.G. Giebel, *Kurzgehörnte Rindviehrassen*, (artist unidentified), 1859.



Figure 3.26. Adolf von Rueff (unidentified illustrator), *Höllander Race*, in *Racen des Rindes*, Chromolithograph, 1877.



Figure 3.27. Adolf von Rueff, *Hereford Race*, in *Die Racen des Rindes*, Chromolithograph, 1877.



Figure 3.28. Adolf von Rueff, *Simmenthaler Race*, in *Die Racen des Rindes*, Chromolithograph, 1877.



Figure 3.29. Anton Braith, *Kuh im Licht*, Oil on canvas, 1868,



Figure 3.30. Anton Braith, *Kühe vor einem vom Gebirgsbach zerstörten Steg*, Oil on canvas, 1873.



Figure 3.31. Anton Braith, *Viehherde am Gatter* (detail), Oil on canvas, 1878.



Figure 3.32. Anton Braith, *Kühe an der Tränke*, Oil on canvas, 1878.

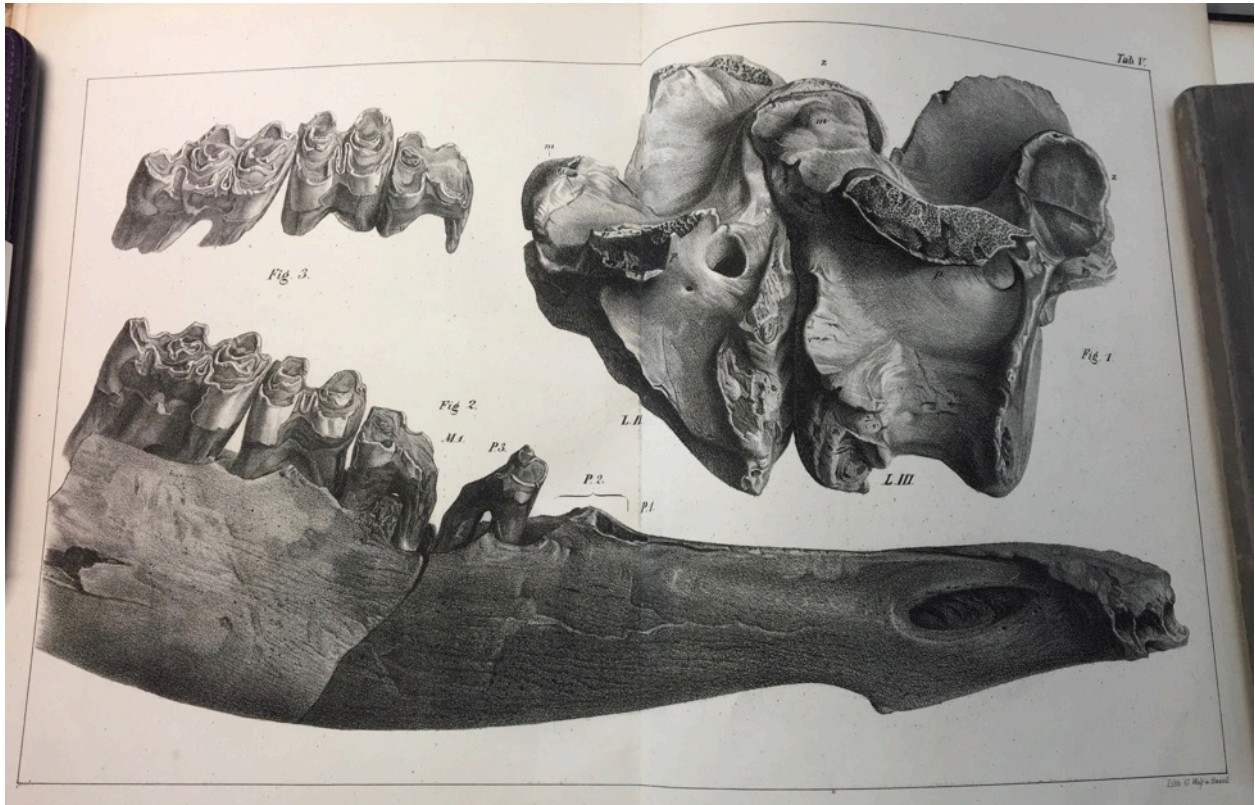


Figure 3.33. G. Wolf and Basel (lithographers), Bovine skeletal remains, from *Die Fauna der Pfahlbauten der Schweiz* (1861).



Figure 3.34. Handcolored engraving after an illustration by Charles Hamilton Smith from Edward Griffith's *The Animal Kingdom by the Baron Cuvier*, 1827.

Bibliography:

Anonymous. *Notice sur la vie et sur les travaux d'Emile Baudement, professeur au Conservatoire imperial des arts et métiers*. Paris: Imprimerie de Bourdier, 1864.

Anonymous. *Anton Braith 1836-1936: Ehrung zu seinem 100. Geburtstage am 20. September 1936 in Biberach an der Riß*. Biberach an der Riß: Stadtverwaltung, 1937.

Anderson, Warwick. "Climates of Opinion: Acclimatization in Nineteenth Century France and England." *Victorian Studies* no. 35 (Winter 1992): 135-157.

Appel, Toby. *The Cuvier-Geoffroy Debate: French Biology in the Decades Before Darwin*. Oxford: Oxford University Press, 1987.

Ashton, Dore. *Rosa Bonheur: A Life and a Legend*. New York: The Viking Press, 1981.

Baudement, Emile. *Les races bovines au Concours universel agricole de Paris en 1856*. Paris: Imprimerie impériale, 1861-62.

Blanc, Charles. *Histoire des peintres de toutes les écoles. École hollandaise*. Paris: Jules Renouard, 1863.

Borin, Marie. *Rosa Bonheur: Une artiste à l'aube du féminisme*. Paris: Pygmalion, 2011.

Brehm, Alfred Edmund. *Brehms Thierleben: Allgemeine Kunde des Thierreichs. Erste Abtheilung--Säugethiere, Dritte Band*. Leipzig: Verlag des Bibliographischen Instituts, 1877.

Buehler, Hans Peter. *Anton Braith, Christian Mali; Tiermalerei der Müncher Schule*. Mainz: von Zabern, 1981.

Buffon, George Louis Leclerc, comte de. *Histoire naturelle par Buffon: Quadrupedes*. Paris: Firmin Didot, 1799.

Bulletin mensuel de la Société impériale zoologique d'acclimatation. Paris: Imprimerie de L. Martinet, 1862.

Cernogora, Judith. *Rosa Bonheur: l'éloge du monde animal*. Rouen: Éditions Point de vues DL, 2015.

Clark, T.J. *The Absolute Bourgeois: Artists and Politics in France, 1848-1851*. London: Thames and Hudson Ltd, 1982.

- Cuvier, Georges. *The Animal Kingdom*. Translated by Edward Griffiths. London: G.B. Whittaker, 1827-1836.
- Daston, Lorraine and Peter Galison. *Objectivity*. New York: Zone Books, 2007.
- Degreif, Uwe. *Anton Braith: Tiermaler in München*. Lindenberg im Algäu: Kunstverlag Josef Fink, 2005.
- Denis, Bernard. *Les vaches ont une histoire*. Paris: Delacahux et Niestlé, 2016.
- Denis, Bernard. "Les races d'animaux domestiques dans l'oeuvre de Rosa Bonheur." In *Rosa Bonheur (1822-1899)*, edited by Francis Ribemont. Bordeaux: Musée des Beaux-Arts de Bordeaux, 1997. Page numbers unavailable due to Covid-19 related library closures.
- Derech, Jean-Michel. *Les zoos de Paris: histoire de la ménagerie du Jardin des plantes, du Jardin d'acclimatation et du zoo de Vincennes*. Prahecq: Éditions Patrimoines et médias, 2012.
- Descartes, René. *Discourse on Method*. Translated by Desmond M. Clarke. New York: Penguin Books, 1999.
- Digne, Danielle. *Rosa Bonheur ou l'insolence: histoire d'une vie*. Paris: Denoël/Gonthier, 1980.
- Driessen, Clemens and Jamie Lorimer. "Back Breeding the Aurochs." In *Hitler's Geographies: The Spatialities of the Third Reich*, edited by Paolo Giaccaria and Claudio Minca. Chicago: University of Chicago Press, 2016. Page numbers unavailable due to Covid-19-related library closures.
- Dutil, Azur, ed. *Le jardin d'acclimatation illustré, par une réunion de savants et d'hommes de lettres. Dessins de Riou. Gravures de nos plus célèbres artistes paraissant les 5 et 20 de chaque mois*. Paris: 1863.
- Edgerton, Judy. *George Stubbs, Painter*. New Haven: Yale University Press, 2007.
- Fowle, Frances. "Picturing the Highlands: Rosa Bonheur's Grand Tour of Scotland." *Journal for the Scottish Society for Art History* 18 (2013): 40-48.
- Fromentin, Eugène. *Les maîtres d'autrefois: Belgique-Hollande*. Paris: E. Plon et Cie, 1876.
- Giebel, Christopher Gottfried. *Die Naturgeschichte des Thierreichs, Erster Band: Die Säugethiere mit 926 Abbildungen*. Leipzig: Verlag von Otto Wigand, 1859.
- Gossin, Louis. *L'agriculture française: principes d'agriculture appliqués aux diverse parties de la France*. Paris: Imprimerie de J. Claye, 1858.

Gossin, Louis. *Les universités libres et l'enseignement supérieur de l'agriculture*. Imprimerie C. Moisand, 1875.

Grosse, Pascal. *Kolonialismus, Eugenik und bürgerliche Gesellschaft*. Frankfurt am Main: Campus Verlag, 2000.

Grosse, Pascal. "Turning Native? Anthropology, German Colonialism, and the Paradoxes of the 'Acclimatization Question,' 1885–1914." In *Worldly Provincialism: German Anthropology in the Age of Empire*, edited by H. Glenn Penny and Matti Bunzl, 179-197. University of Michigan Press, 2003.

Heck, Heinz. "The Breeding-Back of the Aurochs." Translated by Winifred Felce. *Oryx* 1, no. 3 (September 1951): 117-122.

Heck, Lutz. *Tiere- mein Abenteuer: Erlebnisse in Wildnis und Zoom*. Vienna: Ullstein, 1954.

Heurtel, Pascale and Michelle Lenoir. *Les vélins du Museum national d'Histoire naturelle*. Paris: Coedition Museum-Citadelles & Mazonod, 2016.

Kearns, James. *Théophile Gautier, Orator to the Artists: Art Journalism in the Second Republic*. London: Legenda, European Humanities Research Center, 2007.

Jennings, Eric T. *Curing the Colonizers: Hydrotherapy, Climatology and French Colonial Spas*. Durham: Duke University Press, 2006.

Jussiau, Roland, Louis Montméas and Jean-Claude Parot. *L'élevage en France: 10,000 ans d'histoire*. Dijon: Educagri Editions, 1999.

Lagenevais, F. [Henry Blaze de Bury], "Le salon de 1849." *Revue des deux mondes* 3 (1849): 559-593.

Livingstone, David N. "Tropical Climate and Moral Hygiene: The Anatomy of a Victorian Debate." *The British Journal for the History of Science* 32 (March 1999): 93-110.

Lyon, John. "'The Initial Discourse'" to Buffon's *Histoire naturelle*: The First Complete English Translation," *Journal of the History of Biology* 9 (Spring 1976): 133-181.

"Maitre Cam." "La vache." *La revue de l'éducation nouvelle à Paris*, no. 1 (February 1849): 55-56.

Marbot, Bernard. *After Daguerre: Masterworks of French Photography (1848-1900) from the Bibliothèque Nationale*. New York: Metropolitan Museum of Art, 1980.

Nadar, Félix. *When I Was a Photographer*. Translated by Eduardo Cadava and Liana Theodoratou. Cambridge: MIT Press, 2015.

Nochlin, Linda. *Realism*. Middlesex: Penguin Books, 1971.

Nye, Robert. *Masculinity and Male Codes of Honor in Modern France*. New York: Oxford University Press, 1993.

Osborne, Michael. *Nature, the Exotic and the Science of French Colonialism*. Bloomington: Indiana University Press, 1994.

“Our Foreign Courier.” *The Dublin University Magazine: a Literary and Political Journal*, 53 (January to June, 1859): 107.

Rewilding Europe. “The Tauros Programme.” Accessed March 25, 2020.
<https://rewildingeurope.com/rewilding-in-action/wildlife-comeback/tauros/>.

Rueff, Adolf. *Beschreibung der Racen des Rindes. Deren Entwicklung, Verbreitung und Nutzungen*. Stuttgart: Verlag von Eugen Ulmer, 1877.

Rütimeyer, Ludwig. *Die Fauna der Pfahlbauten der Schweiz*. Basel: Verlag von Bahnmeiers Buchhandlung, 1861.

Saslow, James M. “Disagreeably Hidden: Construction and Constriction of the Lesbian Body in Rosa Bonheur’s Horse Fair.” In *The Expanding Discourse: Feminism and Art History*, edited by Norma Broude and Mary Garrard, 187-205. New York: Harper Collins, 1992.

Société Impériale zoologique d’acclimatation. *Guide du Promeneur au Jardin Zoologique D’Acclimatation*. Paris: January, 1865.

Stanton, Theodore. *Reminiscences of Rosa Bonheur*. New York: D. Appleton and Co., 1910.

Van Slyke, Gretchen “The Sexual and Textual Politics of Dress: Rosa Bonheur and Her Cross Dressing Permits.” *Nineteenth-Century French Studies*, 26, nos. 3 & 4 (Spring Summer 1998): 321-335.

Walsh, Amy, Edwin Buijsen and Ben Broos. *Paulus Potter: paintings, drawings and etchings*. The Hague: Mauritshuis, 1994.

Chapter 4: Animal Taxonomies and Human Typologies: Illustrated Natural Histories, 1817-1893

German ornithologist Hermann Schlegel (1804-1884) remarked that one of the greatest challenges facing animal painters and zoological illustrators was the difficulty of depicting live animals. In the 1849 essay “Zweck und Eigenschaften Naturkundlicher Abbildungen,” (“Goals and Characteristics of Natural History Illustration”) he defined what he saw as the key distinctions between “scientific” and “artistic” animal illustrations. Of scientific images he wrote: “The goal of such an illustration is to enter the place of the depicted objects, which one would only with great difficulty be able to view or examine in their natural habitat.”²⁰⁶ In this genre of natural history depiction, the overall stylistic effect of the image must be subordinated to the inclusion of essential descriptive markers. As Schlegel noted, the appearance of verisimilitude produced thereby is by necessity an illusion, as most zoological plates are smaller than life-size and must be selective in their inclusion of detail. In order to render an “ideal” specimen, certain anatomical irregularities might be ignored by the draftsman. By contrast, a more “artistic” portrayal may include such unusual aspects of a specimen, giving the impression of a unique portrait. Schlegel presented the competing demands of aesthetic pleasure and a never fully achieved “objectivity” as the fundamental dilemma of animal illustration. Ideally, consummate artistic skill and knowledge of natural science would be embodied in the same individual. Given the unlikely probability of this perfect combination, Schlegel proclaimed that

²⁰⁶ “Der Zweck einer solchen Abbildung aber ist es, an die Stelle der Gegenstände zu treten, die man selber in der Natur nur schwer sehen oder untersuchen kann.” (All translations in this chapter are my own unless otherwise noted). Hermann Schlegel, “Zweck und Eigenschaften Naturkundlichen Abbildungen,” in Claus Nissen, *Die zoologische Buchillustration: ihre Bibliographie und Geschichte*, Bd. 2 (Stuttgart: Anton Hiersemann, 1978), 231.

an educated artist was generally better qualified than an artistically gifted savant to visualize zoological information. The artist, he observed, was particularly attuned to animal expressions and attitudes. Even then, such expressions could not always be viewed in the captive or taxidermically preserved creatures that typically served as artists' models at the time. As any child visiting the zoo may attest, even when the animals do assent to make an appearance, they often seem inactive and lethargic. Artists were thus confronted with the difficulties of encountering "wild" "life" in a manner deemed "natural" by a writer like Schlegel.²⁰⁷ This inability was perhaps more keenly felt in late nineteenth century Europe due to the growing perception of "nature" as a realm fundamentally separate from human "culture." The now pronounced feeling that the "natural" only exists in discrete, delimited spaces— national parks, wildlife preserves, ecological heritage zones— was bolstered by the widespread development of zoological gardens, open park spaces and other sites of escapist urban leisure in nineteenth-century Germany and France.²⁰⁸

Natural history illustrators of the period, much like their *animalier* counterparts, often portrayed animals as central protagonists existing at a remove from humanity, all while observing most of their subjects—living and dead—in the circumscribed, citified spaces of the zoological garden and natural history museum. As this chapter will argue, nineteenth-century zoological book illustrations, particularly full-page illustrated plates, increasingly took on many of the characteristic features of nineteenth-century narrative animal painting. They incorporated dramatic multi-figure (often multi-species) *mise-en-scène*, psychologized, emotive framing and elaborate habitat backgrounds that minimized or eliminated any implied human presence. These

²⁰⁷ Ibid, 236.

²⁰⁸ For a magisterial analysis of the socially engineered separation of hygienic realms of "nature" from the increasingly polluted city environment in nineteenth century France, see Nicholas Green, *The Spectacle of Nature: Landscape and Bourgeois Culture in Nineteenth Century France* (Manchester: Manchester University Press, 1990).

images thereby provided the illusion of exclusive voyeuristic access to alien life worlds. However, the conventions of single specimen illustrations and anatomical diagrams, with their profile views and blank backgrounds, continued to coexist alongside more dynamic, diegetic plates, even within the same publication, as indicated by the wildly popular *Brehms Thierleben* (1864) and Curmer and Dubouchet's dueling guides to the *Jardin des plantes* (1841). The illustrations from the *Thierleben* and the *Jardin des plantes* volumes will therefore serve as the central case studies for this chapter.

The illustrations to natural histories are never only illustrative. Indeed, given their capacity to exist outside the framework of their original publications and to even be replaced altogether in new editions and translations, it becomes clear that their consumption was not predicated on an informative function fixed by the associated text and the scientific author's intent. Nonetheless, these images participated in a scientific culture that the artists would have attuned themselves to after their own fashion, absorbing the tendencies of, for instance, natural history and racialized scientific anthropology. The scientific gaze, with its aim then centered on allegedly "inferior" non-human species, as well as non-Western human beings, was defined as much by objectification as objectivity. The zoological garden and its paper menagerie counterpart became sites of racialized, gendered and classed convergences structured by more explicitly stated natural hierarchies.

However, images of live animals in their native landscapes were sometimes viewed by period natural historians as less scientifically useful than illustrations of anatomical features and dissections. In one telling instance, anatomist Georges Cuvier (French, 1769-1832) regarded French naturalist Louis-Jean-Marie Daubenton's (1716-1800) anatomical descriptions and Jacques de Seve's (French, 18th century) accompanying drawings as the most zoologically

valuable contributions to the Comte de Buffon's *Histoire naturelle*. Daubenton was placed in charge of writing these segments, intended as a fine-grained anatomist's supplement to chief author Buffon's capacious musings on animal personalities and the interconnections of "nature" and human society. These portions were distinguished by their provision of hard data from the charming illustrative vignettes, morality tales and psychologizing descriptions of animal behavior with which Buffon filled his pages.²⁰⁹ The *Histoire naturelle's* inclusion of both "live" animal portraits (albeit based at least in part on taxidermied models) on the one hand and anatomical diagrams of skeletons, dissected specimens and internal organs on the other, fused the then separate genres of anatomy and zoology into a single visual compendium, a trend to continue in the oeuvre of Cuvier, Brehm and others.²¹⁰

These diagrammatic codes of scientific depiction deliberately eliminated the viewing conditions surrounding the zoo specimen in order to maintain its status as a pure instance of wild nature and species type, even as comical prints of gawking spectators, ostrich-drawn carriages and myopically fixated scientists found elsewhere in popular natural history publications like those of Curmer and Dubouchet put the lie to the artist's artifice. Where the single animal or species group appears elegantly delineated, sometimes even hand-colored, framed by either the white space of the scientific plate or a fictively reimagined habitat, the human figures who long to see them pose either as fashionable staffage or absurd characters, engaged in a labor of observation often made difficult or impossible by the number of other spectators, the obscure nature of their research or the animal's stubborn refusal to appear within its enclosure. I posit that three distinct figures of the observer occur in period natural histories: the layperson/zoological garden visitor, the natural historian, and the artist. Different forms of

²⁰⁹ Toby Appel, *The Cuvier-Geoffroy Debate* (Oxford: Oxford University Press, 1987), 24.

²¹⁰ *Ibid.*, 24-25.

animal imagery catered to differently subjectivized modes of viewing, albeit with moments of overlap. The anatomical specimen on a blank background conjured the studies of the “desk” naturalist, while an animal represented in its native environment could appeal to both the ecologically-minded field naturalist and the armchair traveler reading for pleasure. Throughout this chapter, I will also use visual portraits of naturalists from the period to reveal how their identities as purveyors of knowledge were carefully constructed. The portraits vaunt their status, but also place their subjects “on view” as social types, much like the animals and zoological garden visitors. The artists possessed the power to reveal the natural historian as embroiled within the taxonomies he helped create, rather than separate from systematized species and social relations. In portraits and caricatures of natural historians, the scientists no longer narrate about their subjects from “above” as they do in their writings. They instead become one type on view among many. The imagery of natural history might therefore provide us with a more polyphonic, nuanced experience of the nineteenth-century natural sciences than a reading of its texts alone.

As my case studies will reveal, the mythos of the natural historian was constructed and disseminated through predominantly narrative means, which could downplay the collective construction of illustrated natural histories, as the artists involved in those projects, with a few exceptions like John James Audubon, remain relatively unknown and uncelebrated as compared to figures like Darwin and von Humboldt. I do not, however, wish to imply that these visual byproducts were morally uncompromised, but rather that they may reveal facets of historical scientific practice overlooked in a more text-based approach

Regardless of the image type, scientific illustrations have often been analyzed by historians as the exclusive byproduct of “scientific” minds, even while commentators acknowledge their collaborative genesis and the head author/scientist’s frequent lack of artistic

training.²¹¹ Though scientific illustrators are acknowledged as the producers of visual materials, the (typically white, male) scientist emerges from standard biographical narratives as the guiding intellect and intent. However, I do not wish to simply shift the attribution of originality to the artist rather than the author but instead want to better address the material specificity of artistic labor in this context. While some scientists did produce their own illustrations (with variable results, as Cuvier and von Humboldt's published drawings demonstrate) more often, "artistic" and "scientific" forms of expertise were not embodied in the same individual, as Schlegel lamented. This has become a problem of attribution, creation and knowledge formation in natural histories, discussed at some length by Daston and Galison, but still insufficiently considered in the secondary literature, given the psychologizing fixation on great personalities still rife in histories of science.²¹² The textual archives of the scientists are admittedly far more voluminous than the oft-sparse documentation of artists primarily employed as book illustrators and printmakers. Given these archival lacunae and my desire to shift away from a subjectively delimited biographical approach that frequently comes at the expense of a more systemic social perspective and the visibility of actors operating at the margins of the intellectual elite, this chapter centers on the illustrations themselves as the loci of visual knowledge and affective engagement. Aesthetic-affective viewing, I argue, cannot be parsed apart from the acquisition of scientific visual "data." The knowledge presented by natural historical illustrations is

²¹¹ See, for instance, the plethora of monographs on the "art of Darwin," particularly the number of bicentennial publications on the subject released in 2009: Fae Brauer and Barbara Larson (eds), *The Art of Evolution: Darwin, Darwinisms, and Visual Culture* (Hanover, NH: Dartmouth College Press, 2009); Diana Donald and Jane Munro (eds), *Endless Forms: Charles Darwin, Natural Science and the Visual Arts* (New Haven and London: Yale University Press, 2009); and Pamela Kort and Max Hollein, *Darwin: Art and the Search for Origins* (Frankfurt: Schirn Kunsthalle, 2009).

²¹² This tendency is especially noticeable in popular histories of science such as Andrea Wulf's *Alexander von Humboldt: The Invention of Nature* (New York: Alfred A. Knopf, 2015) but also appears not infrequently in academic histories of science, wherein the biography and bibliography of the scientist forms the nexus of monographic attention, as in Jonathan Smith's *Charles Darwin and Victorian Visual Culture* (Cambridge: Cambridge University Press, 2009).

apprehended through sensual forms rather than abstracted and separated from them. In a work like *Brehms Thierleben*, entertainment and edification were closely intertwined, even as no less a figure than Charles Darwin praised the technical value of the illustrations and purchased the woodcuts for reuse in his own publications.²¹³

To what extent is the knowledge deployed by the animal painter distinct from that utilized by the scientific illustrator? In both cases, the artist possessed at least some degree of knowledge about animal anatomy. *Animaliers*, much like their illustrator counterparts, employed taxidermic specimens, attended veterinary dissections, visited zoological gardens, natural history museums and butcher's shops. They gained a deep visual knowledge of creaturely conformation. While in the case of zoological illustration, scientists had input in the commissioning and final appearance of the images, the plates can seldom simply be treated as the unmediated byproduct of those scientific aims, untouched by painterly conventions of style, genre and sheer arbitrary artistic choice, as Barbara Stafford, Daniela Bleichmar and other art historians specializing in the history of scientific imagery have noted. In the following, I want to consider the political ramifications of this firmly held distinction between the artful and the scientific and whether its terms were as relevant for the nineteenth-century artists to which they are applied as they are for commentators today. The intertwining of early modern and Enlightenment era science and art practices has been richly elaborated upon in the existing art historical literature.²¹⁴ However, the

²¹³ Charles Darwin, Letters to John Murray, 4 August, 1867 and 9 January, 1868. Darwin Correspondence Project, <http://darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-5781.xml;query=brehm;brand=default>, Accessed September 4, 2019.

²¹⁴For a few representative examples, see Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983); Daniela Bleichmar, *Visible Empire: Botanical Expeditions and Visual Culture in the Hispanic Enlightenment* (Chicago: University of Chicago Press, 2012); Janice Neri, *The Insect and the Image: Visualizing Nature in Early Modern Europe, 1500-1700*; Brian W. Ogilvie, *The Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2006); Barbara M. Stafford, *Body Criticism: Imaging the Unseen in Enlightenment Art and Medicine* (Cambridge, MA: MIT Press,

status of nineteenth-century zoological illustration has been less fully considered, particularly given the arguably different role played by those images. While earlier European illustrations of exotic plants and animals often served as “eyewitness” accounts of species and territories previously “unknown” to Western observers, many of the animals presented in nineteenth-century encyclopedias were already well recognized, and for many French and German urbanites of the upper classes, readily available to view at the local zoological gardens and natural history museums.²¹⁵ In the most prominent recent examination of the specificities of nineteenth-century scientific visual culture, Lorraine Daston and Peter Galison treat the subject through the lens of newly available, mechanized modes of imaging and the concomitant distancing of the human “hand” from a visual repertoire thus perceived to be more “mechanical” and “objective” in character. While their argument is not technologically deterministic, the late nineteenth-century examples they provide are more often photographs, X-rays and other exemplars of new technologies than “traditional” printed and drawn natural history illustrations. Otherwise, the literature primarily consists of biographical monographs on exceptional artists, scientists and naturalist-illustrators. These histories are all too often filtered through the hagiographic narratives of the singular European man: a Charles Darwin (1809-1882), an Alexander von Humboldt (1769-1859) or a John James Audubon (1785-1851).

I want to reevaluate the anxious cordoning off of “aesthetic” considerations in the examination of scientific imagery by many present-day historians of science, as such concerns were clearly not irrelevant to the artists participating in an encyclopedic project such as *Brehms* or the *Jardin des plantes* editions. The artistic ambitions and amusements of such images were,

1991); and Barbara Stafford, *Artful Science: Enlightenment, Entertainment, and the Eclipse of Visual Education* (Cambridge, MIT Press, 1994).

²¹⁵ Bleichmar, *Visible Empire*.

especially in the “popularizing” mode, integral to, rather than separate from, their educative function.

In turn, the language of “popularization” frequently applied to the *Brehms* project must itself be examined. As historian of science Bernard Lightman observes: “The modern meaning of the terms ‘popularizer of science’ or ‘popular science’ contain such negative connotations that any use of them to discuss nineteenth-century figures introduces an ahistorical dimension that seems to justify their dismissal as unimportant.”²¹⁶ He nevertheless continues to deploy the term for lack of a better alternative. The perceived triviality or lack of intellectual rigor associated with the phrase seems counter to the aims of an intellectual history written from “above,” from the vantage point of prominent, “elite” cultural producers—the aforementioned Darwins and von Humboldts—and the dissemination of their ideas into the wider culture via zoological gardens, natural history museums and popular publications. Rather than going directly to the fount of heightened thinking and “original” ideas, the historian of “popular” science could be seen as only examining the diluted derivatives of scholarly science. As Lightman goes on to assert, “this model cannot be adopted as a heuristic guide to research because it uncritically assumes the existence of two independent, homogenous cultures, elite and popular, and forces the latter into a purely passive role.”²¹⁷ Perceived to be plagued with simplifications and exaggerations of the source material, “popular science,” or science writing directed towards a lay audience was not the exclusive enterprise of “non-scientists,” as Lightman points out (and as is demonstrated by the case of Brehm and other German writers of his era).

²¹⁶ Bernard Lightman, *Victorian Popularizers of Science: Designing Nature for New Audiences* (Chicago: The University of Chicago Press, 2007), 9.

²¹⁷ Lightman, 14.

Moreover, lay readers and practitioners did not exist in a separate sphere from their supposedly more “enlightened” counterparts, but instead also made contributions to the sciences and the broader social understanding thereof. Noah Heringman borrows the term “knowledge worker” from Alan Liu to describe the wide variety of laborers contributing to the sciences in the eighteenth and nineteenth centuries. These included “native guides” and the often female, unattributed colorists and illustrators, who never received the designation of either professional or amateur “scientist” (contemporaneously or posthumously) but nonetheless made essential contributions to collective European “knowledge.”²¹⁸ Heringman and other historians of science thus assert that scientific knowledge was and is never solely constituted as a practice by those individuals socially situated as classically educated gentleman scholars or, later, as professional scientists. This stance allows the production of zoological illustrators to be considered on a level commensurate in importance to the texts they illustrate. Not all “popular science” was produced by “non-scientists” and not all “scientific” texts were the exclusive byproduct of “scientific” minds.

Portrait artists and caricaturists were also crucial contributors to the status and self-mythology of the scientist, producing images that consolidated his (he was almost invariably male in this era) public role as anatomist, “desk zoologist,” or adventuresome field naturalist trotting the globe, as I will demonstrate throughout this chapter. The nature of knowledge visually disseminated by these illustrations cannot be analyzed exclusively in the terms of a scientific discourse but neither can that discourse be evacuated of its aesthetic dimension (one that a stance of “objectivity” seems all too eager to avoid). Any firm distinction between “style” and “content” that one might try to establish in the field of natural illustration would ultimately

²¹⁸ Noah Heringman, *Sciences of Antiquity: Romantic Antiquarianism, Natural History and Knowledge Work* (Oxford: Oxford University Press, 2013), 9-11.

deny the very human, mediated qualities that comprise such art in the first place, whether drawn, printed or “mechanically” produced. As Jacques Rancière observes, “the expression [the aesthetics of knowledge] presupposes that such a dimension does not have to be added as a supplementary ornament, that it is there in every sense as an immanent given of knowledge.”²¹⁹ Nonetheless, the processes of mediation often understood as a given in an art historical discourse do not always seem to translate to a history of science context, wherein illustrations are still frequently treated as self-evident supplements to the text that do not require their own method of critical analysis. To present a more purportedly “scientific” counterpart to Brehm, Bernard and Boitard, I will begin the chapter with a discussion of Georges Cuvier’s *Le Règne Animal* (1817), a specialist text aggressively devoid of ornamental flourishes, where the author still grudgingly conceded the inability of verbal description to fully convey certain aspects of animal form to the reader. Even while consciously avoiding “ornament,” the zoological illustration was still the result of aesthetic choices, even as these choices were not presented as such.



Illustration Degree Zero: The Images of Georges Cuvier’s *Le Règne Animal*

Not being able to provide many plates, we have elected to show species not yet well represented or anatomical parts necessary to the understanding of technical terms employed in the text.—Georges Cuvier ²²⁰—

In the “Explication des planches” segment of Georges Cuvier’s encyclopedic *Le Règne animal*, the author frankly acknowledges the technicalities and financial limitations structuring the spartan illustrations included at the end of the first volume. What few notations Cuvier does provide for the images have a perfunctory quality. At times, he merely directs the reader to the

²¹⁹ Jacques Rancière, “Thinking Between Disciplines: an Aesthetics of Knowledge,” *Parrhesia 1*, 2006, 1.

²²⁰ “Ne pouvant donner beaucoup de planches, on a choisi de preference des espèces non encore bien représentées, ou des parties anatomiques nécessaires à l’intelligence des termes techniques employés dans l’ouvrage.” Georges Cuvier, *Le Règne animal* (Brussels: Louis Hauman et Comp, 1836), 423.

section of the text discussing the animal or anatomical feature in question, rather than expending additional words on an explication tailored to its visual depiction (e.g., “the birds of plates IV and V are sufficiently described or indicated in the text in the cited passages”).²²¹ He evinces a sense of inconvenience around the idea of including any images at all: “I would have preferred to deprive my work of this ornament.”²²² This sense of scientific expediency extends to the illustrations themselves, which at times dispense with the depiction of the whole animal and show only a skull. These metonymic plates seem to bolster Cuvier’s boasts that he could identify a species simply by viewing an isolated bone, detached from the rest of its body.²²³ Including an illustration, even a bare bones one, allowed him to effectively lay claim to a newly discovered species or facet of its anatomy. The head is treated as sufficient to the “explanation of the bone structure” of an organism. At very least, the skull illustrations contribute to the “understanding of technical [anatomical] terms employed in the text.”

When animal bodies do appear intact, the use of dead specimens is seldom disguised; they were drawn against mostly blank backgrounds, posed with taxidermic stiffness and stacked together in rows recalling the naturalist’s cabinet display. All prints are black and white. A “platypus” (fig. 4.1) hardly deserving of that name stands bolt upright, with a strangely protruding tongue, propped against the barest suggestion of a riverbank. A bushbaby raises its arms as though ready to hold a tree branch, with which the illustrator has failed to provide it. A scrawny, needle-furred American red wolf is caught in a perpetual growl. Cuvier evidently employed fellow Musée naturalists like zoologist and paleontologist Charles Léopold Laurillard

²²¹ Cuvier, *Le Règne animal*, 423.

²²² *Ibid.*

²²³ Gowan Dawson, *Show Me the Bone: Reconstructing Prehistoric Monsters in Nineteenth Century Britain and America* (Chicago: University of Chicago Press, 2016), 42.

(French, 1783-1853), rather than trained artists, for the task of illustrating the volume.²²⁴ In many of Cuvier's texts, he served as head illustrator. The illustration, a mere "ornament" in Cuvier's view, should, when it did appear, dispense with as many ornamental qualities as possible.

The skulls of various species unfamiliar to a European audience—an aye-aye, a Javanese python—are, by contrast, rendered with the utmost care. The cod's head shown in recto, verso and profile view is particularly striking in this regard, its parts alphabetically labeled and dramatically shaded (fig. 4.2). The high degree of detail dedicated to these fragments accorded with the author's specialization as a comparative anatomist. Internal conformation and external appearance are granted equal priority. Nonetheless, the comically poor quality of many of the "live" animal images would seem to belie Cuvier's stature as the premier natural historian of his day, while also definitively differentiating his publication from the popularized, perusable quality of its predecessor, Buffon's *Histoire naturelle*. Even the editors of the third, posthumously published, French edition of *Règne Animal* conceded that the execution of the plates in the first edition "left something to be desired."²²⁵

Even so, the author did in fact possess some knowledge of, and training in, the fine arts. His architect cousin, Werner, provided young Cuvier with drawing lessons. The grandson of the elder Werner, Jacques-Christophe, would become a "peintre du Muséum d'Histoire naturelle" and a key contributor to the vellum collections.²²⁶ Cuvier produced drawings and even engravings by his own hand, the latter skill likely acquired through his relationship with the engraver Simon-Charles Miger (1736-1828), a former apprentice of Charles Nicolas-Cochin the Younger (1715-1790). Miger furnished many of the plates for the *Menagerie du Muséum national d'histoire*

²²⁴ Cuvier, *Le Règne animal*. Various plates in the first volume are marked "del. Laurillard," Index Plates I-XV.

²²⁵ Anonymous editors in Georges Cuvier, *Le Règne animal*, 2.

²²⁶ Léon Bultingaire, *Iconographie de Georges Cuvier, extrait des archives du Muséum d'Histoire naturelle, 6e série, tome IX* (Paris: Masson, 1932), 2.

naturelle (1804) published by Bernard Germain de Lacèpede (French, 1756-1825), Étienne Geoffroy Saint-Hilaire and Cuvier.²²⁷ The numerous painted, sculpted and printed portraits of the naturalist were similarly revealing about the artistic circles closely affiliated with the Muséum. Perhaps the most unusual byproduct of these interactions was the plaster portrait bust (fig. 4.3) produced by sculptor Julie Charpentier (French, 1770-1845) as a pendant to a bust of Étienne Geoffroy Saint-Hilaire for display in the Muséum's bibliothèque. Here, a handsome, svelte Cuvier, sporting curled locks of hair and a draped Roman costume, is positioned above a plinth decorated by an allegorical relief depicting the extinction of species he was famous for theorizing. In this lower register, lightning strikes animals to the ground while an avenging angel flies overhead.²²⁸ (Charpentier, an unmarried woman fallen on hard times, also worked as a taxidermist at the Musée national d'Histoire naturelle, where her training in the plastic arts continued to prove useful.)²²⁹

Though for Cuvier the natural history discipline was fundamentally visual and descriptive in character, he dispensed with the narrative flourishes of the *Histoire naturelle*. Cuvier's science was written and pictured as unadorned fact, approached with an attitude to become characteristic of present-day biological studies. The author, it seems, only deployed the illustrated plate when textual description proved insufficiently illuminating. These illustrations were, moreover, meant

²²⁷ Bernard Germain de Lacèpede, Étienne Geoffroy Saint-Hilaire and Georges Cuvier, *La ménagerie du Muséum national d'histoire naturelle, ou description et histoire des animaux qui y vivent et qui y ont vécu* (Paris: Chez Miger, 1804).

²²⁸ Bultingaire, 4.

²²⁹ Marjan Sterckx, "The Invisible 'Sculpteuse': Sculptures by Women in the Nineteenth-century Urban Public Space—London, Paris, Brussels," *Nineteenth Century Art Worldwide* 7, no. 2 (Autumn 2008), 111-12. As Sterckx writes, "Julie Charpentier, a student of Augustin Pajou's received, from the director of Public Works, commissions for two allegorical bas-reliefs—*Surgery* (1816) and *Geography* (1821)—for the marble basin under the gigantic plaster elephant—not yet cast in bronze—ordered by Napoleon Bonaparte [for public display in Paris]. By mentioning her desperate financial situation as a single woman of poor descent, who took a badly paid extra job as a taxidermist at the Musée d'Histoire Naturelle, the Minister of the Interior, who had recommended Charpentier for the second commission, may have hoped to save her from a life of poverty through a state commission, for which she thanked him humbly but competently."

to correspond with a proto-positivistic bent towards the classification of organisms, a logical taxonomy based in “authentic” anatomical distinctions rather than what Cuvier deemed to be arbitrary divisions corresponding to outer appearances. His practice thus married the often separated disciplines of zoology and anatomy. Such an approach decisively parted ways with Buffon’s bouts of linguistic skepticism regarding the tangible existence of any taxonomic category “higher” than species. Taxonomic methods of classification, Cuvier asserted, were useful not only for natural historical research but could also be deployed by the “young man” who studied them for leisure to “débrouiller tous les genres d’affaires”—to sort out all manner of business. Such was the calming and rationalizing effect of classificatory practice that it could furnish men—a male readership was almost always assumed—with a purposeful activity that rechanneled the “need for occupation” that had “strongly contributed to the troubles of our century.”²³⁰ Systematic modes of thinking and knowledge of a fixed natural order thereby contributed to the maintenance of social norms and the political status quo recently disrupted by the French Revolution and Napoleonic Wars. Fittingly, the first edition of *Le Règne Animal* was released in 1817, in the immediate aftermath of the Bourbon Restoration.

Yet a one-to-one match of literary and illustrative methodology could not be taken for granted. The picturesque narratives of Buffon are, for the most part, neither conveyed nor alluded to by Jacques de Seve’s static, highly uniform drawings of animal bodies and skeletons placed on pedestals before generic landscape backgrounds that only hinted at the creatures’ origins. (However, de Seve did also provide images of animal dissections in more direct alignment with the anatomical exegeses penned by Daubenton.) An English translation of *Le Règne animal* published in the 1840s did away with the illustrations of the original French

²³⁰ Cuvier, *Le Règne animal*, xv.

edition altogether, replacing them with decorative, partially colored plates. Nonetheless, these prints remained thoroughly economical. They maximized the number of related species included in a single plate and using identifying colors for the animals' bodies while leaving backgrounds black and white. The original images were either difficult to reproduce or considered extraneous to the text, even detrimental to its consumption, given their amateurish quality. The human observer has been reincorporated in the images in a quite literal fashion, with figures of various ethnicities sharing plate space with the animals. The human species even receives its own racially charged origin tableau, alluding to both Biblical Eden and more modern tropes of Rousseau's "noble savage"(fig. 4.4). The Adam and Eve figures are, unlike the portrait plates surrounding them, markedly Caucasian in appearance. The central image insinuates an uninterrupted "white" heritage for the Christian populations of Europe, as well as the comparatively "undeveloped" stage in civilization's linear chronology occupied by the non-white subjects in the surrounding four corners.

In the opening plate (fig.4.5), a woman peers morosely over a precipice at a conveniently arranged group of international herpetiles. At the center of the composition, a sea turtle is flanked on either side by an iguana, a chameleon, a cobra and assorted smaller species of frogs, snakes and lizard, assuring that the plate includes as many cold-blooded species representatives as possible. Taxonomic relations provide the only pictorial logic; all beings apart from the woman are either reptiles or amphibians from a wide assortment of geographic locations. In a yet stranger group portrait (fig. 4.6), an inquisitive gentleman stands before a moss-covered stone structure (perhaps a belfry, the bat's proverbial home), observing a flying lemur, its young tucked under its arm. The lemur and the man are surrounded by a decorative garland of flowers, leaves and bats' heads, again provided with alphabetical labels corresponding to the relevant

sections of the text. The unrelated species are here apparently joined by their status as “flying” mammals, though the lemur could more properly be said to glide on its membranous limbs. The illustrations were thus not considered an inseparable element of the *Règne Animal* text, but could be replaced in translations in a manner perhaps more amenable to a general reading public. The sympathy of the human observer was solicited by their incorporation into the plate. The human actors literally model the curious stance towards the natural world that the publisher, author, and translators wished to promote.

Such attempts at emotive and aesthetic appeal were even more prominent in explicitly popularized publications like the *Jardin des plantes* guides and *Brehms Thierleben*. In the various *Jardin des plantes* volumes, the human viewer becomes the subject of her own dedicated plates, a creature on display much like the other animals. The analogous nature of human and animal being is conveyed through their shared participation in systems of social and natural taxonomy, read through visual markers of difference. Each animal and human is assigned a seemingly fixed role. However, especially in the Curmer edition of *Jardin des plantes*, the human animal is every bit as absurd and irrational (perhaps more so) than the various strange and “exotic” species he has taken it upon himself to rule over. These texts, I assert, offer an intermediary between Cuvier’s fundamentally non-evolutionary view of nature and Brehm’s undisguised Darwinism, as I will discuss in the following section.



Paper Menageries: Curmer and Dubouchet’s *Jardin des plantes*

The *Jardin des plantes* zoological gardens, established in the wake of the French Revolution, made the exotic plants and animals of the Royal Menagerie at Versailles available to

a wide public of bourgeois and working class subjects in Paris.²³¹ Public zoological gardens like the *Jardin des plantes* and later, the *Jardin d'acclimatation*, also provided artists with access to exotic animals that once would have been largely limited to designated painters of the royal menagerie and vellum collections. Traveling menageries provided another means of entrée for artists in the early modern period, but these were not permanent displays.

Popular illustrated guides and periodicals pertaining to the *Jardins* contained highly heterogeneous visual programs, including depictions of animal subjects, as well as the zoo visitors, natural historians, and the institutional spaces that surrounded them. However, to remain within the conventions of natural history illustration, the plates centered on individual species remained largely isolated from this artificial, urban environment of the zoo, either doing away with a background altogether or replacing it with the animal's native habitat. The augmented popular visibility of purportedly "exotic" species helped produce a concomitant boom in prints, paintings and other visual media. The act of viewing animals in and of itself became a subject of artistic fascination, as the garden grounds engendered unique moments of open-air sociability. Though the institution was initially conceived to be educational in purpose, it also served as a site for those of a certain class to see and be seen in their leisure attire. These observations were then reproduced, often in the form of printed bookplates.

The value placed on the contributions of prominent artists to natural history publications, especially those aimed at amateurs, children and other members of the non-specialist public, is made clear by a heated mid-century Parisian publishing feud. Two editors, a M. Curmer and M. Dubochet, simultaneously planned to release illustrated volumes of the *Jardin des plantes* under

²³¹ For more on the early development of the *Jardin des plantes* and the Muséum National d'Histoire naturelle in Paris, see E.C. Spary, *Utopia's Garden: French Natural History from Old Regime to Revolution* (Chicago: University of Chicago Press, 2000).

the same, rather uncreative name (*Le Jardin des plantes*) for the Christmas season of 1841. The fundamental similarity of the two projects led to a vicious publicity war in which both sides, among other tactics, cited the names of well-known contributing artists in order to ensure higher sales.²³²

The Dubouchet release was penned by Pierre Boitard (1787-1859), a French botanist and geologist also known for his prehistoric novel, *Paris before Man*, (published posthumously in 1861) (fig. 4.7). The Dubouchet volume (fig. 4.8) presents a repertoire of both human and animal specimens on view at the gardens. One of the opening pages boasts of the quantity and quality of the illustrations, which include 110 large mammalian subjects engraved on copper plates (fig. 4.9), fifty views of the gardens and various landscapes of the world (fig. 4.10) and steel-engraved, hand-painted plates of some of the “most brilliant birds of the two hemispheres.”²³³ Divergent artistic conventions and media were thereby deployed for different subjects. The scenes of human viewership are gently prescriptive, demonstrating how to properly appreciate the sublime vistas and scientific exhibitions of the institution’s grounds. Humans are dwarfed by the stately promenades and plant life of which they stand in appreciation (figs. 4.11-12). The animal illustrations, by contrast, largely eliminate the social and architectonic context in which the displayed animals would have been found, instead imagining the creatures as they might have appeared in their original milieu. The illustration of a mole rat (fig. 4.13) by German artist Johann Conrad Susemihl (1767-1846), one of the premier natural history illustrators of the day, is exemplary of this tendency. The creature is shown close up and close to the ground, nestled within brush, encountered on the page in an intimate manner that the zoo cage would not permit

²³² Thierry Laugée, *La menagerie d’Éugène Delacroix. Études d’un jeune peintre rugissant*. Bulletin de la Société des amis du muse Eugène Delacroix. Bulletin 11 2013-2014, 28-51.

²³³ Pierre Boitard, *Le Jardin des plantes: description et moeurs des Mammifères de la ménagerie et du Muséum d’Histoire Naturelle* (Paris: Dubouchet, 1842).

to the visitor. Each minutely rendered bristle of fur has been engraved with the greatest possible tactility, further heightening the impression of proximity. Another Susemihl plate shows carnivorous marsupial quolls actively preying upon a marsh bird and her eggs (fig. 4.14), much as they might be found doing in their native Australian biome. Elsewhere, a group of monkeys stand poised in a miniature battle tableau, ready to harass their rivals with stick-weapons (fig. 4.15). In some cases, we also see species as they were hunted by human beings in the wild (fig. 4.16). By contrast, the genteel visitors wandering the zoological garden grounds maintain a stylish elegance but lack any personalizing characteristics, serving more as staffage than specific types (figs. 4.11-12). The animals that do appear in these scenes are barely visible, the buildings and landscaping of the park serving as the pictorial focus. We also witness natural historians, and a lone artist, at work in the anatomical theater (fig. 4.17). The only other place where the artist's vocation is indicated is a small visual vignette of a chimpanzee which is shown drawing (fig. 4.18), and which the text deems the "most intelligent animal."²³⁴ Perhaps this was a rare moment of humor in an otherwise staid publication, wherein the artist is exclusively permitted the privilege of panoptic invisibility.

The Curmer book (figs. 4.19-20), written by Pierre Bernard (French, 1810-1876) and Louis Couailhac (French, 1810-1885), likewise contains many illustrations of the visitors as well as the zoological displays. The human subjects (figs. 4.21-22) are, however, rendered in a broadly caricaturized manner evocative of a Parisian *physiologie*, much like the famous contemporaneous series also published by Curmer, *Les Français peints par eux-mêmes*, or a cartoon by Honoré Daumier (French, 1808-1879) (who also, significantly, depicted the *Jardin*

²³⁴ Boitard, 51.

des plantes crowds on more than one occasion) (fig. 4.23).²³⁵ The eclectic cross-section of Parisian life on view—fashionable women, raucous workers, gawping children, eccentric scientists—was, the volume implies, at least as entertaining as the animals. The disparity in the handling of the human figures between the two *Jardin* publications is especially notable in a comparison of the natural *historian* illustrations. The professional dignity of the well-dressed students attending, in mildly-distracted, man-spread postures, to an anatomy theater lesson in the Dubouchet are less distinctive and expressive than the parodic figures found in the Curmer text, equipped with unnecessarily convoluted instruments and apparently engaged in the pseudoscientific enterprise of phrenology, judging by the presence of the diagrammatic head (fig. 4.24).

The human beings of Curmer's text also contrast dramatically with the lush color plates found in the back of the same volume, which are highly reminiscent of the French royal vellum collections (fig. 4.25). The vellums were lavishly colored, gouache-painted depictions of the various botanical and animal specimens from the king's collections at Versailles and were created for the private consumption of an elite audience of the royalty and nobility. Following the transfer of the royal menagerie to the Parisian *Jardin des plantes*, specially appointed artists affiliated with the Paris natural history museum continued to produce vellums as form of scientific documentation. The paintings remain among the *Muséum's* holdings today and are seldom placed on public display due to their extreme sensitivity to light.²³⁶ In viewing the specimen images, the reader of the volume shifts positionality. No longer a flaneuse gawking at fellow *Jardin des plantes* visitors, she now occupies the role of a scientist closely observing his

²³⁵ Pierre Bernard and Louis Couailhac, *L. Curmer: Le Jardin des plantes* (Paris: Thierry frères, 1842).

²³⁶ For more on the vellum collections, see Pascale Heurtel and Michelle Lenoir, *Les Vélins du Muséum national d'Histoire naturelle* (Paris: Coedition Museum-Citadelles & Mazenod, 2016) and Madeleine Pinault, *The Painter as Naturalist* (Paris: Flammarion, 1991).

carefully isolated specimen or of a royal patron perusing his art collection. In Curmer's print of the *Tachyphona archeveque* (a type of tanager found in the Neotropic region) (fig. 4.26), the close attention to the coloration of the feathers and the bananas and the placement of a fruit and animal grouping on a clean, blank backdrop follows the same conventions found in the vellum collection. Like the illustrators of Curmer and Dubouchet's publications, the vellum painters (and/or their patrons) deliberately selected the most "brilliant," colorful animals and botanical specimens for this manner of visual preservation, as one can also observe with the striking blue and purple plumage of the *Rollier verd* or the reflectively highlighted texture and sheen of the boa constrictor's scales (fig. 4.27). The creaturely bodies of the vellums and the hand-painted plates become surfaces for both virtuosic painterly play and representational exactitude. The plates in the Curmer volume, much like the *Jardin des plantes* itself, democratized the aesthetic luxury of viewing "exotic" creatures in their multitude of colors and forms. Eventually, the *Jardin des plantes* moved away from its elite origins and was considered increasingly déclassé, too available to the working classes in their Sunday clothes to be an adequate site of bourgeois display. The *Jardin d'acclimatation*, opened in 1860 in the Bois de Boulogne, adjacent to the wealthy environs of Neuilly-sur-Seine, was, in the mid-century, often the preferred zoological venue of the upper classes (see Chapter 3).

The multitude of viewing positions modeled by the *Jardin des plantes* prints—the zoologist observing a specimen, the consumer of luxury art, the curious layperson on his first foray to the zoo—invited the reader into what was an increasingly public natural historical discourse. The polite, proper bearing of the bourgeois visitor ready to be enlightened by her experience of the *Jardin* in the Dubouchet and the more antic attitude of the spectator in the Curmer speak to the simultaneously entertaining and educative functions of the modern

zoological garden. However, another genre of popular scientific literature sought to do away with the settings of the zoological garden and the natural history museum, instead inserting the lay reader into the world of the field naturalist and his direct encounters with an all too often exoticized and colonized nature. In *Brehms Thierleben*, the visible trappings of the “desk naturalist,” with his single specimen images, give way to ever more lush and elaborate painterly depictions of animal life.



Thiermalerei and Thierleben

In contrast to the *Jardin des Plantes* guides, Brehm courted the reader through a sympathetic, Darwinian, approach to the animals pictured, precluding the need for a human intermediary by asserting the fundamentally analogous nature of animal emotions and actions to those of humanity and, in turn, positing human beings’ purely materialistic, animal nature. However, as I will argue, the call for the reader to recognize her human animality was underpinned by Brehm’s racist ideology that still allowed her to distance herself, as an “educated European,” from the baser forms of animality supposedly embodied by supposedly more “primitive”—typically colonized—human beings.

The wildly popular *Thierleben*, a mainstay of the bourgeois bookshelf in the Germanic states from its first publication in 1864-69, became an ongoing scientific and artistic project for zoologist Alfred Edmund Brehm (German, 1829-1884) and his numerous scientific and artistic collaborators. Brehm, judging from the drawings found in his field notes, did not illustrate his own publication with good reason (fig. 4.28). In contrast with his cabinet naturalist/preacher father, affectionately known among his parishioners as the “Vogelpastor” (bird pastor), the younger Brehm pitched himself as a dashing zoological adventurer, having escaped his

Thuringian hometown of Unterrentendorf to participate in voyages to North Africa, Spain, Scandinavia, Sweden and Siberia.²³⁷ In the introduction to the *Thierleben*, the younger Brehm derided the lack of attention paid by “desk naturalists” to living animal behavior, which could be better observed by field zoologists such as himself: “the living animal is a feeling and moving being; the dead, taxidermied, preserved in spirits, is and forever remains, only an object.”²³⁸ As he later elaborated, “Our goal is to learn about the life of the body and the soul, about the whole animal, and this goal before all we will keep in sight.”²³⁹

The differing conceptions of the zoologist’s vocation become starkly apparent in extant portraits of the senior and junior Brehm. In painter Carl Werner’s (German, 1808-1894) watercolor of the “Vogelpastor” (fig. 4.29) that gentleman appears seated in profile view in his book-lined, wood-paneled study, a (probably dead) bird specimen delicately perched atop his hand. His body, his writing desk and a haphazard heap of taxidermied birds are illumined by the sunlight emanating from the window. Oil paintings from the life of Christ and a mounted shoebill specimen keep vigil over his spiritual and scholarly activities. An air of slow decay, the consignment of dead life to dusty pages, pervades the space. The wood paneling appears stained, the surface of the oil painting in the far right corner is cracked. Only the green, leafy tendrils peering through the window hint at the presence of a more lively outside world. Per his son’s description, the space appears to be exclusively occupied by inert “objects.”

By contrast, Alfred Brehm is portrayed at rest on a journey through the Altai mountains in a woodcut, based on a drawing by painter Wilhelm Simmler (German, 1840-1923), published

²³⁷ For more on the Alfred Brehm’s biography, see Hans Dietrich Haemmerlin, *Alfred Edmund Brehm: Biografie in Zeit- und Selbstzeugnissen* (Markkleeberg: Sax Verlag, 2015).

²³⁸ Alfred Brehm, *Brehms Thierleben Allgemeine Kunde des Thierreichs, Zweite umgearbeitete und vermehrte Auflage: Erste Abtheilung---Säugetiere*, (Leipzig: Verlag des Bibliographischen Instituts, 1884), VII. Throughout this chapter I will be referencing the second, more extensively illustrated edition of the *Thierleben* unless otherwise noted.

²³⁹ A.E. Brehm, *Brehms Thierleben, Erste Abtheilung—Säugethiere*, 8.

as one of the front plates of the first volume of the *Thierleben* (fig. 4.30). Decked out in a peacoat with a full-grown beard and stocky frame, the naturalist sits in three-quarters view on a large boulder with field notes in one hand and a hunting rifle in the other. He pensively poses with the signifiers of his self-sufficient enterprise, the other members of his traveling party nowhere to be found, apart from what appears to be a native Siberian guide. This individual holds his own gun and equine mount at the ready. His facial features are racially caricatured—dark, broad, crudely drawn—presumed to be of little interest to the bourgeois German reader of the volume, as compared to Brehm’s soulful, skillfully rendered visage. Even the horse appears more expressive than the guide, with its eye furtively directed off page. The grand figure of the colonial adventurer-naturalist overshadows the surrounding environment, which he seems to explore on his own though he in fact traveled with at least two other naturalists (and likely many more uncredited assistants and guides) during his 1876 voyage to Siberia, organized by the Bremen union for Arctic Exploration.²⁴⁰ Brehm’s personality overshadows both the natural landscape and the human beings inhabiting it. The patriarchal stance hinted at by the author’s popular nickname (*Tiervater* or “animal father”) is thus visually conveyed. The distinctions between the portraits of the Brehms were not unique. They closely adhered to conventions conjured in other period paintings of cabinet and field naturalists in the Germanic context, such as Carl Spitzweg’s (1808-1885) *Scholar of Natural Sciences* (fig. 4.31) and Friedrich Georg Weitsch’s (1758-1828) *Portrait of Alexander von Humboldt* (fig. 4.32). The natural historians, like their creaturely subjects, were depicted in their respective habitats.

In accordance with this conception of the adventurer-naturalist’s labor, the illustrative program of the *Thierleben* comprised scenes of animal life rendered *as if* viewed in the field, in

²⁴⁰ “Sketch of Alfred E. Brehm,” *Popular Science Monthly* 27, June 1885.

situ. The pedestal-bound skeletons and stiffly posed “live” specimens of Cuvier and Buffon’s volumes would not do for an examination of “feeling and moving beings” in their respective biomes. In line with earlier illustrated natural histories going back to the oeuvre of British artist Thomas Bewick (1753-1828), the black and white illustrations were produced using wood engraving, a technique amenable to the insertion of images within blocks of text (as opposed to separately printed pages of plates). The color plates were created using the newly popularized technology of chromolithography, though most were based on black and white engravings from earlier editions of the text.²⁴¹ Even if many (or most) of the depicted scenes were fictive in nature, they could still convey an apparently truthful sense of an animal’s inner, psychological being so valued by Brehm.

The use of narrative tableaux could also contribute to optimal visual concision. Multi-species prints are cleverly configured into group portraits or otherwise granted a seemingly naturalistic visual coherence, however far-fetched the scenarios might be in a truly “natural” setting. In a print of assorted southern European vulture species (fig. 4.33), Gustav Mützel (German, 1839-1893) assembled an unlikely conference of birds from disparate geographic regions over the feast of a mammalian corpse. In other cases, wholly ancillary figures and stories were added to furnish a sense of local color. The kangaroo attacked by dingoes in the lower portion of the *Riesenschwalm* plate (fig. 4.34) telegraphs the Australian outback setting to an unfamiliar reader. The birds certainly seem to live up to their German name (“giant frogmouth”), appearing larger in size than the beleaguered kangaroo thanks to the image’s

²⁴¹ Artist attributions for the lithographs are complicated by the elimination of signatures from the wood engravings. When possible, I have tried to locate the designer of the lithographic images in the previous black and white versions of the prints, most of which do contain signatures for both the draftsman and the engraver.

bizarre perspectival configuration, which centers the named species while attempting to include as much localizing detail as possible.

Such an approach to natural history was conveniently appealing to Brehm's target audiences of the adult bourgeoisie and their families, who might grow weary of extended anatomical discourses.²⁴² Authors and editors of prior natural history encyclopedias fretted over whether anatomical illustrations were too dull and technical for a general readership. In his 1780 translation of Buffon's *Histoire naturelle*, Scottish natural historian William Smellie (1740-1795) praised that author's omission of such images and descriptions from his last Paris edition.²⁴³ Brehm did include prints of the animals' skeletal structures, but only as small illustrations inserted into the body of the text, rather than dedicated full page plates—readily available to the diligent scientist but easily skimmed past by the uninterested reader (fig. 4.35).

A ten volume exploration of the animal kingdom, from “Volkerkunde” (anthropology) to the “lower creatures” of the bacterial orders, the popularity of the first edition of the *Thierleben* allowed for even more elaborate illustrative commissions, beginning with the hiring of Gustav Mützel and the Specht brothers—August (illustrator) (1849-1923), Friedrich (lithographer), and Carl Gottlob Friedrich (woodcutter and engraver) (1846-1898), among many others—for the second edition, released from 1876-79.²⁴⁴

The changing of the artistic guard could have also been motivated by the author's personal vendettas. The head illustrator of the first edition, Robert Kretschmer (German, 1812-1872), a fellow member of the *Naturforschenden Gesellschaft Leipzig* (Leipzig Society for Naturalist Researchers), had a contentious relationship with the zoologist, complaining in his

²⁴² A.E. Brehm, *Brehms Thierleben, Erste Abtheilung—Säugethiere*, VIII.

²⁴³ Elizabeth Liebman, “Painting Natures: Buffon and the Art of the *Histoire Naturelle*,” Ph.D. Diss., Department of Art History, University of Chicago, December 2003, 49-50.

²⁴⁴ DSI Stuttgart.

personal correspondence of Brehm's controlling nature and unbridled arrogance.²⁴⁵ After traveling with Brehm to the north of Africa in 1862, Kretschmer wrote to his friend, German novelist Friedrich Gerstäcker (1816-1872), complaining of an “injurious letter full of prim malice” (“einen verletzenden Brief voller gedrechselter Malicen”) he received from Brehm. The letter in question critiqued the artist's use of “cavalier's perspective” in his drawings.²⁴⁶ Though the correspondence predates the second edition of the *Thierleben*, the relationship between the men evidently did not improve in the meantime.²⁴⁷

In any event, the second edition illustrations were popular enough to be released as a series of 170 loose-leaf *Chromotafeln* (colored lithographic plates) issued in sets of Mammals, Birds and “lower animals” (reptiles, amphibians, fish, polyps etc.) by painter Olof Winkler. The title page of each set proclaimed that Winkler had produced the images “nach dem Leben” (from nature) even though most of the plates are clearly colorized versions of prints drawn and engraved by other artists in earlier *Thierleben* editions. (Unless otherwise noted, I will be focusing on images drawn from these *Chromotafeln* sets, as the most prominent representatives of the *Thierleben* visual project). An individual set cost five Marks.²⁴⁸ The colorized plates present an array of strange and highly elaborate animal narrative subjects, from comfortingly familiar domestic species like the Chillingham Cattle (fig. 4.36) to a teeming, horde-like procession of mosquito larvae (fig. 4.37).

²⁴⁵ Haemmerlin, 197.

²⁴⁶ Letter from Robert Kretschmer to Friedrich Gerstäcker, June 7, 1862 in Staatsarchiv Coburg LA A 7420, reprinted in Haemmerlin, 183. “Auch mit mir hat es Reibungen gesetzt, er [Brehm] schrieb mir neulich unverhofft, und vom Zaune gebrochen, einen verletzenden Brief voller gedrechselter Malicen, behandelte mich darin von der Cavaliersperspective herab, und glaubte dadurch wahrscheinlich zu imponiren, gewiß hat er geglaubt, daß ich berstürzt zu ihm rennen würde, um *pater peccavi* zu sagen und in Rücksicht auf unsere ungelöste Geschäftsverbindung mich möbeln zu lassen.”

²⁴⁷ Haemmerlin, 181.

²⁴⁸ Olof Winkler, *Brehms Thierleben Chromotafeln*, (Leipzig: Verlag des Bibliographischen Instituts, 1883), accessed at the Museum für Naturkunde, Berlin.

The scientific purchase of the texts was also not to be discounted. The first four volumes of the *Thierleben* can be found today in Darwin's personal library. The books were first brought to the scientist's attention by V.O. Kovalevsky, translator of the first Russian edition of *Variation of Animals and Plants Under Domestication*. Kovalevsky proposed the reuse of Brehm's woodcuts for that publication.²⁴⁹ He attempted to persuade Darwin through the paired gifts of a first edition *Brehms* and a very large bear skin, both shipped directly to the latter's home, much to the consternation of his daughter.²⁵⁰ Darwin deemed the volumes a "kind and magnificent present" with their "astonishing number of illustrations" that would "do admirably" to illustrate his book. Brehm's work was evidently not in wide circulation at this time in England, as Darwin could not locate a copy for himself (however, he had previously cited the scholarship of Alfred's ornithologist father).²⁵¹ Once Darwin read Kovalevsky's gifted copy he was so enthused that he wrote to his publisher, John Murray, recommending the release of an English translation so that others could appreciate its "admirable illustrations" and the most "amusing and interesting an account of the habits of Baboons" that he had read in "any other work whatever."²⁵² The illustrations of the *Thierleben* were thus disseminated beyond the confines of their original publication, cleaved from their association with a single text. Indeed, the German release of the loose-leaf chromolithographs in 1883 treated the textual explanations of the plates as superfluous

²⁴⁹ Pamela Kort, "Natural Histories in Germany: Alfred Edmund Brehm and John Heartfield," in *Darwin : Art and the Search for Origins*, ed. Pamela Kort and Max Hollein (Frankfurt: Wienland Verlag, 2009), 230.

²⁵⁰ Charles Darwin, letter to V.O. Kovalevsky, June 24, 1867. Henrietta Emma Darwin wrote in a letter to Hope Elizabeth Wedgwood, Summer 1867: "Did I tell you about the enormous bear I found on my arrival making it dangerous to go into the best room as he was put there for a mat & has an enormous head to tumble over & 4 large paws with sharp slightly upturned nails with tear yr. gown and scratch yr. legs?" Darwin Correspondence Project. <http://darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-5575.xml;query=brehm;brand=default>. Accessed September 4, 2019.

²⁵¹ Ibid.

²⁵² Charles Darwin, Letters to John Murray, 4 August, 1867 and 9 January, 1868. Darwin Correspondence Project, <http://darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-5781.xml;query=brehm;brand=default>, Accessed September 4, 2019.

to their placement in an album or framing on a bourgeois household wall. Nevertheless, the few scholars who reference the illustrations implicitly treat them as a fragment of Brehm's own imperious vision, with only the slightest mention—if any at all—of the large number of artistic collaborators enlisted to work on the project.²⁵³

The illustrations of *Brehms Thierleben*, I argue, present an unusual, borderline case of the blurring of distinctions between “scientific” and “artistic” representations of natural historical subjects. Images accompanying a “scientific” publication by a noted zoologist, albeit one aimed at a bourgeois lay audience, present multi-figure narrative compositions saturated with the “entertaining” and “aesthetic” characteristics more commonly associated with period *animalier* painting.

The range of vocations and specializations embodied by the second edition illustrative team is made especially clear by the inclusion of prominent battle painter Wilhelm Camphausen (German, 1818-1885) as the primary horse illustrator. The presumed facility for equine anatomy among Prussian military painters dated back at least to the beginning of the century, when the preeminent painter of military portraits and processions, Franz Krüger (German, 1797-1857), was dubbed “Pferde Krüger” (“horse Krüger”) for his exemplary skill in depicting blood horses of the kind possessed by the cavalry and Berlin nobility. Indeed, one of the initial motivations for including instruction in animal anatomy in European artistic academies was the production of naturalistic cavalry scenes, as discussed in Chapter 2. Camphausen's images visibly reflect this tradition, as that artist was only commissioned to draw pure, domesticated breeds of horse: the

²⁵³ Pamela Kort (2009) frames her discussion of Brehm's illustrations around the zoologist's professional biography, with little consideration paid to the artists or visual analysis of the images. David Bainbridge does acknowledge a “lack of unity of artistic purpose” in the *Thierleben*, which he attributes to the large number of illustrators involved, but does not elaborate further on this point. *Stripped Bare: The Art of Animal Anatomy* (Princeton: Princeton University Press, 2018), 146. Jonathan Smith attributes the woodcuts ordered by Darwin for reuse in *The Descent of Man* to Brehm himself in his image captions, though the zoologist did not illustrate his own publications. *Charles Darwin and Victorian Visual Culture* (Cambridge: Cambridge University Press, 2009).

Arabian, the English Thoroughbred, the German Trakehner and the French Percheron, replacing earlier illustrations by the less well-known Krestchmer from the first edition. Most notably, the latter artist's text-embedded engraving of an Arabian horse was replaced in the second edition by a full chromolithographic plate by Camphausen (fig. 4.38). Camphausen's talents were thus reserved for aristocratic horses (with the exception of the draft Percheron), with other artists deployed to depict the wild Tarpan and the shaggy, working-class Shetland pony. Brehm recused himself from the task of exhaustively categorizing and explicating equine breeds, instead offering up "captions" for the illustrations produced by the "master's hand" of Camphausen.²⁵⁴ Yet in a possible nod to Buffon, Brehm upheld the horse's status as the "noblest of all living creatures."²⁵⁵ The Arabian breed was a subject of especial fascination for him, as the ancestor of the English Thoroughbred, with its elegant conformation and "eyes of a loving woman." It resembled in its build "the greyhound, the dove and the camel all at once."²⁵⁶

Camphausen's print presents a rather better case for the animal's appeal than the scientist's surreal musings, returning to more standardized tropes of natural historical art than many of the other *Thierleben* artists. The horse stands with practiced posture before a desert scene populated with lazily sketched, Orientalized staffage. These Arabian keepers receive hardly half the delicate visual articulation of the animal. The overall presentation thus conforms to earlier nineteenth-century prints of the breed. Théodore Géricault utilized the same format of a foregrounded, profile-view horse set against exoticized staffage, though he granted slightly greater prominence to the human keepers (fig. 4.39). Like Simmler, Camphausen seems to consider the non-white subjects unworthy of a properly drawn face. The stereotyped figures are

²⁵⁴ A.E. Brehm, *Brehms Thierleben: Erst Abtheilung—Säugethiere*, Vol 2, 47.

²⁵⁵ *Ibid.*, 47-48.

²⁵⁶ *Ibid.*

well placed to accompany Brehm's folk legends about the Arabic people's inordinate love of their own horse breeds. Brehm claimed that they refused to sell the animals to non-Muslims, reserving the death penalty for anyone who failed to adhere to this rule. The purchase of an Arabian stallion's stud duties was considered highly distasteful by locals, who refused to act as "Merchants of Horse Love" (*Verkauf der Liebe des Pferdes*).²⁵⁷ Such ethnographic details were then apparently suitable subject matter for a natural historian.

By contrast, the profile view of the horse's anatomy, as drafted by Camphausen's deft hand, presents the creaturely byproduct of centuries of careful husbandry: the perfected equine body with its slender neck, silver-dappled coat, firm, athletically poised stance and soft pink muzzle. The sunlit sheen of its frame reveals the well-formed veins and muscles beneath its fur. The cleanly brushed mane is only mildly disrupted by the desert breeze. Even the animal's coiffure is elegant. It is a creature at which the keepers (and by extension the viewer) must wonder. Oddly enough, the uninitiated military painter designed a plate far more typical of the scientific illustration genre than Mützel and other artists affiliated with the *Thierleben* who worked almost exclusively as zoological illustrators. Camphausen's drawings of the Thoroughbred and the Percheron share the Arabian horse's stiff, profile positioning, with only the *Trakehner* depicted more dynamically, trotting in three-quarter view alongside her foal.

The Arabian horse plate brings the racialized political dynamics of the *Thierleben* into sharp focus. Brehm, a firm adherent of Darwinism, asserted man's fundamentally animalistic nature in the opening pages of his text.²⁵⁸ Any well-defined division between human and animal behavior and life-ways was thus brought into question by the project. Despite the apparently wide-ranging empathy of Brehm's approach and its elevation of animal interiority, such fellow

²⁵⁷ Ibid, 48.

²⁵⁸ Ibid, 1-2.

feeling did not always extend to what the author deemed to be the more “primitive” examples of humankind. He expressed a racially hierarchized view of humanity’s connection to the animal kingdom, denying the typically “human” attributes of speech, writing, religion and morality to what he considered the “less developed” peoples of the world. As he pontificated in an extended citation of the physiologist and materialist philosopher Ludwig Büchner (German, 1824-1899):

‘All of the supposedly unique signs of difference between humans and animals,’ says Büchner truly and to the point, ‘appear on closer inspection invalid, and even those attributes held to be most characteristic of humanity, like spiritual and moral characteristics, upright posture and free use of the hand, human physiognomy and articulate language, societal existence and religiosity, etc. lose their worth or become relative, as soon as one sets aside limiting and case-study based comparisons and thereby sets our sights not only on highly educated Europeans, as usual, but on those human beings and human types closer to animals, who possess the chance to rise out of primitive, natural states to the level of civilized people.’²⁹⁹

The discomfort the reader might feel upon confronting her animalistic qualities was allayed through the assurance that the “educated European” subject remains far above the base, raw state of nature to which Büchner consigned other races. Brehm insinuated that the reader should feel uplifted, not demeaned, by her animal ancestry, knowing how far her civilization has superseded its humble origins. Allegedly “primitive” human beings are at times denigrated by Brehm as being even less developed than other animal species. The author thus consolidated a naturalized, white supremacist racial hierarchy while sidestepping the more radically Communist connotations of Darwinist materialism. Darwinism and materialist philosophy were generally understood to be two sides of the same coin in the nineteenth-century German-speaking context,

²⁹⁹ ‘Alle sogenannten specifischen Unterscheidungszeichen zwischen Mensch und Thier,’ sagt Büchner treffend und wahr, ‘werden bei genauerer Betrachtung hinfällig, und selbst die für die charakteristischsten gehaltenen Attribute der Menschlichkeit, wie geistige und moralische Eigenschaften, aufrechter Gang und freier Gebrauch der Hand, menschliche Physiognomie und artikulierte Wortsprache, gesellschaftliches Wesen und Sinn für Religiosität u. verlieren ihren Werth oder werden relative, sobald man sich zu eingehenden und auf Thatsachen gestützten Vergleichen herbeiläßt und dabei nicht bloß, wie gewöhnlich, den höchgebildeten Europäer, sondern auch jene dem Thiere näher stehenden Menschen und Menschenarten ins Auge faßt, welche seine Gelegenheit hatten, sich aus dem rohen Ur- und Naturzustande zu der Stufe des civilisirten Menschen emporzuschwingen.’ A.E. Brehm, *Brehms Thierleben: Erst Abtheilung—Säugethiere*, 2.

signifying an inevitable political and cosmic progress rooted in secular, physiological forces. But in spite of his status as an ardent Darwinist and former student of Ernst Haeckel (German, 1834-1919), Brehm mostly avoided direct references to evolutionary theory in the *Thierleben*, even while expressing his hope that the “lower” peoples of the Earth could eventually be brought to a state of “civilization” comparable to that of his audience.²⁶⁰

The second edition of the *Thierleben* was released just a few years after German unification in 1871, with subsequent editions published throughout the 1880s and 1890s, just as Germany was joining the “Scramble for Africa” in full earnest. Germany’s projected participation in the colonial enterprise was implicitly justified by commentators like Brehm by both the need to “improve” and “uplift” colonized peoples in Africa and Asia to a higher plane of evolution and by the naturalist’s “need” to personally view animals in their native landscapes. Scholars of German colonialism, such as Susanne Zantop and Chunjie Zhang, have noted the prominent role played by published texts (often illustrated) in the shaping of a Germanic colonialist imaginary, particularly given the country’s belated participation in processes long dominated by the English, Spanish and French. Zantop argues that prior to the 1880s German colonialist impulses were actively displaced into literary forms, such as the travelogue and the scientific monograph, as well as novels and plays conjuring fantastical journeys to Africa, Asia and the Americas. Zhang offers a more nuanced, bilateral reading of Germanic colonialist texts and encounters of the eighteenth and nineteenth centuries.²⁶¹ She treats non-Western cultures not merely as proto-colonies but as vital (if often unacknowledged) contributors to German scientific

²⁶⁰ Alfred Kelly, *The Descent of Darwin: The popularization of Darwin in Germany, 1860-1914* (Chapel Hill: University of North Carolina Press, 1981), 34.

²⁶¹ Susanne Zantop, *Colonial Fantasies: Conquest, Family and Nation in Precolonial Germany, 1770-1870* (Durham, N.C.: Duke University Press, 1997).

and artistic traditions.²⁶² Zhang also notes that the Germanic states did in fact possess some limited colonial holdings prior to the 1880s. As she writes

It is true that the kingdom of Brandenburg-Prussia had several small colonies in Africa and the Caribbean around 1700—for example, Groß Friedrichsburg in today’s Ghana, founded in 1683 by the Great Elector, or Saint Thomas Island in the Caribbean, leased from the Danish West India Company by Brandenburgisch-Afrikanische Compagnie for the purpose of slave trade. These colonial sites, however, were soon sold or given up by Brandenburg-Prussia in the early eighteenth century. They were sporadic and short-lived in comparison to the expansive, long-term, and systemic enterprise of British, French, and Spanish colonialisms.²⁶³

This comparative lack of formalized colonies seemed to stir ever-stronger colonial imaginings, if the vast popularity of genres like the Robinsonade (a manner of Robinson Crusoe fanfiction or pastiche) in the Germanic states was any indication. By 1800, at least 128 Robinsonades had been published in German, as opposed to nine in English and six in French.²⁶⁴ However, as John Philip Short notes in *Magic Lantern Empire*, the adventurous, enterprising conception of colonialism began to be replaced, during the actual colonial period of the post-1880s, with “the discourse of a sober, scientific colonialism,” wherein colonial practices were justified more in terms of economic, scientific and geopolitical practicalities than a spirit of discovery.²⁶⁵ The establishment of the colonies needed to be justified to an increasingly wary German public, which moreover was not unilaterally in favor of colonial policies. The Social Democratic Party (SPD) and various Socialist workers’ movements in particular decried the devastation wrought by Germanic conquests and capitalistic forms of resource extraction.²⁶⁶ A figure like Brehm could be seen as operating on the cusp between the two kinds of colonial discourse identified by Short.

²⁶² Chunjie Zhang, *Transculturality and German Discourse in the Age of European Colonialism* (Evanston: Northwestern University Press, 2017).

²⁶³ Zhang, 4-5.

²⁶⁴ Zhang, 17.

²⁶⁵ John Philip Short, *Magic Lantern Empire: Colonialism and Society in Germany* (Ithaca: Cornell University Press, 2012), 16-17.

²⁶⁶ As Short writes, “The SPD exemplifies neither carnival enchantment nor the minor-key eccentricities of grassroots colonialists, but a whole rival public, institutionalized like the colonial movement but articulating a fierce, sustained ‘counterdiscourse.’” *Magic Lantern Empire*. 18.

He both enticed the reader with the myriad fascinations of the animal world, but also sought to explain this realm in terms of a rigorously materialistic Darwinism, albeit a form of materialism that did not align with working-class, anti-colonial sentiments.

The perceived radicalism of Brehm's materialist science was nonetheless bitterly critiqued by members of the Catholic establishment in Southern Germany, who deplored the moral hazards of explicit descriptions of animal mating habits and the denial of man's spiritual elevation above other species.²⁶⁷ Yet, when the *Thierleben* did espouse these claims for the animality of humanity, it did so in a familiar, familial descriptive style. Brehm practiced what Alfred Kelly claims was a *gemütlich* or cozy style of popularized science writing: "The *gemütlich* style was gentle and relaxed and tended to be structured as a series of word pictures; it frequently taught by personal example or anecdote...*Brehms Thierleben* was a series of word and picture portraits of the various animals, and each portrait was like an individual family magazine article, with all the sentimentality that genre implies."²⁶⁸

The familial style adopted by Brehm works to convey the fundamental relatability of other species' experiences. The thematic of the hierarchy of being is maintained throughout the introduction to the first volume, wherein Brehm compares the intellectual and sensory capacities of various species of mammals. At the same moment, he engages in a pre-Derridean critique of the "human reason"/ "animal instinct" dichotomy. As he considered at some length in his opening remarks:

For the preacher of each lecture that aims to awaken the joy of nature in man, there is no other stance than one we have long overcome, but to make clear to the faithful, that everything in existence is lovingly created for him, that he must therefore be made of entirely different stuff

²⁶⁷ See, e.g., the review of the *Thierleben* by H. Bolsmann, Pfarrer zu Gimbte (Priest of Gimbte) in Haemmerlin, 166-167.

²⁶⁸ Kelly, 34.

than all other related creatures, of which we have a fixed knowledge. Therefore one strives to demonstrate that the animal, as spiritless and soulless being, possesses no understanding, will, feelings nor sensitivity to outside influences, neither thinks nor judges, neither loves nor hates, neither recognizes nor learns, neither gathers experiences nor evaluates them, that it is a mere plaything in “higher hands,” that it is fished, led, handled, ordered and forced to love, to hate, to feed, to mate, to fight, to build nests, to raise young, to serve man. And this all with the aim of elevating man, “still carrying something animalistic about him,” to his true grandeur, to his demi-godhood. The more one presses the animal down, the higher climbs the human; the more one seeks to suppress the similarities between man and animal, the less man has to fear that he, through the animal and his being, will somehow be tarnished. If one grants the animal understanding, so must one also not completely deny it free will; free will is however valued as the chief characteristic of humanity: ergo must he alone possess this trait, whether this possession is factually grounded or not... One understands by instinct not at all a natural desire, but rather, more or less, the capability by which animals are directed by the orders of some outside influence, without their own awareness, somehow without corresponding to the actions of their own brains. I will attempt to replace the, to my mind entirely lacking concept, “instinct,” through other opposing terms.²⁶⁹

This perspective allowed the author to construct colorful narratives around creaturely behavior, treated as analogous (though not identical) to human activities and motivations. Materialism was thus married to a comfortably contained view of the animal world. Do the illustrations present a similar dichotomy, with their strange combination of sentimentality and stylistic experimentation? I argue that the *Thierleben* was more tonally complex (whether

²⁶⁹ “Es handelt sich für die Prediger jener Lehre, welche wir als einen längst überwundenen Standpunkt betrachten, keineswegs darum, in dem Menschen Freude an der Natur zu erwecken, Sinnigkeit der Anschauung zu begründen, sondern einzig und allein darum, dem Gläubigen es begreiflich zu machen, daß alles Bestende ihm zu Liebe geschaffen worden, er also aus ganz anderen Stoffe gebildet sein müsse als die übrigen uns verwandten Geschöpfe, von denen wir bestimmte Kunde haben. Deshalb bemüht man sich darzuthun, daß das Thier, als geist- und seelenloses Wesen, weder Verstand noch Willen noch Gefühl noch Empfindung für äußere Einflüsse habe, weder denke noch urtheile noch handle, weder liebe noch hasse, weder erkenne noch lerne, weder Erfahrungen sammle noch solche verwerthe, daß es sei ein Spielball in ‘höherer Hand,’ daß es gegängelt, geleitet, behandelt, zur Liebe, zum Haß, zur Tafel, zur Brautschau, zum Kampfe, zum Nestbau, zur Erziehung der Jungen, zum Dienste des Menschen, befohlen und gezwungen werde. Und dies alles zu dem Zwecke, dem ebenbildlichen, ‘obschon noch immer manches Thierische an sich tragenden’ Menschen zu seiner wahren Würde, zu seiner Halbgöttlichkeit zu verhelfen! Je mehr man das Thier herabdrückt, um so höher steigt der Mensch; je mehr man das Uebereinstimmende zwischen Mensch und Thier zu verwischen sucht, um so weniger braucht man zu fürchten, daß er durch das Thier und sein Wesen irgendwie beeinträchtigt werden könne. Gesteht man dem Thiere Verstand zu, so darf man ihm wohl auch freien Willen nicht gänzlich absprechen; freier Wille aber gilt bekanntlich als das bezeichnende Merkmal des Menschengeistes: folglich muß dieser gedachte Eigenschaft ausschließlich besitzen, gleichviel ob dies thatsächlich begründet oder nicht... Man versteht nämlich unter “Instinkt” keineswegs Naturtrieb, sondern die Fähigkeit infolge eines oder mehrerer, dem Thiere von außen her zukommender, ihm nicht zum Bewußtsein, gelangender Befehle zweckmäßig zu handeln, ohne dabei das eigene Hirn irgendwie zu beanspruchen... Ich will versuchen, den mir vollständig mangelnden Begriff des Ausdrucks “Instinkt” durch gegnerische Worte zu erläutern.”
Ibid, 21.

intentionally or otherwise) than Kelly's assessment would suggest. While the aforementioned bourgeois sentimentality often figures prominently, Brehm did not assume this tone uniformly assumed across all species—nor, as the introduction indicates, was it always extended to other members of humanity. For example, the playful nuclear family scenes of tigers (fig. 4.40) and leopards (fig. 4.41) by Mützel are decidedly more inviting to the viewer than a single zoological specimen against a stark white background, even as they depict beasts described by Brehm as ferocious and wholly resistant to human mastery. The plump, endearing infant leopards paw at their mother's face and tail and stare at the viewer with wide, kittenish eyes. The tiger cubs are likewise kitschily endearing, sleeping on their mother's back and harassing their siblings as the parents look on with unwavering, protective gazes. The far right-hand cub appears at least as distressed as any human interloper might be by the scene. While the plate conveys other aspects of the text, such as the heightened ability of the creatures to camouflage themselves in shadowy forests with their stripes, the reader is chiefly drawn in by the dynamics of the family portrait.²⁷⁰ Interestingly, the illustrated carnivores seem to share this staid, *bürgerlich* lifestyle with their herbivorous counterparts, such as the red deer (fig. 4.42). The species is not, in fact, given over to the formation of nuclear family groups: most fathers part ways with both their mates and their young after the breeding season.

Yet other tableaux, such as the striking plate of a plague of locusts (fig. 4.43) or a forest-wide invasion of mosquito larvae (fig. 4.37) deviate from the heteronormative projections and moral consolations of the charismatic mega-fauna and, in the case of the locusts, seem to overwhelm any attempt at human containment, straining the representational capacities of the artist. But even insects are occasionally treated in a more humorous, captivating manner. A plate

²⁷⁰ A.E. Brehm, *Brehms Thierleben: Erst Abtheilung—Säugethiere*, 389.

depicting various vermin consuming a dead bird serves as a cheerfully sunlit parable on the merits of “teamwork” (“*Wirkungen Vereinter Kräfte*”) (fig. 4.44).

The cricket plague illustration, drawn by zoologist Eduard Oscar Schmidt (noted for his researches on sea sponges), is typical of the *Thierleben*'s peculiar combination of folk histories, scientists' reports and first-hand accounts. Much of the chapter on the cricket family, known variously in the German vernacular as *Heuschrecken*, *Graspferde* [grass horse], *Grashüpfer* [grass hopper], *Heupferde* [hay horse], *Sprengsel* and *Grillen*, relies on hysterical eyewitness accounts of the plague phenomenon, coupled with sober, factual descriptions of the insect's breeding habits and the various environmental conditions—rainfall, dampness/dryness of the surrounding area, availability of edible plant matter—that contribute to excessive reproduction. Particular illustrative and textual attention is paid to the striking, agriculturally ruinous spectacle of the “plague” brought about by the animal's intensive summer mating season, which could, in certain species, last a quarter of the year, from July through October.²⁷¹ Brehm cited an assortment of highly dramatized accounts of this phenomenon, writing of historic “cricket clouds” (*Wolken*) in Europe, South America and Africa that carpeted entire fields and blotted out the sun in broad daylight. In the incident most closely resembling the accompanying chromolithograph plate, he drew on the account of an English tobacco plantation owner in South America:

As he learned that disastrous swarms of crickets had periodically shown themselves on his plantations, he brought all his tobacco plants together by his house to better protect them. Here they grew tall and green and reached the height of almost thirty centimeters, when one afternoon the cry was heard: “The grasshoppers are coming!” The planters sped toward the house and saw them gathered there in a thick cloud. The swarm spread itself immediately over the tobacco fields, fell suddenly upon them and covered them like a brown, outspread mantel. In about twenty seconds or half a minute, the swarm lifted itself as quickly as it arrived and flew off. But of the 40,000 tobacco plants not a trace remained.²⁷²

²⁷¹ A.E. Brehm, *Brehms Thierleben: Vierte Abtheilung—Wirbellose Thiere*, Vol. 9, 552.

²⁷² Da er bei seiner Niederlassung in jener Gegend gehört hatte, daß sich dann and wann verheerende Heuschreckenschwärme in derselben gezeigt hatten, so vereinigte er alle Tabakpflanzen, vierzigtausend Stück an der

The cricket's prolific nature created a visual and economic disturbance, while also forming a compelling, sublime sight worthy of eager, extensive reportage and lavish color plates. The serene order of anthropomorphized tiger, leopard and deer families forms a stark contrast with this scene of teeming promiscuity and insectoid invasion. Depleting plant life, blanketing the ground and overshadowing the sun, the locusts represent a natural force capable of overpowering other organic life forms and even the elements themselves. In *Swarm of Migratory Crickets/Schwarm der Wanderheuschrecke*, the Biblical Egyptian plague is invoked through the reference to the migratory locust species, though the location remains otherwise indeterminate (despite the image's resemblance to the South American account, the crickets appear to consume wheat rather than tobacco plants). Their dense accumulation darkens the background of the plate, while brilliant emerald forms and outspread wings occupy the foreground, the sweep of their rapid descent implied by the rightward arc formed by their bodies. Only the smallest corner of sky in the upper left-hand corner remains unoccupied. The planters and their implements remain powerless against the crickets' numbers. Despite the chaos, the artist does not neglect to furnish the viewer with two foreground specimens posed in place for maximum bodily coherence, one with wings outspread on the right, the other poised to spring up again near the left-hand edge. The disorder paradoxically possesses an organized, regimental quality, as noted by Boers plagued by a local species of locust:

Zahl, bei seinem Hause, um sie besser schützen zu können. Hier wuchsen und grüntten sie vortrefflich und hatten etwa die Höhe von dreißig Centimeter erreicht, als eines Mittags der Ruf erscholl: "Die Heuschrecken kommen!" Der Pflanze eilte vor das Haus und sah sie in eine dichte Wolke rund um daselbe geschart. Der Schwarm verdichtete sich unmittelbar über dem Tabakfelde, fiel plötzlich in daselbe und bedeckte es so, als wenn ein brauner Mantel darüber gebreitet worden wäre. In etwa zwanzig Sekunden, also nach seiner halben Minute, erhob sich der Schwarm ebenso plötzlich wie der gekommen war und setzte seinen Flug fort. Von den vierzigtausend Tabakpflanzen sah man aber keine Spur mehr A.E. Brehm, *Brehms Thierleben: Vierte Abtheilung—Wirbellose Thiere*, Vol. 9, 550-51.

In South Africa at the end of 1863, as the rains poured with unusual strength, the locusts broke forth in innumerable masses as hardly ever before seen and the larvae covered large stretches of land. These specimens have black stripes on a brownish-red body in their youth and thereby appear colorful and are referred to by the Boers as ‘Rooi Batjes’ or ‘Red Coats’ or ‘Bötganger,’ ‘Foot Soldiers,’ given their unmistakably migratory, territorial instincts. The first nickname also makes a fine wordplay on the red uniforms of English soldiers, a species most hated by the African Boers, and the comparison becomes all the more apt, as the young locusts will even form themselves into trains and march over the area in closed ranks. In favorable years one will see entire armies of them on the march, mostly maintaining a fixed direction from which they refuse to deviate.²⁷³

The functions of reportage and anthropomorphic projection once again overlap, the informative eyewitness accounts of the Boer citizens colored by dislike of their English colonial competitors.

The natural world is represented as the “Scramble for Africa.” The locusts are forever on the prowl for new resources to pillage, new territory to render their own. Conflict and conquest remain the dominant tropes in this section, with none of the gentle endearments presented by the mammalian creatures discussed elsewhere in the text.

In another particularly dramatic example of conflict-ridden nature, in the *Flughahn* plate (fig. 4.45) a band of seagulls preys on a school of gliding fish (the titular “sea chickens”) suspended in mid-air and hurtling towards the foreground. As the text observes, the animals, not to be confused with “flying fish,” can propel themselves four to five feet above the waves with their gliding fins, a sight familiar to many seafarers. Featuring the animals by the dozen, rather than honing in on a single species representative, the artist renders its communal lifestyle

²⁷³ “in Sudafrica...brachen am Ende des Jahres 1863, als die Regen in ungewöhnlicher Stärke einsetzen, die Heuschrecken in so zahllosen Massen hervor, wie sie kaum je vorher beobachtet worden waren, und bedeckten als Larven große Länderstrecken. Diese haben im Jugendzustande schwarze Zeichnungen auf braunrothem Grunde, erscheinen daher bunt und werden vom Bör ‘Rooi Batjes,’ das heißt Rotröcke oder ‘Bötganger,’ Fußgänger, genannt, weil sich bei ihnen schon in der Jugend der Wandertrieb unverkennbar ausdrückt. Die erste Benennung enthält zugleich eine feine Anspielung auf die roth uniformirten englischen Soldaten, ein dem africanischen Bör besonders verhaßtes Geschlecht, und die Vergleichung wird um so treffender, als die jungen Heuschrecken sich ebenfalls zu Zügen ordnen und geschlossen über die Gegend marschiren. In inhnem günstigen Jahren sieht man ganze Armeen derselben auf dem Marsche, die meist eine bestimmte Richtung einhalten und dieselbe nich gern aufgeben. A.E. Brehm, *Brehms Thierleben: Vierte Abtheilung— Wirbellose Thiere*, Vol. 9, 549.

palpable. Together, the sea robins form themselves into a downward tilting arc that advances towards the viewer, bringing fully detailed, profile-view specimens to float before her gaze. The garishly chromolithographed pinks, yellows and greens of their scales set them off from the aquamarine of the sea. The print approaches the appearance of a stereoscopic photograph or modern three-dimensional film. The foreground fish are presented diagonally bursting away from the picture plane, emphasizing an illusory proximity to the observer, eyes and lips protruding outward. The insistent flatness of the profile view specimen print is completely done away with. The zoological illustration has entered the realm of popular spectacle—of stereoscopes, dioramas and panoramas.

Elsewhere, animals are picturesquely juxtaposed against backdrops reminiscent of human cultural achievements. The wall lizard, hyena, and Egyptian mongoose plates are all based in this dynamic, placing Greco-Roman, Egyptian and Moroccan ruins (respectively) on grand display alongside the wholly indifferent animals. The animal's range and habitat are visually telegraphed to the audience, while imparting elements of the adventurer's travelogue to an otherwise standard representation. In this respect, the *Thierleben* illustrators further emphasized a trope utilized with a lighter touch by de Seve and other earlier practitioners. What in earlier illustrations would have been softly adumbrated, distant backgrounds have become fully inhabited three-dimensional spaces. Animal habitats were no longer a subject of secondary interest but instead an inseparable component of understanding creaturely development, habits and reproduction. Human society appears as much a part of this "natural world," as the animals, plants and geological formations. A bird perches on what appears to be the remnants of a sphinx sculpture as though it were simply another boulder (fig. 4.46). The mongooses likewise appear unfazed by its presence. The wall lizards sun themselves alongside the Parthenon with

nonchalance, (fig. 4.47) drawn more by the warmth of the ancient walls than their appearance. Reptiles and plants alike luxuriate in the hot, still day, their live green shapes set against the yellowed decay of the buildings. The central, brightly lit ledge, diagonally juxtaposed to the view of the Acropolis, provides yet another example of the peculiar, close-up perspectives found throughout the *Thierleben*.

The ethnographic tendencies of the text become especially apparent in the description of the bobak marmot (*Bobak*), an animal used as an emergency source of meat by the inhabitants of the Central Asian steppes when more attractive game was unavailable in the early spring months. Following an account of the animals' extensive tunnel building and seasonal life-ways of summer frolicking and semi-comatose winters, Brehm pondered the various predatory perils faced by the charming creatures. In addition to wolves, bearded vultures and eagles, the latter pictured in Mützel's design (fig. 4.48) looming ominously over the marmot colony, human beings are acknowledged as a particularly grave threat to the animals' survival. The yurts and camels in the far right background insinuate this danger, which the foreground animals turn towards with worried expressions. The author anthropomorphizes the animals, expounding on their architectural construction of underground towns and the highly convivial society built around them: "During the summer in all bobak settlements (*Bobaksiedelungen*), an uncommonly lively and productive life reigns."²⁷⁴ The marmots' sociability, penchant for construction and occasional bipedal stance (taken on by most of the animals depicted in the illustration) further contribute to its sympathetic, quasi-human appearance. Their hilly colonies indeed seem to mirror in shape and distribution the group of yurts found in the background. Yet Brehm speaks with incredulity about the humanizing projections of the Tungusic and Burjaten-Mongolian

²⁷⁴ A.E. Brehm, *Brehms Thierleben: Erst Abtheilung—Säugethiere*, Vol 2.

locals onto the same species. Brehm relates folklore, via a scholar by the name of Radde, according to which marmots were the reincarnations of overzealous human hunters and, as such, had to be treated with a certain respect when hunted themselves. As Radde wrote:

Under the armpit of the marmot one finds beneath the flesh a thin, white mass, which it is forbidden to eat, as it is the remains of the man who, through the rage of an evil spirit, has been transformed into a marmot. Because you must know that all marmots were once humans who lived off the hunt and were exceptional sharpshooters. Once, however, they bragged too boldly that they could kill any animal with one shot, even a bird in flight, and thereby angered the evil spirit. To punish them, he walked among them and ordered the best hunter to shoot down a flying swallow with their first bullet. The hunter loaded and shot; the bullet ripped through only the middle of the swallow's tail. Since this time, the swallow has had a split tail; the cocky hunters, however, became marmots.²⁷⁵

The practices of the Central Asian steppe hunters are as much a subject for study as the creatures themselves. Nevertheless, one remains overcome by the vastness of the animals' domain, a green territory consuming two thirds of the picture plane. The superiority of human civilization is left in question, the perspectively shrunken yurts appearing quite paltry in comparison.

Notably, Mützel, one of the primary illustrators for the second edition of the text, was hired to illustrate both zoological and ethnographic publications throughout his lifetime, again emphasizing the perceived proximity of (or indeed, lack of distinction between) the study of natural history and ethnology/ethnography (*Völkerkunde*) at this time, particularly in the German-speaking context. He was employed by, among others, Friedrich Ratzel (German, 1844-1904), a geographer and ethnographer who pioneered the concept of an ecological and sociological *Lebensraum* later utilized in National Socialist ideology. A graduate of the Berlin

²⁷⁵ Unter der Achsel des Murmelthieres findet man zwischen dem Fleische eine dünne, weißliche Masse, deren Genuß verboten wurde, da sie der Ueberrest des Menschen ist, welcher durch den Zorn des bösen Geistes zum Bobak verdammt wurde. Denn Du muß wissen, daß alle Murmelthiere einst Menschen waren, von der Jagd lebten und ausgezeichnet schossen. Einst aber wurden sie übermüthig prahlten, jedes Thier, selbst den Vogel im Fluge, mit dem ersten Schusse zu tödten und erzürnten dadurch den bösen Geist. Um sie zu strafen, trat dieser unter sie und befahl dem besten Schützen, eine fliegende Schwalbe mit der ersten Kugel herabzuschießen. Der dreißte Jäger lud und schoß; die Kugel riß der Schwalbe jedoch nur die Mitte des Schwanzes weg. Seit jener Zeit haben die Schwalben einen Gabelschwanz; die übermüthigen Jäger aber wurden zu Murmelthieren." (translation my own) Radde, cited in A.E. Brehm, *Brehms Thierleben: Erst Abtheilung—Säugethiere*, Vol 2, 300.

Akademie der Künste and member of the German ornithological society, Mützel was evidently considered a suitable illustrator of anthropological subjects despite his primary background in animal depiction. Such an approach seems highly symptomatic of German attitudes towards colonial peoples as somehow less “human,” as their persistent inclusion in zoological displays and natural history museums further attested.²⁷⁶

Mützel’s ethnographic illustrations are almost as haphazard and crude as his images of animals, particularly birds, are painstaking and sensitive. The artist’s preparatory watercolors of a wood grouse/*Auerhahn* (fig. 4.49) and a group of crossbills/*Waldrosseln* (fig. 4.50) are richly painted. The grouse’s black feathers are tinged with iridescent purples and blues, its stance evoking a painstakingly coordinated mating ritual. The crossbills are sweetly ensconced in a picture postcard pine tree. By contrast, the ethnographic illustrations have a bare, rushed quality—which could also be attributed to the artist’s primary employment and training as an illustrator of animal subjects. In his sketches of Aboriginal individuals from Australia and New South Wales, countries with a history of violent German colonial encounters, Mützel contributes comparatively little in the way of anatomical detail or environmental context (fig. 4.51). The prints of tattooed subjects are presented in the form of disembodied torsos viewed from the front and back (fig. 4.52). The bodies become mere recto and verso surfaces for the display of a custom deemed barbaric and lurid by European audiences. The lush chromolithographs and delicate wood engravings of the *Thierleben* have here given way to monochromatic prints with minimal nuance. They are more specimen types than human portraits. Nigel Rothfels demonstrates the close connection between the study of other species and the early discipline of

²⁷⁶ For more on the history of combined zoological and ethnographic displays in nineteenth-century Germany, see in particular Nigel Rothfels, *Savages and Beasts: the Birth of the Modern Zoo* (Johns Hopkins University Press, 2002) and Eric Ames, *Carl Hagenbeck’s Empire of Entertainments* (Seattle: University of Washington Press, 2008).

anthropology, then dedicated to biological study of so-called “primitive” peoples involving the measurement of body parts and problematic attribution of correspondent mental and societal capacities based on these quantifications. In this respect, the practice resembled Brehm’s analysis of animal capabilities according to physical anatomy in the opening pages of the *Thierleben*.²⁷⁷ Though Brehm’s natural history practice was more qualitative in character, the capacities of creatures are nevertheless deterministically evaluated by the size of the ears or acuity of the eyes. However, this conflation of zoology and the social sciences was, despite the shared animal origin of all humanity articulated by Brehm, primarily practiced with regard to colonized subjects.

The combined zoological and ethnographic displays of Carl von Hagenbeck at the Hamburg Zoological gardens represent the most extreme instance of this tendency, all while inadvertently raising doubts about the humanity of the colonial project. Period commentators who actually visited the exhibitions raised doubts about the allegedly “inferior” intelligence of the displayed human beings. In response to growing fear of these sentiments, German colonial propagandists successfully lobbied for a federal ban on the display of German colonial “natives” in public for fear that the visitors might begin to sympathize with them and that they might take on “civilized airs” when returned to their native countries. Fears of miscegenation were likewise rampant, particularly following Hagenbeck’s Nubian exhibition of 1876, which was famed for its “Adonis-like” African men, who drew large numbers of young German women and were rumored to be carrying on affairs with them in parts of the display hidden from view. German colonialists were particularly anxious to prevent the emergence of a legally ambiguous “half-race” class along the lines of the “mulattoes” found in Haiti and other parts of the French West

²⁷⁷ Nigel Rothfels, *Savages and Beasts: the Birth of the Modern Zoo* (Johns Hopkins University Press, 2002).

Indies.²⁷⁸ First gawped upon, then placed out of sight and, pro-colonial factions hoped, out of mind, the visual manifestation of colonized subject was often subsumed under a natural historical discourse chiefly dedicated to the non-human. Yet, as the *Thierleben* entries on the Arabian horse and the Bobak reveal, Western natural histories relied a great deal on “native” forms of knowledge for understanding the widely dispersed species of the Earth. Even when these forms of knowledge were treated with curious condescension by Brehm, he seemed reluctant to exclude them from his accounts. These recountings subtly (though perhaps unintentionally) reveal the greater depth and longevity of knowledge possessed of horses by the Arabians or marmots by their Siberian hunters. Deprived of these histories in the illustrations, they become mute and objectified.



Despite frequent accusations of anthropomorphism and sentimentality, neither Brehm’s writing nor his images are comforting or complacent in a straightforward manner. He engages with overwhelming natural disturbances—plagues, predation, death and decay. Any fixed sense of animal “being” remains elusive when encountering species as disparate as the mosquito and the tiger. The reader of the *Thierleben* is exposed to lived experiences across species and continents, all the while tacitly reassured of her evolutionary superiority by the very act of educating herself with the sort of scientific literature that for Brehm defined the supposed European apex of humanity. The bare specimens of a Cuvier or even a Buffon, with their taxidermied models and disembodied skulls, were inadequate to the task of embedding the viewer, of taking her on an international voyage. The techniques of narrational animal tableaux, with their subjectivizing of the creaturely subject, could best achieve the purpose. Empathy for

²⁷⁸ Eric Ames, *Carl Hagenbeck’s Empire of Entertainments* (Seattle: University of Washington Press, 2008) [Page numbers unfortunately were unavailable due to Covid-19 restrictions on library access].

the creatures was strongly elicited, with exaggerated close up views, as in the frogmouth and flying hen plates, which promoted a reading of their finely drawn expressions and gleaming pupils. The human figures in Mützel's ethnographic prints, by contrast, are held at both perspectival and emotive distance. Their faces remain difficult to analyze or, in the case of the fisherman, are turned away from the viewer. Species diversity seems to have been far more readily embraced by the Brehm's illustrators than its human counterpart. While less taxonomically oriented than scientists of prior generations, Brehm could not escape a damaging attachment to arbitrary human hierarchies. As the *Jardin des Plantes* guides of Curmer and Dubouchet show, white European subjects could usually only be typologized in a parallel manner when the illustrative tone was parodic in nature. Being compared and classified lowered an individual, made them appear ridiculous, as the mad scientists of the Curmer illustration do. The incorporation of the Parisian people into a Linneasque taxonomy had to remain a kind of joke to be acceptable. The official portraits of natural historians produced for museal display or book frontispieces, worked to dignify and glorify the role of their subjects. The very portrait genre itself was implicitly set against representationally animalized forms of embodiment, which occupied their own respective rungs in the hierarchy of genres (still life and animal painting) and in the realm of illustration (natural history). The portraits are, moreover, among the few illustrations occupying zoological texts that most would hesitate to label as "scientific." The various forms of imagery adjacent to natural history thus served to uphold not only a hierarchy of nature, but of humanity.

Figures:



Figure 4.1. Georges Cuvier/Charles Léopold Laurillard, Various Mammal Illustrations, in *Le Règne Animal*, Vol. 1 (Brussels: Louis Hauman, 1836), Engraving.

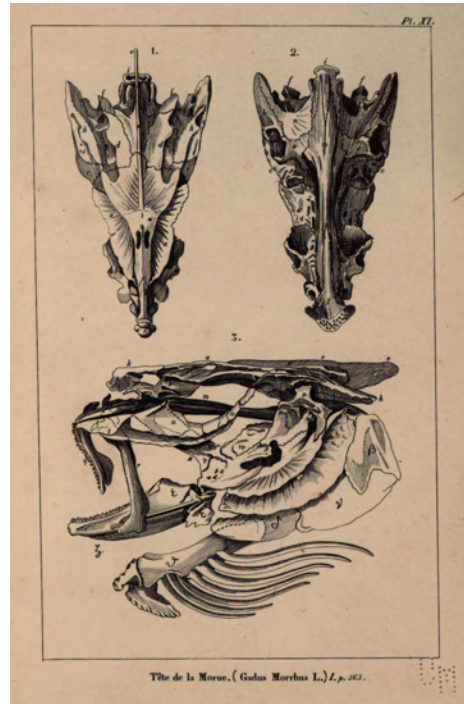


Figure 4.2. Cuvier/Laurillard, *Cod's Head/Tête de la morue*, in *Le Règne Animal*, Vol. 1 (Brussels: Louis Hauman, 1836), Engraving?

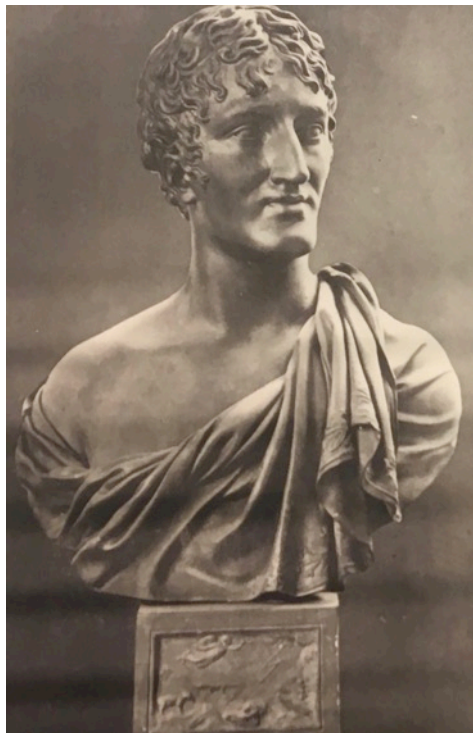


Figure 4.3. Julie Charpentier, *Bust of Georges Cuvier*, 1802, Photograph from Masson et Cie, Editeurs, Bibliothèque Nationale de France, Paris.

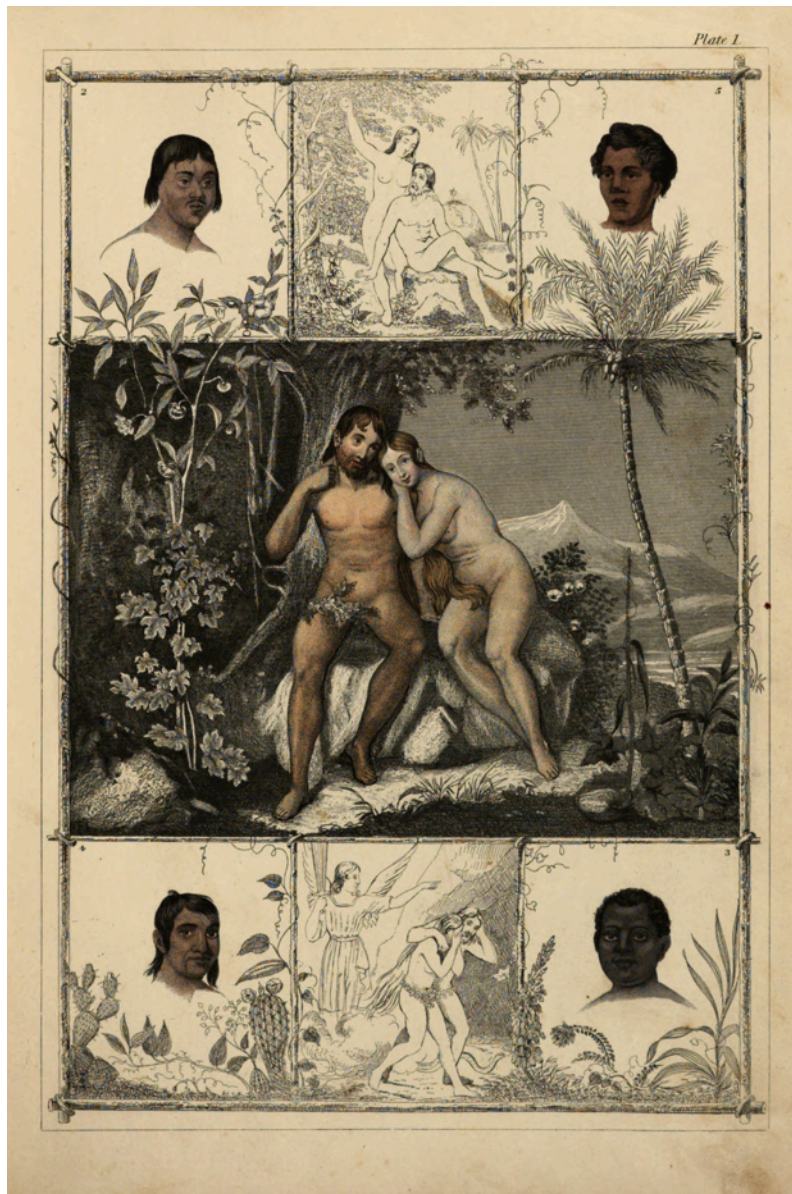


Figure 4.4. Human figures (Plate 1) in *Georges Cuvier's The Animal Kingdom* (London, 1840s).



Figure 4.5. Reptiles (Plate 16) in *Georges Cuvier's The Animal Kingdom* (London: 1840s).



Figure 4.6. Bats and Lemurs (Plate 3) in *Georges Cuvier's The Animal Kingdom* (London, 1840s).



M. BOITARD ET LE DIABLE BOITEUX SUR UN AÉROLITE.

Figure 4.7. Edw. Moreau, *M. Boitard et le diable boiteux sur un aérolite*/*The disabled devil explains the state of Paris before man to M. Boitard while seated on an asteroid*, illustration from *Paris avant les hommes*, c. 1861.

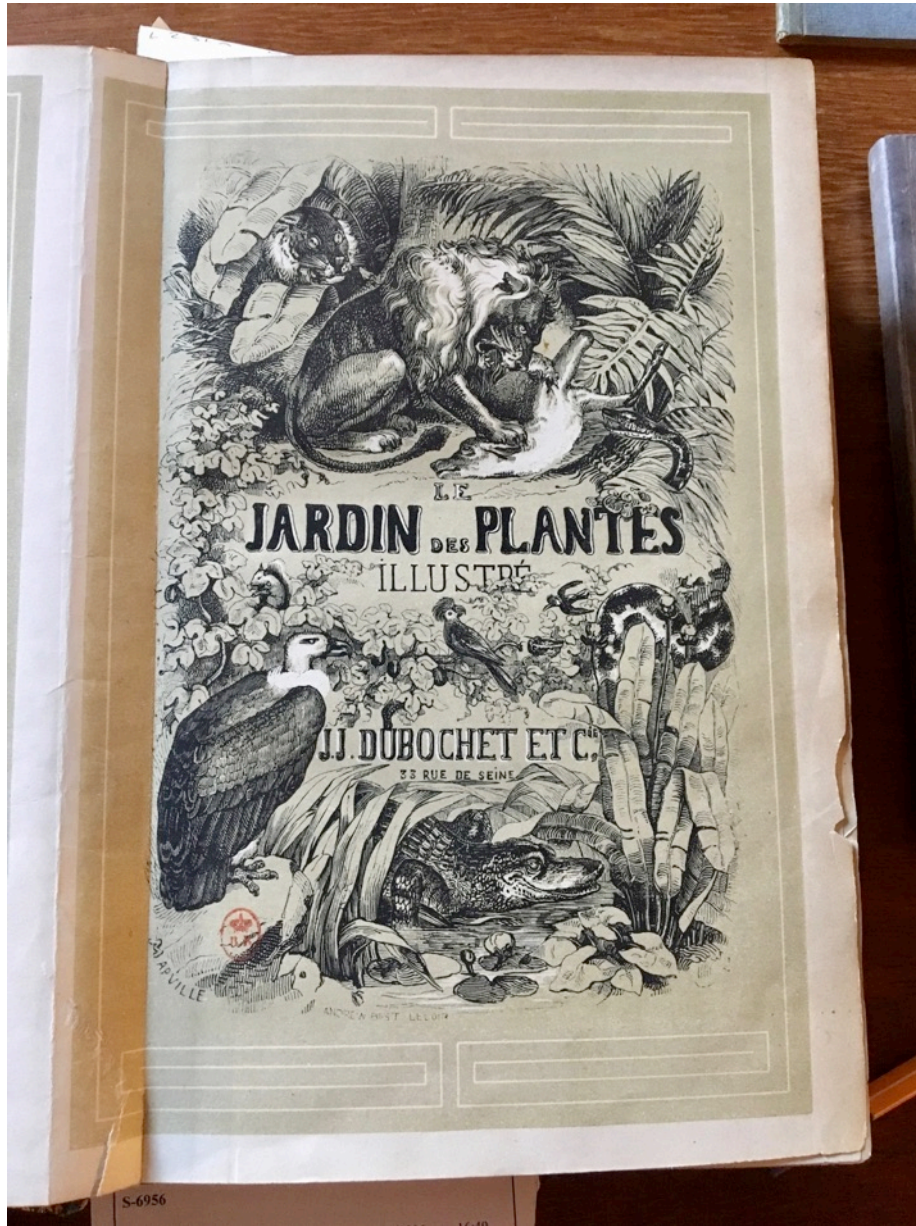


Figure 4.8. Marville (designer), Andrew, Best & Leloir (engravers) Title Page, *Le Jardin des plantes illustrés*, J.J. Dubochet et Cie, engraving, 1841.



Figure 4.9. Werner, *Le Galago*, painted steel engraving, c. 1841.

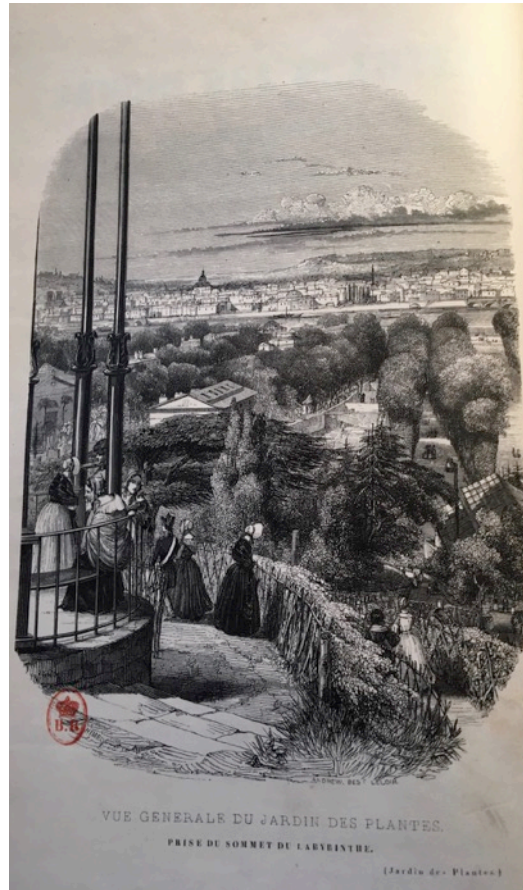


Figure 4.10. Himel/Andrew, Best & Leloire, *General View of the Jardin des Plantes/ Vue generale du Jardin des plantes*, engraving, c. 1841.



Figure 4.11. Marville (draftsman), *Monkey Cages/Galleries des singes*/Right: Karl Girardet (draftsman), engraving, c. 1841.



Figure 4.12. Karl Girardet (draftsman), Andrew, Best and Leloir (engravers), *Monkey Escaped in the Gardens/Singe échappé dans le Jardin*, Engraving, 1841.

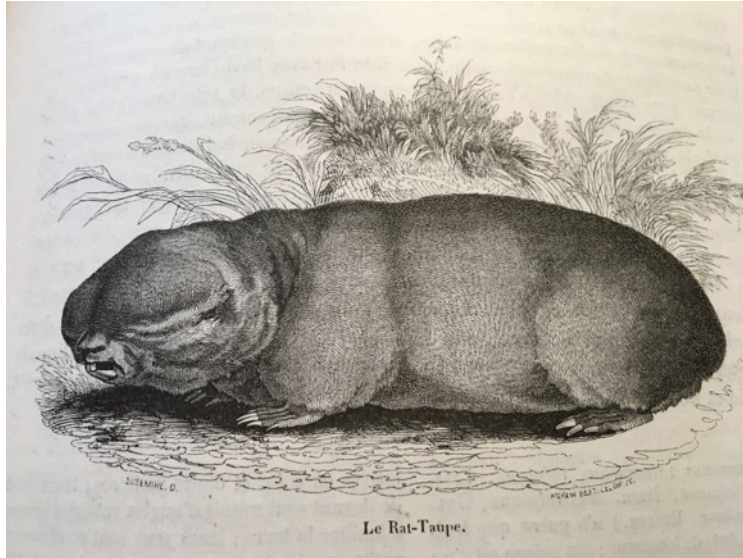


Figure 4.13. Johann Conrad Susemihl *The Mole Rat/Le Rat-Taupé*, engraving, 1841.



Figure 4.14. Johan Conrad Susemihl, *Long-tailed Quoll/Le Dasyure à longue queue*, engraving, c. 1841.

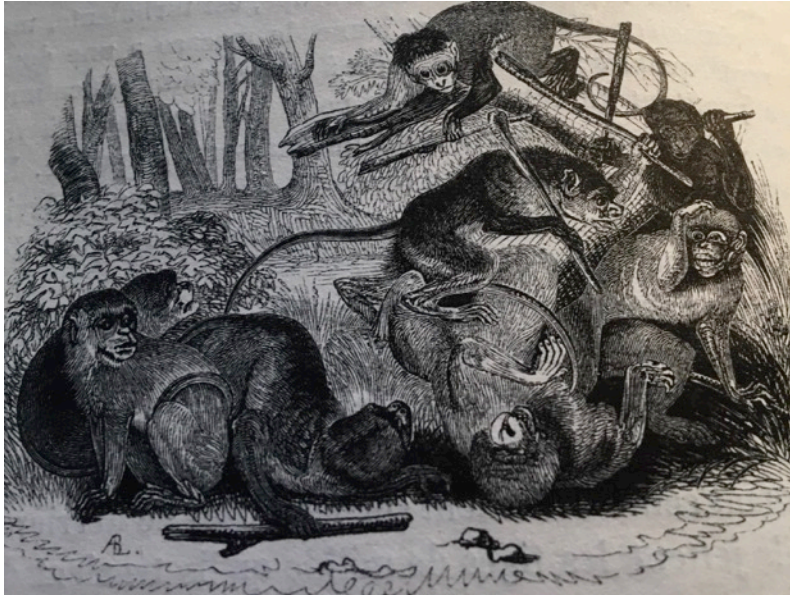


Figure 4.15. Dueling monkeys, engraving from Dubouchet's *Jardin des Plantes*, c. 1841.

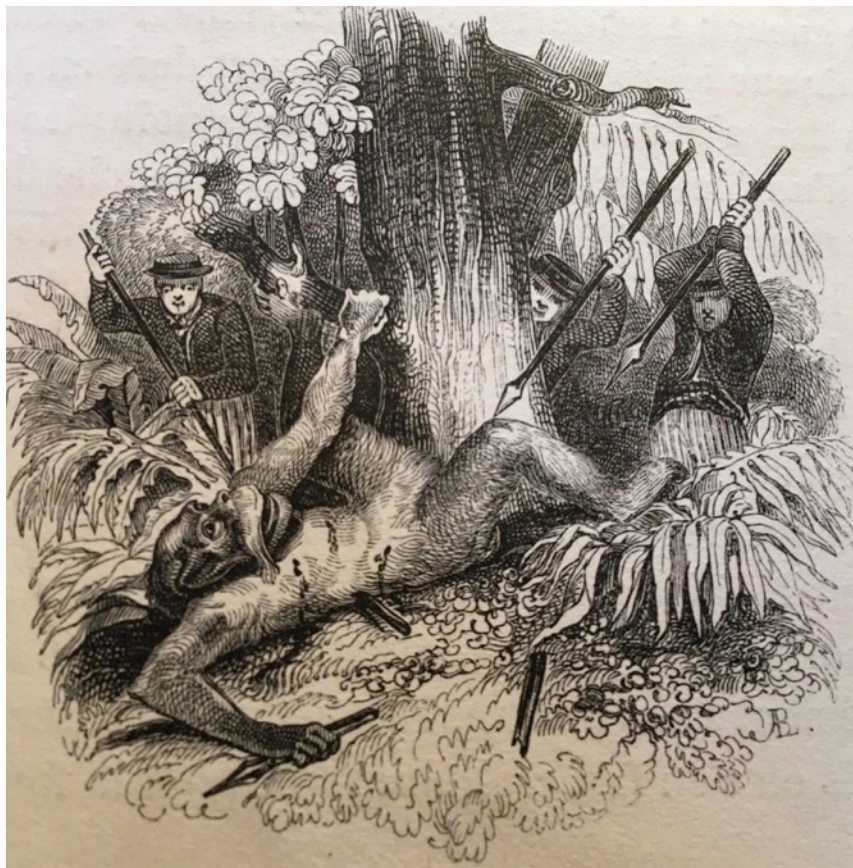


Figure 4.16. Monkey hunt, *Dubouchet's Jardin des Plantes*, engraving, c. 1841.

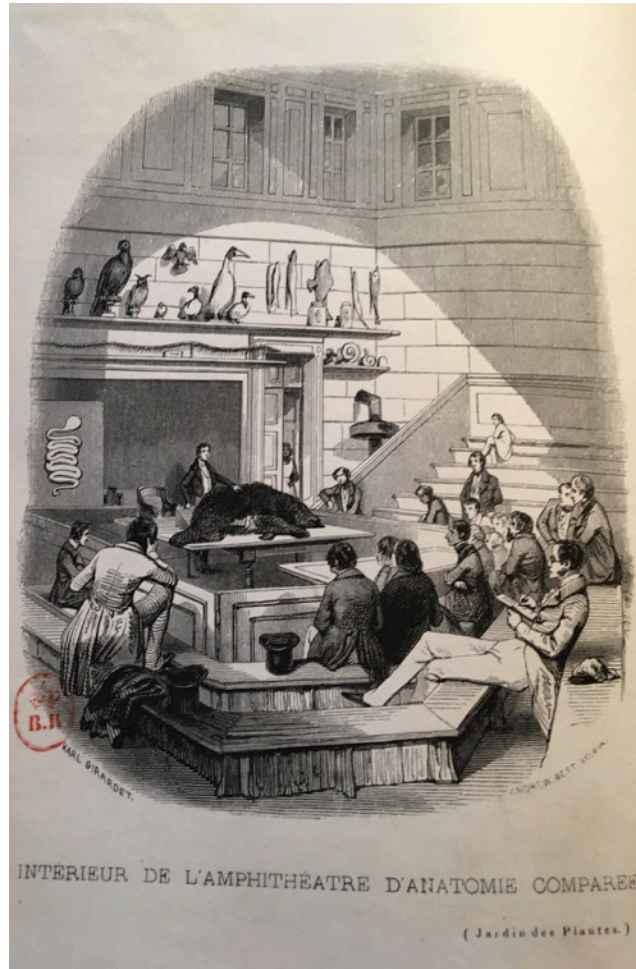


Figure 4.17. Karl Girardet (draftsman), Andrew, Best and Leloir (engravers), *Interior of the Comparative Anatomy Amphitheater/Interieur de l'Amphithéâtre d'Anatomie Comparée*, engraving, 1841.

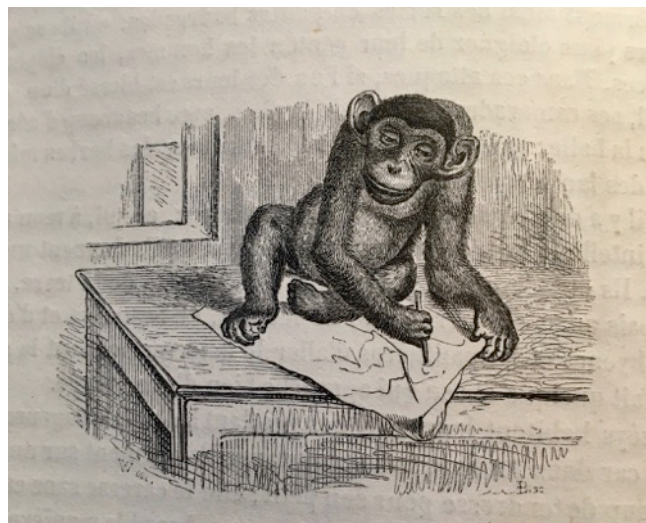
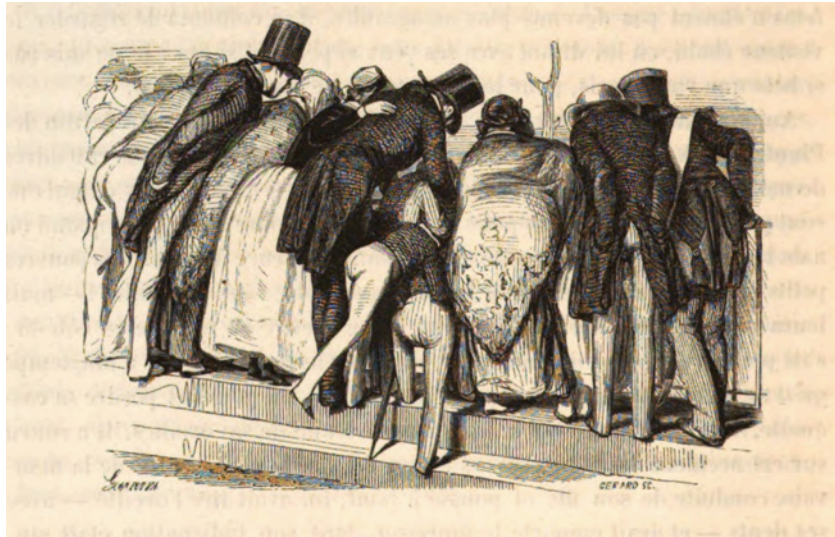


Figure 4.18. Drawing Chimp Vignette from Dubouchet's *Jardin des Plantes*, engraving, c. 1841.



Figures 4.19-20. Advertisements for L. Curmer's *Jardin des Plantes*, lithograph, 1842 Bibliothèque Nationale de France, Paris.



Figures 4.21-22. Gervais, *L. Curmer's Jardin des Plantes*, engravings, 1841.



Figure 4.23. Honoré Daumier, *Le Dimanche au Jardin des Plantes*, lithograph, ca. 1862, Photo courtesy of the Brooklyn Museum, New York.

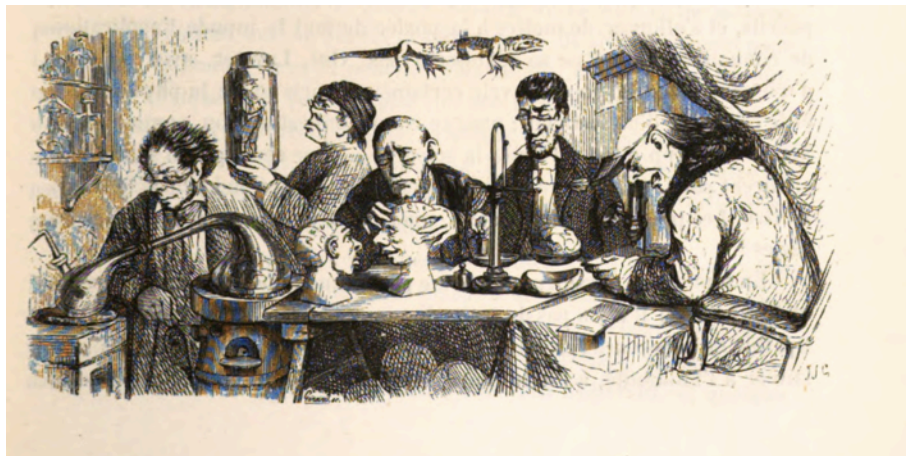


Figure 4.24. J.J.G., *Natural Historians at the Muséum nationale d'Histoire naturelle, Paris in L. Curmer's Jardin des Plantes*, engraving, c. 1841.



Figure 4.25. Curmer, *Jardin des Plantes*, *Tachyphona archevêque*, 1841.



Figure 4.26. Pierre François de Wailly, *Rollier verd*, vellum, 1811, French Royal Vellum Collection, Muséum national d'Histoire naturelle, Paris.



Figure 4.27. A.J.B. Vaillant, *Boa constrictor*, 1851, gouache on vellum, French Royal Vellum Collection, Museum national d'Histoire naturelle, Paris.

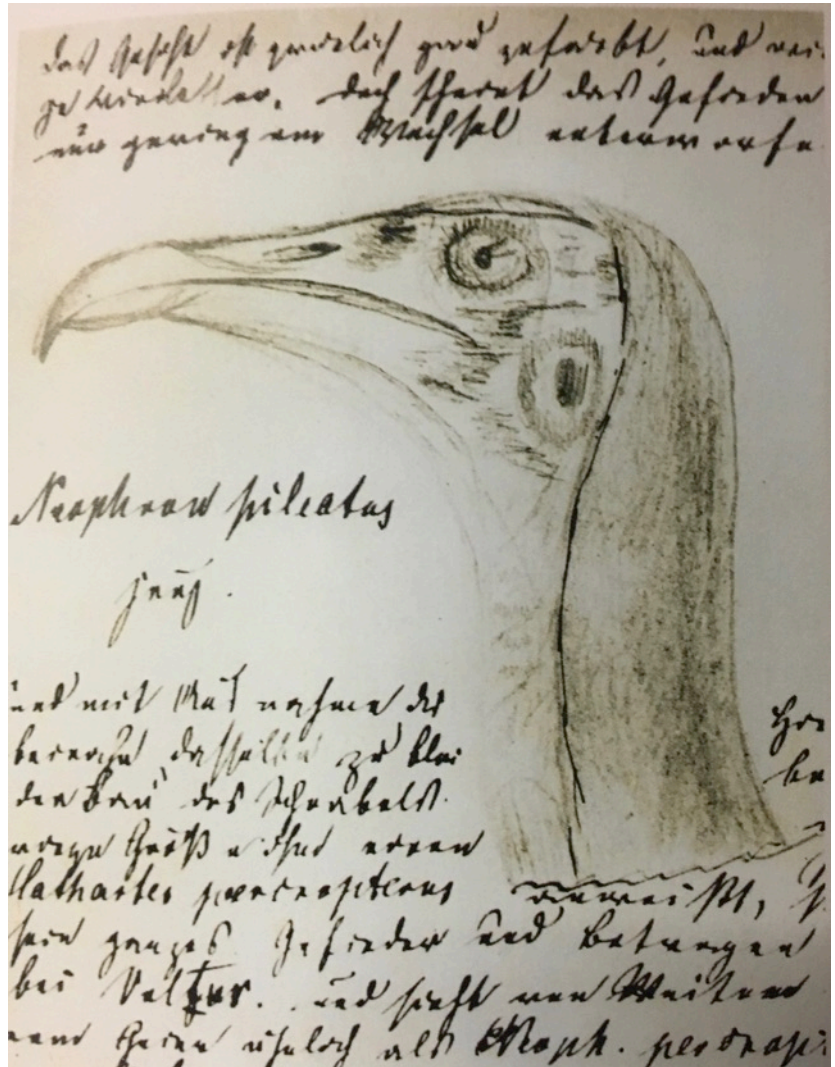


Figure 4.28. Alfred Edmund Brehm, African Diary (Afrikanische Tagebuch) Vol 2., pg. 140, Sketch of a Hooded Vulture, June 1850, Drawing, in Hans Dietrich Haemmerlin, Alfred Edmund Brehm: Biografie in Zeit- und Selbstzeugnissen.



Figure 4.29. Carl Werner, *Portrait of Christian Ludwig Brehm*, Watercolor, Photo courtesy of the Victoria and Albert Museum, London.

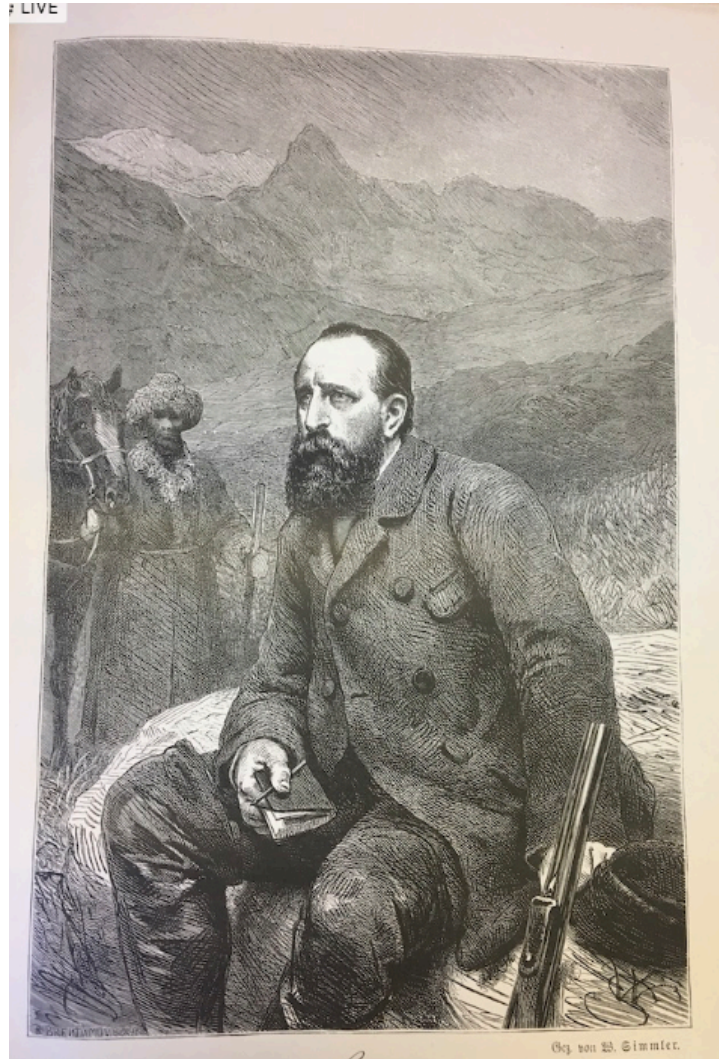


Figure 4.30. Wilhelm Simmler, *Portrait of Alfred Edmund Brehm* (frontispiece of *Brehms Thierleben*), wood engraving, c. 1876.



Figure 4.31. Carl Spitzweg, *Scholar of Natural Sciences*, Oil on paper mounted on canvas, 1875-80, Milwaukee Art Museum.



Figure 4.32. Friedrich Georg Weitsch, *Portrait of Alexander von Humboldt*, Oil on canvas, 1806, Photo courtesy of Staatliche Museen zu Berlin.



Figure 4.33. Gustav Mützel, *Sudeuropäische Geier*/Southern European Vultures, Loose Plate from *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.34. Robert Kretschmer, *Riesenschwalm/Frogmouth* (detail) from *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.

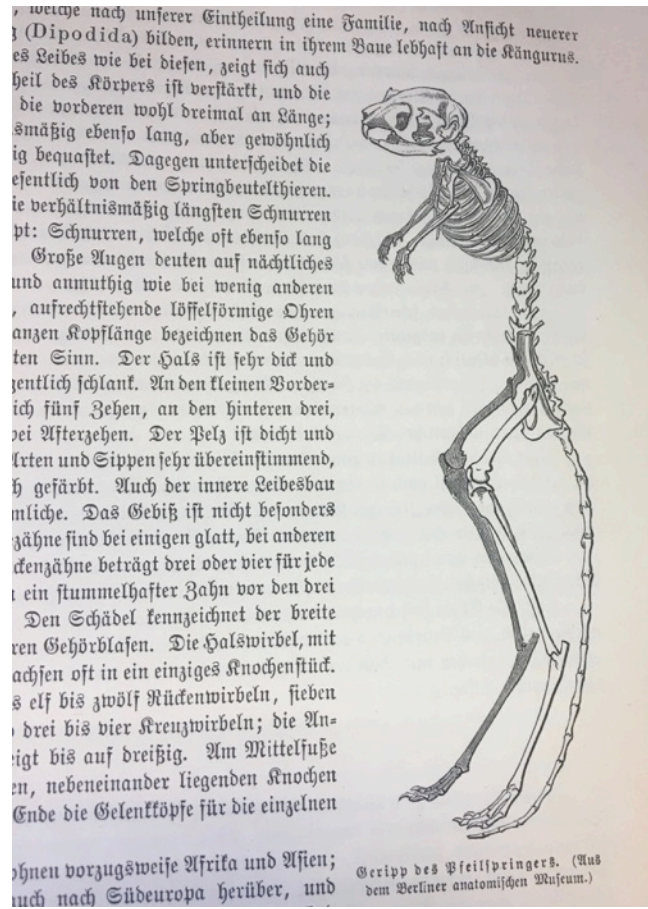


Figure 4.35. Skeleton of a *Pfeilspringer* from the Berlin anatomical museum, from *Brehms Thierleben*, Wood engraving, 1870s.



Figure 4.36. Ludwig Beckmann, *Parkrind/Chillingham Cattle* in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.37. *Heerwurm/Mosquito Larvae* (detail), from *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.38. Wilhelm Camphausen, *Arabisches Pferd/Arabian Horse*, in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.39. Théodore Géricault, *Cheval Arabe/Arabian Horse*, Lithograph, 1822, Photo courtesy of Minneapolis Institute of Art.



Figure 4.40. Gustav Mützel, *Tigers* in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.41. Gustav Mützel, *Leopards* in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.42. Gustav Mützel, *Edelhirsch/Red Deer* in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.43. Eduard Oscar Schmidt, *Schwarm der Wanderheuschrecke/Swarm of Locusts* in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.44. Eduard Oscar Schmidt, *Teamwork/Wirkungen Vereinter Kräfte*, in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.45. *Sea Robin/Flughahn* in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.46. *Mongoose/Ichneumon*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.47. *Common Wall Lizard/Mauereidechse*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.48. Gustav Mützel, *Bobak*, in *Brehms Thierleben*, Chromolithograph by Olof Winkler, 1883, Museum für Naturkunde, Berlin.



Figure 4.49. Gustav Mützel, *Auerhahn/Wood grouse*, Watercolor on paper, 1885, Kupferstichkabinett Berlin.



Figure 4.50. Gustav Mützel, *Wacholderrosseln im Kieferngehölz*, Watercolor on Paper, 1886, K \ddot{u} pferstichkabinett, Berlin.



Figure 4.51. Gustav Mützel, *Fischfang an der Seeküste, St. Kilda, Melbourne/Fishing on the Melbourne coastline, St. Kilda, 1872*, Photo courtesy of the Ethnologisches Museum, Berlin,

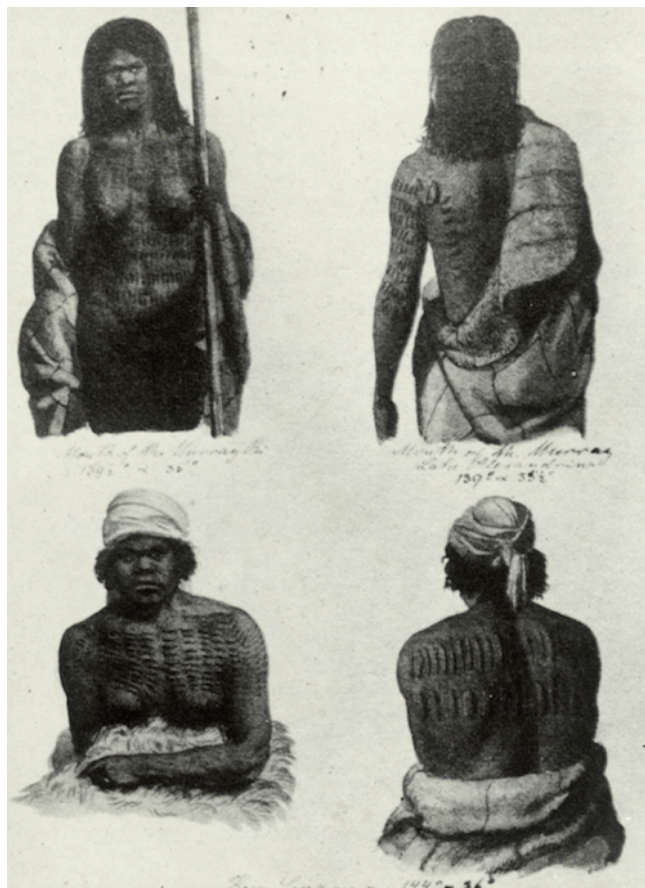


Figure 4.52. Gustav Mützel, *Vier Frauen mit Ziemarben/Four Women with Tattoos, 1888*, Photo courtesy of the Ethnologisches Museum, Berlin.

Bibliography:

- Anonymous. "Sketch of Alfred E. Brehm." *Popular Science Monthly* 27 (June 1885): 263-7.
- Alpers, Svetlana. *The Art of Describing: Dutch art in the Seventeenth Century*. Chicago: University of Chicago Press, 1983.
- Ames, Eric. *Carl Hagenbeck's Empire of Entertainments*. Seattle: University of Washington Press, 2008.
- Appel, Toby. *The Cuvier-Geoffroy Debate*. Oxford: Oxford University Press, 1987.
- Bainbridge, David. *Stripped Bare: The Art of Animal Anatomy*. Princeton: Princeton University Press, 2018.
- Bernard, Pierre and Louis Couailliac. *L. Curmer: Le Jardin des plantes*. Paris: Thierry frères, 1842.
- Bleichmar, Daniela. *Visible Empire: Botanical Expeditions and Visual culture in the Hispanic Enlightenment*. Chicago: University of Chicago Press, 2012.
- Boitard, Pierre. *Le Jardin des plantes: description et moeurs des mammifères de la ménagerie et du Muséum national d'Histoire naturelle*. Paris: Dubouchet, 1842.
- Brauer, Fae and Barbara Larson, eds. *The Art of Evolution: Darwin, Darwinisms, and Visual Culture*. Hanover, NH: Dartmouth College Press, 2009.
- Brehm, Alfred. *Brehms Thierleben Allgemeine Kunde des Tierreichs, Zweite umgearbeitete und vermehrte Auflage: Erste Abtheilung---Säugetiere, Vol. 2*. Leipzig: Verlag des Bibliographischen Instituts, 1884.
- Brehm, Alfred. *Brehms Thierleben Allgemeine Kunde des Tierreichs, Zweite umgearbeitete und vermehrte Auflage: Erste Abtheilung---Säugetiere, Vol. 7*. Leipzig: Verlag des Bibliographischen Instituts, 1884.
- Brehm, Alfred. *Brehms Thierleben: Vierte Abtheilung—Wirbellose Thiere, Vol. 9*. Leipzig: Verlag des Bibliographischen Instituts, 1884.
- Bultingaire, Léon. *Iconographie de Georges Cuvier, extrait des archives du Muséum d'Histoire naturelle, 6e série, tome IX*. Paris: Masson, 1932.
- Cuvier, Georges. *Le Règne animal*. Brussels: Louis Hauman et Comp, 1836.
- Darwin, Charles. Letters to John Murray, 4 August, 1867 and 9 January, 1868. Darwin Correspondence Project. Accessed September 4, 2019.

<http://darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-5781.xml;query=brehm;brand=default>,

Darwin, Charles, letter to V.O. Kovalevsky, June 24, 1867. Darwin Correspondence Project. Accessed September 4, 2019. <http://darwinproject.ac.uk/letter/?docId=letters/DCP-LETT-5575.xml;query=brehm;brand=default>.

Dawson, Gowan. *Show Me the Bone: Reconstructing Prehistoric Monsters in Nineteenth Century Britain and America*. Chicago: University of Chicago Press, 2016.

Donald, Diana and Jane Munro, eds., *Endless Forms: Charles Darwin, Natural Science and the Visual Arts* (New Haven and London: Yale University Press, 2009).

Green, Nicholas. *The Spectacle of Nature: Landscape and Bourgeois Culture in Nineteenth Century France*. Manchester: Manchester University Press, 1990.

Haemmerlin, Hans Dietrich. *Alfred Edmund Brehm: Biografie in Zeit- und Selbstzeugnissen*. Markkleeberg: Sax Verlag, 2015.

Heringman, Noah. *Sciences of Antiquity: Romantic Antiquarianism, Natural History and Knowledge Work*. Oxford: Oxford University Press, 2013.

Heurtel, Pascale and Michelle Lenoir. *Les vélins du Muséum National d'Histoire naturelle*. Paris: Coedition Museum-Citadelles & Mazonod, 2016.

Kelly, Alfred. *The Descent of Darwin: The Popularization of Darwin in Germany, 1860-1914*. Chapel Hill: University of North Carolina Press, 1981.

Kort, Pamela and Max Hollein, eds. *Darwin: Art and the Search for Origins*. Frankfurt: Schirn Kunsthalle, 2009.

Lacépède, Bernard Germain et al. *La Ménagerie du Muséum national d'Histoire naturelle, ou Description et histoire des animaux qui y vivent et qui y ont vécu*. Paris: Chez Miger, 1804.

Laugée, Thierry. "La ménagerie d'Éugène Delacroix. Études d'un jeune peintre rugissant." *Bulletin de la Société des amis du musée Eugène Delacroix*, no. 11 (2013-2014): 28-51.

Liebman, Elizabeth. "Painting Natures: Buffon and the Art of the Histoire naturelle." PhD. Diss., University of Chicago, 2003.

Lightman, Bernard. *Victorian Popularizers of Science: Designing Nature for New Audiences*. Chicago: University of Chicago Press, 2007.

Neri, Janice. *The Insect and the Image: Visualizing Nature in Early Modern Europe, 1500-1700*. Minneapolis: University of Minnesota Press, 2011.

Ogilvie, Brian W. *The Science of Describing: Natural History in Renaissance Europe*. Chicago: University of Chicago Press, 2006.

Pinault, Madeleine. *The Painter as Naturalist*. Paris: Flammarion, 1991.

Rancière, Jacques. "Thinking Between Disciplines: an Aesthetics of Knowledge." Translated by Jon Roffe. *Parrhesia 1* (2006): 1-12.

Rothfels, Nigel. *Savages and Beasts: The Birth of the Modern Zoo*. Baltimore: Johns Hopkins University Press, 2002.

Schlegel, Hermann. "Zweck und Eigenschaften Naturkundlichen Abbildungen." In *Die zoologische Buchillustration: ihre Bibliographie und Geschichte*, Bd. 2, edited by Claus Nissen, 231-239. Stuttgart: Anton Hiersemann, 1978.

Short, John Philip. *Magic Lantern Empire: Colonialism and Society in Germany*. Ithaca: Cornell University Press, 2012.

Smith, Jonathan. *Charles Darwin and Victorian Visual Culture*. Cambridge: Cambridge University Press, 2009.

Spary, E.C. *Utopia's Garden: French Natural History from Old Regime to Revolution*. Chicago: University of Chicago Press, 2000.

Stafford, Barbara M. *Artful Science: Enlightenment, Entertainment, and the Eclipse of Visual Education*. Cambridge: MIT Press, 1994.

Stafford, Barbara M. *Body Criticism: Imaging the Unseen in Enlightenment Art and Medicine*. Cambridge, MA: MIT Press, 1991.

Sterckx, Marjan. "The Invisible 'Sculpteuse': Sculptures by Women in the Nineteenth-century Urban Public Space—London, Paris, Brussels." *Nineteenth Century Art Worldwide* 7, no. 2 (Autumn 2008): 98-138.

Winkler, Olof. *Brehms Thierleben Chromotafeln*. Leipzig: Verlag des Bibliographischen Instituts, 1883. Archival materials accessed at the Museum für Naturkunde, Berlin.

Wulf, Andrea. *Alexander von Humboldt: The Invention of Nature*. New York: Alfred A. Knopf, 2015.

Zantop, Susanne. *Colonial Fantasies: Conquest, Family and Nation in Precolonial Germany, 1770-1870*. Durham, N.C.: Duke University Press, 1997.

Zhang, Chunjie. *Transculturality and German Discourse in the Age of European Colonialism*. Evanston: Northwestern University Press, 2017.

Chapter 5: From Taxonomy to Ecology in Gustave Courbet's Deer Paintings and Adolph von Menzel's *Kinderalbum*

In the best-selling *Kosmos* (1845-1862), Alexander von Humboldt (German, 1769-1859) imparted both an expansive vision of the universe and an epoch-spanning history of its recorded human perception.²⁷⁹ Coupled with a consideration of literature and scientific discourses, the author included a lineage of painted landscapes from ancient Greece, Rome and India through their contemporary manifestations in Western Europe. He found the contemporaneous panorama format to be a particularly promising method for visualizing the earth's complex topography. After bemoaning the quality of many printed natural history illustrations, "the engravings which accompany, and too often only disfigure, our books of travels," he wrote:

The class of representations which Vitruvius and the Egyptian Julius Pollux satirically described as 'rural satiric decorations,' which, in the middle of the sixteenth century, were, by Serlio's plan of sliding scenes, made to increase theatrical illusion, may now, in Barker's panoramas, by the aid of Prevost and Daguerre, be converted into a kind of substitute for wanderings in various climates. More may be effected in this way than by any kind of scene painting; and this partly because in a panorama, the spectator, enclosed as in a magic circle and withdrawn from all disturbing realities, may the more readily imagine himself surrounded on all sides by nature in another clime...it appears, indeed, to me, that if large panoramic buildings containing a succession of such landscapes, belonging to different geographical latitudes and different zones of elevation, were erected in our cities, and like our museums and galleries of paintings, thrown freely open to the people, it would be a powerful means of rendering the sublime grandeur of the creation more widely known and felt.²⁸⁰

²⁷⁹The five volume *Kosmos*, though never completed in the author's lifetime, was very widely read in nineteenth century Europe, particularly in the author's native Germany. Nearly rivaling the Bible, the text numbered among the most widely read works of the century. Hanno Beck, in Alexander von Humboldt, *Kosmos, für die Gegenwart bearbeitet* (Stuttgart: Brockhaus, 1978), v.

²⁸⁰ Alexander von Humboldt, *Cosmos. Translated with the author's sanction and cooperation under the superintendence of Lieut. Col. E. Sabine* (London: Longman, Brown, Green and Longmans, 1849), 90-91.

The 360-degree painted views offered in an enclosed venue could evoke the varied topographies and climates of the globe as a whole. A few nineteenth-century entrepreneurs, most notably geographer James Wyld (English, 1812-1887), did construct panoramic structures of the earth analogous to Humboldt's vision, though none were equal to its outsized scientific ambitions or museum-wide scale (fig. 5.1).²⁸¹ The overall character of a regional climate, Humboldt insinuated, could only be partially and inadequately captured by a two-dimensional book illustration. The appearance of a landscape, as an irreducible conglomerate of animal, vegetal and mineral life, was best perceived through a physically enlarged and all-encompassing form of mediation, a visual format that could incorporate as many elements of a "natural whole" as possible. Moreover, one such representation on its own was insufficient to cultivating this understanding on the part of the public. An individual landscape was best viewed as part of a "succession" of pictorialized geographic realms, interlinked by climatic patterns that Humboldt was among the first to theorize. The world's combined natural complexity required the seriality and enormity of a panoramic museum.

The passage from *Kosmos* pointed to a perceived inadequacy on the part of traditional, paper and canvas media for depicting animals and plants that were, in the closing decades of the nineteenth century, increasingly figured by the author's scientific successors as inextricably bound to their natural milieus, their lives conditioned by surrounding species of flora and fauna, by the quality of water and air, by the elevation of the land. The envisioning of nature as a series of what would today be termed "ecosystems" posited a representational problem for the arts: how to depict the *interrelationships* between natural forms rather than separate instances of

²⁸¹ James Wyld oversaw the construction of a circular, hollow panorama of the earth, allowing viewers to explore all the "continents" and "oceans" of the globe. The structure was based at Leicester Square in London from 1851-1862. Stephen Oettermann, *The Panorama, History of a Mass Medium*, trans. Deborah Lucas Schneider (New York: Zone Books, 1997), 90.

species life. As Humboldt himself proclaimed, he was less interested in the discovery of new species than in the mapping of their distributed populations, their “biogeography.”²⁸² As such, he wanted to move beyond the Linnean segmenting and parceling of natural forms into a taxonomic grid. This systematic approach towards the ordering of nature was primarily concerned with the grouping of organisms into species, genera, families and ever more expansive super-categories of life as based on the comparative classification of individual physical conformations. Conversely, Humboldt deployed painterly metaphors to express what he felt was a more holistic approach to nature. He referred to his own drawings, as well as lectures and literary texts, as *Naturgemälde* (nature paintings), which depicted landscapes and climatic regions as unified wholes:

A descriptive nature painting, as we in this prolegomenon put forward, must however not simply investigate details; it does not require for its completion the enumeration of all life forms, all natural things and natural processes. Avoiding the tendency towards an endless fragmentation of the known and the collected, the tabulating thinker must strive to escape the danger of empirical overabundance.²⁸³

Comprehending the overall relationship between the elements of nature, envisioned on a cosmic scale that included the outer universe as well as planet Earth, was the crux of the *Kosmos* project. The infinitude of life contained within these successive spheres could not be studied in isolation. To this end, the transnational spread of scientific discourse, facilitated by the nationalist movements in the Americas, could all the better contribute to a project so far-reaching in its scope. Intellectual democratization would bring about greater knowledge in both science and painting, a knowledge only obtained on site, rather than through hothouse studies and “so-called botanical drawings:”

²⁸² Hanno Beck, in Alexander von Humboldt, *Kosmos, für die Gegenwart bearbeitet*, XIII.

²⁸³ Humboldt, *Kosmos*, 48. “Ein beschreibendes Naturgemälde, wie wir es in diesem Prolegomenon aufstellen, soll aber nicht bloß dem Einzelnen nachspüren; es bedarf nicht zu seiner Vollständigkeit der Aufzählung aller Lebensgestalten, aller Naturdinge und Naturprozesse. Der Tendenz, endloses Zersplitterung des Erkannten und Gesammelten widerstrebend, soll der ordnende Denker trachten, der Gefahr der empirischen Fülle zu entgehen.” (All translations from the German and French are my own, unless otherwise noted).

Great events in the world's history, the independence of the Spanish and the Portuguese Americas, and the spread and increase of intellectual cultivation in India, New Holland, the Sandwich Islands, and the southern colonies of Africa, cannot fail to procure, not only for meteorology and other branches of natural knowledge, but also for landscape painting, a new and grander development which might not have been attainable without these local circumstances. In South America, populous cities are situated 13,000 feet above the level of the sea. In descending from them to the plains, all climatic gradations of the forms of plants are offered to the eye. What may we not expect from the picturesque study of nature in such scenes, if after the termination of civil discord and the establishment of free institutions, artistic feeling shall at length awaken in these highlands!²⁸⁴

The project of nature's artistic and scientific rendering became an incitement to republican feeling and international exchange. Despite the peaceful connotations of Humboldt's vision, the specter of colonialism loomed throughout, as the reference to "India, New Holland (Australia), the Sandwich Islands and the south of Africa" and their presumed lack of "artistic feeling" makes apparent. He justified the European occupation of those regions in the language of improvement and intellectual benefit, even while lauding decolonizing political movements, particularly in his beloved South America.

The biogeographic mapping that preoccupied Humboldt presented globalized relations--human, animal and botanical--that could not be directly mapped onto the often violently drawn boundaries of state and empire. His project thereby embodied a form of ecological cosmopolitanism. Yet the scientist's fame, anecdotally rumored to be second only to that of Napoleon Bonaparte in earlier decades of the nineteenth century, belonged to a parallel project of scientific empire.²⁸⁵ The impulse to map and document all regions of the world, which often coincided with political and military attempts at dominion (perhaps most memorably in the Napoleon-helmed *Description de l'Égypte*), were, however, put forward by Humboldt with

²⁸⁴ Humboldt, *Cosmos*, 85.

²⁸⁵ Andrea Wulf, *The Invention of Nature: Alexander von Humboldt's New World* (New York: Alfred A. Knopf, 2015).

seemingly more benign connotations that belied the proprietary character of knowledge accumulation.

While Humboldt focused largely on the botanical and geological features of the landscape, only at times mentioning fauna, the species interconnectivity that formed the focal point of his vision became central to the natural history writing of Charles Darwin (English, 1809-1882), Karl Möbius (German, 1825-1908) and other late nineteenth century figures. These authors conceived of species life as the byproduct of complex interactions between all biological strata of organisms. Within this schema of natural science, the “botanical drawing,” and travel engraving, with their typically isolated depictions of individual specimens on blank backgrounds, could indeed appear paltry and unequal to the rendering of environmental plenitude.

At the same time, French and German artists working in more traditional painterly media, as opposed to large-scale spectacles like the panorama, rendered the interactions of animal species amongst surrounding flora, fauna and geological formations with a complexity not attempted by prior generations of animal painters. Notably, the social and economic priority afforded the natural sciences through the spread of zoological gardens, natural history museums and the popularization of field studies of wild nature in the latter half of the century prompted interest in those subjects among prominent artists *not* classified as *animaliers*. Realist painters Gustave Courbet (French, 1819-1877) and Adolph von Menzel (German, 1815-1905) were, over multiple decades, consistently preoccupied by narrative animal subjects. They produced extensive series of creaturely dramas of a kind then primarily associated with the likes of Rosa Bonheur and Edwin Landseer, all while leading artistic careers defined by their renderings of human subjects. Menzel in particular was lauded for the most normative of history painting subjects: his numerous tableaux from the life of Friedrich the Great. Operating within the limits

of oil on canvas and gouache on paper, these artists managed to imply the presence of a greater ecological whole through the organismal forms depicted in their paintings.

The deer paintings of Courbet and the animal-themed gouaches of Menzel's *Kinderalbum* (1863-1883) engaged in a scientifically objective form of animal picturing. The creatures appear not simply as objects of observation but participants in a network of biological life processes. In this respect, the artists broke with earlier traditions of Western European animal picturing exemplified by the likes of George Stubbs (British, 1724-1806) and Jean-Baptiste Oudry (French, 1686-1755) that focused on posing individual species representatives for maximal visual clarity to human eyes, without particular regard to the creatures' biogeography. Menzel and Courbet also distinguished themselves from their *animalier* contemporaries, the aforementioned Bonheur and Landseer, in their unwavering attention to the botanical and geological details of landscape and, in Menzel's case, to the other species surrounding their creaturely protagonists. In his deer paintings, Courbet utilized the monumental format characteristic of history painting to lend a psychologically charged dramatic significance to the infighting and rutting of the central figures. The life-size scale of the animals confronting the viewer in these works effectively implicates her in the actions taking place. By contrast, the Menzel series consists of intimately sized gouache paintings on paper. These images engage in a reversal of the typical human-animal viewing relationship, positioning the observer inside birdcages, chicken coops and zoological displays and placing her under the scrutiny of other human spectators. While Courbet's paintings often eliminate any sense of human intervention, Menzel's works show us hybridized forms of animal and human "habitats." Yet both projects involved manipulations of scale and perspectival space intended to enmesh the viewer in the animal's represented life sphere. I thus argue in this chapter that the animals in Menzel and

Courbet's paintings exist as component parts of ecosystems, of national landscapes. They emerge from the ecological entanglements of the French and Germanic forests, as well as the mixed manmade and "natural" ecologies of the modern-day European cityscape.²⁸⁶

The animal paintings of Courbet and Menzel contended with a perception of nature based less in individuated typologies and species hierarchies than in concentric, lateral relations of symbiosis, cohabitation and predation. These were not matters of detached scientific interest: The economic circumstances of the colonial exotic animal trade, oceanic fishing and scientific forestry, among countless other industries, created a need for the continued transnational maintenance of resources for capitalist exploitation. Regrowth of a landscape and renewal of valuable raw materials were seen to go hand in hand. The nuanced understanding of soil quality, of water salinity, of the distribution of animal populations, gradually moved education in the natural sciences beyond the rote recitations of species, genus and family that had preoccupied European school pupils for so many years, though these pedagogical methods remained firmly in place throughout the close of the century.²⁸⁷ However, I do not wish to posit these scientific and artistic shifts as straightforward advances towards a heightened visual truth, but rather as differing paradigms of constructing the natural world for human consumption.

²⁸⁶ The role of animals in modern, Western urban life is an emergent field of enquiry, as evidenced by recent publications such as *Animal History in the Modern City: Exploring Liminality*, ed. Clement Wischermann et al. (London: Bloomsbury Academic, 2019).

²⁸⁷ Annelore Rieke-Müller and Lothar Dittrich, *Der Löwe brüllt nebenan: Die Gründung zoologischer Gärten im deutschsprachigem Raum 1833-1869* (Cologne: Böhlau, 1998). David Blackbourn, *The Conquest of Nature: Water, Landscape and the Making of Modern Germany* (New York: Norton, 2006). Blackbourn in particular addresses nineteenth century infrastructural projects related to swamps, rivers, canals and other bodies of water and the ways in which these alterations of the landscape reorganized German society. He also remarks upon the possible influence this movement had on the rise of ecology, which in its early development was largely concerned with aquatic ecosystems. The nascent conservationist concerns of ecology thus ran both parallel and counter to those of the human domination of nature.



Sylvan Symbiosis in Courbet's Deer Paintings

Camille Lemonnier, the Belgian painter and critic who unreservedly proclaimed Courbet to be the “most powerful animal painter of this era,” was especially struck by the combination of landscape and animals in his oeuvre: “The harmony of the animal and the landscape is yet more proof of the good sense of Courbet which one speaks of. He rarely produces one without the other, imbuing them accordingly with the same life, and in effect the animal is nothing other than the incarnation of the energies of the earth.”²⁸⁸ The integral placement of wildlife within the landscape, particularly in the artist's numerous deer paintings, possessed an environmentally embedded quality that set his works apart, in Lemonnier's eyes, from other contemporaneous depictions of animals. Any realm outside the forest, any picturesquely framed recessional distance, remains entirely out of the pictorial frame. Deer, brush, trees, and snow fill nearly every inch of canvas, the artist's characteristic heavy facture accentuating their obstinate materiality (figs 5.2-5). The viewer seems to spontaneously encounter the creatures and spy on their everyday activities of breeding, feeding and watering at the stream, placing her *inside* their habitat. She enters a world untrammelled by paths, hunters, or hounds, though these elements do appear in other canvases by the artist, most famously in *The Death of the Stag (L'Hallali du cerf)* (1867) (fig. 5.6). While the deer paintings have been previously addressed by art historical scholarship in terms of their relationship to the hunt scene genre²⁸⁹ and the empathic,

²⁸⁸ Camille Lemonnier, *G. Courbet et son oeuvre, Gustave Courbet à la Tour de Peliz* (Paris: A. Lemerre, 1868), 55-56.

²⁸⁹ Gilbert Titeux, *Au temps du brame...Les représentations de la chasse dans l'oeuvre de Gustave Courbet et dans la peinture allemande du XIX siècle (1800-1900)* (Dijon: Les Presses du Réel, 2014), 132-134. See also Shao-Chien Tseng, “Contested Terrain: Gustave Courbet's Hunting Scenes,” *The Art Bulletin* 90, no. 2 (2008): 218-234.

psychoanalytic projection of Courbet's psyche onto an animal other,²⁹⁰ they have yet to be fully placed in the context of period natural historical discourses.²⁹¹ Many of the works, I argue, hardly qualify as hunt paintings at all.

While other commentators have observed the harmonious relationship between deer and landscape and the correspondent lack of human intervention in many of the paintings, these characteristics have not been fully related to scientific imagery and textual sources.²⁹² At the same time, Courbet's paintings are often noted by scholars for their strange inaccuracies regarding cervid behavior and habitat as well as their purported naturalism. The scientific verism frequently assumed to inhere in "life-sized" depictions of animals is often brought into question in the deer paintings.²⁹³ The animals breed at the wrong time of year and present awkward, contorted poses. They appear in no way disturbed by human society, despite the fact that deer populations and the French forests they inhabited were often carefully maintained for aristocratic and post-Revolutionary bourgeois hunting, as well as timber harvesting.²⁹⁴

In *Spring Rut (Le rut du printemps/ Combat de cerfs)* (fig. 5.2), *Deer in the Forest* (fig. 5.3) and *Roe Deer in a Covert* (fig. 5.7), Courbet presented a nature existing apart from

²⁹⁰ Michael Fried, *Courbet's Realism* (Chicago: University of Chicago Press, 1990), 184-188.

²⁹¹ Gilbert Titeux briefly discusses the separate animal sphere that Courbet constructs in works like *Spring Rut*, without further considering period scientific discourses concerning animal life. Titeux, *Au temps du brame* 132-134.

²⁹² Greg M. Thomas briefly mentions Courbet's affinity with Théodore Rousseau's "ecological" approach to landscape painting, noting his abandonment of human narratives and fixation on environmental materiality. Building on Thomas' reading, I would like to focus more on the significance of the animal figure in these landscapes, with particular reference to the scientific discourses that constructed the perception of "bare materiality" that Thomas attributes to the paintings. Greg M. Thomas, *Art and Ecology in Nineteenth Century France: The Landscapes of Théodore Rousseau* (Princeton: Princeton University Press, 2000), 74-75. Titeux and Michèle Haddad have likewise noted the seeming absence of the human observer from these compositions and their apparent insider view of the animals' lives. Titeux, 2014 and Michèle Haddad, *À la chasse avec Gustave Courbet* (Ornans: Les Éditions du Sekoya, 2012),

²⁹³ For further discussion of "life-size" scale in natural history illustrations, particularly with reference to the practice of John James Audubon, see Jennifer Roberts, *Transporting Visions: The Movement of Images in Early America* (Berkeley: University of California Press, 2014).

²⁹⁴ As observed in the artist's letters and Titeux's monograph, many of these hunt scenes, even those supposedly located in France, were based in large part on the artist's hunting experiences in Germany, where forests often contained larger deer populations than those found in Courbet's homeland.

urbanization, industrialization, deforestation and other civilized depredations, an ecosystem in which deer and plant life converge. In their seeming evacuation of human life, the tableaux conform with the notion of mechanical objectivity that historians of science Lorraine Daston and Peter Galison attribute to much mid-to-late nineteenth century scientific imagery. To recall Daston and Galison: “By *mechanical objectivity* we mean the insistent drive to repress the willful intervention of the artist-author, and to put in its stead a set of procedures that would, as it were, move nature to the page through a strict protocol, if not automatically.”²⁹⁵ The belief that a natural historical illustration, painting or photograph could achieve this elimination of the artist-author’s trace was, as Daston and Galison are careful to argue, a social construct and byproduct of positivist ideology. Courbet’s deer tableaux thus engage in a central paradox of portraying natural forms that remain outside a human purview yet are constantly subject to our projected understandings.

The paintings, by depicting animals in closely observed environments, engaged in species-specific actions and in intimate, life-sized proximity to the viewer, thus moved away from a mode of specimen depiction prominent in the works of eighteenth century animal painters like Jean-Baptiste Oudry (figs 5.8-9) and George Stubbs (fig. 5.10). The animal subjects in these earlier paintings are conveniently situated in profile or three quarter views derived from natural history illustrations, deliberately posed for our benefit. The painted landscapes function less as habitats than as stage backdrops. The red deer of Stubbs’ *Red Deer: Stag and Hind* stand in an open clearing that minimizes any ocular distractions from their discretely outlined forms. The warmly colored, gently receding landscape seems to have little relation to their bodies; they do not feed or forage or engage in any discernable action. The titular animal in Oudry’s *Stag at Bay*,

²⁹⁵ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 121.

injured in the hunt, presents a strikingly coherent and intact view of its dramatically lit body, in contrast to the frenzied dash of Courbet's stag at bay, still pursued by hounds (fig. 5.11). The bodies of Oudry's and Stubbs' animals are bounded and foregrounded, unthreatened and unnourished by any interpenetration with the organic forms that surround them.

In *Spring Rut* (fig. 5.2), Courbet depicted a battle for reproductive dominance between three stags. Portrayed at life size, the raging deer stand closer to the spectator than hunterly discretion would typically permit, their expressions crazed, fully in the throes of hormonally induced furor. The middle stag lets his tongue loll at the side of his mouth, while the animal escaping the scene to the right throws his head back with a distraught cry. Rather than locking antlers, the fighting bucks dangerously expose their necks to each other.²⁹⁶ They battle for breeding rights over the females of the species in springtime, rather than in the fall, as was typical for the *cerf* (red deer), an error often mentioned in existing scholarship.²⁹⁷ As an experienced hunter, it seems likely that Courbet committed these inaccuracies knowingly, in a conscious strategy of painterly artifice. Despite these discrepancies with "actual" nature, the canvas provides the viewer with what appears to be an unprecedented access to the animals' lived world. It was conceived as part of a series that also included *Stag at Bay* (*Le Cerf à l'eau, chasse à courre ou Le Cerf forcé*) (fig. 5.11) and *Riderless Horse* (*Le Cheval dérobé ou Le Piqueur*) (fig. 5.12), which the artist described with his habitual hyperbole: "They are unlike anything either traditional or modern. There isn't an ounce of idealism in them. Their values are mathematically precise."²⁹⁸ Convinced of the works' astounding originality, Courbet was aggravated by their relegation to the landscape and animals section of the Salon of 1861.

²⁹⁶ Titeux, 34-35. Titeux notes that such an exposed posture would not be witnessed in an actual deer combat.

²⁹⁷ See Titeux in particular.

²⁹⁸ Petra Chu (ed.), *Letters of Gustave Courbet* (Chicago: University of Chicago Press, 1992), 193-195.

The mention of “mathematical precision,” which initially might seem somewhat peculiar in reference to this dramatic trio of paintings, could allude to their apparent scientific objectivity. They offer a glimpse of animal “nature” far more proximate and palpable than would ever be attempted by a sensible human interloper, who might be trampled by a raging deer or runaway horse. Yet as his letters reveal, Courbet made use of taxidermied deer, dead roe deer peddled by game merchants (*marchands de gibier*), and photographs to achieve such representations. The dead game made for particularly difficult models, prone to rapid putrefaction and limb-stiffening *rigor mortis*.²⁹⁹ This stiffness is particularly evident in the bent legs of the crying stag on the far left hand side of *Spring Rut*.

In the rutting scene, we are enveloped in a space shrouded in partial darkness. The central deer are dramatically stage-lit by the little sunlight that manages to penetrate the dense tree cover. The intense gaze and magisterial antlers of the middle deer are particularly brought to our attention in this way, as is his opponent’s unyielding triangular stance and battler-ready rump. The central deer appears to give way to its opponent in an improbable pose, legs buckled on the forest floor in defeat. The intermixture of yellow-tinged, broadleaf trees and green-black pines augments the dramatic effect. A dense interplay of shadow and light imbues the activities of the deer with a Caravaggesque dignity. Though the creatures that served as the painting’s inspiration were observed in the German hunting preserves of Wisbaden and Hombourg according to the artist’s letters, the background is filled by plant life from the French Jura, with its above-noted combination of “evergreens and deciduous trees.” In the Jura springtime, Courbet wrote, “everything close to the ground was already green” with “the sap rising up into the great trees.”

²⁹⁹ Titeux, 51-57.

He claimed that this setting was what “the action of the painting demanded.”³⁰⁰ While the seasonal inaccuracy would seem to belie this statement, the closely observed landscape does enhance our sense of envelopment in the cervids’ habitat. Botanical growth and animal reproduction occur in conjunction, sap and semen returning to circulation after their winter dormancy. Painted in tawny tones adjacent to the browns of the thick tree trunks and sporting fully grown antlers, the creatures physically resemble their environment, as deer were particularly wont to do, if natural historians like the Comte de Buffon were to be believed.

Texts by Buffon, an ardent rival of Linneaus, were still widely read in France throughout the late nineteenth century (often more so than those of Darwin and other contemporary zoologists). Buffon viewed deer as so deeply entwined with their wooded environs that they too manifested vegetal growth, in the form of antlers which the males (and certain genetically anomalous females) of the species grew and shed anew each year.³⁰¹ This physical resemblance doubled as a linguistic pun, the French *bois* denoting both “wood” and “antlers.” The seasonal alterations of the antlers and the deciduous tree cover participated in a perpetual cycle of expansion and contraction. Buffon even drew a link between the animal’s level of nourishment and its ability to reproduce, asserting that once the deer and its antlers had achieved their full growth potential, any excess molecules obtained through food would be channeled into the production of semen and dispersed through the creation of other “organized beings.”³⁰²

³⁰⁰ Chu, 192-3.

³⁰¹ Comte de Buffon, “Cerf” in *Oeuvres complètes de Buffon: Mammifères tome 1* (Brussels: Chez Th. Lejeune, 1828), 360. “Le cerf, qui n’habite que dans les bois, et qui ne se nourrit que des rejetons des arbres, prend une si forte teinture de bois, qu’il produit lui-même une espèce de bois qui conserve assez les caractères de son origine pour qu’on ne puisse s’y méprendre.” Elsewhere in the same chapter, he writes “Le bois du cerf pousse, croit et se compose comme un végétal greffé sur un animal, et qui participe de la nature des deux.”

³⁰² Buffon, 362.

Monsieur d'Yauville, master of the hunt under King Louis XV and author of a celebrated hunting treatise, which was read and reprinted under Napoleon III's revival of aristocratic hunting practices, likewise attributed a vegetal quality to antlers. He especially noted the similarity of their growth patterns to that of the forested landscape's yearly spring renewal.³⁰³ In the early nineteenth century, the more anatomically minded Georges Cuvier was moved to assure readers that antlers only "possess the name of wood," correctly asserting that these protuberances consisted exclusively of bone.³⁰⁴ Nonetheless, the deer was a species considered peculiarly symbiotic to its habitat, as other canvases by Courbet further accentuate.

In *Deer in the forest* (*Chevreaux et Chevrettes*) (1868) (fig. 3), the artist conjured an atmosphere of sylvan equanimity that contrasts decisively with *Spring Rut* while possessing a similar sense of organic unity.³⁰⁵ The central roe deer both sport rudimentary antlers, marking them as males either in their youth or the early stages of spring regrowth. Their pelts are soft and clean, flecked by the sunlight filtering through the trees. The roe deer (*chevreuil*), a much smaller species than the red deer (*cerf*) depicted in the *Spring Rut*, appear as decorous as their counterparts are ferocious. They are innocently serene. The feeding buck's elongated, vertical stance mimics the presumably upright posture of the viewer, eliciting imaginative identification. Meanwhile, his resting companion lounges in a stereotypically feminized languor, though

³⁰³ M. d'Yauville, *Traité de vénerie, illustré de 27 figures de Jean Baptiste-Oudry* (Paris: Émile Nourry, 1929), 99. The volume was first issued in 1788 and reprinted in 1859, after the reestablishment of the "Vénerie de la Couronne" under Napoleon III.

³⁰⁴ Georges Cuvier, *Le règne animal distribué d'après son organisation, Tome 1* (Paris: Chez Deterville, 1817), 253-256. "Ces cornes, purement osseuses, et sujettes à des changements périodiques, portent le nom de bois." Cuvier moreover wrote dubiously of deer hunters and their speculations on the species: "La chasse du cerf, qui passé, comme on sait, pour le plus noble des exercices, est devenue l'objet d'un art qui a sa théorie, et une terminologie où les choses les plus connues s'expriment par des termes bizarres, ou détournés de leur acception ordinaire."

³⁰⁵ There are two known, extant versions of the painting, originally titled "Chevreuil and Chevrete:" a canvas from 1865 (now in a private collection) and the 1868 painting currently housed in the Minneapolis Museum of Art. The original title is deceptive in the case of the latter canvas, which depicts two male roe deer. For the purposes of this discussion, I will only be referring to the Minneapolis canvas. Michèle Haddad, *À la chasse avec Gustave Courbet* (Besançon: Éditions du Sekoya, 2012), 93.

scarcely visible antler stubs also gender him as male. Relaxed in their demeanor, they perhaps experience the chemical high derived from young plants that Buffon observed in the species: “In the spring, the roe deer...eat the buds and young leaves of almost all trees: this hot food ferments in their stomachs and intoxicates them in a manner such that...they do not know where they go...”³⁰⁶

However, the feeding roe deer do not present readily readable expressions, withholding the reciprocity of their gaze and absorbing themselves in their leafy surround. They contort their bodies to reach their meal, appearing indifferent to any potential viewer’s presence, their gazes averted. The enormous tree around which they converge provides abundant nourishment. The size of the trees and the density of the leaf cover lend an untouched aspect to the landscape, as though no forester had yet encountered it. The emerald leaves and russet trees present a bright, lively mosaic to offset the sheen of their bodies, an abstract play of vegetal forms that Ségolène Le Men likens to the decorative *verdure* of Second Empire Gobelins tapestries.³⁰⁷ The dense, overall effect of the plant life also heightens the impression that we remain fully ensconced in the creatures’ exclusive land holdings. As in *Spring Rut*, this dense foliage is nonetheless conveniently arranged to permit the sunlit highlighting of the animals’ bodies.

While the detached, careful observation of flora and fauna was in line with the artist’s realist, positivist proclivities, *Deer in the Forest* also possesses a tinge of Romanticism, with its ideal of harmonious natural unity. The idyllically undisturbed animals and vegetation appear naïve to the disruptions of the modern world, a theme that would recur in Courbet’s animal subjects.

³⁰⁶ Buffon, 406.

³⁰⁷ Ségolène Le Men, trans. Deke Dusinberre et al. *Courbet* (New York: Abbeville Press Publishers, 2008), 275.

The Covert of the Roe Deer (La Remise de Chevreuils au ruisseau de Plaisir-Fontaine)

(1866) (fig. 5.7), conveys a similarly anodyne aspect of roe deer life. Initially exhibited at the art dealer Jules Luquet's gallery in the Rue Bergère, the painting was later accepted by the Comte de Nieuwerkerke to the Salon of 1866. As Courbet wrote of the canvas in a letter to his former schoolmate, Urbain Cuenot:

It is the landscape painted over the canvas that Juliette [Courbet's sister] ruined, the Hippocrène Fountain, (the one we carried to the Puits noir, my father and I) that is causing all this ruckus. You must remember it. It shows the embankment of the stream, with rocks and large trees. Everything is golden. Last winter I rented some roe deer and turned it into a covert. In the middle sits a small female roe deer who receives [company], it is like a salon. Next to her, outlined against the rocks, is her mate, who nibbles at the ivy on a tree on the left. Another roe deer is crossing the stream, and is followed by a little yearling that drinks from the bank. It is enchanting, and they are as polished as diamonds.³⁰⁸

The charm of the subject matter was pleasing even to the Second Empire officialdom that had so often rejected the artist's work and the Comte de Nieuwerkerke situated the canvas in a place of honor at the Salon. The roe deer, two males and two females, nearly blend into the surrounding grey trees in their staged "covert." (Courbet unfortunately did not elaborate upon the process of "renting" roe deer or whether this borrowing of live specimens was supplemental to the use of dead game). The bodies of the right-most deer are particularly difficult to discern under the shadows of the foliage and against the dark shading of the tree trunks. The palette consists almost exclusively of browns, greys, greens and yellows, the material substances of fur, foliage and rocks both distinctly rendered and peacefully balanced. The deer thus converge with a segment of Ornans frequently--and lucratively--depicted by the artist.³⁰⁹ The lurid combination of

³⁰⁸ Letter from Gustave Courbet to Urbain Cuenot (Paris, April 6, 1866) in Chu, *Letters of Gustave Courbet*, 277.

³⁰⁹ For a thorough examination of Courbet's extensive series of Franche-Comté landscapes, see Mary Morton and Charlotte Eyerman, *Courbet and the Modern Landscape* (Los Angeles: The J. Paul Getty Museum, 2006). Morton in particular notes the artist's commitment to portraying the geological specificities of this region. She argues that Courbet forewent the traditional landscape framing of fore-, middle and background in order to closely depict specific features of the topography as though randomly and photographically selected.

hormonal animal furor and vegetal regrowth found in *Spring Rut* gives way to sumptuous complacency, the animals supplied with sufficient food, water and physical refuge from the hunt. The stark corporeal outlines of *Deer in the Forest* have softened in the low light, the cervid bodies permeable to water, greenery and shade. Only a lone male deer, stiffly poised at attention, seems to glimpse an intruder from his perch on the stream bank.

The gentle roe deer was a subject amenable to the imagining of a pristine, still-wild Franche-Comté and, as such, was a particularly common subject of Courbet's nature scenes, depicted with greater frequency than any other non-human animal in his oeuvre.³¹⁰ The fine-grained precision Courbet attributed to the spring rut series has been replaced by a charming anthropomorphism, all the while maintaining an overall sense of natural unity between deer and landscape. Much as the spring foliage grows and disperses in tandem with the red deer's breeding rituals in *Spring Rut*, the trees of *Deer in the Forest* and *The Covert* benevolently shelter and sustain the roe deer. Likewise, the resemblance between the *bois* of the deer and the trees in *Spring Rut* and *Deer in the Forest* heightens the enmeshment of animal and environment. Growing and decaying in measure with the animal's age and the extent of its food supply, these impermanent secondary sex characteristics, unstable signifiers of their masculinity, assimilate the mammalian into the arboreal.

The finely drawn distinctions between deer species, each with its own designated French term which could not be deployed synonymously, indicated their central role in the lives of upper-class French hunters and naturalists. Both Buffon and Cuvier dedicated separate sections of their encyclopedic natural histories to the *chevreuil* (roe deer), the *cerf* (red deer) and the *daim* (fallow deer)--none of these terms is precisely equivalent to the English catchall, *deer*. The red

³¹⁰ Michèle Haddad, *À la chasse avec Gustave Courbet*.

deer in particular had powerful, masculine associations, as seen most prominently in Edwin Landseer's famous *Monarch of the Glen* (1851) (fig. 5.13). Buffon's *Histoire naturelle* even included illustrations of each species to further illuminate their differences (figs. 5.14-17). However, the seemingly pure, natural state of symbiosis between deer and forest was in fact precariously maintained and subject to the interventions of humans and other species. Though in Courbet's canvases we feel ourselves to be lost in the wilderness, witnessing the animals in their most intimate mating and watering rituals, the forests of mid-nineteenth century France and Germany were endlessly cultivated and culled by human beings through hunting, wood-gathering and the recently developed field of scientific forestry. As officials mathematically calculated timber yields through the standardized unit of measure of the average tree (*Normalbaum*) and cleared forests of brush and other tree species in the name of cultivating a single, desirable species of wood, the newly popularized German methods resulted in forests of remarkable visual uniformity. The practice originated in Prussia and Saxony in the eighteenth century, spreading to France in the 1820s and eventually gaining international reach throughout Europe, its colonies and the United States as a standardized, state-instituted method (often promulgated by globe-trotting Prussian forestry experts).³¹¹ Friedrich the Great applied a similar approach to forest fauna. On the ruler's orders, hunters culled large predatory species to the point of localized extinction in Prussia.³¹² As Karl Gayer (German, 1822-1907), a noted Bavarian forest official and professor of forestry at the University of Munich, remarked in the introduction to

³¹¹ Henry E. Lowood, "The Calculating Forester," in *The Quantifying Spirit in the Eighteenth Century*, 341. Prussia is credited as the first Western state to convert forestry practice into a quantifiable science, utilizing standardized units of measure such as the "mean tree" (*Normalbaum*) to calculate the size and potential yields of a given landscape without having to laboriously count numbers and species of tree. David Blackbourn notes the itinerant nature of Germanic forestry knowledge in *The Conquest of Nature: water, landscape, and the making of modern Germany* (New York: Norton, 2006), 46.

³¹² Blackbourn, 47.

Der Waldbau, “The forest, just as much as the agrarian field of the peasant farmer, has become a cultural object.”³¹³

Though the introduction of German monocultural forestry techniques could have elided the appearances of the German and French forests that appeared in Courbet’s paintings, his letters point to a significant difference in the appearance of the Franche-Comté landscape, still containing a combination of deciduous and evergreen trees, unlike the homogenous, single-species stands promoted by Germanic timber practices (though increasingly discouraged by “back to nature” scientists like Gayer). The practice of German forestry became synonymous with human attempts to control nature, a perception that has persisted beyond the nineteenth century. As James Scott wrote in *Seeing like a State*, “The German forest became the archetype for imposing on disorderly nature the neatly arranged constructs of science.”³¹⁴ Moreover, the interests of forestry officials and hunters, the latter of whom wanted to keep deer populations artificially inflated and provide them with a corresponding variety of sustenance, were often in conflict.³¹⁵ However, as the texts of Gayer and his coevals of the late nineteenth century indicated, there was an increased appreciation of the interconnections of all species within the landscape, an appreciation that occurred once successive generations of single species tree stands proved infertile due to the human elimination of nourishing forest floor brush furnished by animals, fungi, and other plants. The forest’s appearance was the constantly shifting byproduct of

³¹³ Karl Gayer, *Der Waldbau* (Berlin: Verlag von Wiegandt, Hempel und Parey, 1880), 1.

³¹⁴ James C. Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven: Yale University Press, 1998), 15.

³¹⁵ Joachim Radkau, “Wood and Forestry in German History: In Quest of an Environmental Approach,” *Environment and History* 2, no. 1 (February 1996), 65 “The damage done by game preserved in excessive numbers by many gamekeepers is well-known, and represents today, as in the time of princely hunting, a serious burden for many forests. And even today, as in the year 1800, there is sometimes a bitter hostility—though seldom fought out in public—among German foresters which divides the lovers of deer-hunting from the lovers of trees. From an environmental viewpoint, one could ask whether the value of woodlands is constituted only by trees or by animals as well.”

economic and ecological concerns, manipulated by human intercession but not fully delimited by it. Frequently hunting throughout both the Franche-Comté and the German countryside surrounding Frankfurt, Courbet was uniquely situated to witness such alterations in the landscapes of both nations. The activities of the artist himself thus negated the isolated appearance of his painted deer. His paintings provided an illusory sense of nature unadulterated by human forces, the forests appearing as endlessly verdant and perfectly attuned with the animals' needs.

Though Courbet deployed a distinctive style in his deer paintings, those paintings show us a world in which neither the painter nor any other people have interposed themselves. In their interplay of intense verism and fabrication, Courbet's deer paintings simultaneously adhere to and diverge from a modern, Western notion of animal nature as possessing an objective existence and form of interiority fundamentally separate from humanity, a regime of thought termed "Naturalism" by anthropologist Philippe Descola.³¹⁶ Anthropomorphization of the deer and the aforementioned factual anomalies prove the fictive quality of this imaging, even as the everyday lives of the creatures seem all the more tangible and within reach.



The Living Communities of Adolph von Menzel's *Kinderalbum*

In Adolph Menzel's *Fallow Deer in an Enclosure (Damwild im Gehege)* (1863) (fig. 5.18), the creatures that bred, fed and lounged uninhibited by human contact in Courbet's paintings, have been corralled and contained. They are displayed in the first incarnation of the public Berlin Zoological Gardens, established in 1844. One of the few dated works in Menzel's

³¹⁶ Philippe Descola, *Beyond Nature and Culture*, trans. Janet Lloyd (Chicago: University of Chicago Press), 2013.

series of gouache paintings comprising the *Kinderalbum*, the painting serves as a document of the institution's appearance in the 1860s, prior to German unification. Located in the Berlin *Tiergarten*, a vast forested preserve in the city center, the animals are strangely imprisoned within their own native landscape. They are gawped at and physically prodded by the zoo visitors, in a reduced, humiliated state, surrounded by scattered patches of grass and the thin cover of two birch trees, the pitiful remnants of their former domain. The human observers eliminated by Courbet reemerge here in full force, peering through the bars of the cage dressed in their summer Sunday best.³¹⁷

The quarry of the hunt has become the subject of detached, leisurely interest. The deer are now the focal point for an afternoon of bourgeois education and amusement, even as their expressions remain opaque. The doe's over the shoulder glance, seemingly directed at the viewer, initiates our gaze into the enclosure, without particularly evoking pathos or pity. In contradistinction to the typical natural history illustrator or a painter of princely menageries, Menzel does not artificially isolate the animals from their manmade surroundings but instead renders the act of zoological viewing itself as the subject of his painting. While Ellen Spickernagel interprets the *Kinderalbum* as an implicit critique of human imprisonment of animals, I argue that the album serves not only as a latent commentary on animal suffering but also an exploration of complex organismal configurations—of coexistence, containment and commerce.³¹⁸ Throughout, any facile distinction between “nature” and “culture” falls apart, the streets of Berlin as much a biotic unit as the forested wilderness.

³¹⁷ Marie Riemann-Reyher, *Adolph von Menzel: Das Kinderalbum* (Berlin: Nicolaische Verlagsbuchhandlung, 1997), 76.

³¹⁸ Ellen Spickernagel, *Der Fortgang der Tiere: Darstellungen in Menagerien und in der Kunst des 17.-19. Jahrhunderts* (Cologne: Böhlau Verlag, 2010), 173-181. Spickernagel argues that the *Kinderalbum* should be read with relation to popular children's natural history guides such as Hermann Wagner's *Haus und Hof*, which

As noted in a 1912 facsimile edition of the album, these images were not originally displayed in a book format, as that title given by the artist might suggest. Max Necke wrote in the volume's introduction:

The King's Nationalgalerie in Berlin owns, among a nearly innumerable collection of sketches, drawings, watercolors, frescoes and oil paintings of the great master a work of Adolph von Menzel, which possesses the name *Kinderalbum*. It does not however exist—as the artist-given name might lead one to suspect—in the form of a closed, bound book or album, but rather includes 43 single sheets which are sometimes displayed in the Galerie under glass and frame in one of the rooms dedicated to the artist, sometimes carefully enclosed in the department for drawings. [Menzel and his niece and nephew, for whom the album was initially produced] lived in the large city of Berlin of the 1860s, then becoming a modern, world-class metropolis. Yet the avenues to the joys of nature were not yet closed, and they were visited as often as possible.³¹⁹

The album, less regularly displayed than the rest of the artist's oeuvre due to the delicate nature of its paper substrate, documents the natural peculiarities of a still half-wild Berlin, of a Germany with a rapidly changing infrastructure and concomitant reorganization of “nature.”³²⁰ (Though contrary to Necke's statement, the album in its current state contains forty-four, not forty-three, pages).³²¹ The rotating display, perhaps coupled with its ostensibly young intended demographic, has led to a dearth of commentary about the *Kinderalbum* as compared to the rest of the artist's

popularized the keeping of aquariums and caged birds within the bourgeois household. She goes on to apply this logic of caging to the entire series, including those images depicting “wild” nature, asserting that the close cropping deployed by the artist effectively represented the animals' confinement and suffering. “Die Differenz zwischen Haus, Straße, See, Wald und Zoo schwindet... jedes Raum unter seiner Hand zum Käfig wurde,”

³¹⁹ Max Necke in Adolph von Menzel, *Kinderalbum* (Leipzig: E.A. Seemann, 1900), 10-11. Die Königliche Nationalgalerie in Berlin besitzt unter den faßt unzähligen Entwürfen, Zeichnungen, Wasserfarben, Deckfarbenbildern und Ölgemälden von der Hand des großen Meisters ein Werk Adolf von Menzels, das den Namen “Kinderalbum trägt. Es liegt aber nicht— wie man nach diesem von dem Künstler selbst gewählten Namen vermuten könnte—in Form eines geschloßnen, etwa gar zusammengebundenen Buches oder albums vor, sondern es besteht aus 43 Einzelblättern, die in der Galerie teils unter Glas und Rahmen in einem dem Künstler gewidmeten Raume aufgehängt find, teils sorgfältig verschloßen in der Abteilung für Handzeichnungen aufbewahrt werden. Jedes Blatt ist ein kunstvoll durchgearbeitetes “Gouachebild,” d.h. ein Wasserfarbenbild, das faßt ausschlieslich in DeckFarben gemalt wurde, so daß Untergrund, das Papier, nicht mehr sichtbar ist, auch nicht durch die Farbe hindurchscheint wie bei einem gewöhnlichen Wasserfarbenbilde, den “Aquarell... wohnten sie in der großen Stadt, im Berlin sechziger Jahre, das sich anschickte, die moderne Weltstadt zu werden. Doch noch waren die Zugänge zu den Freuden der Natur nicht verschloßen, und sie wurden so oft wie möglich beschriften.

³²⁰ Blackbourn, *The Conquest of Nature*.

³²¹ Riemann-Reyher, *Adolph von Menzel: Das Kinderalbum*.

body of work.³²² As Necke indicated, the actual conditions of the “album’s” presentation are not particularly album-like. Its pages, even before their public exhibition, were carefully protected from the grubby, prying hands of the artist’s niece and nephew through their placement behind the glass and wood doors of his brother-in-law’s music cabinet. The paintings were, it seems, always intended for museal display rather than leisurely leafing. Only through their selective reproduction in the 1912 partial facsimile edition, produced with the support of the Berlin teachers’ union, were they made available as children’s illustrations.

Later, in an extended discussion of the *Kinderalbum*’s variegated subject matter in the educators’ volume, Paul Samuleit remarked on the egalitarian visual attention Menzel paid to such disparate subjects as the exotic imported animals of the Berlin, Cologne, Munich and Paris zoological gardens and the seemingly more mundane sewer rats, working dogs and chickens. In reference to *Calf with Geese and Chickens* (*Kalb mit Hühnern und Gänsen*) (fig. 5.19), he wrote: “They present a perfect example of Menzel’s capacity to, with unerring objectivity, bring the same level of interest to all the forms and colors of life, of nature.”³²³ Menzel was attributed with a nearly extrasensory ability to detect “beauty” in the muddied, dung -laden surroundings of the barnyard creatures. The dirtied hay in which the calf embeds itself possesses a textural depth and coloristic complexity unsuspected in such a “low” substance, a detail that Samuleit suspects the “typical” observer of the scene would easily overlook. We remain at ground level with the animals, attuned to the details that their eyes, searching for feed and bedding, would be primed to notice. The ground and fencing occupy the entirety of the pictorial space, the area outside of the coop only barely visible through the closed door. The animals’ enclosure becomes our visual limit point. This trope is repeated throughout the series, as we similarly enter the homes of

³²² Spickernagel, 145.

³²³ Paul Samuleit in *Kinderalbum*, 1900.

various Zoologischer Garten specimens, the cages of pet canaries and the edge of a goldfish pond (fig. 5.20).

Certain of the *Kinderalbum* gouaches, such as *Forest Floor with Squirrel (Waldboden mit Eichhörnchen)* (fig. 5.21) and *Forest Floor with Lizard (Waldboden mit Eichechse)* (fig. 5.22) capture natural spaces at a nearly microscopic level. The creatures depicted in these tableaux can only be discovered by the viewer through careful investigation. The observer takes on the role of a field naturalist, scouring the grass, wildflowers, roots and murky streams for elusive organisms. The titular subject matter remains difficult to locate, the viewer's attention diffusely directed, quickly drawn away from the sought after creature by the play of branches, bursts of blue and yellow wildflowers, skeins of grass and button-like mushrooms. The profusion of species and objects of interest presents the animal not as an isolated object of study, but as the deeply imbricated denizen of a biological system. The clarity prized by the conventional natural history illustration has been completely abandoned in *Eagle-owl in a thicket (Der Uhu in Dickicht)* (fig. 5.23), wherein the creature promised to the observer by the title can only be extricated with great difficulty from the tangled mass of undergrowth surrounding it on all sides and forcefully covering the painting's foreground. The expectations of animal picturing are thoroughly frustrated, the longing for distinct forms that painting typically provides deferred, while again positioning the viewer in a scenario arguably closer to the actual experience of the amateur ornithologist, binoculars in hand, searching the treetops for signs of the wished for specimen. The animals presented elsewhere in captive displays are comparatively available for viewing, albeit with a reduced sense of "authentic" encounter.

These forays into vernacular nature---the meadows, lakes and forests on the outskirts of Berlin--are in many respects akin to the field nature studies promoted by nineteenth century

pedagogues such as Karl Möbius. Möbius, a proponent of what would later be termed ecological research, and eventual director of the Berlin Natural History Museum (*Museum für Naturkunde*), aimed many of his early educational efforts at primary and secondary school children. The biologist grew up in a merchant class family, a stratum of society from which it was difficult to obtain a university position in the natural sciences. Prior to his employment at the Berlin Museum, he served as a teacher in the Hamburg Johanneum secondary school.³²⁴ In the 1870s, he gave a lecture series on zoology for Kiel parish schoolteachers that rejected the memorization and recitation of Linnean morphologies and taxonomies that had long formed the basis of natural historical study for German schoolchildren. As he wrote in later recollection of these lectures:

I rejected following the provisions of Lübens to primarily familiarize children with the taxonomic characteristics of animals. Rather, I recommended they study the form and vital activities, and the relationship of both with the outer living conditions, as I did myself as a teacher at the Hamburg Johanneum from 1853-1868.³²⁵

Möbius was thus an early advocate for a holistic study of interactions between organisms and their environment, a preoccupation inspired in part by his youthful readings of Humboldt's *Kosmos*. Möbius wrote his noted definition of the living community, the *Biocoenosis* or *Lebensgemeinde* (which he later also referred to as the *Lebensgemeinschaft*) in response to the Prussian agricultural ministry's query on the viability of commercial oyster fishing along the coasts of Schleswig and Holstein, territories recently annexed to Prussia as a result of the Second War of Schleswig in 1863.³²⁶ In *The Oyster and Oyster Harvesting (Die Auster und*

³²⁴ Lynn K. Nyhart, *Modern Nature: The Rise of the Biological Perspective in Germany* (Chicago: University of Chicago Press, 2009), 128-9.

³²⁵ Karl Möbius, "Die Lebensgemeinschaft im naturkundlichen Unterricht," *Natur und Schule: Zeitschrift für den Gesamten Naturkundlichen Unterricht Aller Schule*, III Band, 1904. "Ich verwarf die Befolgung der Vorschrift Lübens, die Kinder hauptsächlich mit den systematischen Merkmalen der Tiere bekannt zu machen, sondern empfahl, den Bau und die Lebenstätigkeiten der Tiere und die Übereinstimmung beider mit den äußeren Lebensbedingungen zu schildern, wie ich es selbst als Lehrer am Johanneum zu Hamburg von 1853-1868 getan hatte."

³²⁶ Nyhart, *Modern Nature*, 152.

Austernwirtschaft) (1877), Möbius cautioned against the overfishing of wild oysters, which had already depleted supplies off the coasts of France and could similarly damage the fishing industry's economic viability in Germany. French overharvesting, he warned, had caused other, less commercially desirable mussels to overtake the beds formerly inhabited by the oysters. After reproducing, the gentrifying mollusks altered the environment in their favor, preventing oysters from breeding back to their earlier numbers.³²⁷ Möbius thus demonstrated how the population levels of a single species vitally depended on interactions with other organisms, as well as the salinity and temperature of the water and the mineral qualities of the sea floor. He further cautioned against attempts to artificially fatten the oysters with cornmeal feed or fertilize their surroundings with fish feces, as these actions would deeply upset the overall balance of the oceanic environment. Unfortunately, the fishers' zeal for increased sales proved too much for the scientist's protests, which he delivered before the Reichstag, on the limitations of natural renewal.³²⁸

The significance of these biological relations was such that Möbius urged the need for their own terminology and methodology: "Science still lacks a term for such a community of living beings, for average outer life relations corresponding to the range and number of types and individuals, which through mutual reliance and reproduction establish themselves in a particular site. I refer to such a community as a *Biocoenosis* or *Lebensgemeinde*."³²⁹ Though Darwinian zoologist Ernst Haeckel (German, 1834-1919) coined the term "ecology" (Ökologie) in 1866, which would ultimately designate such researches, his scholarship was not, like that of Möbius,

³²⁷ Karl Möbius, *Die Auster und die Austernwirthschaft* (Verlag von Wiegandt, Hempel und Parey, 1877), 72. "Die Verarmungsgeschichte der französischen Austernbänke ist sehr lehrreich. Als die Bänke von Cancale durch schonungslose Überfischung von Austern fast ganz entblösst waren, nahmen Herzmuscheln (*Cardium edule*) ihre Stelle ein, und auf den erschöpften Bänken bei Rochefort, Marennes, und Ile d'Oléron erschienen Scharen von Miesmuscheln (*Mytilus edulis*).

³²⁸ Nyhart, *Modern Nature*, 157.

³²⁹ Karl Möbius, *Die Auster und die Austernwirthschaft*, 76.

primarily dedicated to the study of biological communities. “Ecology” only entered into common usage among German scientists and their English-speaking counterparts in the late nineteenth and early twentieth century.³³⁰

While most famously applied to the case of the fishing industry, Möbius asserted the relevance of this mode of analysis for all manner of animal and social relations. He even attributed humanity’s success as a species to the expansion of the human biome through domestication and agriculture: “This artificial multiplication of cultured plants and domesticated animals is the basis for the increased fertility and reproduction of human beings, for the spread of the ecological realm of the species *Homo sapiens*.”³³¹ According to this line of thought, the living community could be either “natural” (*natürlich*) or fully or partially cultivated by human beings (*künstlich*). The importance of the relations between organisms obtained everywhere on earth, whether in the urban environs of the industrialized city, the partial wilds of cultivated forests or in the unreachable ocean depths. Much as the species on the ocean floor were subject to the availability of food and space, the capitalist industries which relied on these natural resources ebbed and flowed according to their availability. German forestry and fishing science promoted a homogenization of nature only to later oppose it when the economic disadvantages of these practices became clear.

To promote holistic awareness of nature from a young age, Möbius enumerated a wide range of field sites conducive to primary and secondary students’ understanding of the *Lebensgemeinschaft*, a list bearing considerable resemblance to the assorted locales documented in the *Kinderalbum*:

³³⁰ Nyhart, *Modern Nature*, 314.

³³¹ Möbius, *Die Auster und die Austernwirtschaft*, 84.

Flowerpots, flowerbeds, trees lining an avenue, swallows and sparrows in the streets of villages and cities, gardens, meadows, fields and forests offer rich possibilities for students of all ages to learn that all living beings are correlated and contributing members of living communities (*Lebensgemeinschaften*).³³²

This perception of nature as composed of communal organizations, both at the more expansive level of wild forests and fields, as well as in the microcosms of the flowerpot and boulevard tree, served both to initiate the student into the field of natural history and into the various strata of the social order, from the family to the nation. Living communities occurred at multiple scales and levels of complexity, such that Menzel's tree stump or chickens in a barnyard could be said to constitute a kind of ecosystem. As Möbius elaborated, the child, through this study, was made to feel himself "as a member of a living community with his parents, siblings and playmates, with the household staff and pets."³³³ Multiple forms of social formation, of *Bildung*, were incorporated, and as it were, naturalized, into the observation of the living community. These relations, Möbius implied, would help the student to understand better the organization of the natural world.

Moreover, evolutionary biology in Germany was conceived of as parallel to the process of individual growth and development: "ontogeny recapitulates phylogeny," as Haeckel famously declared. The successive stages of a human embryo's maturation were, he theorized, a re-presentation of the stages of that organism's historical evolution in miniature, the zygote's

³³² Möbius, "Die Lebensgemeinschaften," 292. "Alle lebenden Pflanzen und Tiere, die das Kind sieht, gehören natürlichen oder durch den Menschen veränderten künstlich Lebensgemeinschaften an. Blumentöpfe, Blumenbeete, Alleebäume, Schwalben und Sperlinge in den Straßen der Dörfer und Städte, Gärten, Wiesen, Felder und Wälder bieten reichliche Gelegenheit dar, Schüler aller bedingende Glieder von Lebensgemeinschaft sind."

³³³ Ibid. "Das Kind fühlt sich selbst als Glied einer Lebensgemeinschaft mit seinen Eltern, Geschwistern und Gespielen, mit dem Hausgesinde und den Haustieren."

rudimentary cells transforming into a fish-like, tailed creature that ultimately took on full human form at birth.³³⁴

With the study of biological interactions, Möbius and Menzel initiated their child audiences into a web of human and nonhuman organisms, evolving in tandem. While Menzel himself may not have been directly involved in the study of proto-ecological discourses, he did interact regularly with the institutions of zoology. The statutes of the joint stock company (*Aktienverein*) that sponsored the initial opening of the Berlin Zoological Gardens from which Menzel derived so many of his *Kinderalbum* subjects explicitly mentioned “instruction of the youth” (*Jugendunterricht*), along with “scientific investigation” (*wissenschaftlicher Beobachtungen*) and “artistic study” (*künstlerischer Untersuchungen*) as the founding goals of the institution.³³⁵ As the five *Gröschen* entry fee was beyond the means of most Prussian families of the era, the government sponsored school visits to the zoo, making its offerings available to a wider range of pupils. As the quote from the *Aktienverein* indicates, the zoo was also conceived of as a site for artistic development. The institution’s founder, zoologist Martin Hinrich Lichtenstein (German, 1780-1857), doled out free passes (*Freikärten*) to young artists and scientists to encourage their patronage.³³⁶ Berlin’s zoological gardens were the first in a deluge of zoos opening in the Germanic states from the 1840s through the 1860s, from Cologne to Frankfurt to Munich.³³⁷ The other establishments were similarly educational in their orientation and the Munich, Dresden and Cologne zoos furnished further subjects for Menzel’s album.³³⁸

³³⁴ For a modern examination of this theory, see Stephen Jay Gould, *Ontogeny and Phylogeny* (Cambridge, MA: Harvard University Press, 1977).

³³⁵ Rieke-Müller and Dittrich, *Der Löwe brüllt nebenan*, 64.

³³⁶ *Ibid.*, 65.

³³⁷ *Ibid.*

³³⁸

Ranging from the openness of meadows to the enclosure of birdcages, the *Kinderalbum* seems to cover the entire scope of living communities available to view in the artist's native milieu. Menzel even thematized and blurred the distinctions between *natürlich* and *künstlich* life communities in a diptych of parrot images, *Sweet Freedom (Süße Freiheit)* (fig. 5.24) and *Sweetened Servitude (Versüßte Knechtschaft)* (fig. 5.25) The former depicts a macaw in the forests of an unidentified "Southern homeland" (*südlichen Heimat*), most likely in South America, the latter an Australian cockatoo in the "prison" of a wealthy woman's household. As Samuleit writes, the cockatoo appears:

as though made to be the plaything of this genteel hand, as perfected for the sumptuous splendor of this house; it is not difficult for it to sacrifice freedom for the sweetness of such a prison. Like a noble free child of the untamed, unfathomable primeval forest, the blue macaw is throned next to the coddled slave of humans in the mysterious floral twilight of its southern homeland, unapproachable, leaving our vision nearly intoxicated by the magical picture of this royal form, by the wonder of the thousand colors and we do not know, which should receive the beauty prize, the imprisoned or the free.³³⁹

The cousin species are presented as a moralistic diptych that was added to the album, along with *Owl in a Thicket* and *Tree Stump with Robin and Hoopoe (Baumstrumpf mit Rotkehlchen und Wiedehopf)* (fig. 5.26), for its display in the artist's fiftieth anniversary exhibition at the Berlin *Nationalgalerie*.³⁴⁰ The macaw, with its wide-open eye, appears suddenly alert to the presence of a viewer. The texture of its rumpled feathers mimics the wild outgrowth of leaves surrounding its perch. Plumage and foliage merge along its rump and tail. A wan, dirty light breaks through the tree cover, offsetting the royal blue and gold of the bird's body. The lack of recession beyond the

³³⁹ Paul Samuleit, *Kinderalbum*, 14. "scheint wie geschaffen zum Spielzug dieser vornehmen Hand, wie bestimmt für diese schwelgerische Pracht des Hauses; ihm wird's nicht schwer, die Freiheit zu opfern für die Süßigkeit solches Gefängnisses. Wie ein edles freies Kind des unbezwungenen, unergründlichen urwaldes thront neben diesem verhätschelten Slaven der Menschen der blaue Aras im geheimnisvollen Blütendämmer seiner südlichen Heimat, unnahbar, fast unser Auge bleibt trunken hängen an dem zauberhaften Bild der königlichen Form, der gedampften Pracht der tausend Farben und weiß nicht, wem es den Preis der Schönheit zuerkennen soll, dem Gefangenen oder dem Freien."

³⁴⁰ Claude Keisch and Marie Riemann-Reyher, *Adolph Menzel: between Romanticism and Impressionism, 1815-1905* (New Haven: Yale University Press, 1996), 315.

leaves and dull pink flowers immediately surrounding the central figure flatten the space. The animal, flush with the surface of the composition, is ensconced in its native rainforest; the density of plant growth does not permit the identification of discrete species but rather implies their diversity and profusion.

The cockatoo of *Sweet Servitude* perches in a similarly flattened and florid decorative realm. The backdrop now consists of painted foliage and an Orientalized tapestry of indiscernable origin, though its particolored geometries appear adjacent to those of seventeenth century Persian rugs.³⁴¹ A human presence is only revealed by the elegantly adorned, disturbingly cropped woman's arm, her delicate fingers entwined in the animal's head feathers. Her gold jewelry and aristocratic pallor echo the bird's white feathers and gold chains. The cockatoo appears agitated, presenting not a legible profile but a confused, contorted mass of feathers, perhaps preening, perhaps pulling itself away from the woman's insistent grasp. Menzel here depicted a decidedly white, feminized form of servitude, that, coupled with the Orientalized overtones of the décor, calls to mind a Gérôme (French, 1824-1904) harem scene (fig. 5.27), the violence of imposed slavery evacuated by the tongue-in-cheek tone of the title. (Menzel made Gérôme's acquaintance during a trip to the Paris Universal Exposition in 1867).³⁴² Samuleit even insinuated that the boudoir could be considered the animal's native habitat, as it appears "perfected" for the "sumptuous" setting. Placed alongside luxury textiles, birds themselves were a prized source for women's luxury accessories, their feathers plucked for fans, hats and other adornments.

³⁴¹ Special thanks to Ashley Dimmig and Courtney Wilder for assisting with the identification of the decorative art objects in this painting.

³⁴² Ibid, 57.

The aesthetic further calls to mind the imagined hothouse environment of the *Pfaueninsel* (peacock island) in Carl Blechen's (German, 1798-1840) painting series of 1832-4 (fig. 5.28), wherein exotic birds and tropical plants are accompanied by a band of fair-skinned Middle-Eastern courtesans, lounging and plying their instruments on a outspread tapestry in the winter garden's lush surrounds, with a white feathered fan by their sides. The work, commissioned by Friedrich Wilhelm III of Prussia, depicted the ruler's newly constructed Palm House, situated within an island which, as its name suggests, played host to a range of imported avian life. Even the faraway origin of the cockatoo alludes to the depredations of the ever more extensive German exotic animal trade, then at its height in the 1880s. The trade in animals and the enslavement of human beings too often went hand in hand under the new colonial power of late nineteenth-century Germany. Humans were prominently displayed alongside animals in the Hamburg Zoo and made the subject of their own zoologically styled displays in the popular *Völkerschauen*.³⁴³ *Sweetened Servitude* points obliquely to these colonial undertones, insidiously refashioning them into the popular visual rhetoric of Orientalism.

The combination of natural and artificial splendors that characterized the *Pfaueninsel* and public zoological gardens plays out around the pampered pet. Placed alongside the macaw of *Sweet Freedom*, the boundaries between wild and domesticated verdure, between tapestry and forestry, blur. The rainforest botany and the luxuriant textiles are parallel forms of excess, one still to be mined for its scientific fascinations and its raw materials, the other the result of a robust imports industry. While the macaw in *Sweet Freedom* is embedded in its native landscape and described in language connoting the "noble savage," *Sweetened Servitude* portrays the

³⁴³ For a thorough treatment of the massive scale of the global German exotic animal trade and *Völkerschauen* of the late nineteenth century, see Eric Ames, *Carl Hagenbeck's Empire of Entertainments* (Seattle: University of Washington Press, 2008) and Nigel Rothfels, *Savages and Beasts: the Birth of the Modern Zoo* (Baltimore: Johns Hopkins University Press, 2002).

cockatoo as one luxury good among many--a living, feathered bauble. The natural and artificial landscapes are presented as equally suitable to the creatures' needs, seeming to justify continued German encroachments into an internationalized nature trade.

A more mundane example of natural overabundance occurs in *Tree Stump with Robin and Hoopoe* (fig. 5.26). The birds are barely discernable within the teeming decay and regrowth surrounding the stump of a felled tree. One organism's demise has furnished a fertile site for countless other species to occupy. The scene appears as the antithesis of the cleared, clean forest floor prized by late eighteenth- and early nineteenth-century Prussian scientific forestry. In contradistinction to earlier advocates of a monocultural forest divested of brush and less profitable species of trees and animals, Karl Gayer emphasized the essential nature of brush and litter to the overall functioning of the forest ecosystem. The elimination of dead and decaying matter, as well as other living species, had effectively prevented the long-term maintenance of monoculture forests after initially successful generations of single species stands. The undisturbed brush would, from a commercial standpoint, fertilize the trees and allow them to regrow after timber harvests.³⁴ Ecological considerations were thus factored into calculations of economic viability.

The visual overwhelm of the wildflowers, leaves, roots, branches and grasses, of brown, gray and green tones, reveals the organisms as inextricably bound to one another, components of a symbiotic unit nourished by undisturbed waste. The forest floor appears as the site of generation and regeneration, of dead matter reabsorbed by living forms. The species are not, however, readily enumerable or neatly inscribed within linear boundaries of drawn bodily form. They blend in with the dense, diffuse grouping of colors, joining masses of clipped, overlapping

³⁴W.R. Fisher and Karl Gayer, *Schlich's Manual of Forestry: Volume 5 Forest Utilization, being an English translation of "Die Forstbenutzung" by Karl Gayer* (London: Bradbury, Agnew and co., 1908), 594-5.

brushstrokes. The hunting hoopoe nearly disappears in the brush, a furtively glimpsed, wild mass rather than a carefully posed specimen.

Menzel's album contains several such intimate scenes of everyday Germanic nature, glimpsed at close range in all of its chaotic dispersion. His notebooks of 1863-4 and 1866-7 include numerous preparatory sketches of forest scenes, implying that these works were conceived during the artist's own wanderings in nature.³⁴⁵ In *Waldboden mit Eichhörchen* (fig. 5.21) the scene is dominated by the tree's trunk and roots. Assorted grasses and flowers grow in its interstices. A squirrel stalks the right hand corner of the sheet, its upper body partially hidden by the vegetation. *Waldboden mit der Eidechse* (fig. 5.22) eliminates the vertical picture plane and horizon line altogether. The ground level occupies the entire sheet. The positioning of the viewer seems particularly childlike, fallen on hand and knees in search of the camouflaged brown lizard twined between wildflowers, or perhaps out to pick the red buttoned mushrooms that dot the grass. *The Goldfish Pond (Der Goldfischeich)* employs a similar framing, devoid of horizon line. The elongated composition is filled to its outer edges by the miniature biome of the pond, bordered by a grassy bank upon which a small but striking chickadee perches. The orange and black fish, gathering as though around morsels of food, confront the bird's gaze through the shallow, transparent water. It is a picture of calm inaction, made visually compelling by the delicate organic interplay, the greens and yellows of the wildflowers presenting a striking contrast to the dirty brown pond water. The bird places itself at the cusp between terrestrial and aquatic realms. The plants cross this borderline, half-floating at the water's edge. Even at this granular level, multiple biomes seem to converge.

³⁴⁵ Riemann-Reyher, *Adolph von Menzel: Das Kinderalbum*, 70-98.

Menzel's attempt to help his city bound niece and nephew appreciate the non-human organisms of their environment, whether the rats inhabiting the sewer, the lions in the Zoological Gardens or the goldfish in the meadow pond, covered the variegated range of wildlife visible in industrializing, urbanizing Germany. The subject matter of the album itself, much like period natural history, was not based in a clear-cut nature/culture dichotomy but rather acknowledged a succession of biotic communities, of varying degrees of human intervention. The apprehension of natural historical knowledge was moreover considered amenable to a larger program of *bürgerliche Bildung* or education. The German *Bildung* is far more expansive in its connotations than the English term "education," encompassing a sense of moral and personal development that could be applied more broadly to the processes of both maturation into adulthood and the cultivation of cultured selfhood. The *Kinderalbum*, with its varied *Lebensgemeinschaften*, engaged with this implicit correlation between evolutionary animal development and human maturation into nuclear family member and normative citizen. The young citizen needed to, as Möbius taught, define herself not in individualistic isolation, but in relation to her parents, playmates, and in a telling indicator of her presumed class status, her household staff. The possibility of organisms' evolution was seen to have parallels with the upward mobility of the bourgeois classes, who could escape the constrictions of a prior aristocratic social order through concerted liberal education and social self-improvement.³⁴⁶ As a grown citizen and employee, an understanding of ecology, of the logical limitations of natural resources and their regeneration, was crucial to the maintenance of a rapidly growing domestic and colonial economy in unified

³⁴⁶ Annelore Rieke-Müller and Lothar Dittrich, *Der Löwe Brüllt Nebenan: Die Gründung Zoologischer Gärten im deutschsprachigen Raum, 1833-1869* (Cologne: Böhlau Verlag, 1998), 45.. "Aus der Annahme einer Evolution in der Natur, die seit dem Ende des 18. Jahrhunderts verstärkt diskutiert wurde, ließ sich danach auch auf eine potentielle Höherentwicklung und auf die Bildungsfähigkeit der Menschheit schließen. Diese Annahme gehörte zu den zentralen Auffassungen der liberalen bürgerlichen Bewegung. Kulturgeschichte und Naturgeschichte standen also im Bildungsbewußtsein des liberalen Bürgertums in einem engen Zusammenhang. Fortschritt in der Kultur war danach ein Naturgesetz.bjsasdfghj"

Germany. The apparently humorous *Kinderalbum* illustrations thus contain an unsettling undertone, particularly in images like the *Deer in an Enclosure*, *Tree Stump* and *Sweetened Servitude*, wherein natural and fabricated life communities become prescriptive and delimited spaces, the individual's role determined by other species or facilitated by the death and destruction of other beings.

❖ Conclusion

“The art of taxidermy,’ declared Sir William Flower, zoologist and director of the British Museum [of Natural History] in 1898, ‘has had far too little attention bestowed upon it. Despite the fact that few people recognize the difference between a really well-mounted bird or mammal and an inferior one, there is as much difference between them as between a picture of a loon by Landseer or Rosa Bonheur and a picture of the same animal depicted by a village artist on the sign for a public house.’³⁴⁷ Flower, through the citation of Landseer and Bonheur, expressed his desire to place taxidermic art on an aesthetic level with the practice of famed *animaliers*. His statement was symptomatic of shifting attitudes towards “artistic” modes of display among the scientists employed by the natural history museums of Europe and the United States at the close of the century. The habitat diorama, with its inclusion of multiple species, botanical props and elaborate painted backdrops in a capacious tableau not unlike those of Menzel or Courbet, could demonstrate the complex interactions of organic life in a manner that the drawers and vitrines of preserved specimens that formed the initial core of natural history

³⁴⁷ Karen Wonders, *Habitat Dioramas: Illusions of Wilderness in Museums of Natural History* (Uppsala: Acta Universitatis Upsaliensis, 1993), 23.

museums were incapable of achieving (figs. 5.29-30). As noted by Lynn K. Nyhart and Karen Wonders in their writing on European habitat dioramas, the format was initially developed in the nineteenth century by private taxidermy practices for shop windows and international expositions. Natural historians, conversely, mostly rejected painted backdrops and dramatically posed taxidermy models as taking undue aesthetic liberties with the raw materials of scientific research.³⁴⁸ While limited attempts were made to include birds in vitrines with painted backdrops, particularly as arsenic-based preservation techniques then in use rendered feathered creatures easier to pose than their mammalian counterparts, the large scale habitat display was not extensively utilized by scientific museums until the end of the century, and then predominantly in Sweden and the United States.³⁴⁹ Later, at the turn of the twentieth century, museums began to reverse course and adopted the habitat diorama as amenable to a more holistic understanding of creaturely life. Wonders goes so far as to argue that habitat dioramas ultimately “took over much of the communicative function traditionally fulfilled by zoological illustrations.” She even sees the diorama as a partial fulfillment of Humboldt’s fantasy of biogeographical panoramas.³⁵⁰ Biologists increasingly felt that the animal mount needed to be viewed in a recreation of its natural surroundings and in interaction with other regional species in order to be fully understood by the lay viewer. A once “nonscientific” mode of display thus entered the realm of the science museum. Though such developments were late to arrive to French and German museums, German and French taxidermists were at the forefront of constructing such displays for the

³⁴⁸ Nyhart, 77. Nyhart shows that the use of taxidermy with backdrops was still primarily associated with artistic, commercial practices rather than scientific museum displays, even as such framings of nature were more in line with the concerns of much late nineteenth century biological ecology: “Even as interest in biogeography and ecology increased among museum researchers at the turn of the century, the representation of animals in their habitats held a limited place in German museums of natural history, largely, I would argue, because of these associations [of commercial interest of taxidermists and artistic, spectacular display].

³⁴⁹ Wonders, *Habitat Dioramas*, 25.

³⁵⁰ Wonders, *Habitat Dioramas*, 45, 194.

commercial sphere and accordingly would have had access to academic exhibitions of animal paintings of the kind discussed in this chapter.³⁵¹

In one of the most elaborate and striking early examples of the large-scale habitat diorama, Carl and Delia Akeley, along with an extensive team of assistants, constructed the *Four Seasons* series of deer vitrines at the Field Museum in Chicago in 1902 (figs. 5.31-32). The dioramas indicate the charismatic appeal attributed to the species through the pictorial precedents of Courbet, Landseer and other nineteenth century artists. Resulting from four years of labor, the clay-modeled, plaster cast, taxidermied deer are surrounded by thousands of leaves molded by hourly workers, set against a painted backdrop of the Michigan Iron Mountain region executed by museum staff artist Charles Abel Corwin.³⁵² In the density of their surroundings and their seeming indifference to human observation, they appear much like a three-dimensional rendering of Courbet's tableaux. In *Fall* (fig. 5.31), a doe keeps watch from the right-hand corner, protecting the grazing fawn standing behind her. Befitting the season, the trees in the painted background have lost their leaves, while the foreground trees remain partially covered. The botanical life provides a safe enclosure. The posed specimens are re-enlivened by their positioning within a reconstructed landscape, engaged in their everyday feedings and wanderings. Like Courbet's rented roe deer at their forested "salon," the vegetal density of their realm and the ease with which they blend into its space gives them the appearance of being in their own fully furnished creaturely home. The curvature of the painted background enhances the three-dimensional illusion even as the enclosing vitrine reveals its artifice. The deer are grouped

³⁵¹ As Wonders notes, Jules Verreaux (1807-1873) of the Maison Verreaux taxidermists in Paris, was considered "the foremost commercial supplier of natural history specimens in the world" for much of the nineteenth century (34). The German Johann Friedrich Naumann, a taxidermist, ornithologist and illustrator, was, she writes, "a forerunner of the diorama and modern ecological thinking" (33).

³⁵² Donna Haraway, "Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936" *Social Text* 11 (Winter, 1984-1985): 34.

into congenial, familial units, companionably resting together in the *Spring* diorama (fig. 5.32). The brush coating the ground and cushioning their bodies promises new growth. The scientific display of an ecological sphere is made legible through the painterly tropes of fore-, middle- and background, of dramatically posed animal protagonists observed as though existing outside of human intervention.

Much as animal painters incorporated the study of animal anatomy and behavior into their practices, natural historical illustrations and museum displays imitated the visual style of animal paintings and sculptures exhibited in the Salons and academies. The parameters of acceptable scientific representation were malleable and subject to the influences of the fine arts. In this instance, the tropes and techniques of animal painting seem to have preceded the museal methods of display increasingly considered most amenable to an ecologically integrated exhibition of species life. While the nineteenth-century development of the natural history diorama has been extensively documented and the resemblances between sculpture and taxidermy often noted, the relationship of these displays to the visual tropes of contemporaneous animal painting has been less fully acknowledged, a subject I intend to address in future research.³⁵³

Courbet's paintings achieved an intimate vision of cervid life within its natural environment that later nineteenth-century natural historical endeavors, particularly the habitat diorama, sought to achieve. Much like the dioramas, which combined taxidermy models, constructed props and painted backdrops, Courbet's paintings comprise composite, contradictory forms of representation presented as if in organic unity. German stags were placed in the landscapes of the Jura in *Spring Rut*; the roe deer in *Deer in the Forest* were likely purchased at a

³⁵³ Petra Lange-Berndt provides an extensive, international treatment of taxidermy as a sculptural form in *Animal Art: Präparierte Tiere in der Kunst, 1850-2000* (Munich: Edition Metzler: 2009).

dead game market or shot by the artist himself, only to be resuscitated in a peaceful forest clearing.³⁵⁴ Menzel's *Kinderalbum*, conversely, represented biological communities as gradations of the manmade and the natural, often depicting animals poised on the boundary line between their "own" biomes and the constructions of human society. The cockatoo of *Sweetened Servitude* and the calves in the barnyard are shown in the course of their intimate life-ways and attachments, though inhabiting a thoroughly urban, humanized setting. While I do not view Courbet and Menzel's paintings as proleptic, they do speak to the impulse, then developing in the nineteenth-century, to access an animal world that was seen to either exist at a fundamental remove from humanity or to be inalterably changed by human interventions. Courbet indulged a fantasy of objectively recording nature, of depicting the habitat-in-itself, much as the natural scientist strove to research aspects of "wild" creaturely life not directly subordinated to human uses. Meanwhile, Menzel, like Möbius, acknowledged the biological community concept in its manifold manifestations, effectively including *Homo sapiens* as one organism among many, albeit with an outsized influence on his surroundings. Each artist, in his unique manner, thus managed to present a symbiotic fusion of animal and environment, participating in an ecological, "objective" mode of looking that continues to structure the natural history museums, documentaries and wildlife photography of the present day.

³⁵⁴ Haddad, 61-62.

Figures:

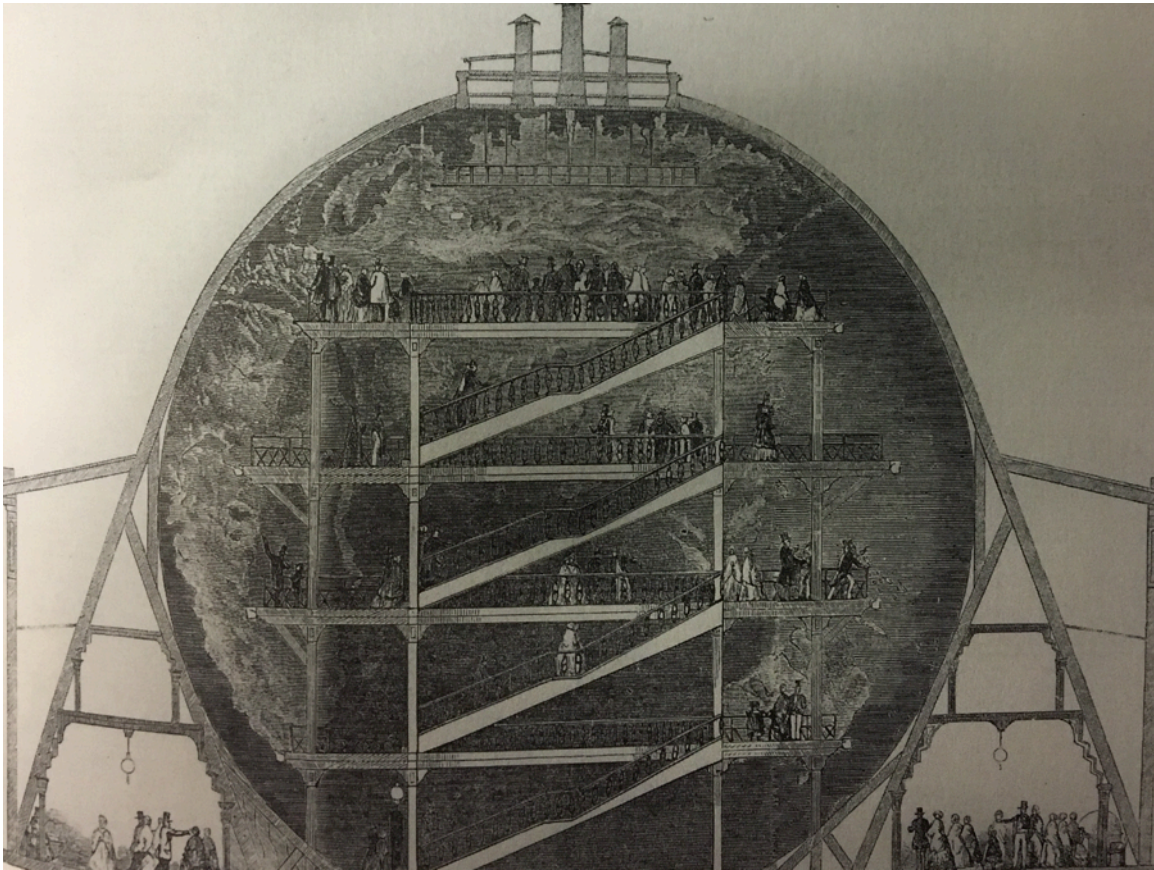


Figure 5.1. Exterior view of James Wyld's "The Great Globe" panorama, 1851-1862, Guildhall Library, Corporation of London.



Figure 5.2. Gustave Courbet, *Le rut du printemps/ Combat de cerfs/Spring Rut. The Battle of the Stags*, Oil on canvas, 1861, Musée d'Orsay, Paris.

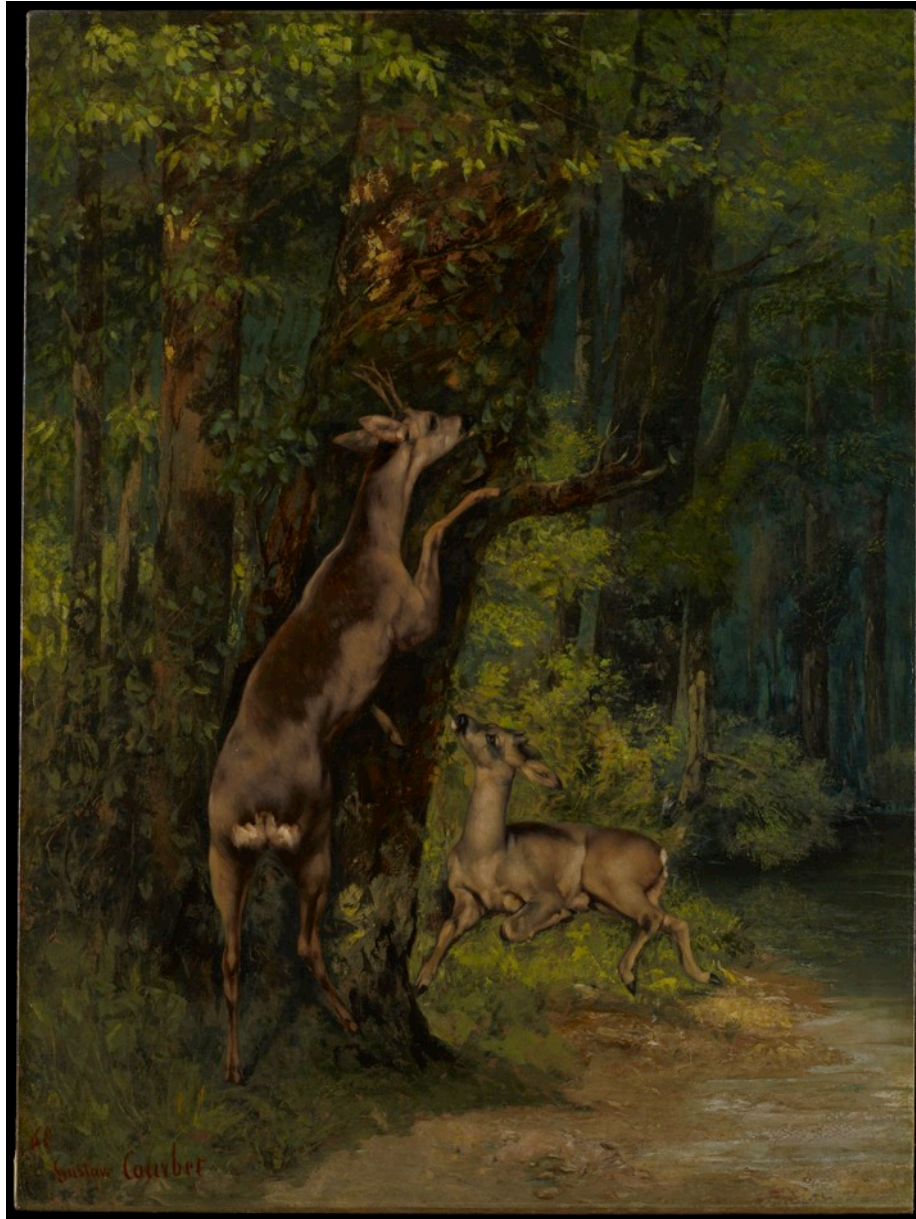


Figure 5.3. Gustave Courbet, *Chevreuil et chevrette*, (Roe) *Deer in the Forest*, Oil on canvas, 1868, Minneapolis Institute of Art.

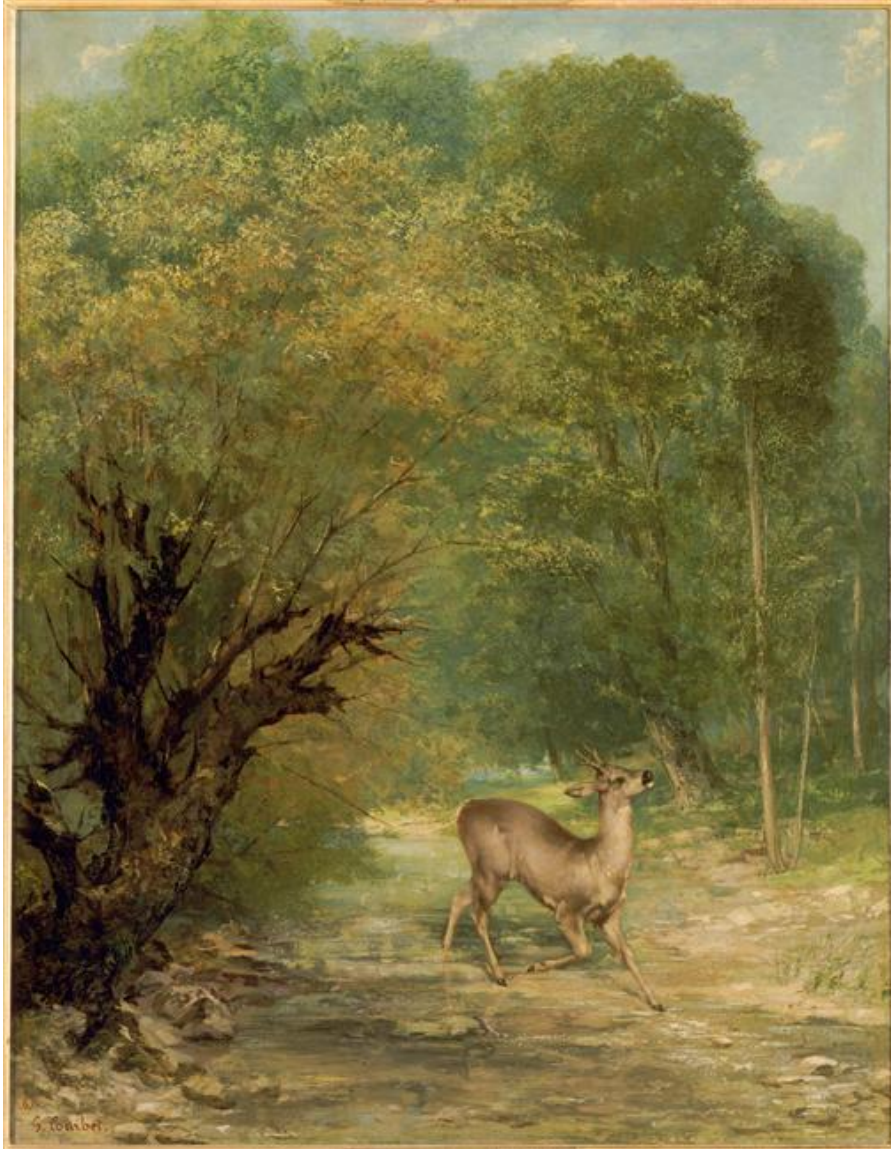


Figure 5.4. Gustave Courbet, *Le chevreuil chassé aux écoutes, printemps*/The Hunted Roe Deer on the Alert, Spring, Oil on canvas, 1867, Musée d'Orsay, Paris.



Figure 5.5. Gustave Courbet, *Les chevreuils dans la neige*/The Roe Deer's Shelter in Winter, ca. 1866, Oil on canvas, Musée des Beaux Arts, Lyon.



Figure 5.6. Gustave Courbet, *L'Hallali du cerf*/Killing a Deer, Oil on canvas, 1867 Musée d'Orsay, Paris.



Figure 5.7. Gustave Courbet, *Remise de chevreuils au ruisseau de Plaisir-Fontaine/Roe Deer in a Cover at the brook of Plaisir-Fontaine*, Oil on canvas, 1866, Musée d'Orsay, Paris.



Figure 5.8. Jean-Baptiste Oudry, *Cerf aux abois*/Stag at Bay, Oil on canvas, before 1738, Staatliches Museum, Schwerin.



Figure 5.9. Jean-Baptiste Oudry, *Antilope*/Antelope, 18th century, Staatliches Museum, Schwerin.



Figure 5.10. George Stubbs, *Red Deer Stag and Hind*, Oil on canvas, 1792, Royal Collection, Buckingham Palace.



Figure 5.11. Gustave Courbet, *Le Cerf à l'eau, chasse à courre ou Le Cerf forcée*/The Stag at the Water, hunted by hounds, or The Stag at Bay, Oil on canvas, 1859-61, Musée des Beaux Arts, Marseilles.



Figure 5.12. Gustave Courbet, *Le Cheval dérobé ou Le Piqueur*/Riderless Horse or Master of the Hounds, Oil on canvas, 1861, Neue Pinakothek, Munich.



Figure 5.13. Edwin Landseer, *Monarch of the Glen*, Oil on canvas, 1851, Scottish National Gallery, Edinburgh.



Figure 5.14. Jacques de Sève (drawing), *Le Chevreuil et La Chevrette*/Male and Female Roe Deer, Colored engraving, 18th century.

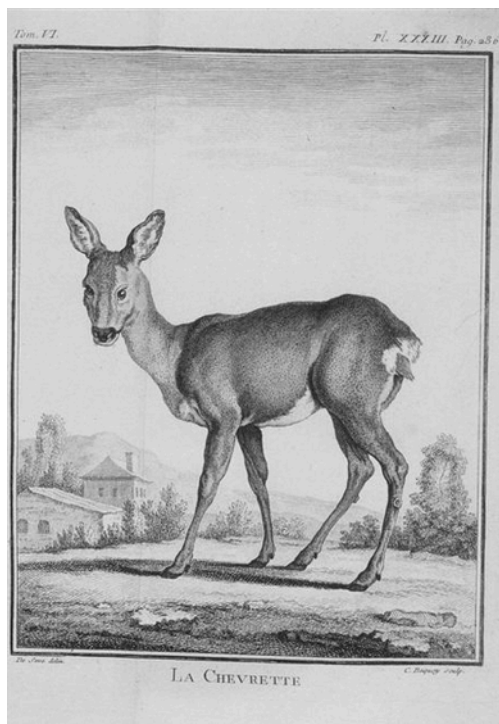


Figure 5.15. Jacques de Sève, *La Chevette*/Female Roe Deer, Engraving, 18th century in Buffon's *Histoire naturelle*.



Figure 5.16. Jacques de Sève, *Le Daim*/Male Fallow Deer, Engraving, 18th century in Buffon's *Histoire naturelle*.

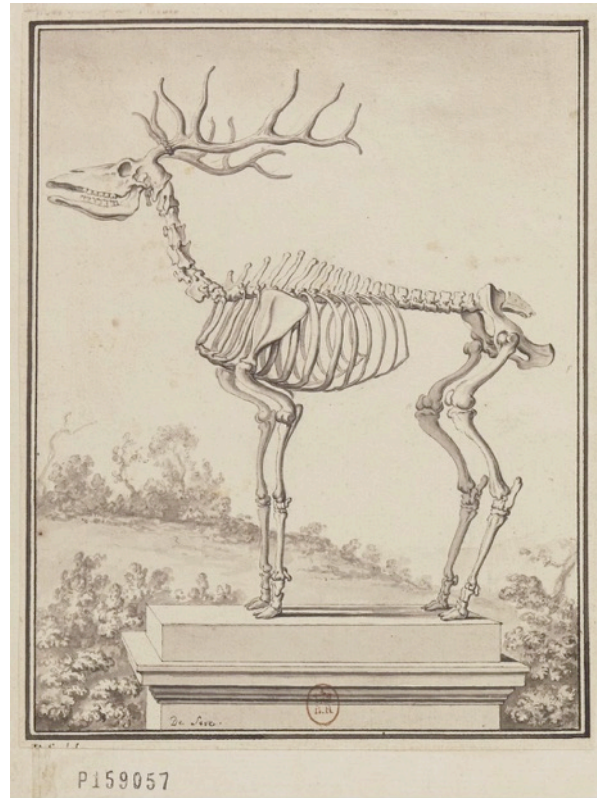


Figure 5.17. Jacques de Sève, *Squelette du Cerf*/Male Red Deer Skeleton, Engraving, 18th century in Buffon's *Histoire naturelle*.



Figure 5.18. Adolph von Menzel, *Daimwild im Gehege/Fallow Deer in an Enclosure*, Gouache, 1863, Kupferstichkabinett Berlin.



Figure 5.19. Adolph von Menzel, *Kalb mit Hühnern und Gänsen/Calf with Chickens and Geese*, Gouache, 1863-83 Kupferstichkabinett, Berlin.



Figure 5.20. Adolph von Menzel, *Der Goldfischteich/The Goldfish Pond*, 1863-83, Kupferstichkabinett, Berlin.



Figure 5.21. Adolph von Menzel, *Waldboden mit Eichhörnchen*/Forest Floor with Red Squirrel, Gouache, 1863-83, Kupferstichkabinett, Berlin.



Figure 5.22. Adolph von Menzel, *Waldboden mit der Eidechse/Forest Floor with Lizard*, Gouache, 1863-83, Kupferstichkabinett, Berlin.



Figure 5.23. Adolph von Menzel, *Der Uhu im Dickicht*/Eagle-Owl in a Thicket, Gouache, 1883, Kupferstichkabinett, Berlin.



Figure 5.24. Adolph von Menzel, *Süße Freiheit/Sweet Freedom*, Gouache, 1883, Kupferstichkabinett, Berlin.



Figure 5.25. Adolph von Menzel, *Versüßte Knechtschaft/Sweetened Servitude*, Gouache, 1883, Kupferstichkabinett, Berlin.



Figure 5.26. Adolph von Menzel, *Baumstumpf mit Rotkehlchen und Wiedehopf*/Tree Stump with Robin and Hoopoe, Gouache, 1863-83 Kupferstichkabinett, Berlin.

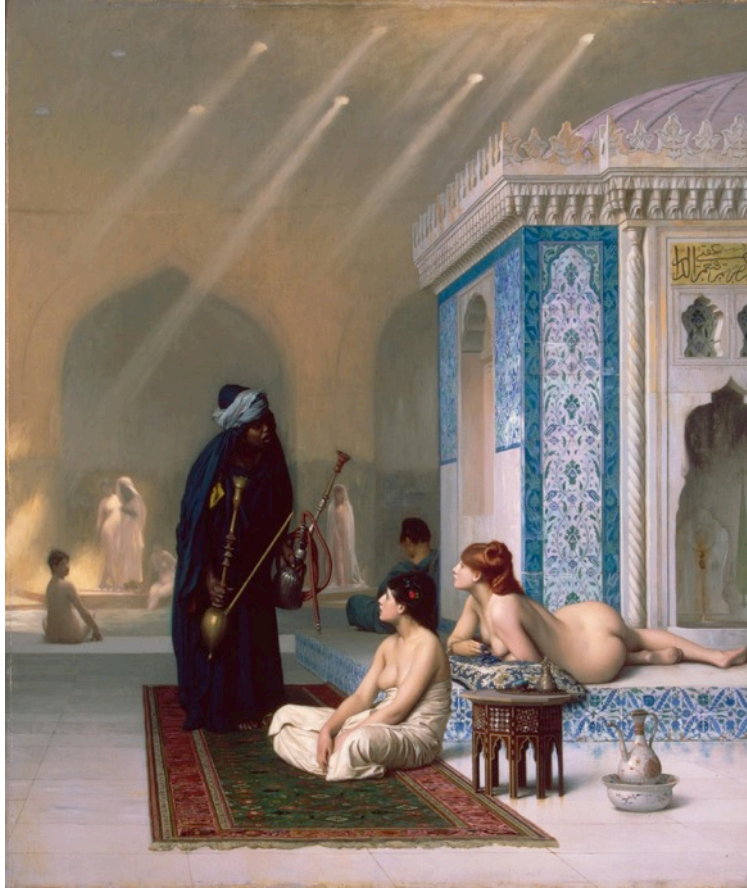


Figure 5.27. Jean-Léon Gérôme, *Pool in a Harem*, Oil on canvas, 1876, The State Hermitage Museum, St. Petersburg.



Figure 5.28. Carl Blechen, *The Interior of the Palm House on the Pfaueninsel near Potsdam*, Oil on canvas, Art Institute of Chicago.

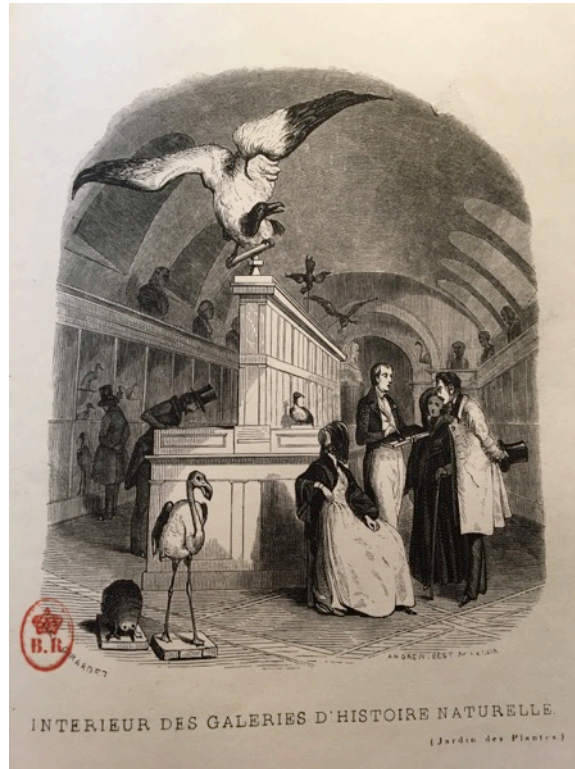


Figure 5.29. Karl L. Girardet, *Interior of the Natural History Museum Galleries, Paris*, Engraving, c. 1851.

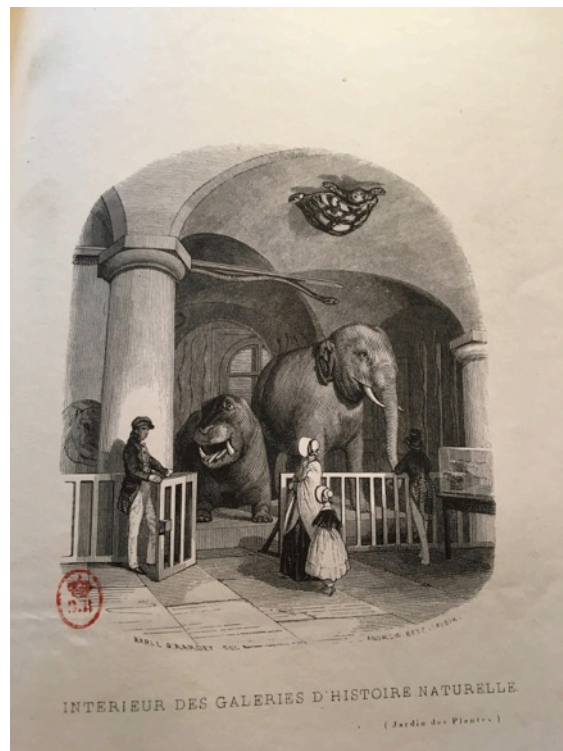


Figure 5.30. Karl L. Girardet, *Interior of the Natural History Museum Galleries, Paris*, c. 1851.



Figure 5.31. Carl and Delia Akeley, *Spring* (Four Seasons Dioramas), 1902, Field Museum, Chicago.



Figure 5.32. Carl and Delia Akeley, *Fall* (Four Seasons Dioramas), 1902, Field Museum, Chicago.

Bibliography:

- Ames, Eric. *Carl Hagenbeck's Empire of Entertainments*. Seattle: University of Washington Press, 2008.
- Blackbourn, David. *The Conquest of Nature: Water, Landscape and the Making of Modern Germany*. New York: Norton, 2006.
- Buffon, Comte de. "Cerf" in *Oeuvres complètes de Buffon: Mammifères tome 1*. Brussels: Chez Th. Lejeune, 1828.
- Courbet, Gustave. *Letters of Gustave Courbet*, edited and translated by Petra Chu. Chicago: University of Chicago Press, 1992.
- Cuvier, Georges. *Le règne animal distribué d'après son organisation, Tome 1*. Paris: Chez Deterville, 1817.
- Daston, Lorraine and Peter Galison. *Objectivity*. New York: Zone Books, 2007.
- Descola, Philippe. *Beyond Nature and Culture*. Translated by Janet Lloyd. Chicago: University of Chicago Press, 2013.
- Fisher, W.R. and Karl Gayer. *Schlich's Manual of Forestry: Volume 5 Forest Utilization, being an English translation of "Die Forstbenutzung" by Karl Gayer*. London: Bradbury, Agnew and co., 1908.
- Fried, Michael. *Courbet's Realism*. Chicago: University of Chicago Press, 1990.
- Gayer, Karl. *Der Waldbau*. Berlin: Verlag von Wiegrandt, Hempel und Parey, 1880.
- Gould, Stephen J. *Ontogeny and Phylogeny*. Cambridge, MA: Harvard University Press, 1977.
- Haddad, Michèle. *À la chasse avec Gustave Courbet*. Ornans: Les Éditions du Sekoya, 2012.
- Haraway, Donna. "Teddy Bear Patriarchy: Taxidermy in the Garden of Eden, New York City, 1908-1936." *Social Text* 11 (Winter, 1984-1985): 20-64.
- Humboldt, Alexander von. *Kosmos, für die Gegenwart bearbeitet*, edited by Hanno Beck. Stuttgart: Brockhaus, 1978.
- Humboldt, Alexander von. *Cosmos. Translated with the author's sanction and cooperation under the superintendence of Lieut. Col. E. Sabine*. London: Longman, Brown, Green and Longmans, 1849.

- Lange-Berndt, Petra. *Animal Art: Präparierte Tiere in der Kunst, 1850-2000*. Munich: Edition Metzler: 2009.
- Le Men, Ségolène. *Courbet*. Translated by Deke Dusinberre et al. New York: Abbeville Press Publishers, 2008.
- Lemonnier, Camille. *G. Courbet et son oeuvre, Gustave Courbet à la Tour de Peliz*. Paris: A. Lemerre, 1868.
- Lowood, Henry E. "The Calculating Forester," in *The Quantifying Spirit in the Eighteenth Century*, edited by Tore Frängsmyr, J.L. Heilbron and Robin E. Rider, 315-342. Berkeley: University of California Press, 1990.
- Möbius, Karl. *Die Auster und die Austernwirthschaft*. Berlin: Verlag von Wiegandt, Hempel und Parey, 1877.
- Möbius, Karl. "Die Lebensgemeinschaft im naturkundlichen Unterricht," *Natur und Schule: Zeitschrift für den Gesamten Naturkundlichen Unterricht Aller Schule*, III Band, 1904.
- Morton, Mary and Charlotte Eyerman. *Courbet and the Modern Landscape*. Los Angeles: The J. Paul Getty Museum, 2006.
- Necke, Max. *Adolph von Menzels Kinderalbum*. Leipzig: E.A. Seemann, 1900.
- Nyhart, Lynn K. *Modern Nature: The Rise of the Biological Perspective in Germany* (Chicago: University of Chicago Press, 2009), 128-9.
- Oettermann, Stephen. *The Panorama, History of a Mass Medium*. Translated by Deborah Lucas Schneider. New York: Zone Books, 1997.
- Radkau, Joachim. "Wood and Forestry in German History: In Quest of an Environmental Approach." *Environment and History* 2, no. 1 (February 1996): 63-76.
- Rieke-Müller, Annelore and Lothar Dittrich. *Der Löwe brüllt nebenan: Die Gründung zoologischer Gärten im deutschsprachigem Raum 1833-1869*. Cologne: Böhlau, 1998.
- Riemann-Reyher, Marie. *Adolph von Menzel: Das Kinderalbum*. Berlin: Nicolaische Verlagsbuchhandlung, 1997.
- Roberts, Jennifer. *Transporting Visions: The Movement of Images in Early America*. Berkeley: University of California Press, 2014.
- Rothfels, Nigel. *Savages and Beasts: the Birth of the Modern Zoo*. Baltimore: Johns Hopkins University Press, 2002.

Scott, James C. *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven: Yale University Press, 1998.

Spickernagel, Ellen. *Der Fortgang der Tiere: Darstellungen in Menagerien und in der Kunst des 17.-19. Jahrhunderts*. Cologne: Böhlau Verlag, 2010.

Thomas, Greg M. *Art and Ecology in Nineteenth Century France: The Landscapes of Théodore Rousseau*. Princeton: Princeton University Press, 2000.

Titeux, Gilbert. *Au temps du brame... Les représentations de la chasse dans l'oeuvre de Gustave Courbet et dans la peinture allemande du XIX siècle (1800-1900)*. Dijon: Les Presses du Réel, 2014.

Tseng, Shao-Chien. "Contested Terrain: Gustave Courbet's Hunting Scenes." *The Art Bulletin* 90, no. 2 (2008): 218-234.

Wischermann, Clement et al., eds. *Animal History in the Modern City: Exploring Liminality*. London: Bloomsbury Academic, 2019.

Wonders, Karen. *Habitat Dioramas: Illusions of Wilderness in Museums of Natural History*. Uppsala: Acta Universitatis Upsaliensis, 1993.

Wulf, Andrea. *The Invention of Nature: Alexander von Humboldt's New World*. New York: Alfred A. Knopf, 2015.

d'Yauville, M. *Traité de vénerie, illustré de 27 figures de Jean Baptiste-Oudry*. Paris: Émile Nourry, 1929.

Chapter 6: Epilogue

Within the present-day overflow of animal imagery in nature documentaries, social media and scientific photography, the unique fascination exerted by animal painting in the nineteenth century can both familiarized and difficult to compass. A select number of contemporary artists, such as Walton Ford (American, b. 1960) (fig. 6.1) and Thierry Bisch (French, b. 1953) (fig. 6.2), who exhibit internationally, continue to produce highly detailed, naturalistic paintings of animal subjects in a vein comparable to their nineteenth-century counterparts, though these artists are considered something of an anomaly in the contemporary art world.³⁵⁵ However, painting in this mode has often (particularly in the case of Ford) become an act of ironized historical and political commentary on the troubling colonialist past of such imagery rather than a straightforward attempt to capture nature-in-itself. The improbably numerous flocks of birds recurrent in Ford's paintings, such as the passenger pigeons of *Visitation* (2004), plunder landscapes to the point of exhaustion. Though nineteenth-century animal paintings were likewise weighted with implicit political biases, as shown throughout this study, their positions on issues like colonialism and capitalist extraction of natural resources were usually not clear-cut, as they prioritized the representation of animals behaving *as if* unaffected by human incursions. Photography and film today serve a similar function as the predominant media for picturing non-human species "from nature." The "camera trap," a disguised, motion- or heat-activated camera discreetly embedded within a creature's native habitat, seems to "capture" wild organisms in a

³⁵⁵ See for example the profile of Ford in Calvin Tomkins, "Man and Beast: the Narrative Art of Walton Ford," *The New Yorker*, January 26, 2009 issue, <https://www.newyorker.com/magazine/2009/01/26/man-and-beast>.

comparatively undisturbed fashion. The production of animal imagery has thus become even further distanced from the human bodies that instigate its creation. Current technology allows nature photographers and zoologists to completely evacuate the premises, no longer occupying the site of image-recording. The trip wires or heat sensors detecting a live animal set the photographic process into motion. The pretense of a disembodied embodiment on the part of the artist/naturalist, of the headless Bonheur mannequin that paints but does not “watch” her animal subjects, is no longer necessary. The film and the photograph have more immediate indexical relationships to their animal subjects, recording traces of their live presence. Yet these media also distance the image-maker from creaturely bodies. The photographer-naturalist can await results in her studio or laboratory while the animal painter meticulously sketched zoo specimens, handled bones and taxidermy models and, if she happened to be Rosa Bonheur, yoked and tethered animals in place for extended portrait “sittings.” The often-coercive intimacy of the animal painter’s encounter with his or her subjects has given way to a conservationist’s physical remove.

Particularly amusing camera trap images shared on social media still partake of the delights of creatures imbued with backstories and personalities. The more widely circulated instances of camera-trap photography still rely heavily on the visual tropes of nineteenth-century narrative animal painting to achieve this characterization. Fittingly, a casual Google search calls forth the more artfully composed examples of this genre, wherein concessions are made to techniques such as flash photography and studio lighting (carefully hidden on site). Jonny Armstrong, a professor of Fisheries and Wildlife at Oregon State University, has produced many photographs in this mode, utilizing heavy contrasts that combine the drama of a Landseer deer

combat (fig. 6.3) with the promise of scientific realism offered by the camera trap.³⁵⁶ In one such image (fig. 6.4), a cougar's predatory grandeur occupies the center of a wintery composition. Fine-grained, overexposed expanses of fur, dirt, blood and snow abut against the clean, tawny body of the cougar, maintaining a vigorous hold on life while its prey, a large buck, becomes intermingled with the forest floor, the discrete forms of snow, roots and animal corpse coalescing into shared substance. The simple palette of brown, grey and white tones is only broken up by the bristling, bright red bursts of blood and internal organs on the deer's sprawled stomach. This candid interval of "wild" nature is seductive because of the seemingly unmediated nature of its mediation. As in Courbet's deer paintings, one can hardly imagine the safe presence of human observers or human technology in the face of such wild carnage. Yet the image derives much of its dramatic force from the stagey contrasts established by the lighting, which infuse the nighttime scene with a sharpened focus and coherence. However, Armstrong's cameras are not solely biased in favor of such primal scenarios. In another capture (fig. 6.5), four black Angus cattle with curious gazes congregate around the camera trap, ear tags visibly marking them as domestic beasts at large, showing a desire for direct confrontation not unlike the cattle in an Anton Braith canvas (fig. 6.6). The captures posted online, whether of wild predators or more mundane creatures, tend to focus on "charismatic megafauna," large mammals perceived to be more likable and relatable by human observers than, say, insects or rodents, and which therefore often serve as the "face" of environmental conservation campaigns.³⁵⁷ The familiar stagings of

³⁵⁶ Jonny Armstrong, "Hidden camera traps capture wildlife in Wyoming: An ecologist uses a scientific tool for artistic purposes," *High Country News*, October 2, 2015, <https://www.hcn.org/articles/wildlife-camera-traps-photos>.

³⁵⁷ A team of French ecologists affiliated with the Université Paris-Saclay recently attempted a ranking of the "20 most charismatic species," based on surveys, photographs on zoological garden homepages and pop culture representations, producing a list consisting mostly of "large, exotic [to Western observers], terrestrial mammals" such as lions, leopards and elephants. Céline Albert, Gloria M. Luque, and Franck Courchamp, "The Twenty Most Charismatic Species," *PLOS One*, July 9, 2018. The cougars and bears favored by Armstrong would seem to align

earlier eras of animal painting remain at play: the predatory combat in the photo of the puma, the peaceable “cattle scene” in the capture of the Angus cows. The selection of these photographs for publication from a set of hundreds or thousands is facilitated by this apparent visual legibility, whether or not the practitioner possesses a deep awareness of art history.

In Armstrong’s camera trap photos, we view the world as if it were momentarily depopulated of our bodily presence, experiencing a realm existing outside of our own limited human perceptions. Modern visual technologies seem to render *noumena*, objects-in-themselves, available to our gaze, as Lorraine Daston and Peter Galison observe in *Objectivity*.³⁸ A term drawn from Kantian metaphysics, the *noumena* is an object as it supposedly exists outside of our sensory experience of it. However, the lighting and the selection of these images rather than other, less alluring examples for online publication allows the conventions of the painterly, dramatic canvas to continue structuring our sense of “nature’s” possibilities. Though the primary medium has shifted, nature photography continues to participate in the challenges and fascinations of earlier forms of zoological illustration and animal painting. Camera-trapping thus seems (but only seems) to have circumvented one of the fundamental dilemmas of animal picturing: how to capture the animal subject in its “natural” attitude, uninfluenced by the awareness of a human observer.

The camera trap photograph has nevertheless been attributed with a degree of agency in Western media. It is supposedly gifted with the power to retrieve “lost” species. In one recent image of this kind (fig. 6.7) we see a miniature, russet-grey creature, akin to a comical mouse-deer hybrid, timidly hunched in a brushy forest corner, momentarily still but poised for quick

with these preferences, albeit in a less “exotic,” American context. Cattle are similarly “large, terrestrial and mammalian,” if decidedly not “exotic” by our standards.

³⁸ Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2010).

escape. Its gleaming eye and anxiously primed haunches signal a wary awareness of another presence outside the pictorial frame. The animal, a silver-backed chevrotain (*Tragulus versicolor*), has been visually captured for human viewers for the first time in almost three decades (“*This Elusive Creature Wasn’t Seen for Nearly 30 Years. Then It Appeared On Camera*” reads the captivated *New York Times* headline from the November 11, 2019 issue).³⁵⁹ However, this witnessing only occurred second-hand: biologists affiliated with the Global Wildlife Conservation organization and the Leibniz Institute for Zoo and Wildlife research had placed camera traps in patches of coastal Vietnamese forest where locals had most recently reported possible sightings of the “elusive” animal. The “recovery” by scientists of the chevrotain was conducted as part of a larger Global Wildlife initiative, “The Search for Lost Species.” The Search for Lost Species, according to its website, has “compiled a list of 1,200 species of plants and animals that are missing to science... These lost species are animals or plants that have gone unseen for years or decades and are feared possibly extinct.”³⁶⁰ However, the viewers that are seen to matter according to these press releases are members of the officially sanctioned team of German and Vietnamese scientists rather than the local hunters and forest dwellers who “helped” them to “recover” the chevrotains that they had evidently been encountering in their day-to-day activities for some time.³⁶¹ The images themselves are treated as an achievement for conservationists and lauded as such in Western media.

Such projects desperately seek hope in the face of an unprecedented worldwide loss of organic biodiversity through habitat destruction and climate change. The ability to “see” the

³⁵⁹ Elizabeth Preston, “This Elusive Creature Wasn’t Seen for Nearly 30 Years. Then It Appeared on Camera,” November 11, 2019, <https://www.nytimes.com/2019/11/11/science/vietnam-silver-backed-chevrotain.html>.

³⁶⁰ Global Wildlife Conservation, “Search for Lost Species,” Accessed February 10, 2020, <https://www.globalwildlife.org/search-for-lost-species/>.

³⁶¹ Elizabeth Preston, “This Elusive Creature,” <https://www.nytimes.com/2019/11/11/science/vietnam-silver-backed-chevrotain.html>.

organisms in question, if only briefly, if only in mediated form, provides a kind of reassurance. The photographs are a triumphant relief, proof that a planet of dying ecosystems and homogenizing global capitalism can still yield surprises. Indeed, the camera traps operate on the premise that visible human intervention in these habitats would only discourage the appearance of the animals, or, at very least, cause them to behave in ways they would not otherwise “in the wild.” In a similar and germinal way, the distancing of the human form operative in nineteenth-century animal painting functioned as visual proof of unadulterated wildness.

The scientists’ impulse to locate the human viewer remotely seems to allow for a less compromised mode of depiction even though the animals themselves are often quite aware of the traps and will try to interfere with them. The observer only reenters the picture at the moment of selection, reception and data evaluation.³⁶² The practice aligns with Daston and Galison’s contention that scientific imagery in the twentieth and twenty-first centuries has moved toward a viewer-interpreted framework of “aperspectival objectivity,” wherein a mechanical process, such as an X-Ray or a seismograph, appears to generate images of its own accord and a viewer must then divine their significance (or lack thereof).³⁶³ The machine becomes at once “observer and artist.” Yet considerable human resources are required to separate signal from noise, coherent specimen portraits from disposable glitches. The camera eye records, the scientist observes. The destructive consequences of killing and stuffing biological specimens, of colonizing appropriation of indigenous resources, are apparently minimized (a present day naturalist would

³⁶² See for instance the Snapshot Serengeti Project: <https://www.zooniverse.org/projects/zooniverse/snapshot-serengeti>. Scientists and, in certain cases, digitally recruited citizen volunteers, work their way through a plethora of photographs, of varying levels of coherence and relevance. All too often, the infrared heat detectors record activities of animals unrelated to the study at hand or motion sensors catch the rustling of dead leaves in the breeze. This kinetically generated archive often contains far more incidental images of this kind—numbering in the thousands—than scientifically salient data, hence the frequent use of non-scientist volunteer labor to identify whether or not the desired species appear in frame.

³⁶³ Lorraine Daston and Peter Galison, “The Image of Objectivity.” *Representations* Issue 40 (Autumn 1992): 81-128.

probably not be acquitted of the mass avian casualties committed by Audubon), without entirely abandoning the acquisitive, paternalistic tendency to intervene in the name of “science” and a presumed greater environmental good.³⁶⁴ Animal imaging has thus taken on a modern form commensurate to a regime of digital omnipresence.

³⁶⁴ Jennifer Roberts, “Audubon’s Burden: Materiality and Transmission in *The Birds of America*,” in *Transporting Visions: The Movement of Images in Early America* (Berkeley: University of California Press, 2014), 69-116.

Figures:



Figure 6.1. Walton Ford, *Visitation*, color etching, aquatint, spit-bite and drypoint on paper, 2004, Smithsonian American Art Museum.



Figure 6.2. Thierry Bisch, *Propithecus Coquereli*, Tempera and oil on canvas, 2016.



Figure 6.3. Edwin Landseer, *Morning (Two Dead Stags and a Fox)*, Oil on canvas, ca. 1853, Photo courtesy of the Philadelphia Museum of Art.



Figure 6.4. Jonny Armstrong, *Cougar and mule deer*, Camera trap photograph with studio lighting, ca. 2013-15.



Figure 6.5. Jonny Armstrong, *Cattle*, Camera trap photograph with studio lighting, ca. 2013-15.



Figure 6.6. Anton Braith, *Cows being Watered*, Oil on canvas, 1878.



Figure 6.7. SIE/GWC/Leibniz-IZW/NCNP,xk, “A silver-backed chevrotain, once thought “lost” to science, spotted by a camera trap.” New York Times, Nov. 11, 2019.

Bibliography:

Albert, Céline, Gloria M. Luque and Franck Courchamp. “The Twenty Most Charismatic Species.” *PLOS One*, July 9, 2018.

Armstrong, Jonny. “Hidden Camera Traps Capture Wildlife in Wyoming: An Ecologist Uses a Scientific tool for Artistic Purposes.” *High Country News*, October 2, 2015.
<https://www.hcn.org/articles/wildlife-camera-traps-photos>.

Daston, Lorraine and Peter Galison. “The Image of Objectivity.” *Representations* Issue 40 (Autumn 1992): 81-128.

Daston, Lorraine and Peter Galison. *Objectivity*. New York: Zone Books, 2010.

Global Wildlife Conservation. “Search for Lost Species.” Accessed February 10, 2020.
<https://www.globalwildlife.org/search-for-lost-species/>.

Preston, Elizabeth. “This Elusive Creature Wasn’t Seen for Nearly 30 Years. Then It Appeared on Camera,” *New York Times*, November 11, 2019.
<https://www.nytimes.com/2019/11/11/science/vietnam-silver-backed-chevrotain.html>.

Roberts, Jennifer. “Audubon’s Burden: Materiality and Transmission in *The Birds of America*.” In *Transporting Visions: The Movement of Images in Early America*, 69-116. Berkeley: University of California Press, 2014.

Tomkins, Calvin. “Man and Beast: the Narrative Art of Walton Ford,” *The New Yorker*, January 26, 2009. <https://www.newyorker.com/magazine/2009/01/26/man-and-beast>.

Zooniverse. “Snapshot Serengeti.” Accessed June 22, 2020.
<https://www.zooniverse.org/projects/zooniverse/snapshot-serengeti>.