

Monkey Business: The Victorian Natural History Museum, Evolution, and the Medieval Manuscript

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[See table of contents](#)

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Article abstract

Victorian natural history museums (NHMs) incorporated sophisticated theories of literate culture through their architectural, artistic and cultural strategies; these literary gestures were fundamental to science communication in the nineteenth century. Victorian architects looked to the cultural and artistic pasts of classical, medieval and renaissance Europe as inspiration for artistic, cultural and social values: most obviously, in the medievalism of the Gothic Revival. The idea of the “medieval,” or a more generalized mythic past, shaped the development of NHMs that in the nineteenth century were wrestling with the idea of the past in biological science—specifically the idea of an evolutionary past. These two concepts of history—literary-historical and evolutionary-scientific—intersect in critical ways in the Victorian NHM. This paper will explore how Victorian medievalism interprets biological science through the built environment of the NHM, and will explain how these interpretations are essentially literary in nature. We will give special attention to the use of marginal figures in British, European and Canadian museums, specifically the Oxford University Museum (1860), the British Museum (Natural History), London (1881)—now known as the Natural History Museum—and the Naturhistorisches Museum in Vienna (1889), as well as an Art Deco homage to the Victorian neo-Gothic museum tradition, the Royal Ontario Museum (1914 & 1933). These carved and painted figures of plants and animals were at once part of the museum design and references back to the marginalia of the medieval manuscript. We will explore how this medieval literary motif impacts on nineteenth-century scientific interpretation in the built space of the NHM, with special attention to the depiction of monkey figures in these marginal spaces, and their symbolic function in the larger interpretive framework for understanding evolutionary science and our place in the natural world.





Romanticism on the Net

Monkey Business: The Victorian Natural History Museum, Evolution, and the Medieval Manuscript¹

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Abstract

Victorian natural history museums (NHMs) incorporated sophisticated theories of literate culture through their architectural, artistic and cultural strategies; these literary gestures were fundamental to science communication in the nineteenth century. Victorian architects looked to the cultural and artistic pasts of classical, medieval and renaissance Europe as inspiration for artistic, cultural and social values: most obviously, in the medievalism of the Gothic Revival. The idea of the “medieval,” or a more generalized mythic past, shaped the development of NHMs that in the nineteenth century were wrestling with the idea of the past in biological science—specifically the idea of an evolutionary past. These two concepts of history—literary-historical and evolutionary-scientific—intersect in critical ways in the Victorian NHM. This paper will explore how Victorian medievalism interprets biological science through the built environment of the NHM, and will explain how these interpretations are essentially literary in nature. We will give special attention to the use of marginal figures in British, European and Canadian museums, specifically the Oxford University Museum (1860), the British Museum (Natural History), London (1881)—now known as the Natural History Museum—and the Naturhistorisches Museum in Vienna (1889), as well as an Art Deco homage to the Victorian neo-Gothic museum tradition, the Royal Ontario Museum (1914 & 1933). These carved and painted figures of plants and animals were at once part of the museum design and references back to the marginalia of the medieval manuscript. We will explore how this medieval literary motif impacts on nineteenth-century scientific interpretation in the built space of the NHM, with special attention to the depiction of monkey figures in these marginal spaces, and their symbolic function in the larger interpretive framework for understanding evolutionary science and our place in the natural world.

Biographical Note

John Holmes is Professor of Victorian Literature and Culture at the University of Birmingham, U.K.. His research focusses on the interrelationship between science, especially natural history, and cultural forms including poetry, painting and architecture. His books include *Darwin's Bards* (Edinburgh University Press, 2009) and *The Pre-Raphaelites and Science* (Yale University Press, 2018), and the edited collections *Science in Modern Poetry* (Liverpool University Press, 2012) and *The Routledge Research Companion to Nineteenth-Century British Literature and Science* (co-edited with Sharon Ruston, Routledge, 2017).

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1. The nineteenth century, with the emergence of evolutionary theory, was the galvanizing century for natural history and the biological sciences. This is when the general public’s understanding of science—whether or not that science responded positively to evolutionary theory—was understood to be critical to the development of civic society and culture. The construction of the natural history museums in the UK, Europe, and North America were part of this new investment in public science and education. A key strategy in science outreach practice from the inception of the natural history museum (and continuing today) is to connect the institutions and the science they present to the established cultural vocabularies of religion, art, and literature. The nineteenth-century neo-Gothic buildings were constructed as powerful interpretive statements to link science with religion and the arts. They have often been described as “cathedrals of science” (Sheets-Pyenson). This medieval and ecclesiastical analogy was no afterthought, but was deliberately built into the structures themselves. Alfred Waterhouse, the architect of the Natural History Museum in London, conceived of its great Central Hall before it was built as “the Nave of a Cathedral” (Natural History Museum archives, DF930/1, fol. 11). The components of Waterhouse’s image—the religious function of the museum and its medieval roots—recur on other sites. Charles Daubeny, the Professor of Chemistry and Botany at Oxford, described the Oxford Museum’s central court as “the Sanctuary of the Temple of Science” where the professors themselves served as “ministering Priests, engaged in worshipping at her altar, and in expounding her mysteries” (III: 172).² When the Governor General of Canada opened the first wing of the Royal Ontario Museum in 1914, he was presented with an medieval-style illuminated vellum manuscript detailing the full plan of the museum as it was imagined by the architects Darling and Pearson (Browne 64). All three museums were meant to graft new kinds of knowledge onto old kinds of knowledge, investing science with aesthetic and ethical values that functioned on the same level as religion, art and literature.³
2. The Victorian investment in the Gothic—a revival of certain medieval and early renaissance aesthetic values—was in part a reaction to Enlightenment classicism that cultural theorists including John Ruskin saw as elitist, overly cerebral, and inorganic. The term “Gothic Revival” is a shorthand for a range of revivalist movements, of which Gothic is the most dominant in the time period from 1850-1914 (Brooks; McCarthy). It is not a simple thing to distill the term “neo-Gothic” down to a single meaning: the nineteenth-century use of Gothic was a “mediated thing” (Alexander 153), and a “kaleidoscopic category” (Silver 3). As the Gothic imagination was

inherently cross-disciplinary, merging art, literature and architecture, so the incorporation of scientific ideology in revivalist natural history museums is a natural extension of this interdisciplinarity (Bayer-Berenbaum). At the same time, both natural history as practiced in museums in the nineteenth century—the first great age of paleontology—and the historicist architecture of the Gothic revival looked to fragmentary, partially apprehended pasts to refashion their understandings of the present (O’Connor).

3. Literate culture is especially central to Gothic revivalism and associated historicist movements, for the idea of the “medieval” in revivalism is “derived less from medieval history than from medieval story” (Alexander 151).⁴ Most obviously, medieval literary forms such as beast fables and romances lent background narratives to the nineteenth-century building programs. These programs included museums alongside town halls and other municipal, national, or cultural buildings that borrowed heavily from romanticized ideas of the medieval chivalric past to articulate concepts of common (communal) cultural purpose.⁵ Examples include the town halls built by E. W. Godwin for Northampton, and by Waterhouse for Manchester, as well as stately homes from Fonthill Abbey at the beginning of the long nineteenth century to Castell Coch in Tongwynlais, Wales and Casa Loma in Toronto at the end.
4. The neo-Gothic employed not just medieval literary poetics, but also the structures of the medieval material text. Victorian architects and theorists envisioned the neo-Gothic building as a symbolic book; Ruskin was explicit in his belief that “the criticism of the building is to be conducted precisely on the same principles of that of a book” (*Stones* 2: 231)—in effect, that we “read” the building. In fact, this book-and-building analogy used by neo-Gothic practitioners was imported through the style itself: there was already a very firm connection between the book and the building that was rooted in the middle ages, especially in late medieval Gothic architecture. Of course in the medieval period books in codex forms were manuscripts—a relatively new technology that was highly aestheticized and highly theorized. The links between books and buildings (especially cathedrals) in the medieval mind were part of a much broader cultural understanding of the textual nature of the world. Whether or not the nineteenth-century neo-Gothic architects fully understood the deeper literary resonances of their borrowed symbolic language, the medievalism of these buildings imports a sophisticated worldview that underpins the scientific discourse of the nineteenth and twentieth centuries.

I. Medieval books and buildings

5. The links between medieval architecture and medieval manuscripts happen on multiple levels. At the broadest, most philosophical level, medieval scholastics viewed all of earthly existence as a divine text written in the mind of God. Although they employed a mixture of creative metaphors taken from the human realm to describe the cosmological creation—God as builder, God as craftsman—these material metaphors connect with God-as-Author tropes; thus, the activities of creative life—writing, building, shaping—merged together in medieval literate culture. Furthermore, medieval scholars recognized the intensely material nature of text. Isidore of Seville’s etymology of words relating to text, books, and poetics, demonstrates the intensity of this material idea of text, as well as its connection to nature. For example:

A verse (*versus*, also meaning “furrow”) is commonly so called because the ancients would write in the same way that land is plowed: they would first draw their stylus from left to right, and then “turn back” (*convertere*) the verses on the line below, and then back again to the right—whence still today country people call furrows *versus*. (142)

Medieval philosophers saw a much more intimate connection between the world of words and the world of things. They deepened the classical trope of the “Book of Nature” within the framework of Christian belief: the world as book was almost a literal reality for them. As Mary Franklin-Brown reflects:

Among all the things, the *res*, that make up the world is the *liber*, or “book,” itself. But it occupies a privileged position. It is more than just one thing-sign among many: as the container for any number of signs or figures, it becomes the symbol of the universe as a whole. (48)

Real manuscripts, of course, were constructed directly from the natural world: made of plants and animals. In this respect, the medieval understanding of the manuscript as not only a vehicle for text that reflects or explains the world, but actually an artifact *of* the world, provides a clear demonstration of how books were seen as mirroring structures of the textualised Creation.⁶

6. It is of course the cathedral, the house of God, that meets the sacred text most immediately in its cosmological function. Cathedrals were meant to be cosmological models—of the natural world especially—into which human existence was fully integrated. Thus, we might imagine three

reflective planes of existence: the book, the building, and the natural world, all mirroring each other as a triptych. Book-and-building relationships are made even more complex when we consider the arguments of scholars like Mary Carruthers, who have described how medieval scholastic cognitive theory—their understanding of how we think—also employed architectural models that, in turn, connected directly to the manuscript page (*Book of Memory* 172-75; *Craft of Thought* 10-24, 275). Victorian medievalism did not, perhaps, understand the depth of the medieval philosophical connections between the natural world, the built environment, and the written word, but theorists such as Ruskin clearly perceived the shared symbolic language of natural forms in medieval architecture and book making. The title of his famous chapter on “The Nature of Gothic” puns on this. And in the “discriminating and delicate” work of the medieval artists he traced a “subtle inquiry” into nature which he held to be “a prophecy of the development of the entire body of the natural sciences” (*Stones* 2: 201).⁷

II. The World of the Manuscript Page

7. If we dig down to the interpretive level below the medieval cathedral to consider the links between the medieval manuscript book and the modern museum, we find even more intriguing connections between book and building. In order to understand them we have to understand the medieval manuscript page. The history of museum collections can be traced back to textual compilation practices of medieval scholastic book culture (Rogers, “Compiling Creation”). The twinned textual practices of *compilatio* (compiling and editing texts) and *ordinatio* (book and page layout and design) were, as the paleographer Malcolm B. Parkes explained, not mere technical and physical processes of book-making, but part of a cosmological practice meant to reify the very vision of textual divinity inherent in the medieval worldview (59-69). For scholastic authors, compilers and book-makers, the production of manuscripts was a sacred practice of re-asserting the word of God and creation itself. The physical space of the codex, up to and including the placement of each letter of the text, was a microcosmic expression of the holy book of nature. The assemblage of authoritative texts that gave voice to the mind of God was codified in the concept of *compilatio*, which, like our word *compilation*, involves collection and re-assembly, but in this case as theological practice. The collecting work of *compilatio* was meant to reassemble the Book of Nature in microcosm. This is effectively the same mandate as the modern natural history museum. Where today a scientific imperative stands in for the theological

imperative of medieval scholasticism, in the nineteenth century, when the natural history museum was first imagined as a distinctive type of building, science was still conceived of as natural theology. As Richard Greswell, another of the campaigners for the foundation of the Oxford Museum, wrote with insistent emphasis in 1853, the ideal was for each specimen to occupy “*precisely the same relative place that it did in God’s own Museum, the Physical Universe in which it lived and moved and had its being*” (7, italics in the original). Richard Owen, the Superintendent of the Natural History Collections at the British Museum, drew a further analogy which could be said to underpin Greswell’s, registering in his 1865 *Monograph on the Gorilla* the affinity between the “technical language of systematic zoology” in his own practice and “the garb of thought characteristic of the medieval scholastic mind” (50).

8. *Compilatio* involves more complex negotiations between textual meaning and textual space than the impracticably ideal parallelism envisaged by Greswell; in medieval manuscript culture, the codex form defines, but also restricts, the text in both physical and interpretive ways. This tension between meaning and space was managed by *ordinatio*, which was the spatial and visual construction of the texts in the book. Everything that we consider inherent to our modern textual culture, from chapters to page numbering, references and title placement, are inheritances of pre-print medieval *ordinatio*, where every placement on the page and in the binding had to be constructed by hand. In many ways, *ordinatio* is about the physical architecture of the text, to complement the intellectual architecture of *compilatio*. Hrabanus Maurus, a ninth-century theologian and encyclopedist, stated that: “the work should be arranged in such a way that the wise reader would find set out continuously the literal and mystical explanations of individual things; and thus in a certain way he could satisfy his desire by finding a manifestation of both literal meaning and allegory” (qtd. in Franklin-Brown 48). The arrangement of the text, for the medieval compiler, produces the mystical and allegorical meaning; the page has to structurally support—and in fact imbue—the meaning. Much of what we associate with medieval manuscripts—the lush illuminated pages, for example—are in fact *ordinatio*, and thus not merely decorative, but interpretively significant on the same level as the text itself. With this mix of textual, visual, and spatial information on the manuscript page, interpretation was, as Michael Camille has explained, a complex cognitive practice mixing reading and seeing, as well as other sensory inputs (the smell, taste and touch of the book, especially, but—in the time before silent reading—the experience of the text was also aural) (“Sensations” 34-36). The medieval

manuscript, therefore, is an aesthetic experience much more like a building that we experience spatially, visually, aurally, and even on olfactory levels. Ruskin’s exhortation that we read the Gothic building is thus a neat inversion of the medieval idea that we experience a text physically as well as intellectually.

9. To read a natural history museum requires that we be alert to its material composition and to our own experience of that materiality. Just before work began on building the Oxford Museum, Ruskin’s friend Henry Acland, then Lee’s Reader in Anatomy at Christ Church, addressed the Oxford Architectural Society. The University, he said:

was about to perform an experiment; it was about to try how Gothic art could deal with those railway materials, iron and glass; and he was convinced, when the interior court of this museum was seen,—with its roof of glass, supported by shafts of iron, while the pillars and columns around were composed of variously coloured marbles, illustrating different geological strata and ages of the world, and the capitals represented the several descriptions of floras,—that it would be felt that problems had been solved of the greatest importance to architecture.⁸

Acland drew his audience’s attention to the fabric of the building, to how its component materials—the glass roof supported on iron columns, the marble columns surrounding the main court, the plants simulated in stone and wrought iron that top both sets of columns—could combine into a representation of the industrial and natural worlds. The tensile, tactile and visual properties of these materials are called to mind in Acland’s repetition of “iron” and “glass,” his enthusiasm for the “variously coloured marbles.” Internal echoes within his language and within the architectural form itself build up to a compelling composition. The “glass” is supported by the “shafts” of iron which in turn form a subject rhyme with the marble “pillars and columns,” while their various colors in turn reflect back the light shining through the glass roof. In a letter to Acland, his colleague John Phillips, the museum’s first Keeper, added that, “to make these ornamental parts of the fabric *really* and *obviously useful*, as a part of the exhibition of natural objects,” would require a “system” in which the marbles and plants could be grouped and each group given “an appropriate place” within the whole (Acland and Ruskin 92-93). In the process, he hoped to approximate to if not to achieve the order and beauty of the world as created by “the GREAT ARTIFICER” Himself (99). Through these acts of *compilatio* and *ordinatio*, then, the

museum would take form, becoming in effect a physical model of the natural world as conceived by mid-Victorian natural theology.

III. Margins and borders

10. As the Oxford scientists perceived, the spatial placement of information is critical to its interpretation, be it textually or architecturally: whether something is centered or placed on the margin is one of the most important critical gestures that can be made in *ordinatio* of both books and buildings. One of the ways in which Gothic buildings (both medieval Gothic and neo-Gothic) most clearly resemble medieval pages is the presence of decorative borders and margins. Margins and borders in manuscripts and architecture are, as on a map, marking inside and outside: they are portals between one space and another, between one existence and another, and between one text and another (or, between textual space and an altogether textless space). Medieval margins and borders construct spatial knowledge, not simply visual or textual knowledge. And the nature of that spatial knowledge is the marking difference: understanding the point at which things change, and that one space or one thing becomes another. Illuminated manuscript borders contained and connected textual parts, but also disrupted textual space and meaning. Marginal designs could reinforce the meaning of primary text, or they could work against it (Rogers, "Graffiti"; Schipper). They were, in effect, margins that refused to remain marginal.
11. In medieval manuscripts and buildings, much of the decoration is naturalistic; the margins abound with plants and animals, as well as human figures. As on the page, the borders and margins of Gothic architectural space—walls, arches, buttresses, columns—define the physical and conceptual space: margins are both structural and meaningful. As the medieval page and the cathedral were both microcosmic in nature, the margins represented the boundaries of the knowledge and the known universe. Animals, both real and imagined, are especially important. In the middle ages, the study of animals was a serious matter, albeit undertaken with a more literary than scientific impetus. Animals and animal behavior were considered to be critical allegorical systems constructed by God to instruct men. As Allain of Lille put it: "Every creature in the world is like a book and a picture to us, and a mirror; a faithful representation of our life, our death, our condition, our end" (qtd. in Ziolkowski 7). Taking a somewhat more objective approach, Augustine warned that "ignorance of things makes figurative expressions obscure

when we are ignorant of the natures of animals, or stones, or plants, or other things which are often used in the Scriptures for purposes of constructing similitudes” (qtd. in Ziolkowski 8). In the margins of medieval books and buildings much of the marginalia is composed of animal forms, both realistic and imaginary.

12. This complexity is brought to the neo-Gothic versions of margins and borders in natural history museums. The margins of Gothic natural history museums, modeled as they were on the design of the medieval cathedral, have a direct link to the medieval manuscript margin. Typically, margins and borders in museum architecture are naturalistic forms, flora and fauna especially. As the prominent Victorian architect G. E. Street remarked of the Oxford Museum before it was built, “where nature is to be enshrined, there especially ought every carved stone and every ornamental device to bear her marks and to set forth her loveliness” (17). Hence, in Oxford, the capitals of the iron columns of the structure are floriated, recalling a forest in a modern rendition of the trope often discussed in regard to medieval cathedrals (Emery 14). In the Natural History Museum in London, terracotta forms top the capitals of the piers and edge the windows and doors. These are arranged according to the subject designation of the spaces at the time of building, with the east wing dedicated to extinct animals and plants and the west wing to living forms. And in Toronto, the Royal Ontario Museum, with a highly stylized nod to the Gothic through Art Deco, includes both human and animal forms in its marginal spaces.
13. But while the naturalistic designs of Gothic buildings are widely admired, perhaps more striking to the contemporary viewer is the prevalence of medieval monsters and hybrids in the margins of Gothic books and buildings. Hybridity is a hallmark of the margin in multiple ways. It is evident in the interlocked, tangled border beings in manuscripts, the anthropomorphic depictions of animals, and the literal hybrids. Medieval hybrid creatures are typically composites of known animals, including humans—the dog-men, griffins, and more idiosyncratic combinations of beings that populate the margins of the medieval imagination (Isidore 244-45).⁹ Neo-Gothic natural history museums frequently participate in this tradition of marginal hybrids and grotesques. In keeping with their scientific mandate, museums rework the tradition of “grotesques”—the monsters and scowling faces that populate cathedrals and Gothic colleges—into more scientifically resonant figures. Nevertheless, museum margins exhibit many similar

qualities to those of the manuscript grotesques: strangeness, wondrousness, comedy, threat, and hybridity.

14. In the realm of natural history, figures of extinct animals and dinosaurs intersect in especially meaningful ways with the medieval grotesque tradition. The extinct monsters that line the parapet of the east wing of the Natural History Museum in London are some of its most immediately striking grotesques. The palaeotherium has a devil’s eyes and ears, the trunk of a tapir and the claws, so it seems, of a large predator. The hefty, bear-like ground sloth mylodon and the ferocious scimitar-toothed cat *Machairodus* look similarly alien, like parodies of the noble and familiar lion, panther and wolf who stand above the west wing. In fact, all three of these extinct mammals were the subjects of scientific papers by Owen and were realized with scientific precision by Waterhouse.¹⁰ The same combination of grotesquery, equivalence and scientific accuracy is reflected in the decoration of the museum’s interior. The ancient fish who swim up and around the piers in the east wing are bizarre cousins of the modern fish found on the same piers in the west wing. They are clearly fish, yet distorted with spines, bony plates, outsized eyes and leering mouths. They too were copied, closely, from the scientific literature, including Owen’s own textbook *Palaeontology*.¹¹ Around the arch into the east pavilion, terracotta archaeopteryxes stand where modern birds do in the west wing. With its big boney tail and clumsy beak, the archaeopteryx resembles an ungainly prototype, a bird with reptile features, but again it is scientifically accurate, informed once more by one of Owen’s own studies.¹²
15. If extinct animals provided one source for the grotesque neo-Gothic imagination to work with, the future direction of evolution offered another. One particular pair of carvings at the Oxford University Museum, on the capitals on either side of a first-floor window, revels in this possibility. Almost all the decorative carving at Oxford is of currently living animals, but these monstrosities—three to each capital—are an exception. Their front ends look like heavily built carnivorous quadrupeds, their mouths absurdly wide open. Their back halves are long tails, like those of sea-monsters. Given when they were carved, early in 1860, and the function of the museum itself, it seems almost certain that they allude to a well-known and much-ridiculed passage from *On the Origin of Species*, published only a few months earlier.¹³ Here Darwin uses a thought-experiment to explain how evolution could come about through natural selection:

In North America the black bear was seen by Hearne swimming for hours with widely open mouth, thus catching, like a whale, insects in the water. Even in so extreme a case as this, if the supply of insects were constant, and if better adapted competitors did not already exist in the country, I can see no difficulty in a race of bears being rendered, by natural selection, more and more aquatic in their structure and habits, with larger and larger mouths, till a creature was produced as monstrous as a whale. (210)

These carved sea-monsters anticipate the result of this evolutionary change. They are bear-whales, their mouths so grotesquely distended that they have ended up catching not only insects but each other’s eel-like tails. Yet as well as playfully extrapolating from Darwin’s imagined example of evolution, Oxford’s bear-whales also mythologize it. Aptly for a Gothic building, the bear-whales look more like the product of a medieval than a modern imagination, a pre-scientific legend like the mermaid. At the same time, they are science-fiction creatures, projections into the future of what may yet evolve according to Darwin’s theories.

16. The hybridity that characterizes the palaeotherium, archaeopteryxes and bear-whales embodied the new discoveries of Victorian natural history. But it also hinted at living forms and forms of knowledge that troubled the familiar taxonomies. In the rotunda of the Royal Ontario Museum—the architectural center-piece of the Art-Deco extension built in the early 1930s by Chapman and Oxley—the capitals are carved with a pantheon of hybrids, some stylized from actual living creatures such as seahorses and bats, others combining them in impossible forms including winged horses and bat-winged, eagle-headed serpents. There is even a variant form of bear-whale. Together, the combination of these weird animals, the Art Deco style of the relief carving and mysterious symbols carved one per capital, create a strong impression of esoteric knowledge, an arcana that sits uneasily alongside the museum’s scientific remit. In hinting at lost forms of knowledge, the decorations in the rotunda imply that they still linger, to be recovered through science, perhaps even to be mobilized in science, or merely to remind us that the knowledge that is on display in museums is itself never final, never fully apprehended.

IV. Babewyns: Medieval Marginal Monkeys

17. The hybrid figures in medieval culture and its cultural descendant, the neo-Gothic, seek to articulate the complex relationships we have to navigate in our understanding of our place in the

natural world. One particular animal type has a special status in these negotiations: primates. In medieval manuscripts and in natural history museums, monkeys, apes and other primate species have a distinct status as marginal commentary, for they have long been recognized as being connected to humans, especially human cognition, often troped as both divine and animalistic. In this respect they represent our own hybrid nature.

18. It is a common interpretation of medieval texts to see descriptions of monkeys, apes, and other non-human primates as negative, associating them with the devil, as figures of greed, lasciviousness, and malice.¹⁴ But in actuality depictions of marginal monkeys in the middle ages were highly diverse—indeed virtually encyclopedic in their range of ethical presentations, even in a single interpretive space. In *Image on the Edge* Camille opens his interpretive theory of illuminated borders through a close reading of the Terce page in a Book of Hours (11-13). The lush illuminative work depicts the adoration of Magi along with the female patron (who would be the reader of the book) in an elaborate border that merges into an historiated initial—in this case the letter D for *Deus* (*Deus in adiutor*; “O Lord hear my prayer”). This is all incorporated into an ornate marginal frame that merges architectural and floral structures, and that in turn incorporates miniatures of five monkeys. Three of the monkeys seem to be mimicking the gestures of the Magi who are depicted in the initial: is this depiction of evil, mischievousness, or the highest form of flattery? If the Magi are wise, what is the intellect of the monkeys performing the same acts? Answers are not to be had in the margins themselves: surely the point is that we ask these questions.
19. The medieval word for all these elements, Camille suggests, was *babuini* or, in Chaucer’s Middle English *babewynnes*, and he points to Chaucer’s use of the term in the “House of Fame,” where there are “many subtil compassinges, / Babewynnes and pynacles, / Ymageries and tabernacles” (1188-90). There are two things to note here: first, that in this moment Chaucer is using the word “babewyns” to describe architectural features—the decorative margins of a building. Second, that the word “babewyns” is related to our modern word “baboons,” starting off a daisy-chain of associated concepts in simian symbolism. Camille insists that Chaucer achieves yet another simian pun in “compassinges”; for Camille, “singe” evokes “*la singe*,” French for monkey, which, he cleverly suggests, can also function as an anagram of “*le signe*,” or the interpretive object (12).

20. Medieval people, although they were not evolutionary biologists, clearly recognized that monkeys and apes had a special relationship to humanity distinct from that of other types of animals. Simian symbolism is complex, and much of it was borrowed from classical naturalists like Pliny and Aristotle, so representations of primates in manuscript margins are not usually realistic. Primates (usually monkeys) in borders were depicted behaviorally: they are *doing things*, not just being present in the margins. Their actions are sometimes realistic—monkeys doing monkey things, interacting with each other in a fairly naturalistic way—but frequently the monkeys are doing human things. They wear clothing (often clerical clothing). They make—and drink—wine. They use weapons (often on people). They perform processions. They hunt other animals. They make paper. They preach and, especially, they read books. Monkey behavior in medieval manuscripts clearly seems to be representing us—the funny and scary, good and evil, clever and stupid aspects of human behavior, displaced onto our simian relatives. When we read monkeys in medieval manuscripts, we read ourselves.
21. This is perhaps made most overt in images of monkeys using mirrors and books, of which there are many.¹⁵ In their mimicry of humanity, primates are a debased version (to the medieval mind) of humanity’s imitation of the divine mind, including our imitative creative capacity in text and bookmaking. Images abound of monkeys interacting with, if not always reading, books, as well as interacting with (and mocking) book makers and readers (Camille 24).¹⁶ In monkey form, our creative work might be laughable or evil: a pretension to divine knowledge, including our uniquely human knowledge of “book-learning,” made corrupt by our base animalism. In medieval margins, monkeys mock our special status in the great chain of being, pulling us down to the level of animals. The prevalence of book-and-mirror variants in medieval monkey symbolism is in itself significant, as it encapsulates the sheer variability of messaging in primate symbolism generally, which actually produces, somewhat paradoxically, an interpretive stability: monkeys are intermediaries and hybrids: they can be anything. And, they are us, so we are intermediaries and hybrids: we too can be anything.

V. The Babewyn Reborn: Gothic Monkeys in Natural History Museums

22. The relationships between human and non-human primates became a cultural obsession with the emergence of evolutionary theory in the nineteenth century, even as the Gothic revival allowed

the medieval grotesque, repressed by enlightenment rationalism, to return. Darwin’s argument for evolution by natural selection, *On the Origin of Species*, was by no means the first account of evolution, but it was the first to do away with any necessary teleology to account for it. When evolution could be considered as a linear, progressive process in which, in Tennyson’s words, we could “Move upward, working out the beast, / And let the ape and tiger die” (*In Memoriam*, cxviii, ll. 27-28), our simian origins could be comfortably consigned to the past. But as T. H. Huxley demonstrated in his 1863 book *Man’s Place in Nature*, we were just another form of ape ourselves, cousins, not successors, to the other primates. Predictably, there was a strong resistance to the arbitrariness of Darwinian evolution for several decades, as scientists and the laity sought other, more reassuring explanations for the process than natural selection. Equally predictably, monkeys, with their unstable relationship to humanity and their gift for hybridity, became recurrent and unsettling symbols of our own animal origins (Haraway 2-3).

23. The unease that Darwinian evolution could engender is captured in a well-known story that Acland told in the 1890s about the carving of a window at the Oxford Museum. The so-called Cat Window was carved exuberantly in 1859 by James O’Shea, who went on to carve the bear-whales. Acland recalled over thirty years later that O’Shea had been reprimanded for carving monkeys and had turned them into cats instead (Acland and Ruskin 107-09). Although Frederick O’Dwyer (231-42) has called many of the details of Acland’s account into question, it remains the case that the cats around the window do look strangely prosimian. Acland’s telling of the story implies that there was something particularly offensive to the Oxford authorities about having monkeys carved on the front of their museum; the unspoken implication is that this was because of their proximity to humanity. Acland’s story resonates because, within weeks of O’Shea carving the window, Darwin’s book was published, changing its meanings. The cats may or may not have once been monkeys, but they became perceptibly monkey-like. Their newfound hybridity may have been nothing more than an accident of flamboyant carving, but it became a resonant sign of our own grotesque proximity to animals.
24. This same uncomfortable proximity of humans to monkeys is vividly realized in other hybrid carvings found on capitals inside the central hall, built in the early 1930s to connect the old and new wings of the Royal Ontario Museum. On a first glance they represent monkeys, perhaps baboons. Yet these baboons are closer to medieval *babewyns*. They have the dog-like faces of

baboons and long monkey-like (if not very baboon-like) tails. But their long, naked backs, poised hands and heeled feet are remarkably human. In their hybrid form they point to the troubling slippage, between man and monkey—a slippage that is particularly pertinent to the Royal Ontario Museum, with its brief, carved on either side of the main entrance to the highly decorated 1933 extension, to set “The Record of Nature through Countless Ages” alongside “The Arts of Man through All the Years.” These man-monkeys, inconspicuous as they are, raise a key question for a museum which not only covers archaeology and anthropology as well as natural history, but considers them to be cognate and contiguous, even continuous, disciplines. If humanity is a product of nature, where does the divide between art and nature lie? The museum’s motto is ambiguous on this point. “All the Years” and “Countless Ages” imply different timeframes, yet they are in fact synonymous. In their hybridity, the man-monkeys at once rupture the continuity of natural history—they are unreal creatures that never existed—and affirm it; as works of art in their own right, they are at once artificial and the outcome of natural processes.

25. Even the more realistic monkeys carved on the walls of natural history museums stand at once for themselves and for their relationship to humanity. Their meanings are imprecise, often obscured by a lack of direct historical evidence as to who precisely commissioned them, when and why. This element of mystery enhances their inevitable doubleness through the free play of the imagination that it allows for, and a part of this free play is to consider the significance of the different marginal spaces where the monkeys can be found. The man-monkeys at the Royal Ontario Museum are liminal in themselves; fittingly they inhabit a liminal space, perching at the entrance of the central gallery which links the two wings of the museum. The location of two small monkeys carved at the Oxford museum hints too at their possible significance. Their provenance is unclear: as with so much original medieval sculpture, there is no record of who carved them, nor of when they were carved. They inhabit the upper corners of one of the bays on museum’s east side. One monkey is chewing its thumb, the other peeking shyly out from behind its arm. On their own, they seem to be little more than engaging, slightly childlike little creatures. But these monkeys too acquire and draw out meanings from their situation. The capitals and corbels carved in the bays around the museum’s central court represent “the several descriptions of floras,” in Acland’s words. Those in this section of the museum represent coniferous trees—not particularly appropriate as a habitat for monkeys, until you realize that the tree in the next bay

round is a monkey puzzle. The monkeys do indeed seem puzzled, unsure what to make of us as we are of them, perhaps for much the same reason.

26. The carving around the central court was still underway when the museum opened for the meeting of the British Association for the Advancement of Science in June 1860. It was at this meeting that Samuel Wilberforce, the Bishop of Oxford, notoriously asked Huxley whether he was descended from an ape on his grandmother’s or his grandfather’s side.¹⁷ It is tempting to see the monkeys puzzling over the same question even as they pose it back to the visitors in the museum. As with the Cat Window, the subsequent history of the building, and of evolutionary biology, entrenches this reading. After an initial resistance to Darwin’s ideas, the museum came to embrace them and to teach them. Eventually, in 1897, it celebrated them by adding a statue of Darwin to the pantheon of scientists who stand as statues around the court. He was set up deliberately next to Newton and, quite incidentally, in front of the bay with the two small monkeys—the emblems of his troubling insight into the natural world.
27. The best-known of the many natural history museum monkeys are those which scale the arches of the Central Hall at the Natural History Museum in London. They too are at the margins, but at the margins of the commanding and conspicuous architectural center of the museum, a space dedicated, in Owen’s original conception of the museum, to showcasing the wonders of God’s creation and to providing an index of all life on Earth. In the popular imagination—and that of many of the museum’s own staff—they are a representation of the new Darwinian biology, but while scholars like Colin Cunningham correctly assert that these figures “must surely be taken as an acknowledgement of Darwinian theories” (56), what the monkeys say about Darwin’s science and its implications remains indeterminate. Owen presided over the building and decoration executed by Waterhouse for the museum. He was an opponent of Darwin on both scientific and religious grounds, a man for whom evolution, once he had accepted that it happened at all, happened in marked steps through the action of what he described, in a monograph on the eccentric Madagascan lemur, the aye-aye, as “a continuously operative secondary creational law” (“Aye-aye” 96). Owen called his position the “derivation hypothesis” to distinguish it from other forms of transmutationism which did away with direction or divine agency (*ibid.*).¹⁸

28. The most obvious feature of the Natural History Museum monkeys is that they are climbing around the arches. As our eyes follow them up, they seem to ascend, suggesting the possibility that they may be stages on an evolutionary ascent as well. But the climbing monkeys at the Natural History Museum do not change from monkeys into anything else. There is no evolutionary development on display here, even if the monkeys themselves necessarily plant the question of our own evolution in our minds. Since the Second World War, there have been no statues of people among the terracottas at the museum, but prior to the bombing of the building there was one, known as “Adam,” who stood on the gable end of the Central Hall, high above the main entrance. It is telling that, to get from monkeys to man in the decorative schema of the Natural History Museum one had to leave the building entirely. According to this iconography, man was at once the crowning triumph of nature and a being set apart from the rest of the natural world.
29. While Owen was happy to use a supposedly lower primate such as the aye-aye to try out his alternative version of evolutionary theory, he was also determined to confute “the notion of a transformation of the ape into man” (*Classification* 103; see also *Gorilla* 50-2). In rebuffing the evolutionists’ attempts to lay claim to humanity, Owen cites the seventeenth-century Cambridge Platonist Henry More, who charges the man who believes himself to be “an ape, satyre or baboon” with being a degenerate sensualist (cited Owen, *Classification* 103). Waterhouse’s and Owen’s monkeys may ascend, but they do not change incrementally as Darwin and the secular evolutionists might have expected. Instead they remain constant within nature. Were a sudden transformation to make them men, it would propel them, like “Adam,” beyond the confines of the merely natural world. But, as with their conspecifics at Oxford, the Natural History Museum’s monkeys have changed their meanings as Owen’s conception of biology has been forgotten while Darwin’s has been entrenched. They have slipped away from Owen’s grasp. And yet, although people reach for Darwin’s name when they see the monkeys climbing up the Central Hall, the very fact that they see them climbing up, not down, and that they find in this act a metaphor for evolution, indicates that they are thinking of evolution not as the directionless process described by Darwin but as an ascent on which monkeys are indeed a staging post towards man. In this sense, the Natural History Museum monkeys have evolved after all. They have changed what they mean, hybridizing Owen’s and Darwin’s biology and medieval and modern conceptions of

monkeyhood, all the while requiring us to think not about monkeys *per se* but rather about monkeys as a marker of our own place in nature.

30. At least one use of monkey symbolism in a natural history museum tackles head-on its interpretive adaptability in regard to evolutionary debates around human-primate relations, and it uses some of the most established gestures of medieval monkey symbolism to do so. The monkey decorations in the frieze of Johannes Benk in the Naturhistorisches Museum in Vienna offer the most direct meta-statement on the range of responses to evolutionary theory occurring at the time these museums were being built (Jovanović-Kruspel 150-52). In a frieze that forms one of the ornate borders of the museum copula the motif of monkeys using books and mirrors is made into a deliberate commentary on evolutionary theory. In the frieze, a monkey or more precisely an ape holds up a mirror to a cherub, who buries his face in his hands in response.¹⁹ Behind the cherub is another monkey, holding open a book, which is clearly marked “Darwin.” The tableau presents an interpretation of an interpretation of Darwinism: the cherubic infant hides his face in dismay at the truth being presented to him, that Darwin’s theory, written in a great book, now challenges the great book of the medieval God, who gave humanity a privileged position above animals. The frieze depicts the moment of human dismay at this news. The interpretation is negative: this is bad news for the cherub, and of course it depicts the reaction of a significant portion of the nineteenth-century public. But the frieze itself is also a nineteenth-century reaction—one of delight, scientific satisfaction and mischievousness—all of which are depicted through the monkeys. They goad the human, delighting in his discomfort, insisting on the “proof” of the theory—the theory presented in the book, and the visual confirmation presented in the mirror. The monkeys are on the right side of history here: they are the knowers. Through them, the museum’s carvers and builders, and the (in this case) Darwinian scientists behind them, have projected their own roles as truth-tellers, tormenters and teasers into the monkey figures.²⁰

Conclusion

31. The Vienna monkey frieze depicts the unease or discomfort that greeted evolutionary theories in the nineteenth century. It adapts the traditional simian symbolism developed in the Western Middle Ages that figured monkeys as symbols of ontological instability and hybridity. But whether referencing evolution or the great chain of being, the unease that monkey marginalia can

provoke may be precisely the point; it is a way of representing the instability of interpretation and knowledge more generally. Monkeys speak of boundaries, and the breaking thereof. They stand between ourselves and the other animals, and between our knowing selves and our unknowing selves. At the same time, the link between monkeys, mimicry and mirroring re-connects us to the idea of the book—and the museum, and knowledge itself—as a kind of mirror, a reflection of the natural world. Primate symbolism, with its paradoxical stability across historical periods in signifying instability, is a thinking device rooted in literary and textual practices that interrogates our instruments and methods of knowledge (books, mirrors, observation, theorization). In the modern natural history museum, marginal symbolism -- especially simian symbolism -- functions both to express and to trouble the changing meanings of science itself. The monkeys that climb around the margins of natural history museums are markers of the ways in which other categories too—in this case, literary culture and scientific culture—intersect.

32. The behavioral aspect of medieval monkey depictions, anthropomorphic and not, serves to remind us that we have a very difficult time thinking about purely “natural” aspects of the natural world, and that we cannot help but moralize nature. This too is part of our medieval inheritance. The extensive and deep tradition of animal symbolism established in scholasticism, and expressed through manuscript illumination, architectural decoration, and textual traditions such as bestiaries and fables, still makes it difficult for us not to read animals as indicative of the workings of nature (or, in the medieval mind, of God’s will) and as reflections of human ethical codes. This tradition challenges us to think about how those categories might be related to one another.
33. Ultimately, the natural world is the moral world. Today we might talk more comfortably about the ethical obligations that humanity has to the rest of the world in the Anthropocene era, but we can trace a line from those discussions back to the Christian allegories of the medieval bestiary, which was based on the *Physiologus* and other classical natural histories where anthropomorphic theorization formed more of the naturalist methodology than observation. The ethical resonances of monkey marginalia remain important within our understanding of evolution. Medieval depictions of monkeys hybridize human and animal existence; like evolutionary theory itself, they entangle these realms together. We cannot pretend to be separate or radically different. Medieval monkeys put humanity’s behavior on a spectrum between the divine and animalistic, challenging the crisp categorical structures of the great chain of being. In the same way, the

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monkeys carved into the margins of the natural history museums in Oxford, London, Vienna and Toronto unsettle the dominant theories and assumptions of their time, and of ours.

Works Cited

- Acland, Henry W., and John Ruskin. *The Oxford Museum*. 5th ed. London: George Allen, 1893. Print.
- Agnew, Michael. "The 'Comedieta' of the *Satira*: Dom Pedro de Portugal's Monkeys in the Margins." *Signs on the Edge: Space, Text and Margin in Medieval Manuscripts*. Ed. Sarah Larratt Keefer and Rolf H. Bremmer Jr. Paris: Peeters, 2007. 289-309. Print.
- Alexander, Michael. *Medievalism: The Middle Ages in Modern England*. New Haven: Yale UP, 2007. Print.
- Bayer-Berenbaum, Linda. *The Gothic Imagination: Expansions in Gothic Literature and Art*. New Brunswick: Associated University Presses, 1982. Print.
- Bloch, R. Howard. "From Romanesque Architecture to Romance." *Rethinking the New Medievalism*. Ed. R. Howard Bloch et al. Baltimore: Johns Hopkins UP, 2014. 249-70. Print.
- Botting, Fred. *Gothic*. New York: Routledge, 1996. Print.
- Brooks, Chris. *The Gothic Revival*. London: Phaidon, 1999. Print.
- Browne, Kelvin. *Bold Visions: The Architecture of the Royal Ontario Museum*. Toronto: Royal Ontario Museum, 2008. Print.
- Camille, Michael. *Image on the Edge: The Margins of Medieval Art*. Cambridge: Harvard UP, 1992. Print.
- . "Seeing and Reading: Some Visual Implications of Medieval Literacy and Illiteracy." *Art History* 8.1 (1985): 26-49. Print.
- . "Sensations of the Page: Imaging Technologies and Medieval Illuminated Manuscripts." *The Iconic Page in Manuscript, Print and Digital Culture*. Ed. George Borstein and Theresa Tinkle. Ann Arbor: U of Michigan P, 1998. 33-53. Print.
- Carruthers, Mary. *The Book of Memory: A Study of Memory in Medieval Culture*. 2nd ed. Cambridge: Cambridge UP, 2008. Print.
- . *The Craft of Thought: Meditation, Rhetoric and the Making of Images, 400-1200*. Cambridge: Cambridge UP, 1998. Print.
- Chandler, Alice. *A Dream of Order: The Medieval Ideal in Nineteenth-Century English Literature*. London: Routledge, 1971.
- Chaucer, Geoffrey. "The House of Fame." *Riverside Chaucer*. 3rd ed. Ed. Larry D. Benson. Boston: Houghton Mifflin, 1987. 347-373. Print.
- Cunningham, Colin. *The Terracotta Designs of Alfred Waterhouse*. London: Natural History Museum, 2001. Print.

- Darwin, Charles. *On the Origin of Species by Means of Natural Selection*. Ed. Joseph Carroll. Peterborough: Broadview, 2003. Print.
- Daston, Lorraine, and Katharine Park. *Wonders and the Order of Nature, 1150-1750*. New York: Zone Books, 1998. Print.
- Daubeny, Charles. *Miscellanies: Being a Collection of Memoirs and Essays on Scientific and Literary Subjects*. 4 parts in 2 vols. Oxford: James Parker, 1867. Print.
- Dawes, Elizabeth. “Pulling the Chestnuts Out of the Fire.” Houwen 155-69.
- Emery, Elizabeth. *Romancing the Cathedral: Gothic Architecture in Fin-de-Siecle French Culture*. Albany: State U of New York P, 2001. Print.
- Fergusson, James. *History of the Modern Styles of Architecture*. London: Murray, 1862. Print.
- Franklin-Brown, Mary. *Reading the World: Encyclopedic Writing in the Scholastic Age*. Chicago: U of Chicago P, 2012. Print.
- Greswell, Richard. *Memorial on the (Proposed) Oxford University Lectures Rooms, Library, Museums, etc.* Privately printed at Oxford, 1853.
- Hall, Michael. *Gothic Architecture and Its Meanings 1550-1830*. Oxford: Spire, 2000. Print.
- Haraway, Donna. *Primate Visions: Gender, Race, and Nature in the World of Modern Science*. New York: Routledge, 1989. Print.
- Hassig, Debra. “Marginal Bestiaries.” Houwen 171-88.
- Hesketh, Ian. *Of Apes and Ancestors: Evolution, Christianity, and the Oxford Debate*. Toronto: U of Toronto P, 2009. Print.
- Holmes, John. *The Pre-Raphaelites and Science*. New Haven and London: Yale University Press, 2018. Print.
- . “Ruskin’s Windows at the Oxford Museum,” *Ruskin Review and Bulletin* 9.2 (2013): 23-33. Print.
- Houwen, L.A.J.R., ed. *Animals and the Symbolic in Medieval Art and Literature*. Groningen: Forsten, 1997. Print.
- Isidore of Seville, *The Etymologies of Isidore of Seville*. Trans. Stephen A. Barney, W.J. Lewis, J.A. Beach, and Oliver Berghof. Cambridge: Cambridge UP, 2011. Print.
- James, Frank A. J. L. “An ‘Open Clash between Science and the Church’?: Wilberforce, Huxley and Hooker on Darwin at the British Association, Oxford, 1860.” *Science and Beliefs: From Natural Philosophy to Natural Science, 1700-1900*. Ed. Knight and Eddy. Aldershot: Ashgate, 2005. Print.

- Janson, H.W. *Apes and Ape Lore in the Middle Ages and Renaissance*. London: Warburg Institute, 1952. Print.
- Jovanović-Kruspel, Stefanie. *The Natural History Museum—The History of the Construction, its Conception & Architecture*. Vienna: Natural History Museum, 2017. Print.
- Kandola, Sondeep. *Gothic Britain: Nation and Race, Culture and Criticism, 1707-1897*. Manchester: Manchester UP, 2012. Print.
- Kordecki, Lesley. “Losing the Monster and Recovering the Non-Human Subject in Fable(d) Subjectivity.” *Houwen* 25-37.
- Landow, George P. *The Aesthetic and Critical Theories of John Ruskin*. Princeton: Princeton University Press, 1971. Print.
- Lewis, Michael J. *The Gothic Revival*. London: Thames and Hudson, 2002. Print
- McCarthy, Michael. *Origins of the Gothic Revival*, New Haven: Yale UP, 1987. Print.
- McCracken, Peggy. *In the Skin of a Beast: Sovereignty and Animality in Medieval France*. Chicago: University of Chicago Press, 2017. Print.
- O’Connor, Ralph. *The Earth on Show: Fossils and the Poetics of Popular Science, 1802-1856*. Chicago: U of Chicago P, 2007. Print.
- O’Dwyer, Frederick. *The Architecture of Deane and Woodward*. Cork: Cork UP, 1997. Print.
- Owen, Richard. “Description of Some Fossil Remains of *Chaeropotamus*, *Palaeotherium*, *Anoplotherium*, and *Dichobunes* from the Eocene Formation, Isle of Wight.” *Transactions of the Geological Society of London*, N.S. 6 (1842): 41-45. Print.
- . *Description of the Skeleton of an Extinct Gigantic Sloth*. London: Van Voorst, 1842. Print.
- . *A History of British Fossil Mammals*. London: Van Voorst, 1846. Print.s
- . *Memoir on the Gorilla*. London: Taylor and Francis, 1865. Print.
- . “On the *Archaeopteryx* of von Meyer, with a Description of the Fossil Remains of a Long-Tailed Species, from the Lithographic Stone of Solenhofen.” *Philosophical Transactions* 153 (1863): 33-47. Print.
- . “On the Aye-aye.” *Transactions of the Zoological Society of London* 5.2 (1863): 33-101. Print.
- . *On the Classification and Geographical Distribution of the Mammalia*. London: Parker, 1859. Print.
- . *Palaeontology, or A Systematic Summary of Extinct Animals and Their Geological Relations*. 2nd ed. Edinburgh: Adam & Charles Black, 1861. Print.
- Parkes, Malcom B. *Scribes, Scripts and Readers: Studies in the Communication, Presentation and Dissemination of Medieval Texts*. London: Hambledon, 1991. Print.

- Reynolds, Nicole. *Building Romanticism: Literature and Architecture in Nineteenth-Century Britain*. Ann Arbor: U of Michigan P, 2010. Print.
- Rogers, Janine. “Compiling Creation: Medieval Codicology and Images of Early Modern Museums and Collections.” *Image On Text, Text On Image (1450-1789)*. Ed. Christina Ionescu and Lauren Beck. Newark: U of Delaware P, 2017. In press.
- . “Graffiti and the Medieval Margin.” *Scribbling Through History: Graffiti, Places and People from Antiquity to Modernity*. Ed. Elizabeth Frood, Ömür Harmanşah, Chloé Ragazzoli, and Chiara Salvador. London: Bloomsbury, 2018. 175-88. Print.
- Rupke, Nicolaas. *Richard Owen: Biology without Darwin, a Revised Edition*. Chicago: University of Chicago Press, 2009. Print.
- Ruskin, John. *On the Nature of Gothic Architecture*. London: Smith, Elder & Co., 1854. Print.
- . *Stones of Venice*. 3 vols. 1851-53. 2nd ed. London: Smith, Elder & Co., 1867. Print.
- Schipper, William. “Textual Varieties in Manuscript Margins.” *Signs on the Edge: Space, Text and Margin in Medieval Manuscripts*. Ed. Sarah Larratt Keefer and Rolf H. Bremmer Jr. Paris: Peeters, 2007. 25-54. Print.
- Sheets-Pyenson, Susan. *Cathedrals of Science: The Development of Colonial Natural History Museums During the Late Nineteenth Century*. Montreal: McGill-Queen’s UP, 1988. Print.
- Silver, Sean. “The Politics of Gothic Historiography, 1660-1800.” *The Gothic World*. Ed. Glennis Byron and Dale Townshend. London: Routledge, 2014. 3-14. Print.
- Street, George Edmund. *An Urgent Plea for the Revival of True Principles of Architecture in the Public Buildings of the University of Oxford*. Oxford: Parker, 1853. Print.
- Tennyson, Alfred, Lord. *The Poems of Tennyson*. Ed. Christopher Ricks. 3 vols. Harlow: Longman, 1987. Print.
- Townshend, Dale. “Improvement and Repair: Architecture, Romance, and the Politics of Gothic, 1790-1817.” *Literature Compass* 8.10 (2011): 712-38. Print.
- Ziolkowski, Jan M. “Literary Genre and Animal Symbolism.” *Houwen* 1-23.

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² This analogy was mocked by the architectural critic James Fergusson, who feigned surprise in his *History of the Modern Styles of Architecture*, published in 1862, that the dons at the museum were not busy illuminating black-letter copies of Lyell or Darwin (328).

³ For extended discussions of the relationship between science, art and religion at the Oxford University Museum and the Natural History Museum in the context of their own time, see Holmes, *The Pre-Raphaelites and Science*, 117-59, 207-33.

⁴ On the relationship between literature and architecture in the early 19thC see Reynolds and Townshend.

⁵ R. Howard Bloch connects the romance form with 12thC Gothic architecture in “From Romanesque Architecture to Romance.”

⁶ Hence, the common use of the mirror metaphor in medieval textual culture, for example the *Speculum Maius*—The Great Mirror—of Vincent de Beauvais.

⁷ The precedence, forms and influence of Ruskin's medievalism are addressed in two substantial studies from the early 1970s. Alice Chandler sees Ruskin working to augment the ideas of the earlier medievalists into an “almost metaphysical vision of an ordered universe,” calling him a “philosophic rather than a pragmatic medievalist” (Chandler 195-96). Chandler notes too that Ruskin's medievalism shifted over his lifetime (199). For George Landow, Ruskin’s medievalism, and his interpretations of the painting and architecture of the Middle Ages, are increasingly appreciated as conducted “with a sympathy and an attuned sensibility rare in a Victorian critic” (Landow 443-44). For more recent discussions, see Alexander, Matthews, and Evans.

⁸ *Oxford Architectural Society: Reports of Meetings from July 1853, to May 31, 1856*, 69-71. These reports are not attributed to individual authors, and appear to have been privately printed.

⁹ Isidore seems to collapse primates with mythological hybrids: He discusses satyrs and Cynocephali (dog-people) in his section on “monstrous people” (245) and then again in his discussion of apes, where he identifies these two categories as two of the five sub-categories of ape (253). On the construction of the monstrous and its relation to human subjectivity in medieval fables, see Lesley Kordecki.

¹⁰ See Owen, “Description of Some Fossil Remains of *Chaeropotamus*, *Palaeotherium*, *Anoplotherium*, and *Dichobunes*,” 41-45; *Description of the Skeleton of an Extinct Gigantic Sloth; A History of British Fossil Mammals*, 179-83, 316-24.

¹¹ Two sheets of Waterhouse’s designs for extinct fish are reproduced in Cunningham, *Terracotta Designs*, 161-62. Several of them are clearly copied or adapted from Richard Owen, *Palaeontology*, 153-54, 164, 170-71.

¹² “On the *Archaeopteryx* of von Meyer,” 33-47.

¹³ For the dating of these carvings, see Holmes, “Ruskin’s Windows at the Oxford Museum,” 23-33.

¹⁴ For an extended study of medieval depictions of apes and other primates see Janson, as well as Dawes 155-56 and Hassig 172.

¹⁵ The fact that mirrors and books may in fact be reflective symbols between themselves is implicitly understood in Medieval cosmologies, although it is not directly stated in the way that it is in the 18th century by the German philosopher Georg Christoph Lichtenberg: *Ein Buch ist Spiegel, aus dem kein Apostel herausgucken kann, wenn ein Affe hineinguckt* (Aphorisms E49). Although a common understanding (surely alliteratively driven) of the quote in English translation is that “if an ass peers into it, you can’t expect an apostel to look out,” the literal meaning of “der Affe” is ape or monkey, perhaps another example of the cultural persistence of the mirror/book/monkey symbol nexus. On human-animal mirroring see McCracken 107-117, 123-126.

¹⁶ On the conceptual motive of the monkey as a figure of the glossator see Agnew, 289-309.

¹⁷ For a full account of this debate, see Hesketh; for a close critical analysis of the different accounts of who said what, see James, 171-93.

¹⁸ For a discussion of Owen’s “derivation hypothesis” in his work on the aye-aye and thereafter, see Rupke, 165-76.

¹⁹ http://www.nhm-wien.ac.at/en/museum/history_architecture/darwin

²⁰ Stefanie Jovanović-Kruspel discusses the Darwinian science of Ferdinand von Hochstetter, the Vienna museum’s first Director, and how it shapes the museum’s decorative schema in *The Natural History Museum—The History of the Construction, its Conception & Architecture*.