

Man's Best Fiend: Evolution, Rabies, and the Gothic Dog

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Introduction

This essay traces the changing cultural significance of the dog caused by the interaction of intellectual history (evolutionary theories), social and medical history (the rabies epidemic and anti-vaccination movement), and literary history (Gothic fiction) in late Victorian England. It is my aim here to tie together these interacting strands of Victorian culture by showing how pessimistic associations of Darwin's evolutionary theory that surfaced in the latter half of the nineteenth century influenced new and disturbing ideas about the dog. Essentially, degeneration theories emerging from Darwin's theory, when connected with the spread of disease, led to a heightened anxiety about the possibilities of regression in terms of humanity's common origin with animals. Indeed, this paper will argue that rabies – a disease that caused fear and dread in the English populace during the 1870s onwards – became a literary Gothic trope in the late-nineteenth century because it was associated with the bodily pain of infection, the biting trope, and human-animal transformation. The horror of the virus was implicit in its manifestation, its mode of transmission (via the dog), and in the metamorphosis of its victim. From health to sickness, from sanity to perceived madness, the rabies sufferer would undergo horrific changes in body and mind before experiencing a dreadful death.

Prior to the rabies epidemic of the 1870s, the dog had become a reliable and much-loved human companion as well as an icon of moral virtue. As people acquired the ability to create, alter, and improve dog breeds through artificial selection, which represented the kind of practical scientific success that supported an optimistic view of evolutionary progress, the widespread fear of rabies caused a shift in the cultural significance of the dog. During and following the 1870s, scientific, medical, and literary discourses interacted to shape and reinforce the darker mood of the later historical period, leading to a Gothicization of the canine in literature. Thus, as rabies took hold of the public imagination, the dog acquired more negative connotations. No longer simply a symbol of loyalty and faithfulness,¹ the dog took on the role of aggressor as well as pacifier. If the dog was loved, it was also despised and feared, and it was this dual rhetorical function of the animal that allows for Gothic interpretations of its anatomy and nature. As I will endeavour to show, it was this dual rhetorical function of the animal that allowed Gothic interpretations of its anatomy and nature in popular late Victorian fiction such as *Dracula* (1897) and *The Hound of the Baskervilles* (1901).

The first dog show held in Britain, in Newcastle on 28 June 1859, just five months before Darwin published *On the Origin of Species*, presented dog owners, scientists, and breeders of show animals with creative breeding possibilities. However, while breeding dogs for shows became a popular and fashionable pursuit in middle-class society, the transmission of rabies simultaneously allied the dog with disease, dirt, and death. Showing and appreciating the aesthetic qualities of the dog at dog shows masked the fact that man's best friend could so easily become his most deadly enemy.² Interestingly, however, while shows rendered dogs more physically visible to the public, werewolves and vampires in fiction manipulated the dark side of the animal – rabies – into a fictional device for horror. The dog, that is, took on a Jekyll and Hyde cultural significance.

If Darwin's evolutionary science suggested that animals, such as dogs, are our biological kin, it also often argued that evolution was the source of biological progress.³ But by the 1890s, scientific thinkers such

as Max Nordau in his bestseller *Degeneration* (1895) also suggested that humans were capable of regression into vestigial animal states. Thus, by examining the cultural significance of rabies, I am able to understand the Gothic dog, werewolf, and vampire figures as manifestations of anxieties about human degeneration.

Moreover, rabies lent itself both physiologically and conceptually to the ambiguity of the Gothic language that dominated the medical discourses in which it was discussed because it literally transcended the physical bodily limits between human and animal, disrupting and displacing the boundary between reality and fiction.⁴ Literary and cultural theorists such as Cyndy Hendershot have argued that Gothic bodies break down the demarcations between animals and humans, consuming and disrupting established notions of what it means to be human.⁵ The metamorphic Gothic body as defined by critics such as Kelly Hurley,⁶ explores the limits of the human body in a state of transition and on the cusp of monstrous, inhuman existence. The theoretical distinctions between these states of being, determine the contrast between healthy and sick, or the mutable dichotomy between normal and abnormal. My goal is not to reject recent theoretical readings of the Gothic body, but rather to broaden the scope of this area of research by providing historical context and establishing that while the hunt for human origins was in progress, another cultural revolution was changing perceptions of the dog.

The Dog

Up until the middle of the nineteenth century, in art and literature the dog was perceived as an animal that emblemized unwavering loyalty, faithfulness, and dedication.⁷ The historian Paul White points out that while animals such as frogs were used freely in Victorian animal experimentation because they inspired little pity, an 1874 experiment involving dogs caused a public outcry, and those involved were prosecuted by the Royal Society for the Prevention of Cruelty to Animals. As White points out, "dogs embodied Victorian values more fully and consistently than did any other creature [and] were ranked among the highest of ani-

imals because of their moral nature.”⁸ Eminent among animals, then, the dog adopted an almost-human persona, and it did not escape Darwin’s notice in *The Descent of Man* (1871) that, along with their biological development, dogs had advanced, symbiotically with humans, in moral values:

Our domestic dogs are descended from wolves and jackals and though they may not have gained in cunning, and may have lost in wariness and suspicion, yet they have progressed in certain moral qualities, such as in affection, trust-worthiness, temper, and probably in general intelligence. (*Descent* 102)

In the 1870s and ’80s, science considered the dog one of the most advanced species in the quality of its character. George Romanes put the dog above the monkey in the frontispiece diagram of his influential study *Mental Evolution in Animals* (1883) and elevated it in anthropological terms as humankind’s closest animal kin in terms of social skills, imagination, and perception. By placing the dog at the top of the scale of life, and noting that their “products of emotional development” are complex in their ability to feel and exhibit “shame, remorse, [and] deceitfulness,”⁹ Romanes demonstrated that the dog had a special place in the hearts and minds of Victorians.

The dog was a central concern for evolutionary thinkers.¹⁰ Having received a manuscript on the origin of the dog, Charles Lyell wrote to Darwin on 27 September 1860:

I am haunted with a kind of misgiving, which bye & bye I shall be able to express more clearly – that the multiple origin of the dog will furnish an argument for the multiple origin of a Mammal or of Man. Do try to consider it that way, for I incline to go far with Hooker (& with you?) in believing that whatever is true in domestication is essentially possible in Nature also, & I am not sure that you confine the multiple origin of the dog to Man’s selection.¹¹

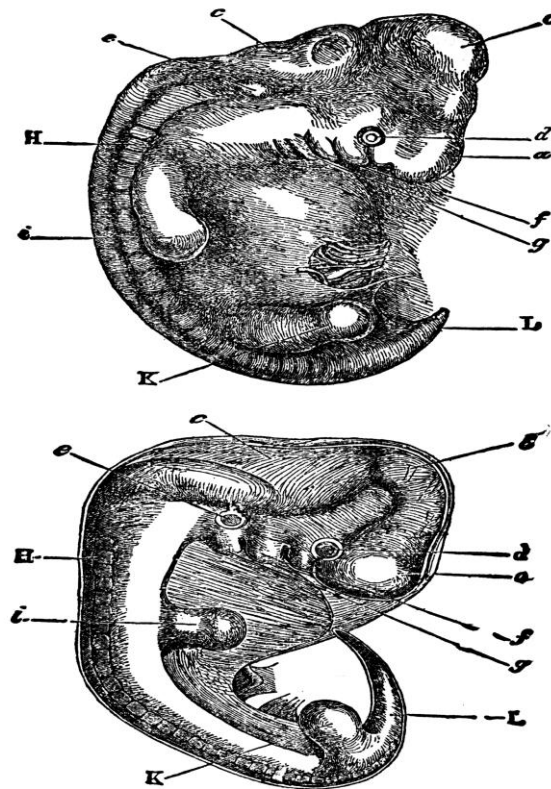


Fig. 1. Upper figure human embryo, from Ecker. Lower figure that of a dog, from Bischoff.

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| <p>a. Fore-brain, cerebral hemispheres, etc.
 b. Mid-brain, corpora quadrigemina.
 c. Hind-brain, cerebellum, medulla oblongata.
 d. Eye.
 e. Ear.</p> | <p>f. First visceral arch.
 g. Second visceral arch.
 h. Vertebral columns and muscles in process of development.
 i. Anterior { extremities.
 k. Posterior {
 l. Tail or os coccyx.</p> |
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Figure 1. Darwin's diagram of the similarity between human and dog embryos in *The Descent of Man* (1871).

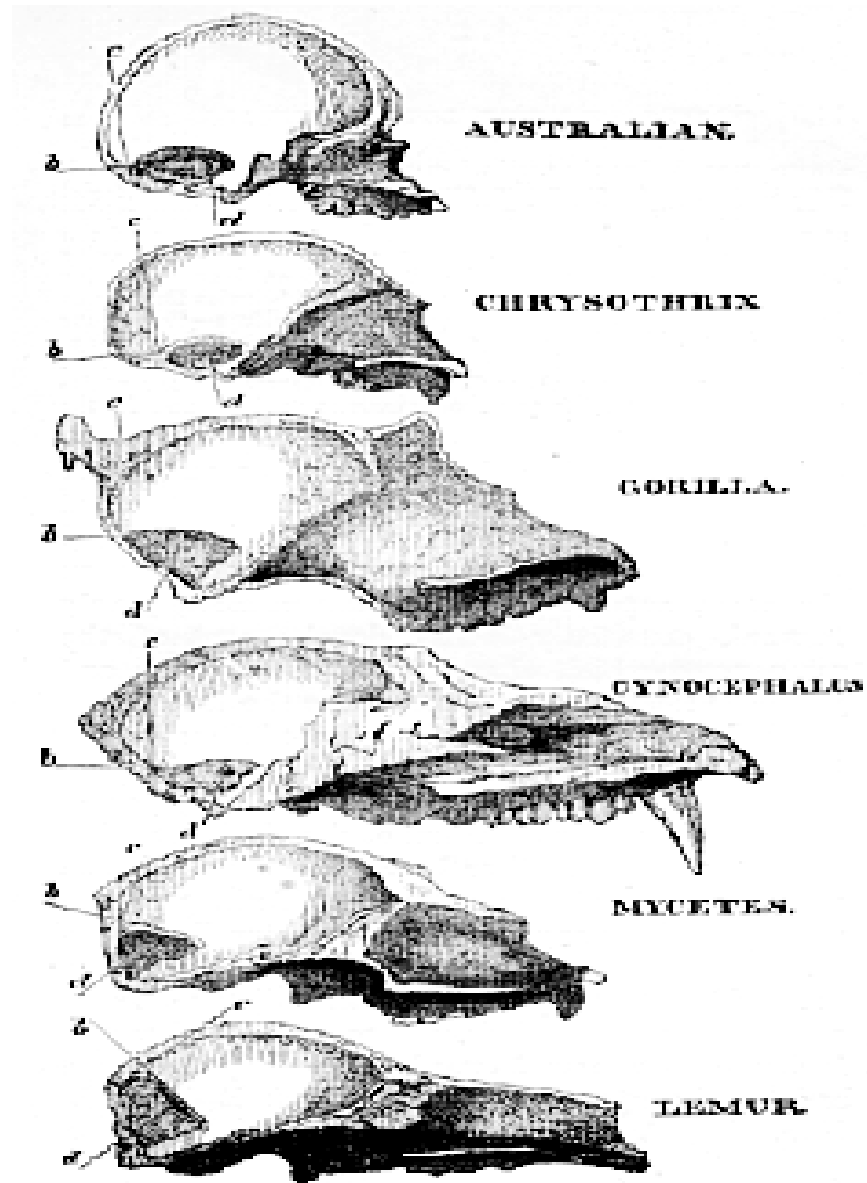


Figure 2: Diagram of the skull shape of the cynocephalus in comparison with various species of primates and man in Huxley's *Man's Place in Nature* (1863).

Surprisingly, the sceptical Lyell attempts to convince Darwin here that the breeding techniques used by humans in the domestication of the dog are vital evidence of how evolution works to alter the attributes and characteristics of all living organisms.

Darwin seems to have considered Lyell's argument carefully; in his conclusion to *The Descent of Man*, he used the dog's embryology (*Figure 1*) as evidence of the biological bond between humans and animals:

the close resemblance of the embryo of man to that, for example, of a dog – the construction of his skull, limbs and whole frame on the same plan with that of other mammals, independently of the uses of to which the parts may be put – the occasional re-appearance of various structures, for instance of several muscles, which man does not normally possess, but which are common to the Quadrumana – and a crowd of analogous facts – all point in the plainest manner to the conclusion that man is the co-descendant with other mammals of a common progenitor.¹²

Both Darwin and T.H. Huxley placed great emphasis on the dog in their evolutionary writings.¹³ Huxley's work on a species of cynocephalus (apes with doglike heads) in his seminal *Man's Place in Nature* (1863) synthesized the human's anatomical function with that of the dog (*Figure 2*) most explicitly in its representation of a seemingly genuine hybrid between human's closest animal relative (the ape) and the canine (the animal long considered as "man's best friend"). As a physiological chimera, the cynocephalus embodied both dog and human in one apish animal. As something of a "missing link,"¹⁴ it featured notably in the century's representation of humankind's evolutionary struggle.¹⁵

In *Descent*, Darwin argues that humankind's ancestry is evident in the transmission of disease between humans and animals, including dogs, which reveals the kinship between all species:

Man is liable to receive from the lower animals, and to communicate to them, certain diseases, as hydrophobia, variola, the glanders, syphilis, cholera, herpes, &c.; and this

fact proves the close similarity of their tissues and blood, both in minute structure and composition, far more plainly than does their comparison under the best microscope, or by the aid of the best chemical analysis. (*Descent* 23)

Darwin's allusion to hydrophobia first (as though this were the disease foremost on his mind) would have led his Victorian reader to associate his remarks with a particular "lower" animal, the dog.

Rabies

While Darwin's evolutionary theory was often interpreted to mean that natural as well as artificial selection was inevitably progressive, by the 1870s the dark side of artificial selection was manifest in the transmission of rabies. Rabies' trans-species propensities not only highlighted that humans and animals were incontrovertibly closely related, as Darwin had stated in *Descent*, but also that humans could not wholly govern the laws of nature or indeed the dog itself once it had contracted the disease. Rabies, then, was emblematic of nature out of control.

Victorian physicians did not underestimate the significance of rabies. In his introduction to *Rabies and Hydrophobia* (1872), for example, George Fleming asserted:

Of all the maladies that are transmissible from the lower animals to man, there is perhaps not one which possesses so much interest, *nor a knowledge of which is so important for the human species*, as that which is popularly, though erroneously, designated *Hydrophobia*. It is even doubted whether any of the many diseases which afflict humanity, and are a source of dread, either because of their painfulness, their mortality, or the circumstances attending their advent progress, can equal this in the terror it inspires in the minds of those who are cognisant of its effects, or who chance to be exposed to the risk of its attack, as well as in the uniform fatality which terminates the distressing and hideous symptoms that characterise the disorder.¹⁶ (emphasis added)

By stressing the extent to which rabies acted upon human society as a source of both alarm and horror, Fleming also acknowledges the importance of understanding this disease in order to benefit humankind. Notably, his words manifest a remarkable use of language replete with Gothic imagery, such as "dread," "pain," and "terror." By using such terminology, he not only clarifies and ratifies the effect of rabies on the Victorian consciousness but his sensationalism actually seems to augment the growing anxieties about rabies and zoonosis. This type of crossover in the authorial language used in Gothic and medical texts is what sustained and strengthened widespread panic about the rabies virus.

Speculation on the causes, symptoms, methods of transmission, and treatment of rabies increased enormously throughout the latter half of the nineteenth century. Until Pasteur concentrated his medical research on rabies, there were few clear answers to the questions surrounding what rabies was, where it had come from, and what could be done to eradicate it (and the fear it caused) from British society. The vast volume of conjecture generated by gossip and rumours, when few hard scientific facts existed, gradually found its way into political and legal discourse. During the 1870s and 1880s, various parliamentary committees for the House of Lords were set up in order to tackle the spread of the disease and to discuss possible preventative measures, such as muzzling and inoculation.¹⁷ In one such government report published in 1878, physician Thomas Dolan argued fervently that the

superstitions respecting hydrophobia have lasted longer in popular belief almost than those of any other disease [...] Quacks of all kinds have not failed to avail themselves of popular ignorance, and by the boasted possession of mysterious remedies to prevent the operation of the virus, have, as Sir Thomas Watson says, sold their nostrums at no cheap rate to those who, having been bitten by the dog, are weak enough to be bitten again by the quack. We have to make war against those vampires of modern society, who make a trade of fattening on the sufferings and weaknesses of humanity [...] if there is

any hope of recovery it must come from legitimate medicine.¹⁸

Dolan's description of medical "quacks" as the real vampires in society is a clever reversal of the common association of rabies and Gothic tropes. It reveals a culture in which rabies had already become mythic in its effects, causes, and symptoms, and its descriptions imbricated with Gothic imagery. The extent to which the disease is seen to have been exploited by trusted – though fraudulent – medical practitioners is notable. Here, in reality, Dr. Jekyll has become a Mr. Hyde.

Rabies posed two main symbolic threats to those who had read or heard of the sensational stories published in the press. First, it threatened to disrupt and destabilize social order – the biology of the infected victim (be it human or animal) exceeded social and cultural limits and laws. Second – and this is a point I wish to stress in terms of rabies and late Victorian werewolf and vampire fiction – rabies emerged from the wilderness to invade organized spaces in the same way that the disease infiltrated the human body. As the disease requires a sharp tooth or needle to penetrate the skin and infect the body, rabies ideologically and symbolically characterized anxieties about attack and invasion in the corruption of racial and biological purity as well as the contamination of the victim's bloodstream.

Harriet Ritvo has noted that the prevalence of the rabies virus by no means warranted or reflected the level of alarm it caused, and argues that "the attention it commanded may have been the result of its complex and sometimes conflicting rhetorical functions rather than of its potential impact on public health."¹⁹ An example of Ritvo's allusion to the disease's "conflicting rhetorical functions" is its presentation in newspaper reports. On the one hand, newspapers gave space to correspondents such as Ouida, the animal rights activist, dog owner, and prolific Victorian novelist, who described the hysterical reaction to rabies as a "disgraceful panic that has made London the laughing-stock of Europe."²⁰ On the other, the popular press propagated myths and enflamed the sense of public hysteria about rabies, in order to sell copy.²¹ The fact that so many diverse opinions existed as to the true nature and origins of the disease led to apprehensive polemical reports of

possible outbreaks as well as sightings of rabid dogs published daily in the national newspapers. The media often acted as a non-biological form of contagion as it provided, perhaps unintentionally, a forum for those wishing to sensationalize the disease, namely disingenuous medical practitioners; or as Fleming remarks, "those vampires of modern society." In fact, partly due to such reports in the media, a disproportionate level of fear and alarm arose considering that the statistics showed that it was extremely rare in humans: at the height of the epidemic (if we can call it such) in 1877, rabies had claimed only 79 human lives.²²

Its rarity, according to Ritvo, "enhanced the symbolic significance of a rabies outbreak,"²³ and so the horror of the virus in the Victorian imagination was paradoxically augmented by its absence. As a disease linked with encephalitis (acute inflammation of the brain) and madness, rabies was associated with sin, corruption, and unholiness, even described by one newspaper as "evil,"²⁴ a term used because the disease had clearly adopted its own biological and political agenda. By evolving into a disease capable of controlling (or at least influencing) the mind of its victim, rabies seemed to propagate by manipulating the brain; the "madness" caused by the virus enables it to spread easily and quickly, urging its animal host to bite innocent humans and other unsuspecting animals. During the 1870s the bite was understood to be paramount to the transmission of the disease. W.M. Hunting, for example, wrote in a letter to the editor of *The Times* in April 1874 that rabies was contagious "only by a bite,"²⁵ suggesting that a fear of biting, or being bitten by some animalistic other was partly what caused the irrational fear of rabies. This anxiety about being bitten was picked up and exploited in what has become the most iconic vampire narrative of the nineteenth and twentieth centuries, Stoker's *Dracula*. Capitalizing on fears about the transmission of rabies, Stoker provided his vampire with distinctly canine attributes.

Dracula's Canine Physiology

Although critics have discussed Dracula's physiology in terms of prevalent degeneration theories of the 1880s and '90s, they have neglected to

explore it with regard to the evident animality of the vampire's appearance.²⁶ However, Stoker's engagement with physiognomy suggests that in terms of race and species, Dracula is depicted as archetypal animal other, as Harker's first description of him shows:

a strong – a very strong – aquiline, with high bridge of the thin nose and peculiarly arched nostrils; with lofty domed forehead, and hair growing scantily round the temples, but profusely elsewhere. [...] The mouth, so far as I could see it under the heavy moustache, was fixed and rather cruel-looking, with peculiarly sharp white teeth; these protruded over the lips, whose remarkable ruddiness showed astonishing vitality in a man of his years [...] his ears were pale and at the top extremely pointed. (*Dracula* 28)

Dracula's "sharp white teeth" are reminiscent of canine teeth, and indeed Stoker specifically refers to vampire teeth as "canine" several times in the novel. Moreover, the sharpness, length, and whiteness of vampire teeth are made much of throughout the narrative, particularly in the transformation of Lucy from human to vampire. In *Descent*, Darwin describes canine teeth in the human as "perfectly efficient instruments for mastication" but categorizes them as "rudimentary" because the canine tooth "no longer serves man as a special weapon for tearing his enemies or prey" (*Descent* 59). In the vampire, canine teeth are both functional and practical accoutrements, as they are for the dog and other predatory animals, in the act of biting. The bite in *Dracula* has a specific rhetorical significance, as it does in the polemic about rabies; it is a penetrative act that gives the vampire/ dog control over its victim. Stoker purposely describes the teeth that represent danger to humanity as "canine" and, by doing so, demonstrates that they have a unique function within the narrative.

Moreover, the lengthening of the human "canine" teeth is a manifestation of the vampire's desire to bite, to be cannibalistic and animalistic. That Lucy's and Mina's canine teeth lengthen in their vampiric state is important to an understanding of how, as anthropologist David Gilmore

suggests, "The gaping, tooth-lined, flesh-tearing mouth is a universal synecdoche for monstrous predation."²⁷ Dracula's specifically-termed "canine" teeth provide further evidence of the vampire's dog-like state and their ability to transmit a deadly virus. Monstrous human, in these terms, equals monstrous dog. Although the canine tooth, notes Darwin, "no longer serves man as a special weapon" (*Descent* 59), for the human-animal vampire it remains an important feature of transgression and horror. Only through the bite is the human transformative; the vampire's victim becomes a regressive, animal, canine creature capable of biting others and spreading the virus to other humans.

Monstrous humans are made strangely familiar to the reader in *Dracula* through Stoker's use of canine attributes. Dracula is humanized insofar as he is recognizable in human form; however, the rest of his anatomy is dog-like. Even the vampire's ears are pointed in a peculiarly canine way, and Dracula's hairy palms contradict Darwin's observation that in humans "the palms of the hands and the soles of the feet are quite naked" (*Descent* 37). Indeed, for Darwin as for Stoker, hirsuteness is an atavistic feature. Like the claw-like nails of the dog, Dracula's nails are "long and fine, and cut to a sharp point" (*Dracula* 28), a feature that, as the prominent nineteenth-century anatomist Richard Owen explained, belongs to cynopodous (dog-footed) animals.²⁸ Betrayed by his "vestiges of a former condition" (*Descent* 34), for the vampire as for the dog, pointed ears, sharp white teeth, claws, and body hair are necessary features of accoutrements to carnivores.

The vampire's behaviour further reveals its animal nature. The snarl,²⁹ for example, refers directly to Charles Bell's "snarling muscles" in his hugely influential study, *The Anatomy and Philosophy of Expression as Connected with the Fine Arts* (1806). Bell makes clear in his writing that from his research the physical function of the "snarling muscles" are "quite peculiar to the ferocious and carnivorous animals" whose "sole office is to raise the upper lip from the canine teeth."³⁰ Nevertheless, it is in *The Expression of the Emotions in Man and Animals* (1872) that Darwin discusses the significance of the snarling muscles in the dog most fastidiously: "When a dog is

on the point of springing on his antagonist,” he observes, “he utters a savage growl; the ears are pressed closely backwards, the upper lip is retracted out of the way of his teeth, especially his canines.”³¹ The vampire hunters’ encounter with Dracula evokes “a horrible sort of snarl” from the vampire, which shows his “eyeteeth long and pointed” (*Dracula* 393). Similarly, when Lucy realizes that the vampire hunters have found her, her fury finds expression not only in the snarl, but also in the growl:

When Lucy [...] saw us she drew back with an angry snarl, such as a cat gives when taken unawares; [...]. With a careless motion, she flung to the ground, callous as a devil, the child that up to now she had clutched strenuously to her breast, growling over it as a dog growls over a bone.
(*Dracula*, 271)

Although Lucy’s snarl here represents a feline attribute, the growl is a distinctly canine trait. In an act of aggression, Lucy growls over the child she has stolen in order to feed as a dog growls over its quarry. Lucy has become inhuman, animalistic in a noticeably canine way. Darwin notes that growling is a sign of anger in the dog (*Descent* 107) and the hallmark of a predatory animal. In the vampire, it is obviously emblematic of regressive behaviour, a vestige of the wildness from which humans once emerged.

With Dracula’s metamorphosis into a dog during his escape from the passenger ship, the regressive link between human and dog is made literal. The “immense” black dog that arrives on English shores is the same creature, we assume, as that which attacks and kills a large mastiff, ripping out its throat and slitting its belly “with a savage claw” (*Dracula* 108). Other instances in the novel of canine references are even stranger and more arbitrary than these. Renfield’s behavior, for example, is markedly doglike on several occasions. Controlled remotely by Dracula, Renfield fawns, sniffs and licks like a dog. Dr. Seward finds him “lying on his belly on the floor licking up, like a dog, the blood which had fallen from my wounded wrist” (*Dracula* 184). This species-blurring in Gothic literature acts to create a sense of dread that permeates the text, evoking and playing on the horror of the rabies epidemic just ten years earlier.

Werewolves, Vampires, and the Anti-Vaccination Movement

Werewolf stories are an important marker for rabies between the 1870s and 1890s, because they explicitly articulated the sense of terror and horror usually associated with the virus during this period. In *A Roman Mystery* (1899) by Richard Bagot, Camillo Montelupi has the power to terrorize Helen, the novel's female protagonist, with his lycanthropic "cruel glare," as he manages to "transfix her and chain her to the spot by the force of an unfathomable depth of horror."³² His "vicious, wolf-like grin, which had at the same time a wholly human malignity in it" (283) prefigures a brutal attack upon her. In the following passage from the novel, Bagot manipulates Helen's fear of being bitten in order to create tension. Interestingly, it is *she* who has become "mad" and "wild" at the prospect of being mauled by the human-wolf that desires to sink its teeth into her flesh:

Almost mad with terror, and conscious only of a wild desire to free herself from the terrible creature before her, Helen darted forward in a vain attempt to pass him and rush to her husband's room; but, with a lightening-like motion, the "lupomanaro" threw himself upon her, and uttering shriek upon shriek, she sank to the ground struggling in his clutches. She felt his hot breath upon her face, and hands tearing at her neck and chest, and then she knew no more, for, consciousness failing her, she fainted away, and, as her head fell back in his grasp, the "lupomarano," with a fierce snarl of rage, fixed his teeth in her shoulder. (283)

Camillo is the insane brother of Ludovico Montelupi, Helen's husband, kept in secrecy because he "has been mad all his life, with the madness of the Montelupi" (285). With a diseased mind and acting stereotypically like a rabid dog, he evokes feelings of fear, terror, and disgust in his victim, puncturing her skin and drawing blood, "which maddened Camillo to a frenzy" (283). More striking in terms of symbolic biting and inoculation is that Helen's shoulder is swollen and painful following the bite, as her body is in danger, mythologically speaking, of assuming Camillo's wolfish appearance. Helen's frenzied response to Camillo's insanity is, conceivably, what

endangers her life rather than any real danger from the bite. After all, though he believes he is, Camillo is *not* a ‘real’ werewolf and can inflict no actual harm on her, suggesting that even normal (uninfected) humans can regress.

Other werewolf stories warn of the dangers of humans returning to their natural habitat: the forest. In *The Werewolf* (1896), Clemence Housman reverses this principle, yet develops the same fundamental theme. Housman’s werewolf may enter the domestic sphere of the house disguised in her human form, indeed may kiss and “mark out” her victim, yet she cannot attack her prey until they wander into the feral space of the nearby forest. Thus, this werewolf narrative proposes that evil (or disease) inhabits the wilderness, merely waiting for its victim to stray innocently from the organized space of the house into the dangerous (infectious) forest. Unsurprisingly, when the marked prey enters the woodland, they are never seen again, dead or alive, for the horrors of such a death are enhanced by the absence of description. *The Werewolf* seems to imply that what lurks in the undergrowth “out there” and encroaches on civilized or domesticated spaces represents a threat to humankind because it symbolizes the imminent possibility of human regression. Like rabies, it worked to endanger the integrity of human culture and biology.

Significantly, the werewolf figure collapses the gap between human and dog, and like the vampire, the method of transmission of the werewolf virus is the bite. More explicit than the vampire in its canine features, the werewolf’s shapeshifting abilities suggest that the disease can cause degeneration not just into doglike status, but into the dog’s progenitor, the wolf (as Lyell noted in his evolutionary writings). This type of invasion is realized, at least in fictional terms, the following year with the publication of *Dracula*, a novel in which the vampire pervades the organized space of imperial England, disrupting the seat of power (London), from the wilderness of Eastern Europe, a blank space on England’s colonial map. Like *Dracula*’s invasion of English soil, the rabies virus invades both English society, causing mass hysteria, and the interior of the body, thus causing both biological and social chaos. England and the human body are therefore symbolically aligned.

Arthur Conan Doyle's dark detective story, *The Hound of the Baskervilles*, first published in *The Strand* in August 1901, plays on precisely the same fears and anxieties as the werewolf and vampire narratives. In this dark tale of murder and deceit, Holmes and Watson investigate the case of a dog believed to haunt the wilderness of the Dartmoor moorland in search of its Baskerville victims. Although initial uncertainties remain as to whether the creature is animal, machine, or ghost, by the end of the story Holmes reveals that the dog has been designed by humans to attack and destroy at will – bred to kill – and is therefore a biological weapon. More elusive and powerful than traditional methods of murder, the dog is an almost untraceable weapon, acting as a psychological spectre that emerges from the moorland fog literally to terrify its victim to death. Although finally rationalized by science, this fictional account of the black dog legend of British folklore³³ makes use of Gothic imagery and rhetoric in much the same ways as medical and legal texts made use of rabies. Like the black dog into which Dracula metamorphoses on the ship to England, the hound of the Baskervilles is both real and spectral, respectable and diabolical, mysterious and rationalized, encapsulating, perhaps, the dichotomy in the figure of the dog.

The Hound finally proves the extent to which breeding can transform and manipulate the biological structure of the dog in order to do human-kind's bidding; it is therefore a manufactured monster using "artificial means to make the creature diabolical" and in this case the "strongest and most savage" the breeders could produce.³⁴ Significantly, the hound also highlights the horror of the biting motif of the rabid dog. Finally faced with their canine nemesis in the thick fog of the moor at night, Holmes and Watson witness the materialization of "the dreadful shape" of the dog, at this point not knowing whether it is real or spectral:

"A hound it was, an enormous coal-black hound, but not such a hound as mortal eyes have ever seen. Fire burst from its mouth, its eyes glowed with a smouldering glare, its muzzle and hackles and dewlap were outlined in flickering flame. Never in the delirious dream of a disordered brain

could anything more savage, more appalling, more hellish,
be conceived than that dark form and savage face which
broke upon us out of the wall of fog.”³⁵

This scene is designed to evoke terror in the reader of the rabies generation, for though the dog is not a ghost, this nightmarish apparition is, more terrifyingly, a real dog, bred and designed by human hands to kill human prey. Furthermore, it associates madness and regression with the dog's bite. The Gothic, through *fin-de-siècle* detective fiction, has come full circle, and humankind's desire to control evolution has ended by creating monsters, not progress. Darwin's science supports the crossing of biological and cultural boundaries.

Although in *Dracula* Lucy's veiled encounters with the vampire do not reveal the precise method of transmission of the virus, there is another instance of harmful exchange of bodily fluids relating both to the spread of disease and the mingling of tissues between organisms. Van Helsing's use of the intravenous blood transfusion is an attempt to save Lucy's life, yet the penetration of the needle into her skin only secures her premature death because her transgressive desire to “marry three different men or as many as want her”³⁶ has been symbolically realized. While Lucy's biological ties with the men who donate their blood intravenously to save her are unsanctioned by Victorian society's moral values, this type of medical assistance, the subcutaneous injection itself, represents in *Dracula* a kind of “legitimate bite.” The penetration into Lucy's skin is a dangerous and unwholesome act.³⁷ Pasteur's vaccination caused serious concerns rooted in the idea that, like the rabid bite, he was injecting the body intravenously with a deadly disease and, in the process, combining human and animal fluids. The novel thus plays upon the anti-vaccinators' argument that inoculation fails to distinguish between good medical and bad animal practices.

Nadja Durbach does not mention rabies in her otherwise superb book *Bodily Matters: The Anti-Vaccination Movement 1853-1907* (2005), despite concentrating a significant section of her work on the 1870s, the period when concern about the virus was at its height. However, her research shows

that by the late 1890s the anti-vaccination movement was still extremely active, prompting the government to introduce the 1898 Vaccination Act (which allowed people to obtain a certificate of exemption on grounds of conscience), just a few months after the publication of *Dracula*. Indeed, just as outraged doctors, such as Fleming, accused "quacks" of being the "vampires of modern society," anti-vaccinators employed the figure of the vampire as an analogy for the evils of vaccination. Durbach attributes this to the making of a "Gothic body":

By scarifying the flesh and introducing disease into the system, vaccination threatened strongly held beliefs regarding bodily integrity and blood purity. It also wielded the power, anti-vaccinators maintained, to transform the individual into something 'other,' a monstrous version of the self. On these grounds, anti-vaccinators attacked vaccination as bodily assault, a violent disruption of the physical integrity of the individual that was both harmful to physical and to spiritual health. In expressing their concerns about the permeability and transformability of the individual body and a trend toward what they considered "violationism," anti-vaccinators participated in the construction of a Gothic body.³⁸

Through its ability to bite and transform its victim, the vampire thus becomes a vehicle for ideological, political, and biological renderings of pathological transmission. Durbach has further argued that "Stoker's novel, in its concern with multivalent, dangerous, penetrative sexualities, explicitly eroticized bodily violation in ways at which the anti-vaccination campaign only hinted," showing that the vampire figure gives emphasis to concerns about the penetration of skin in order to spread or control disease.³⁹ This is evident, for example, in the scene in which Dracula forces Mina to drink his blood. The horror of this act works on two levels. First, although not directly related to the biting motif, this act does temporarily transform Mina into a vampire, threatening the integrity of her human body. She gives in to her animal urge and, since she is not yet endowed with the vampire's (canine)

teeth that would facilitate her future cannibalistic endeavours, Dracula opens a “vein in his breast” with his “long sharp nails” (*Dracula* 371). Second, the novel manifests deep-seated anxieties about the exchange of bodily fluids. Along with the apparent sexual connotations of the act lies unease about the implications of law-enforced immunization. It is the *exchange* of blood which enables Dracula to begin to change Mina into a vampire, to make her “flesh of my flesh; blood of my blood; kin of my kin” (*Dracula* 370).

Stoker’s novel mirrors a world in which an affective anxiety of biting supersedes a fear of the transmission of disease; the bite itself, like the injection, is a terrifying and improper act. After all, if one’s blood is not one’s own, then to whom does it belong? Moreover, what may one become once the blood of another creature has been blended with one’s own? Mina’s ingestion of Dracula’s blood explicitly substantiated anti-vaccinators’ concerns about the risks of blending human and animal fluids. The rabies vaccine was conveyed to its human beneficiary in animal fluids, which meant inserting part of the animal into the human. To the anti-vaccinators, this posed a profound moral and conceptual problem, at least partly because they feared that the patient would adopt animal behavior or appearance.⁴⁰ In *Dracula*, these fears are manifest in the transformed vampire (Lucy) and the transforming vampire (Mina).

An intrinsic fear of reverting to atavistic animal behavior, then, based on a fear of infected blood carrying an animal taint, underpins Victorian society’s rejection of mandatory vaccination. The vociferous debate about humankind’s origins deepened anxieties about the symbolic act of breaking the skin and entering the interior of the body in the form of either vaccination or biting, for this act reminded the anti-vaccinators of humankind’s close biological ties with the animal world. The fear of what Huxley termed “retrogressive metamorphosis”⁴¹ remained alive in the opposition to the use of animal-based vaccines. Could this be why fear of regression became such a prominent theme of the movement?

At least for those Victorians campaigning against compulsory vaccination, it had become clear that along with the possible benefits of the vaccine came disadvantages that far outweighed its usefulness. Anti-vaccinators ob-

jected to the animal material (usually lymph or mucus) used to convey the vaccine because, they argued, apart from the possibility of adopting animal traits, animal matter could convey diseases yet unknown to humans. It was not necessarily only Darwin's argument that zoonosis proved the close similarity between animals and humans, then, that caused the Victorians such concern about diseases such as rabies; it was fear of the unknown, fear of breaking down biological barriers that could not be rebuilt, and a deep-rooted fear of becoming inhuman and inhumane.

While the human is an incidental rather than maintenance host of the rabies virus, and the infection in humankind is a dead-end, the continuation of the *vampire* race secures the metamorphosis of the human *into* a monster capable of biting and therefore infecting others. Gothic creatures that bite and cause transmutation in their victim, then, must be understood to be transmitting metaphorical if not literal disease, which like the vaccination, sparked fears about human regression and degeneration.⁴²

The dog is fundamental to our understanding of how biological disorder, sickness, and degeneration function in the portrayal of monstrosity. The Gothic body, whether in the form of the vampire or werewolf, represents the human possibility for decline and degeneration because pathology works its way into every corner of Victorian culture, exploiting all avenues of expression from political movements to medical analysis. Exploiting canine physiological attributes as well as biting as the specific mode of transmission of the vampire virus, Stoker makes an explicit and implicit reference to the hysterical public reaction to rabies throughout the latter half of the nineteenth century. As Neil Pemberton and Michael Worboys' research on the history of rabies has shown, by the mid-1890s, legal intervention had managed to control the virus and its reign in Britain was ending.⁴³ Nevertheless, Stoker evokes the terror inspired by rabies throughout the previous two decades by employing the rhetoric and imagery associated with the disease and its facilitators. By linking humans and animals through pathology, Darwin's scientific studies inadvertently intensified the Gothic rhetoric that ignited a society in fear of and curiosity about its animal ancestry.

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Notes

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¹ The ancient Welsh saga of Beddgelert, the dog who was mistakenly killed by his master for attacking his child and the Victorian Scottish tale of Greyfriars Bobby, the dog that in 1858 refused to be parted from his master even in death and sat on his grave for fourteen years, are two of the most famous examples of the loyalty and faithfulness of the dog which would have appealed to the Victorian sentimentality. James Turner mentions that “the February 1888 *Animal World*, which told of ‘the lamented death of the Rev. A.H. MacKonochie, and the faithful watching over his body by the two dogs,’ achieved an ‘unprecedented sale.’ In fact, it sold out and had to be reprinted to meet the demand.” James Turner, *Reckoning with the Beast: Animals, Pain and Humanity in the Victorian Mind* (Johns Hopkins UP, 1980), 72. In Arthur Conan Doyle’s popular Sherlock Holmes novel, *The Sign of Four* (1890), the dog Toby is a trusted member of the detective team. Holmes admits to Watson that he would “rather have Toby’s help than that of the whole detective force of London.” Conan Doyle, *The Sign of Four* (London: Penguin, 2001), 48. The benevolent relationship between man and dog is manifested in much earlier fiction too, as seen in the ever faithful and preternaturally sagacious hound Bevis in Scott’s *Woodstock, or The Cavalier* (1826).

² Ritvo discusses the popularity of the dog shows: “There were 217 shows in 1892, 257 in 1895, 307 in 1897, and 380 in 1899. [...] In 1890, almost fifteen hundred dogs competed at the Kennel Club show. And over seventeen hundred were entered in a show at the Crystal Palace.” Harriet Ritvo, *The Animal Estate* (Harvard UP, 1987), 98.

³ I refer here of course to Darwin’s assertion that “as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress towards perfection.” Darwin, *Origin of Species* (London: Penguin, 1985), 459.

⁴ As several prominent critics in the field of Gothic literary criticism

have argued, Gothic represents permeable and shifting boundaries. See, for example, David Punter, *Gothic Pathologies: The Text, The Body and The Law* (Basingstoke: Macmillan, 1998) and Fred Botting, *Gothic: The New Critical Idiom* (London: Routledge, 1995).

⁵ Cyndy Hendershot, *The Animal Within: Masculinity and the Gothic* (U of Michigan P, 1998), 9-11.

⁶ See Kelly Hurley, *The Gothic Body: Sexuality, Materialism, and Degeneration at the Fin de Siècle* (Cambridge UP, 1997).

⁷ *Dignity and Impudence* (1839) by Edward Landseer, for example, is characteristic of nineteenth-century art's tendency to give human attributes to animals. In this painting, Landseer draws a distinction between the large, dignified bloodhound and the small, mischievous terrier, highlighting the extent to which artificial selection – breeding – is able to create two very different animals in appearance and temperament. Both of these dogs, as demonstrated by the painting's title, were looked upon fondly, and darker associations of the dog are not yet implied.

⁸ Paul S. White, "The Experimental Animal in Victorian Britain," *Thinking with Animals: New Perspectives on Anthropomorphism*, ed. Lorraine Daston and Greg Mitman (Columbia UP, 2005), 68.

⁹ George Romanes, *Mental Evolution in Animals* (London: Kegan Paul, Trench & Co., 1883), frontispiece.

¹⁰ Emma Townsend's new book *Darwin's Dogs* (London: Frances Lincoln, 2009) discusses Darwin's relationship with the dog in some detail, exposing the fact that his observations of dogs contributed significantly to his evolutionary writings.

¹¹ Letter from Charles Lyell to Darwin 27 September 1860 published in *Sir Charles Lyell's Scientific Journals on the Species Question*, ed. Leonard Wilson (Yale UP, 1970), 496.

¹² Charles Darwin, *The Descent of Man* (London: Penguin, 2004), 676. All further references to this text are to this edition and will be given in the text.

¹³ Huxley's relatively short study, *Evidence as to Man's Place in Nature* (1863), demonstrates the physiological relationship between dogs and

humans 28 times, with particular reference to canine embryology. In *Descent*, a long study, Darwin employs the dog to demonstrate his arguments 182 times. This is a significant number of times, about the same as the monkey, the creature which Darwin and Huxley went far to align with humans in their later works.

¹⁴ For further discussion on the significance of the “missing link” in Victorian culture, see Gillian Beer, *Open Fields: Science in Cultural Encounter* (Oxford UP, 1996), 115-45.

¹⁵ Darwin discusses various cynocephalus species in *The Descent of Man and The Variation of Animals and Plants under Domestication*, Vol. II (1868).

¹⁶ George Fleming, *Rabies and Hydrophobia: Their History, Nature, Causes, Symptoms, and Prevention* (London: Chapman and Hall, 1872), 1.

¹⁷ See *The Nature and Treatment of Rabies or Hydrophobia; Being the Report of the Special Commission Appointed by the Medical Press and Circular, with Valuable Additions* (1878), Thomas Michael Dolan, *Nature and Treatment of Rabies or Hydrophobia; Being the Report Made for the Medical Press and Circular* (1879), Charles Alexander Gordon, *Comments on the Report of the Committee on M. Pasteur's Treatment of Rabies and Hydrophobia* (1888), and *Reports from the Select Committee of the House of Lords on Rabies in Dogs, and Reports to the Local Government Board on M. Pasteur's Treatment of Hydrophobia and on the Influenza Epidemic, with Minutes of Evidence and Index* (1887-94).

¹⁸ Thomas M. Dolan, *The Nature and Treatment of Rabies or Hydrophobia. Being the Report of the Special Commission Appointed by the Medical Press and Circular, With Valuable Additions* (London: Baillière, Tindall, and Cox, 1879), 18.

¹⁹ Ritvo, *The Animal Estate*, 170.

²⁰ *The Times*, 4 November 1886, 3.

²¹ Hugh Dalziel implicates the press in the circulation of myths about the number of cases of rabies in saying that “It is possible that the increase [in human deaths] may be more apparent than real, because the

press of this country are Argus-eyed, and keenly alive to the interests of the public, and the cheap daily and weekly paper now finds its way into almost every home." Dalziel, *Mad Dogs and Hydrophobia* (Dundee: James P. Mathew & Co., 1886), 3.

²² Ritvo, *The Animal Estate*, 169.

²³ Ritvo, *The Animal Estate*, 170.

²⁴ *The Times*, 27 June 1881, 6.

²⁵ *The Times*, 8 April 1874, 8.

²⁶ For example, Judith Halberstam discusses Dracula's physiognomy in terms of the outcast Jew or the criminal in line with Max Nordau and Cesare Lombroso's popular late Victorian degeneration theories. She does not make reference to the apparent animalism in the vampire's features, however. Judith Halberstam, "Technologies of Monstrosity: Bram Stoker's *Dracula*," in *Dracula: Contemporary Critical Essays* (London: Macmillan, 1999), 178-80.

²⁷ David Gilmore, *Monsters: Evil Beings, Mythical Beasts and All Manner of Imaginary Terrors* (U of Pennsylvania P, 2003), 180.

²⁸ Richard Owen, *On the Anatomy of Vertebrates*, Vol. III (London: Longmans, Green, and Co., 1868), 623.

²⁹ "He who rejects with scorn the belief that the shape of his own canines, and their occasional great development in other men, are due to our early forefathers having been provided with these formidable weapons, will probably reveal, by sneering, the line of his descent." Darwin, *Descent*, 60.

³⁰ Charles Bell, *The Anatomy and Philosophy of Expression as Connected with the Fine Arts*, 7th ed. (London: George Bell and Sons, 1877), 121.

³¹ Charles Darwin, *The Expression of the Emotions in Man and Animals*, 3rd ed. (London: HarperCollins, 1998), 118.

³² Richard Bagot, *A Roman Mystery* (London: Digby, Long & Co., 1899), 283. Subsequent references are to this edition and are cited parenthetically in the text.

³³ *The Oxford Dictionary of English Folklore* suggests that black dogs are often associated with the devil or evil spirits (Oxford UP, 2003), 25.

³⁴ Conan Doyle, *The Hound of the Baskervilles*, 158.

³⁵ *Ibid.*, 149.

³⁶ Bram Stoker, *Dracula* (London: Penguin, 1991), 81. Subsequent references are to this edition and are cited parenthetically in the text.

³⁷ T.M. Dolan, *Pasteur and Rabies* (London: George Bell and Sons, 1890), v-vi.

³⁸ Durbach, *Bodily Matters*, 113.

³⁹ *Ibid.*, 143.

⁴⁰ For a discussion on the inoculation against smallpox in the late nineteenth century, a disease whose vaccination consisted of lymph cultivated from a calf, which caused precisely these types of anxieties, see Durbach, *Bodily Matters*, 124-25.

⁴¹ T.H. Huxley, *Evolution and Ethics* (London: Macmillan and Co., 1894), 6.

⁴² By the 1890s there was still no scientific evidence to show how hereditary traits were passed on. Francis Galton's work on heredity had become widely known during the 1860s with his essays published in *Macmillan Magazine* in 1865 entitled "Heredity, Character, and Talent" and his book *Hereditary Genius* (1869), but he did not offer any explanation for the method of transference of hereditary characteristics. Some, like Darwin, believed that they were carried in the blood, which would have certainly raised the possibility that such traits might be carried in someone's (or some creature's) blood injected into another person's body.

⁴³ Neil Pemberton and Michael Worboys, *Mad Dogs and Englishmen: Rabies in Britain, 1830-2000* (Basingstoke: Palgrave Macmillan, 2007), 133-62.

