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Literary Primatology: Reading Primatology in Ape Fiction

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This article aims at defining the field of literary primatology and illustrating the main forms it has taken in Anglophone literatures in the twenty-first century. The article is organized around five sections. The first one introduces the term *literary primatology*. The second portrays the cultural background against which this field emerged. The third describes its main themes and illustrates them by bringing to the fore significant literary works produced in the twenty-first century. The fourth looks at examples of ape imaginings. Finally, I enumerate some of the unifying characteristics of these narratives and explain literary primatology as one of the responses to today's Anthropocene anxiety and the feeling of grief or solastalgia for a dying planet.

Keywords: primatology; ape fiction; animal literature; Anthropocene; solastalgia

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Primatología literaria: la primatología en la ficción de simios

Este artículo pretende definir el campo de la primatología literaria e ilustrar las principales formas que ha adquirido en las literaturas anglófonas del siglo XXI. El artículo está organizado en torno a cinco secciones. La primera introduce el término *primatología literaria*. La segunda retrata el contexto cultural a partir del cual surgió este campo. La tercera describe sus temas principales y los ilustra a través de obras literarias significativas producidas en el siglo XXI. La cuarta explora algunas respuestas de la imaginación humana sobre los simios. Finalmente, enumero una serie de características unificadoras de todas ellas y explico la primatología literaria como una de las respuestas a la ansiedad del Antropoceno y al sentimiento de pesar o solastalgia por un planeta que agoniza.

Palabras clave: primatología; ficción simia; literatura de animales; Antropoceno; solastalgia

I. INTRODUCTION

When I first read J. M. Coetzee's *The Lives of Animals*, I was drawn to the passage where its protagonist, Elizabeth Costello, refers to a place that, although significant in the history of science in Spain, is not often referred to in the country's popular culture ([1999] 2001, 27-30). This place is in Tenerife and is known today as *La casa amarilla*. In 1912, the Royal Prussian Academy of Sciences established the first primate station in Europe there (Teuber 1994, 551). The station remained operational until 1920 under the direction of Wolfgang Köhler, one of the fathers of Gestalt psychology. His purpose was to study the mental capacities of apes, their ability to reason and solve problems. He first presented the results of his study in his work "Intelligenzprüfungen an Anthropoiden I" (1917), later translated into English as *The Mentality of Apes* (1925).

Coetzee's Costello uses the reference to the primate station in Tenerife and the work done there to spotlight the nonsense of science when it comes to animal experimentation. She is a literary writer who has been invited to give a talk entitled "The Philosophers and the Animals." In her lecture, she establishes a connection between Köhler's "Intelligenzprüfungen an Anthropoiden I" and Franz Kafka's short story "A Report to an Academy" (1917) on the basis of their dates of publication and subject matter: both were published in 1917 and feature apes at their core. Although it is not clear whether or not Kafka knew of the existence of Köhler's study before writing his piece, as Costello argues, the chronological coincidence makes it at least plausible (Coetzee [1999] 2001, 27). This coincidence gives her the opportunity to link Kafka's ape protagonist, Red Peter, with Sultan, "the best of [Köhler's] pupils" and, "in a certain sense," as she explains, "the prototype of Red Peter" (28). Both apes were captured in Africa and taken to a scientific institute. Both went through a process of acculturation, "a period of training intended to humanize them" (27), which left an indelible mark on them. In Red Peter's case, contact with humans shows him that in order to survive he needs to renounce his apedom and pass for one of them. Sultan, Kafka's likely inspiration, is not as fortunate, for he is trapped in the maze of testing designed not to prove the chimpanzee's intelligence, but rather man's superiority. A poet would take a different approach, Costello argues, since instead of forcing their epistemological lens on the animal, they would have engaged with it and thus acquired a finer, more profound knowledge of the animal. But, as Costello grimly concludes, "this is as far as Köhler, for all his sympathy and insight, is able to go; this is where a poet might have commenced, with a feel for the ape's experience" (30).

Kafka's and Coetzee's work are vivid examples of the interplay between literature and science that I suggest may be called *literary primatology*, which explores our cultural understanding of apes by placing ape imaginings at the center of inquiry. While different from a scientific account or description, literary primatology is equally capable of bringing about an understanding of apes, albeit by its own means—namely, by presenting how humans imagine what being an ape is like, what apes might be imagining or how we engage imaginatively with them. Literary primatology aims at

enacting a reading of literary representations of apes where real and fictional nonhuman primates, as well as their encounters with humans, are the central focus of attention. Inspiration for putting forward literary primatology as a specific field of study is taken from Kári Driscoll and Eva Hoffmann's work in favor of establishing a kind of *zoopoetics* that takes into account the specificity of each species, both in its material and its semiotic expressions (2018, 5). They suggest that zoopoetics could and should be organized around the individual study of different species in literature and thus make room for "[distinguishing] between cetopoetics, cynopoetics, and arachnopoetics, and so on" (5). It is within this framework that I venture to suggest literary primatology as a discipline within the broader field of literary animal studies. Literary primatology can thus be defined as a poetics of the ape, an *apepoetics* or a *primatepoetics*. It is a palimpsest composed of the weaving of texts in which nonhuman primates are represented as the result of human imaginings of this intriguing boundary species.

Given its historicity, the next section offers a genealogy of literary primatology, beginning with the first accounts of encounters between human and nonhuman apes dating back to classical times and reaching as far as the popularization of primatology in the twentieth century. In tracing this genealogy, special attention is paid to the main tenet of literary primatology, namely, its focus on the construction of meaning around apes emerging from the contact zone between two modes of narration, the scientific and the literary. Hence, attention is paid to the evolution from a symbolic construction of apes, especially meaningful during the Christian Middle Ages and the Renaissance, to the scientific turn of the early modern age. Next, the impact of two major figures in the history of the natural sciences, Carl Linnaeus and Charles Darwin, is addressed in order to reflect on the ways in which their work led to an ontological crisis that resulted, among other things, in the emergence of literary Darwinism and primate field studies at the turn of the twentieth century. Finally, the coming of age of primatology around 1960 and its significance in Western popular culture since then are considered. This is regarded as the springboard for the growing amount of speculative ape fiction, which is discussed in the third section.

This article reflects on seventeen novels published between 2004 and 2018 and organizes them around three main themes: animal experimentation, animal activism and field primatology. What unifies the novels is the presence of nonhuman apes, mainly great apes, and their meaningful engagements with humans. They constitute a corpus for the exploration of literary primatology in practice, as will be shown in the fourth section. This practice serves to underline how the theriophobic patterns of some ape narratives, such as the ape rape stories dating back to the seventeenth century, have been progressively replaced by ecological narratives that place compassion, advocacy and a willingness to understand oneself in the presence of the ape at the center of ape literature. Consequently, bearing in mind that the imaginative experience of the animal is epistemologically meaningful, it could be said that literary primatology serves the purpose of human self-reflection or, indeed, soul-searching in the face of the ape, as

well as of acquiring knowledge of the nonhuman primate not exclusively based on biological or behavioral descriptions, but also on the imaginings created about them.

2. LITERARY PRIMATOLOGY: A GENEALOGY

The origin of literary primatology is as old as human interest in apes. Although it is true that *primatology* is a term that was first used in 1941 to signify the "study of primates" (Harper [2001] 2019), it came of age as a discipline in the 1960s, although this does not mean that people had not thought about primates before then in an attempt to understand the significance of the species with regard to humans. Thus, the first point that needs to be made is that besides a scientific approach to nonhuman primates, there is room to gain understanding of the animal, as well as ourselves, through the stories we tell about them. By looking at the work of previous scholarly primatologists, a genealogy of literary primatology can be traced that is shaped by epistemological exchanges between science and the literary imagination occurring mainly from the seventeenth century onwards.

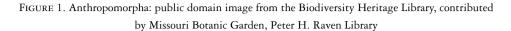
Since classical times and until the Age of Exploration, apes were understood through the veil of mythical constructions. Some originated in Europe while some came from indigenous knowledge transmitted through exchanges between travelers and the people they met on their forays into Africa and Asia. The first account of human-ape encounters dates back to the fifth century BCE when Hanno the Navigator found, possibly in what is now Sierra Leone, a group of natives he referred to as "gorillas" (Janson 1952, 327). These encounters usually kindled human distrust of the anthropoid apes who, in antiquity, were often associated with the monstrous races described by Pliny the Elder in his Historia Naturalis ([ca. 77 CE] 1982). Suspicion of the ape was further increased in the Middle Ages by the Christian association of the ape with Satan, "the Ape of God who mimicked their deity's actions just as apes mimicked human behaviour" (Sorenson 2009, 45). This figura diaboli formed a triad with those of the ape as sinner and as the simian fool (Sorenson 2009, 48). With the development of modern science, these less than favorable depictions were replaced by images of peaceful creatures like Nicolaes Tulp's portrayal of a female ape in his Observationes Medicae ([1641] 1739), depicted with coyly lowered eyes and hands gently folded on her lap (Schiebinger [1993] 2004, 76). Such images normally coexisted with descriptions of male apes as lascivious creatures in "fantasies of violent interspecies rape" (Schiebinger [1993] 2004, 78), thus inaugurating what Raymond Corbey describes as "a persistent to-and-fro, in the Western tradition, between images of noble and images of ignoble others" (1995, 3).

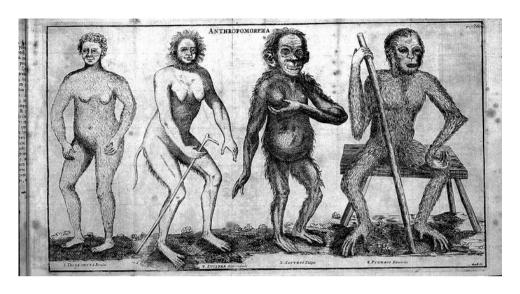
Underlying this ambiguity was the struggle to secure human exceptionalism. Thus, in the second known attempt at studying an anthropoid ape, Edward Tyson set himself to the task of proving man's hierarchical superiority in the Chain of Being. After dissecting what he called a *pygmie*—probably a chimpanzee—he opted

for a comparative approach while drafting his conclusions and, aware of the impact of the mythological when considering the anthropoid ape, accompanied his essay Orang-Outang, sive Homo Sylvestris: Or the Anatomy of a Pygmie Compared with That of a Monkey, an Ape, and a Man with a philological treatise, A Philological Essay Concerning the Pygmies, the Cynocephali, the Satyrs, and Sphinges of the Ancients ([1699] 1894), in which he discussed the differences between certain creatures that were part of the ape lore that had emerged over time. Thus, while the former title promises to establish a comparison between pygmy, monkey, ape and man, the latter takes this comparative analysis into the realm of the fantastic, or what he refers to as "the Fable," "what 'Poets' and 'Historians' of old had written on the 'Pygmie'" (quoted in Thijssen 1995, 47). It seems that Tyson was moved from the outset not so much by the hope of demonstrating that the pygmie was human, but, on the contrary, by the idea that the Plinian races, of which the pygmie was one, could not fare as equals to humans (Thijssen 1995, 47-48).

Although since the start of the modern era scientists like Tyson have aspired to combat the imaginary in science, it has remained noticeable in the tendency, observed by Corbey, to recycle names derived from either the fantastical or mythological (2005, 42), which attests to the cross-fertilization between the realm of science and that of the literary imagination. Expressive examples of this are denominations such as Troglodytes gorilla for the western gorilla and Pan paniscus, the scientific name of the bonobo—troglodytes means "cliff dweller," one of the Plinian races, while Pan evokes the Greek god Pan, who reigns over the wild. In addition to naming, ape iconography, following the development of emblematic natural history in the sixteenth century, also showed a tendency to reuse images of apes of questionable realism that manifest the same epistemological interplay between scientific and imaginative modes of understanding.1 A good example is found in the plate titled "Anthropomorpha," which illustrates the homonymous dissertation by Christianus Emmanuel Hoppius (1760), a disciple of Carl Linnaeus, where four types of hominoid apes are depicted (figure 1). Each representation is derived from previous renderings (Brown 2010, 34-35)—from left to right, the Troglodyta Boentii is drawn from Jakob de Bondt's 1658 illustration, which is itself a derivation of Breydenbach's ape (1486); the Lucifer Aldrovandi is an approximate immediate transcription of Breydenbach's ape; the Satyrus Tulpii is basically copied from Louis Gerard Scotin's engraving of a teadrinking female chimpanzee (1738); and the Pygmaeus Edwardi reminds us of Tyson's pygmy in that it also uses the stick motif.

¹ Emblematic natural history is a branch of natural history where descriptions of nature are enhanced by mythological, folkloric and symbolic references. See William B. Ashworth (1996) for further details.





Hoppius's aim was to set up a clear boundary between human and nonhuman beings at a time when his mentor's classification of humans and orangutans in the same order, *Primates*, and in the same genus, *Homo*, had already caused an ontological crisis that prompted renewed efforts to demonstrate human exceptionalism.

Systematically, scientists scrutinized the bodies and behaviors of nonhuman apes in order to come up with a clear dividing line that separated the human from the nonhuman and also created racialized classifications that helped to support Western imperial efforts. Studies were conducted on the apes' ability for speech, on their behavior and on their dexterity in using certain tools. There were well-publicized debates between James Burnett, Lord Monboddo, who believed apes could speak, and Thomas Love Peacock, in whose satirical novel Melincourt (1817) an orangutan becomes a candidate for the British Parliament. By the middle of the nineteenth century, however, a sort of Rubicon was crossed when Darwin's theory of evolution debunked the idea of man as the apex of creation and marked the transition into the post-Darwinian age, defined by a tension between those who agreed with the idea of a continuum between human and nonhuman apes and those who opposed it. It also led to "a collective imaginary in which fundamental anthropological questions of identity and 'species anxiety' [were] negotiated" (Richter 2011, 4). The fear of being identified with a lowly animal either by descent or by assimilation kindled existential debates that fructified in an increase in scientific attention to apes in the late nineteenth and early twentieth century, which subsequently rippled out into the larger cultural field.

This phenomenon is examined in works of literary criticism that have paid attention to how Darwinism affected Victorian and modernist literature. Gillian Beer's *Darwin's Plots* (1983) and Virginia Richter's *Literature After Darwin* (2011) are exemplary cases in point. But these debates have also facilitated the development of Darwinian literary studies, a field that can be defined as an attempt to "[apply] evolutionary psychology to literary texts" (Gottschall 2003, 259). This Darwinian turn in literary criticism emerged out of the 1960s' acknowledgement of the interconnections between human culture and human biology (Gottschall 2003, 255), and although works such as Margot Norris's *Beasts of the Modern Imagination* (1985) and George Levine's *Darwin and the Novelists* (1988) had already announced its genesis, its establishment as a discipline is generally attributed to Joseph Carroll's *Evolution and Literary Theory* (1994) (Gottschall 2003, 261). Today this Darwinian strand continues to be present in publications such as Dirk Vanderbeke and Brett Cooke's *Evolution and Popular Narrative* (2019) and Clare Hanson's *Genetics and the Literary Imagination* (2020).

Also at the turn of the twentieth century, primate field studies began to take on the shape of what would later be known as primatology. In the 1890s, Richard L. Garner became the first scientist to study great apes in the wild and while he was conducting research on primate vocalizations in Gabon, West Africa, Sir Arthur Keith was observing Asian primates in Thailand (Sussman 2010, 6). Some years later, in 1909, Rosalía Abreu founded the first anthropoid facility in downtown Havana (Cuba). This became a model for later facilities in Tenerife (Spain), Kindia (French Guinea) and Connecticut (US). Meanwhile, great apes became celebrities at zoos, featuring in the popular chimpanzee tea parties or as film protagonists, as in the classical RKO movie *King Kong* (Cooper and Schoedsack 1933).² Such events, together with many of the abovementioned works, brought the existence of great apes to the public eye.

In the postwar period, interest in apes was further expanded as a result of the popularization of science that had taken place in the US in the first half of the twentieth century, when the classical approach to science production, based on the detached observation of the subject of study in a controlled setting only attainable inside the laboratory, developed side by side with an alternative epistemology that advocated firsthand contact with nature (Mitman 2000, 422). Primatology was one of the disciplines affected by this trend, with Jane Goodall and fellow primatologists Diane Fossey and Biruté Galdikas leading the way. The visualization of primatologists' fieldwork brought about by photo documentaries such as those created by Hugo Van Lawick for National Geographic and films such as *Gorillas in the Mist* (Apted 1988) led to public interest in the conservation of great apes through exposure to a nonelitist

² The first ape tea parties are thought to have been organized in the mid-nineteenth century (Allen et al. 1994, 45). A photograph dating back to ca. 1905 shows a group of four orangutans dining formally at New York Zoo (Baratay and Hardouin-Fugier 2004, 192).

model of science based on personal engagement with the animal subject of study.³ Great apes, the nonhuman animals who most clearly represent our animal status, became a familiar presence; they deserved to be defended above any other species since they were not only our ancestors but had been narrated, that is, they had been given a story that granted them agency.

As part of this phenomenon of popularization, literary authors became increasingly interested in apes, a trend that has become particularly prominent in the US, as proven by the 340 entries in Marion Copeland's 2015 ape bibliography, predominantly English-language works by US authors, 152 of which came out after 1960, the starting point of modern primatology. This coincides with the beginning of a period of increased interest in the protection of great apes, as evidenced by the foundation of the Jane Goodall Institute in 1977, the increased visibility of the Great Ape Project—founded in 1993—and the creation in 2001 of the United Nation's program Great Apes Survival Partnership (GRASP). All these initiatives have contributed to the visibility of great apes as an environmental cause connected not only with the future of the planet but also with the future of *Homo sapiens*.

3. APE THEMES IN TWENTY-FIRST-CENTURY APE FICTION IN ENGLISH

A look at Copeland's bibliography of ape fiction reveals that, while in the twentieth century 25% of the titles were written by women, the percentage has risen to 35% in the first two decades of the present century (Copeland 2015). Further, ape-related literature is getting attention from mainstream authors who see an opportunity to incorporate social concerns such as animal rights or species extinction into their writing. Finally, the topic of human/animal hybrids is ever more present, leading to the creation of what can be referred to as the *posthuman ape*, often a female human/ape hybrid.

As shown in table 1, thus far I have located a total of seventeen ape-oriented novels produced in the twenty-first century, fifteen from the US, one British and another one Canadian.

Date	Title	Author	Nationality	Species
2018	Orphaned	Eliot Schrefer	US	gorilla
2016	Rescued	Eliot Schrefer	US	orangutan
2016	We Love You, Charlie Freeman	Kaitlyn Greenidge	US	chimpanzee
2014	Threatened	Eliot Schrefer	US	chimpanzee
2013	We Are All Completely Beside Ourselves	Karen Joy Fowler	US	chimpanzee

TABLE 1. Twenty-first-century ape fiction in English

³ Van Lawick was the nature photographer sent on assignment to cover Goodall's work at Gombe. He married Goodall in 1964.

Date	Title	Author	Nationality	Species
2013	A Beautiful Truth	Colin McAdam	US	chimpanzee
2012	Endangered	Eliot Schrefer	US	bonobos
2011	The Evolution of Bruno Littlemore	Benjamin Hale	US	chimpanzee
2011	Unsaid	Neil Abramson	US	chimpanzee
2010	Ape House	Sara Gruen	US	bonobo
2010	Lucy	Laurence Gonzales	US	bonobo
2010	Half Brother	Kenneth Oppel	Canada	chimpanzee
2008	Captivity	Debbie Lee Wesselmann	US	chimpanzee
2007	Jennie	Douglas Preston	US	chimpanzee
2006	Mr. Thundermug	Cornelius Medvei	UK	baboon
2005	Primal Tears	Kelpie Wilson	US	bonobo
2004	Animal Heart	Brenda Peterson	US	baboon

Within this selection, the focus of this article is placed on those novels that are examples of speculative ape fiction, that is, fiction that problematizes our relationship with nonhuman primates. In terms of content, they all revolve around three thematic categories: animal experimentation, animal activism and field primatology. The first category, animal experimentation, can in turn be divided into four subthemes: raising a baby chimpanzee alongside a human baby, ape language experiments, animal testing and ape-human miscegenation.

Interest in raising a chimpanzee in a human environment can be traced back to the early twentieth century, but was not in fact attempted until 1931 when psychologists Winthrop and Luella Kellogg raised their son Donald with the chimpanzee Gua for nine months (Molloy 2011, 88). They reported on the experiment in their book *The Ape* and the Child (1933). This was, though, not an isolated experiment. Throughout the twentieth century, there were attempts at cross-fostering chimpanzees and, frequently, teaching American Sign Language (ASL) to nonhuman primates, a topic I return to later. The consequences of cross-fostered parenting are the subject matter of Karen Joy Fowler's acclaimed novel We Are All Completely Beside Ourselves (2013). Fowler's novel is narrated by Rosie Cooke, a university student who was brought up alongside an orphaned female chimpanzee called Fern. Her parents, both scientists, wanted to study the ways in which chimpanzee development differed from or resembled that of humans on several levels. Throughout the novel, the author combines Rosie's personal narrative of repentance—she feels responsible for the sudden disappearance of her "sister"—with a look at the ways in which science has dealt with chimpanzees since the beginning of the twentieth century. It uses Rosie's cynical comments and her references to the life of her brother Lowell, now an animal activist, to criticize human behavior towards animals.

The second subtheme—ape language experiments—is often related to the previous one because the human household was normally where such studies began. A landmark

in the history of ape language experimentation is Project Washoe, named after the chimpanzee that Allen and Beatrix Gardner tried to teach ASL to at the University of Nevada, Reno (1966-1970). But interest in such experiments dwindled in the mid-1970s as a consequence of various factors (Linden 1986, 86). Once the chimpanzees reached the age of three, they became difficult to handle in a family setting and many had to be relocated to research facilities or zoos if reintroduction into the wild was deemed unviable or too costly (54). In addition, the credibility of the experiments was questioned by some experts, leading to a division within primate studies between those who doubted their validity and those who continued to believe in them (85).

Contemporary fiction focusing on ape language experiments connects with the tradition of the talking animal stories epitomized by the fable. In it, the anthropomorphization of apes serves the purpose of turning the animal into a spokesperson for its kind, criticizing humans and their behavior towards nonhuman animals. A good twenty-first-century example of this is Benjamin Hale's *The Evolution of Bruno Littlemore* (2011), in which a chimpanzee acquires an extraordinary proficiency in human language. His affair with Lydia Littlemore, one of the researchers at the laboratory where he has been placed, leads him to commit a crime of passion, condemning him to permanent captivity at a research facility.

Animal testing also features prominently as a trope in literary primatology. Novels revolving around this topic often elaborate on the consequences of the manipulation of animal bodies in the interest of medical bioengineering. They also reflect on the commodification of animal bodies for the purpose of science. The use of apes as proxies for humans in medical experimentation is a controversial consequence of their phylogenetic similarity to humans. In the second half of the twentieth century, however, the rise of the animal rights movement together with the development of fields such as cognitive ethology, which led to a more sympathetic understanding of animals, served to place checks on animal testing. In relation to the use of nonhuman apes in laboratories, a clear-cut hierarchy has been established between those species that are closer to humans—chimpanzees, bonobos, orangutans, gorillas—and those that are not. Hence, certain species such as baboons, which fit the latter category, are used in invasive procedures involving the transplant of genetically modified organs from a donor, normally a pig, into their bodies, a theme addressed in Brenda Peterson's Animal Heart (2004). Peterson based part of the content of her novel on the campaign led by Dan Lyons to uncover the xenotransplantation research conducted by Imutran Ltd. between 1994 and 2000 (Villanueva-Romero 2015, 282).

This testing often derives into the fourth thematic subcategory, which involves apehuman miscegenation and features human/ape hybrids as protagonists. This theme has, in fact, been part of ape lore in the Western world since the seventeenth century (Brown 2003, 238-39). Later, it appeared in the accounts of travelers and naturalists such as those of Georges Louis Leclerc de Buffon, as well as in the fiction of Nicolas Edme Restif de La Bretonne and Gustave Flaubert, among others (Rossiianov 2002, 277). Although

the first attempts at creating a human/ape hybrid were made by Russian biologist Iliá Ivánovich Ivanov in French Guinea in 1927 (Rossiianov 2002, 297-98), this topic did not become prominent in Anglophone literature until the 1980s. In her exploration of interspecies pregnancy in ape fiction, Aline Ferreira mentions several examples ranging from Maureen Duffy's novel *Gor Saga* (1981) to Charis Thomson Cussins's short story "Confessions of a Bioterrorist: Subject Position and Reproductive Technologies" (1999) (Ferreira 2008). This topic likely grew in popularity because of the resonance that developments in biotechnology have had in literature from the 1980s onwards. The first human-made *chimera* was a mouse produced in 1961 (Ferreira 2008). In 1996, Ian Wilmut and Keith Campbell cloned the first domestic sheep. This was followed in 1997 by Stuart A. Newman's application for a US patent on a *humanzee*, a human/chimpanzee chimera (Ferreira 2008). The twenty-first century has brought with it news of embryos created by injecting human DNA into rabbit eggs, human liver genes spliced into rice genes, human neurons inserted into embryonic mice (Schmidt 2016, 225) and the creation of the first human/monkey embryos (Ansede 2019, n.p.).

The increase in the popularization of such experiments has had an impact on ape fiction that revolves around the consequences of creating a human/ape hybrid. Kelpie Wilson's Primate Tears (2005) and Laurence Gonzales's Lucy (2010) serve as illustration. Wilson's novel tells the story of Sage, the human/bonobo hybrid daughter of Sarah Carrigan, a teacher who, after being fired for teaching her students about evolution at a school whose principal holds creationist views, decides to volunteer as a surrogate mother for a bonobo embryo. However, the experiment goes wrong and one of her own eggs is accidentally fertilized by bonobo sperm, resulting in a different type of pregnancy from that which was expected—instead of becoming the surrogate mother of a bonobo, she becomes the biological mother of a human/bonobo girl, Sage. Throughout the novel, Sage goes through various phases—runaway, celebrity, symbol of hope for some or evil for others—until she opts for isolating herself from human civilization, answering the call of the wild she feels inside her. In Gonzales's Lucy, the protagonist is the human/ape hybrid daughter of a British scientist, Donald Stone, and a genetically modified female bonobo, Leda. Born in Congo, Lucy is forced to flee from her home after the Congolese insurgents enter the camp where the family live and kill her father. She is rescued by US primatologist Jenny Lowe, who eventually adopts her and becomes her mother. The novel develops into a thriller after Lucy's identity is discovered and she has to run away from Christian fundamentalists who want to destroy her and a sadistic scientist who wants to experiment on her. The novel ends with the hybrid separating herself from mainstream society by finding refuge in the Cheyenne River Reservation, where she starts a family.

⁴ In "What Are Chimeras and Hybrids?," published in *Ethics and Medics* in August 2004, Tara Seyfer defined a chimera as "a combination between two different species within an organism" (quoted in Ferreira 2008).

⁵ Newman's motivation was not to create this chimera, but rather to prevent such a possibility by alerting the general public (Marshall 1999).

The second broad thematic category within twenty-first-century literary primatology, animal activism, involves the issue of animal rescue. As Ralph H. Lutts points out, the trope of the animal as a cause has featured in US animal literature since the middle of the twentieth century (1998a, 10). Lutts also specifies how in the late twentieth century the human characters in these stories turn the animal they protect, normally an endangered species, into the center of their lives (14). This approach is used by Sara Gruen in *Ape House* (2010), where Isabel Duncan, a scientist employed at the Great Ape Language Lab, goes on a personal quest to find the bonobos she used to work with, which have gone missing after the laboratory was blown up by activists. She later finds out that they are being used as entertainment in a TV show and attempts to rescue them.

Finally, the theme of field primatology is based on the popularization of stories about the primatologists' own fieldwork experience, many of which have female primatologists as protagonists. This happens, for example, in Gonzales's *Lucy*, mentioned above, where primatologist Jenny Lowe wrestles with her unexpected encounter with a human/ape hybrid. This focus is due to the popular perception that primatology has become a female discipline, although the history of primate field studies offers a somewhat mixed balance. Early attempts at observing apes in their natural habitat were principally the domain of men (Sussman 2010, 6-7). Garner and his study of primate vocalizations in the late 1890s, Carl Akeley's studies of the gorillas of the Virunga Volcanoes as well as Harold C. Bingham's and Henry Nissen's expeditions sponsored by Robert Yerkes in 1929 predate the work of the famous trimates by decades.⁶ However, there were cases of women working with apes during the Victorian and Edwardian eras—when Alyse Cunningham and Gertrude Lintz became famous foster mothers of chimpanzees and gorillas (Jahme 2000, 19-24)—and at the beginning of the twentieth century—when Mary Hastings Bradley became the first US woman to observe and describe great apes in Africa as part of Akeley's expedition (Sussman 2010, 6-7) and, last but by no means least, Abreu founded the first anthropoid facility in Havana in 1909, an inspiration for pioneer primatologist Yerkes (Rossiianov 2002, 291).

4. APE IMAGININGS

The above thematic classification serves to map the main scenarios where human-animal interactions take place within ape fiction in this millennium. Equally important is to investigate the devices used to shape the imaginings that constitute a distinctive feature of literary primatology. The study of these imaginary apes intersects with some of the main concerns of literary animal studies highlighted by Timothy C. Baker (2019, 1-39). The first refers to the extent to which the literary animal is used as a sympathizing device, a representation through which the author aims to serve as an

⁶ The term *trimates* refers to the women primatologists sponsored by Louis Leakey: in chronological order, Goodall, Fossey and Galdikas.

advocate for the nonhuman animal. This position normally situates suffering as an experience shared by both human and nonhuman animals, with death as the ultimate expression of their shared vulnerability, and owes a good deal to Jacques Derrida's ponderings on the animal question in "The Animal That Therefore I Am (More to Follow)" ([1999] 2002). Among the novels mentioned above, possibly the most extreme example is the baboon Sol in *Animal Heart*, who manifests himself through his heart, now transplanted into the body of nature photographer Marshall. The animal speaks to the human in the liminal spaces of slumber. His voice, marked by the use of italics in the following quote, eventually urges the protagonist to rescue the baboon's family, which is still at a research facility:

How can he get away from the prison of this man's body to find Hara? If he can only make this man see what he sees, and feel what he feels, he might find his family again. They have stolen his body, but not his heart. Not his memory.

Fathoms deep, Marshall remembered the intelligent face, a long primate body stretched out on a steel table. *Hara*, he signed her name. Marshall closed his eyes. Cold deep in his bones. Heat in his heart. The words he once rejected when others spoke them now wafted through Marshall's mind and he shuddered: *I am a transplant. I acknowledge the sacrifice of the dead.* (Peterson 2004, 229; italics in the original)

The last sentence in the extract acknowledges the pain and eventual death of the baboon, who was slaughtered to serve human science and now communicates with Marshall through his heart. Hence, his heart becomes an agentic force representing the baboon as a whole, "[an example] of ecological nonhuman agents projecting themselves as 'textual forms' of matter and telling their stories through the material imagination of their human counterparts" (Iovino and Oppermann 2012, 82).

The subtlety of the baboon's voice above is in great contrast to the rotundity of the ape's voice in Hale's *The Evolution of Bruno Littlemore*. Bruno is a captive chimpanzee who, as mentioned earlier, becomes proficient in human language, an example of the speaking ape in postmodern literature. His autobiography, which he dictates to a college student, "is self-referential, digressive, and full of intertextual references" (Richter 2014, 367). His story also tackles the issue of interspecies sex with a romantic twist that redeems the ape of the traditional ape rape stories, since his affair with Lydia is mutually consented.

A similar corporeal dismantling of the human-animal boundary also takes place in the abovementioned examples of human/ape hybrid fiction, Wilson's *Primal Tears* and Gonzales's *Lucy*. Their protagonists not only physically embody an expression of species continuity but also illustrate it in their ability to connect with the morethan-human world in an empathic way. Lucy repeatedly speaks of perceiving things through "The Stream" ([2010] 2011, 15), a sort of "sixth sense" (Rudy 2014, 214) from which humans, especially adults, have excluded themselves by not wanting to

listen, while Sage enters into a sort of communion with the mountains during her time away from human civilization.

Interspecies miscommunication is crucial in Fowler's We Are All Completely Beside Ourselves. The story of the chimpanzee Fern is mediated through the fragmented narration of her human "sister" Rosie. This mediation leads to the key theme of language within literary animal studies. Thinking about the role language plays in animal representations problematizes the sympathizing approach to animal literature. Some scholars question the capacity of human language to render the experiences of an animal, while others question the credibility of the speaking literary animals. However, many writers continue trying to tentatively capture the workings of the animal mind, as in Colin McAdam's A Beautiful Truth, or else fantasize about the possibility of human/ ape hybrids to make the animal speak. Fowler's work reflects on the consequences of the distance between the human and the animal mind through the story of Rosie's grief, who feels guilty for what happened to Fern after she told her parents she feared being attacked by the animal with whom she had grown up. Thus, although it is true that Rosie and Fern connect as babies, the moment when the human and the animal start distinguishing themselves from one another signals a divide that is difficult to bridge (Dürbeck 2019, 335). In this sense, A Beautiful Truth attempts to explore the animal category in terms of ontological difference, albeit one that does not exempt the animal from being worthy of human respect.

5. CONCLUSION

Affect, manifested in the emotional connection between human and animal, becomes the organizing trope behind stories of commitment to the animal in all the novels discussed here. Further reflection unveils other shared characteristics. All of them are animal biographies or *animalographies*, a term coined by Cynthia Huff and Joel Haefner in 2012 in "His Master's Voice: Animalographies, Life Writing and the Posthuman" (quoted in Nyman 2014, n.p.), and are told from either the human or the nonhuman point of view. Frequently, the animal plays the role of the moral animal or animal teacher common in the tradition of the fable. Their didacticism also connects the stories with the therapeutic role of the animal and inscribes them in what Jopi Nyman has described as "contemporary popular American therapeutic discourse" (2014, n.p.). But, most importantly, these stories can be framed as narratives of cross-species relationships in which human-nonhuman interactions contribute to the genesis of a space of affective encounters where both participants join an *ontological choreography* through which they attain self-realization in their *becoming together*. In this sense, they enact the kind of process of cocreation Donna Haraway writes about: "Partners do not

⁷ I am borrowing the phrase *ontological choreography* from Donna Haraway (2013, 65-67), who in turn takes it from Charis Thompson's *Making Parents: The Ontological Choreography of Reproductive Technologies* (2005).

preexist their relating; the partners are precisely what come out of the inter- and intrarelating of fleshly, significant, semiotic-material being" (2013, 165). As a result of this choreography of becoming, both parties in the relationship metamorphose through processes of reversed humanization and animalization. At times these processes lead to the dismantling of the species boundary, for example through bodily transformations, although sometimes the change occurs only at the level of perception, impacting the rapport between the different species. This ethical transformation leads humans to become aware of the role they play in the life of the ape and by extension in the fate of the planet. Most of these stories eventually turn into narratives of atonement, where the humans transformed by their contact with the animal feel they have to make amends with the more-than-human world for the abuses they have committed against it. This places these narratives as part of the discourse derived from today's Anthropocene anxiety, a feeling of grief for our changing environment—solastalgia together with a growing recognition of species interdependency that make us increasingly aware of our responsibility towards the planet and the role we can play in preventing its destruction.8 This is indeed the message found at the end of one of the most canonical texts in US ape fiction, Daniel Quinn's Ishmael (1992), where the protagonist, the eponymous telepathic gorilla, concludes the story by reminding humans of our interdependency with the more-than-human world:

WITH MAN GONE,
WILL THERE
BE HOPE
FOR GORILLA

WITH GORILLA GONE,
WILL THERE
BE HOPE
FOR MAN? (262-63; capitals in the original)

The answer to this question depends on us.9

⁸ The term *solastalgia* was coined by Australian philosopher Glenn Albrecht (2005).

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WORKS CITED

- ABRAMSON, Neil. 2011. Unsaid. New York: Center Street.
- Albrecht, Glenn. 2005. "'Solastalgia': A New Concept in Health and Identity." *PAN: Philosophy Activism Nature* 3: 44-59.
- ALLEN, John S., Julie Park and Sharon L. Watt. 1994. "The Chimpanzee Tea Party: Anthropomorphism, Orientalism, and Colonialism." *Visual Anthropology Review* 10 (2): 45-54.
- Ansede, Manuel. 2019. "Científicos españoles crean quimeras de humano y mono en China." *El País*, July 31. [Accessed November 6, 2019].
- APTED, Michael, dir. 1988. Gorillas in the Mist. Universal Pictures.
- ASHWORTH, William B. 1996. "Emblematic Natural History of the Renaissance." In Jardine, Second and Spary 1996, 17-37.
- BAKER, Timothy C. 2019. Writing Animals: Language, Suffering, and Animality in Twenty-First-Century Fiction. London: Palgrave Macmillan.
- BARATAY, Eric and Elisabeth Hardouin-Fugier. 2004. Zoo: A History of Zoological Gardens in the West. London: Reaktion.
- BEER, Gillian. 1983. Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot, and Nineteenth-Century Fiction. Cambridge: Cambridge UP.
- Brown, Laura. 2003. Fables of Modernity: Literature and Culture in the English Eighteenth Century. Ithaca, NY: Cornell UP.
- —. 2010. Homeless Dogs and Melancholy Apes: Humans and Other Animals in the Modern Literary Imagination. Ithaca, NY: Cornell UP.
- CAMPBELL, Christina et al., eds. (2006) 2010. Primates in Perspective. Oxford: Oxford UP.
- CARROLL, Joseph. 1994. Evolution and Literary Theory. Columbia: U of Missouri P.
- COETZEE, J. M. (1999) 2001. The Lives of Animals. Princeton, NJ: Princeton UP.
- COOPER, Merian C. and Ernest B. Schoedsack, dirs. 1933. King Kong. RKO Pictures.
- COPELAND, Marion. 2015. "Apes of the Imagination: A Bibliography." *Animals and Society Institute*. [Accessed August 13, 2019].
- CORBEY, Raymond. 1995. "Introduction: Missing Links, or the Ape's Place in Nature." In Corbey and Theunissen 1995, 1-10.
- —. 2005. The Metaphysics of Apes: Negotiating the Animal-Human Boundary. Cambridge: Cambridge UP.
- CORBEY, Raymond and Bert Theunissen, eds. 1995. *Ape, Man, Apeman: Changing Views Since* 1600. Leiden: Department of Prehistory of Leiden University.
- Cussins, Charis Thomson. 1999. "Confessions of a Bioterrorist: Subject Position and Reproductive Technologies." In Kaplan and Squier 1999, 189-219.
- DERRIDA, Jacques. (1999) 2002. "The Animal That Therefore I Am (More to Follow)." Translated by David Wills. *Critical Inquiry* 28 (2): 369-418.
- DRISCOLL, Kári and Eva Hoffmann. 2018. What Is Zoopoetics? Texts, Bodies, Entanglement. London: Palgrave Macmillan.

- DUFFY, Maureen. 1981. Gor Saga. London: Methuen.
- DÜRBECK, Gabriele. 2019. "Empathy, Violence, and Guilt in a Girl-Chimp Experiment: An Analysis of Human-Animal Relations in Karen Joy Fowler's Novel We Are Completely Beside Ourselves (2013)." In Middelhoff et al. 2019, 325-37.
- FERREIRA, Aline. 2008. "Primate Tales: Interspecies Pregnancy and Chimerical Beings." *Science Fiction Studies* 35 (2). [Accessed August 13, 2019].
- FOWLER, Karen Joy. (2013) 2014. We Are All Completely Beside Ourselves. New York: Plume.
- GIANQUITTO, Tina and Lydia Fisher, eds. 2014. America's Darwin: Darwinian Theory and U.S. Literary Culture. Athens: U of Georgia P.
- GLATZER, Nahum N., ed. (1971) 1983. Franz Kafka: The Complete Stories. New York: Schocken.
- GONZALES, Laurence. (2010) 2011. Lucy. New York: Knopf.
- GOTTSCHALL, Jonathan. 2003. "The Tree of Knowledge and Darwinian Literary Studies." *Philosophy and Literature* 27 (2): 255-68.
- GREENIDGE, Kaitlyn. 2016. We Love You, Charlie Freeman. Chapel Hill, NC: Algonquin. GRUEN, Sara. 2010. Ape House. New York: Random House.
- HALE, Benjamin. 2011. The Evolution of Bruno Littlemore. New York: Twelve.
- HANSON, Clare. 2020. Genetics and the Literary Imagination. Oxford: Oxford UP.
- HARAWAY, Donna J. 2013. When Species Meet. Minneapolis: U of Minnesota P.
- HARPER, Douglas. (2001) 2019. "Primate." Online Etymology Dictionary. [Accessed August 8, 2019].
- HOPPIUS, Christianus E. 1760. "Anthropomorpha." PhD diss., University of Uppsala. [Accessed June 7, 2020].
- IOVINO, Serenella and Serpil Oppermann. 2012. "Material Ecocriticism: Materiality, Agency, and Models of Narrativity." *Ecozon*@ 3 (1): 75-91.
- JAHME, Carole. 2000. Beauty and the Beasts: Woman, Ape and Evolution. London: Virago.
- JANSON, Horst W. 1952. Apes and Ape Lore: In the Middle Ages and the Renaissance. London: Warburg Institute.
- JARDINE, Nicholas, James A. Secord and Emma C. Spary, eds. 1996. *Cultures of Natural History*. Cambridge: Cambridge UP.
- KAFKA, Franz. (1917) 1983. "A Report to an Academy." Translated by Tania and James Stern. In Glatzer (1971) 1983, 250-62.
- KAPLAN, E. Ann and Susan Squier, eds. 1999. *Playing Dolly: Technocultural Formations, Fantasies, and Fictions of Assisted Reproduction*. New Brunswick: Rutgers UP.
- Kellogg, Winthrop N. and Luella A. Kellogg. 1933. The Ape and the Child: A Study of Environmental Influence upon Early Behavior. New York: McGraw-Hill.
- Köhler, Wolfgang. 1917. "Intelligenzprüfungen an Anthropoiden I." *Abhandlungen der Königlich Preussischen Akademie der Wissenschaften* 1 (Physikalisch-Mathematische Klasse): 1-213. [Accessed January 30, 2021].
- —. 1925. The Mentality of Apes. Translated by Ella Winter. New York: Harcourt.

- LEVINE, George. 1988. Darwin and the Novelists: Patterns of Science in Victorian Fiction. Chicago, IL: U of Chicago P.
- LINDEN, Eugene. 1986. Silent Partners: The Legacy of the Ape Language Experiments. New York: Times.
- LUTTS, Ralph. 1998a. "The Wild Animal Story: Animal and Ideas." In Lutts 1998b, 1-21.
- —, ed. 1998b. The Wild Animal Story. Philadelphia, PA: Temple UP.
- MARSHALL, Eliot. 1999. "Legal Fight over Patents on Life." *Science* 284 (5423): 2067-69. [Accessed February 2, 2021].
- MARVIN, Garry and Susan McHugh, eds. 2014. Routledge Handbook of Human-Animal Studies. London and New York: Routledge.
- MCADAM, Colin. 2013. A Beautiful Truth. New York: Soho.
- MEDVEI, Cornelius. (2006) 2014. Mr. Thundermug. New York: HarperCollins.
- MIDDELHOFF, Frederike et al., eds. 2019. *Texts, Animals, Environments: Zoopoetics and Ecopoetics*. Freiburg: Rombach Druck- und Verlagshaus.
- MITMAN, Gregg. 2000. "Life in the Field: The Nature of Popular Culture in 1950s America." In Strum and Fedigan 2000, 421-35.
- MOLLOY, Claire. 2011. Popular Media and Animals. New York: Springer.
- NORRIS, Margot. 1985. Beasts of the Modern Imagination: Darwin, Nietzsche, Kafka, Ernst, and Lawrence. Baltimore, MD: Johns Hopkins UP.
- NYMAN, Jopi. 2014. "Horse as Significant Other: Discourses of Affect and Therapy in Susan Richards's *Chosen by a Horse*: How a Broken Horse Fixed a Broken Heart." *Humanimalia: A Journal of Human/Animal Interface Studies* 5 (2): 69-86.
- OPPEL, Kenneth. (2010) 2011. Half Brother. New York: Random House.
- PEACOCK, Thomas Love. 1817. *Melincourt*. London: T. Hookham, and Baldwin, Cradock, and Joy. *Internet Archive*. [Accessed June 5, 2020].
- Peterson, Brenda. 2004. Animal Heart. San Francisco, CA: Sierra Club.
- PLINY the Elder. (ca. 77 CE) 1982. *Historia Naturalis*. Edited by Joyce Irene Whalley. London: Sidgwick & Jackson.
- PRESTON, Douglas. 2007. Jennie. New York: Forge.
- QUINN, Daniel. 1992. Ishmael: An Adventure of the Mind and the Spirit. New York: Bantam.
- RICHTER, Virginia. 2011. Literature after Darwin: Human Beasts in Western Fiction 1859-1939. New York: Springer.
- —. 2014. "Ape Meets Primatologist: Post-Darwinian Interspecies Romances." In Gianquitto and Fisher 2014, 360-87.
- ROSSIIANOV, Kirill. 2002. "Beyond Species: Il'ya Ivanov and His Experiments on Cross-Breeding Humans with Anthropoid Apes." *Science in Context* 15 (2): 277-316.
- RUDY, Kathy. 2014. "Bestial Imaginings." In Marvin and McHugh 2014, 208-19.
- Schiebinger, Londa. 1993 (2004). *Nature's Body: Gender in the Making of Modern Science*. New Brunswick: Rutgers UP.

SCHREFER, Eliot. 2012. Endangered. New York: Scholastic.

- —. 2014. Threatened. New York: Scholastic.
- —. 2016. Rescued. New York: Scholastic.
- —. 2018. Orphaned. New York: Scholastic.

SCHMIDT, Gary A. 2016. Renaissance Hybrids: Culture and Genre in Early Modern England. London and New York: Routledge.

SORENSON, John. 2009. Ape. London: Reaktion.

STRUM, Shirley C. and Linda M. Fedigan, eds. 2000. *Primate Encounters: Models of Science, Gender, and Society*. Chicago, IL: U of Chicago P.

SUSSMAN, Robert W. 2010. "A Brief History of Primate Field Studies." In Campbell et al. 2010, 6-10.

TEUBER, Marianne. 1994. "The Founding of the Primate Station, Tenerife, Canary Islands." *The American Journal of Psychology* 107 (4): 551-81.

THIJSSEN, J. M. M. H. 1995. "Reforging the Great Chain of Being: The Medieval Discussion of the Human Discussion of 'Pygmies' and its Influence on Edward Tyson." In Corbey and Theunissen 1995, 43-50.

Tulp, Nicolaas. (1641) 1739. Observationes Medicae. Internet Archive. [Accessed August 20, 2019].

Tyson, Edward. (1699) 1894. Orang-outang, sive Homo Sylvestris: Or, The Anatomy of a Pygmie Compared with That of a Monkey, an Ape, and a Man. To which Is Added a Philological Essay Concerning the Pygmies, the Cynocephali, the Satyrs, and Sphinges of the Ancients. Internet Archive. [Accessed August 20, 2019].

VANDERBEKE, Dirk and Brett Cooke, eds. 2019. Evolution and Popular Narrative. Leiden: Brill/Rodopi.

VILLANUEVA-ROMERO, Diana. 2015. "Contemporary Primate Literature in English: Voicing the Unvoiced." PhD diss., University of Alcalá.

WESSELMANN, Debbie Lee. 2008. Captivity. Durham, NC: Blair.

WILSON, Kelpie. 2005. Primal Tears. Madison, WI: Frog.

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