Visual Darwinism Caged in the Exoticism of Natural Theology: Echoes of Victorian Ornithology in *Jane Eyre*[1]

Ensaio

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Introduction

This paper aims to analyse the echoes of Thomas Bewick's (1753-1828) *History of British Birds* (1797-1826) in Charlotte Brontë's (1816-1855) *Jane Eyre* (1847) and it will focus on the way the illustrated compendium served both as a mental escape from reality for most of the readership of ornithological publications, like the heroine of Brontë's novel, and as a legacy with which visual Darwinism had to cope.

Firstly, I will pay special attention to Thomas Bewick's illustrations of isolated birds with insufficient suggestions of the environment, devoid of references to the adaptation of the species to their natural habitat, aimed at conveying a message of harmony and order as a sign of divine craftsmanship as was argued at the time by the supporters of Natural Theology. *History of British Birds* followed the path of Natural Theology also by highlighting the exoticism of birds in general, depicting them only in undisturbed environments where absolutely no harm could reach them. Despite Thomas Bewick's incipient depictions of the natural environment, the exoticism of birds functioned as the key aspect to reach a wider readership, regardless of their level of ornithological or zoological knowledge, leaving to Charles Darwin (1809-1882) the complex task of dealing with his predecessors' views and illustrations of the animal kingdom framed by Natural Theology. As is possible to observe in the opening pages of Charlotte Brontë's novel, Jane Eyre, like most nineteenth century readers of illustrated books, looked for the peacefulness of Bewick's environments rather than the sceneries inhabited by species whose

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ornaments were given special visual emphasis by Charles Darwin. He did this because of the core relevance of these adaptive features to explain an Evolutionary perspective of natural selection in general, and sexual selection in particular.

Later, I will take into account the constrictions of the conventions of bird illustration prior to *The Descent of Man, and Selection in Relation to Sex* (1871), which lacked the violence associated with moments of direct confrontation and competition between males to capture the female's attention and ultimately her preference. Visual Darwinism had to face these constrictions of bird illustration conventions while trying to convey as clearly as possible an already extremely controversial natural process – natural and sexual selection – without shocking the readers who were used to the neutral harmonious views and ornithological illustrations of Thomas Bewick's and his predecessors' depictions of the natural environments. In this context, I will discuss the strategies used by Charles Darwin in the illustrations of *The Descent of Man* to articulate his new controversial Evolutionary perspectives of the relations between animals of the same or different species with the existing conventions of the visual presentation of the natural (peaceful) environments of eighteenth century ornithology.

Throughout this analysis I will try to provide answers to the following questions: did visual Darwinism break with these conventions by imposing the new Evolutionary theories visually or did it adapt itself to the constrictions inherent in the visual legacy left by Bewick and his followers?

Charlotte Brontë's ten-year old heroine, Jane Eyre, finds comfort in the observation of various exotic bird species in Thomas Bewick's compendium *History of British Birds* as a way to escape from her troublesome cousin John and her aunt, Mrs Sarah Reed, the second wife of Jane's uncle who had agreed to receive his niece after her parents' death. Against her will, Jane's aunt accepts the young orphan at the request of her husband who pities the poor girl and decides to provide a home for

his niece, treating her as one of his own children. Jane's constant mistreatment by her aunt and cousins, especially John, make her childhood miserable as they show her she is not welcome, mistreating her and highlighting the differences between her and the couple's own children.

Illustrated books such as Bewick's popular ornithological publication become Jane Eyre's gateway to different locations and environments, ones inhabited by exotic birds with attractive plumages, depicted as living in profound peacefulness, with the incipient scenery included in the illustrations as a contrast to her own life. During these brief moments of evasion, Jane Eyre travels to other places and spaces along with the birds she gazes at in profound wonder as she describes in the opening pages of this first-person narrative:

> I returned to my book – Bewick's History of British Birds […] there were certain introductory pages that, child as I was, I could not pass quite as blank. They were those which treat of the haunts of sea-fowl; of "the solitary rocks and promontories" by them only inhabited; of the coast of Norway, studded with isles from its southern extremity, the Lindeness, or Naze, to North Cape – […] Nor could I pass unnoticed the suggestion of the bleak shores of Lapland, Siberia, Spitzbergen, Nova Zembla, Iceland, Greenland, with "the vast sweep of the Artic Zone, and those forlorn regions of dreary space – that reservoir of frost and snow, where firm fields of ice, the accumulation of centuries of winters, glazed in Alpine heights above heights, surround the pole, and concentrate the multiplied rigours of extreme cold". (Brontë 10)

Travelling through the pages of this compendium allowed Jane to escape the harsh reality in which she lived and also the pain of losing both her parents. The descriptions of these distant locations fascinated the young orphan, enabling her to explore places without any sign of the hostility she was used to at her aunt's home. She longed, therefore, to keep discovering the world through Bewick's studies because "each picture told a story; mysterious often to my undeveloped

understanding and imperfect feelings, yet ever profoundly interesting […]. With Bewick on my knee, I was then happy: happy at least in my way, I feared nothing but interruption" (Brontë 10-1).

As the critic David Knight points out, "the primary purpose of any zoological illustration is to show what the animal is like" (Knight 12) and in Bewick's *History of British Birds* the illustrations focused specifically on the animal, centring it in the picture without specifying visually the natural surroundings it inhabited. Nonetheless, for younger readers like Jane Eyre, these scarce visual references to the environment were sufficient to give shape to the textual descriptions about each species presented in the compendium. If zoological illustration in general and ornithological illustration in particular is designed in the first place to display "what the animal is like", in the case of Bewick's illustrations the information that was visually conveyed proved to be insufficient to identify and understand the origins, the life and the habits of the animal depicted. Not only did the English illustrator not represent the bird interacting with members of the same or of other species, but neither did he show the conditions of the natural habitat which inevitably constrained the life of the animal and its own physical anatomy. In general, all the birds presented in Bewick's *History of British Birds* seemed to inhabit peaceful environments, with no imminent perils, focusing only on the animal itself (see Picture 1). This avoidance of the depiction of the natural environment leaves us with some questions concerning the ornithologist's intentions: did Bewick believe such insufficient standardised visual references to the surroundings were in fact enough to show what the animal was like to readers in general? Was this absence of a more detailed natural environment intentional? Did the illustrations run the risk of losing the exoticism and image of peacefulness that ornithological publications framed by Natural Theology wanted to convey if in these representations the animal were placed in its natural habitat and if this were depicted in detail?

Picture 1 - Thomas Bewick, *A History of British Birds. Vol. I. Containing the History and Description of Land Birds.* 1797, page 53.

The images of exotic birds with no visible signs of aggressive or ferocious behaviour even in the case of predators illustrated the conception that the universe and its inhabitants could coexist in harmony because that would be assured by the divine creator. Therefore, adaptive features such as claws and sharp beaks were avoided in these representations to eliminate any association with violence and hostility among the animals that could possibly reveal any incoherence with regard to the imagery of peacefulness conveyed by the supporters of Natural Theology like Bewick. These traits of the animal's body were strategically hidden or depicted with no relation to any aggressive attitude towards other animals because, ultimately,

they were incompatible with a life designed by the divine authority. In the preface to Volume II, Bewick refers to the authority of God in the creation and organisation of nature:

> Among the many approved branches of instruction, the study of Natural History holds a distinguished rank. To enlarge upon the advantages which are derivable from a knowledge of creation, is surely not necessary; to become initiated into this knowledge, is to become enamoured of its charms […]. In whatever way, indeed, the varied objects of this beautiful world are viewed; they are readily understood by the contemplative mind, for they are found alike to be the visible words of God. […] Could mankind be prevailed upon to read a few lessons from the great book of Nature, so amply spread out before them, they would clearly see the hand of Providence in every page; and would they consider the faculty of reason as the distinguished gift to the human race, and use it as the guide of their lives, they would find their reward in a cheerful resignation of mind, in peace and happiness […]. (Bewick, II, iv-v)

The natural habitats did not reveal any clue as to the utility of these adaptive features in relation to the conditions of the place where the animal lived. Apparently, and according to Bewick's visual illustrations in general, the conditions of the natural surroundings did not require any particular features from the animal that could help to assure its survival. Nonetheless, *History of British Birds* was published in two volumes: Volume I "Containing the History and Description of Land Birds" and Volume II "Containing the History and Description of Water Birds". This clear division established by Bewick between these two major environments – land and water – pointed though to the necessity to identify and classify the species found according to the place where they lived as the ornithologist claimed in the preface to the first volume:

> By dividing the various families of birds into two grand divisions, viz. Land and Water, a number of tribes have thereby been included among the latter, which can no otherwise be

> denominated Water Birds than as they occasionally seek their food in moist places, by small streamlets, or on the sea-shore; such as the Curlew, Woodcock, Snipe, Sandpiper, and many others. These, with such as do not commit themselves wholly to the waters, are thrown into a separate division, under the denomination of Waders. To these we have ventured to remove the Kingfisher, and the Water Ouzel; the former lives entirely on fish, is constantly found on the margins of still waters, and may with greater property be denominated a Water Bird than many which come under that description; the latter seems to have no connection with those birds among which is usually classed; it is generally found among rapid running streams, it which it chiefly delights, and from which it derives its support. (Bewick, I, v-vi)

In neither volume did the illustrations portray or grant any clues to provide a possible explanation as to how the conditions in which the animal lived intervened in its way of life, anatomy or physical changes related, for example, to the variations in the colour of their plumage according to climate changes and the natural conditions of the habitat. Nonetheless, as Bewick described in this extract from the preface to Volume I, he had carried out some research into the way of life of the different species he classified and included in his compendium. In fact, Bewick also pointed out the exact locations where these species could be found and provided information about what they lived on. Thus, the location and the natural environment were not irrelevant in the criteria he used for classifying the species but, in the end, there were no accurate or detailed visual representations of these habitats.

Notwithstanding Thomas Bewick's intention of revealing textually the environment each bird inhabited, visually, the illustrator did not include the animal in its natural surroundings.


98 BRITISH BIRDS.

THE FIELDFARE.

(*Turdus Pilaris*, Lin.—*La Litorne, ou Tourdelle*, Buff.)

Picture 2 - Thomas Bewick, *A History of British Birds. Vol. I. Containing the History and Description of Land Birds.* 1797, page 98.

In fact, Bewick's illustrations show the bird juxtaposed with the background scenery of its habitat in general (Picture 2) with no other species or members of the same species present, apart from the odd worm falling from the bird's beak in a few illustrations. Moreover, all the birds are depicted in the same position: a simple profile view. Insufficient details of the environment or the presence of other animals isolate the bird in the centre of the illustration, as Jonathan Smith claims, "without integrating the bird into that habitat" (Smith 99).

Despite Thomas Bewick's intention of providing textual information about the environments and the conditions of the species' location, his studies followed the visual tradition of eighteenth century ornithological illustrations that focused on the

species rather than providing detailed visual information about the environment and interaction with other animals. This taxonomic view of the animal kingdom (Fichman 22-3) reflected the centrality of Carl Linnaeus' (1707-1778) system of scientific classification of species (Lippincott and Blühm 16-7) and, therefore, in Bewick's predecessors' ornithological representations the emphasis was on the bird's structure and plumage rather than on portraying the conditions of its natural habitat or its interaction with other animals.

Later, the French naturalist Buffon (1707-1788), one of the naturalists most respected by Bewick,[2] stressed the importance of including the animal's surroundings even in such incipient ways as the eighteenth century illustrators did (Kemp 122). For example, Bewick's predecessors Eleazar Albin (1690-1742) and George Edwards (1694-1773) portrayed birds in this profile depiction without any elements or references to the natural habitat of the species described (Donald 44-7). In general, eighteenth century ornithological knowledge about a bird's habits and interaction with other species was limited to the observations of birds kept isolated in captivity where food was provided by the animal's keeper without their having the need to hunt or fight for food.[3] Consequently, the animal's defensive instincts were highly constrained and so what these ornithologists observed did not correspond to the animal's behaviour in its natural habitat where it was exposed to different kinds of obstacles to its survival, in particular the not always peaceful interaction with other animals. The way of life outside captivity and the different adaptive features remained a mystery to Bewick's predecessors and also to readers, who were left with a sense of artificial peacefulness that did not match the animal's struggle for survival.

Even though some of these ornithologists did, like Thomas Bewick, in fact travel to other locations in Britain to observe different bird species *in loco*, they lacked the scientific perspective and knowledge that could inter-relate the animal's anatomy and way of life to the conditions in which they lived. It was, therefore,

important to show textually and visually the ties between animals and their habitats.

Eleazar Albin and George Edwards, among other eighteenth century ornithologists and illustrators, included only small stumps and dubious hummocks where the bird was placed without any particular detail that could indicate its precise location. This view of the animal, isolated from any possible imminent peril, aimed at conveying an image of a divine harmony that was provided and assured by a generous entity that had created a space where all beings could coexist peacefully. Thus, the explanations provided by Natural Theology about the ways in which the world and its denizens were conceived functioned as necessary justification for the lack of *in loco* knowledge by ornithologists and illustrators.

In addition, this insufficient understanding of the ways different species survived in their natural environments seemed to fulfil the purpose of expanding the book market, in particular illustrated ornithological publications. In other words, the lack of information collected *in loco* by authors and illustrators made the studies more comprehensible to a younger readership as well as to individuals without any deep scientific knowledge of zoology or ornithology. The textual descriptions were necessarily more succinct and the language used was easily understandable because, in general, it did not incorporate any specific scientific terminology.

The book Jane Eyre was reading, *History of British Birds*, is a paradigmatic example of the popularity of these illustrated publications among younger readers such as Charlotte Brontë's ten-year-old heroine. One of the reasons for this success is the visual innovation Thomas Bewick introduced in this work. Although knowing that illustrations caught the attention of a younger readership, Bewick was also aware of the high cost of including a large number of illustrations. During the eighteenth century, illustrated scientific manuals used, for example, in Anatomy or Medicine lectures in university were not accessible to a wider readership owing to the high quality of the illustrations that, moreover, had to be printed on special

paper. In these circumstances, it was difficult for authors and publishers to produce a significant number of copies of the publication because this implied the risk of not selling the books. As a result, the illustrated publications were produced generally by subscription so the print run was limited to the number of subscribers.

Thomas Bewick decided to introduce a woodcut process in his *History of British Birds* that modernised and innovated the book market by including on the same page both the illustration and the textual description without any special paper being required to print the illustration as had been the case for previous expensive illustrated publications. The costs were therefore significantly reduced but the quality of the pictures did not decrease. On the contrary, throughout the nineteenth century, after the introduction of Bewick's innovative technique along with the subsequent remarkable success of his compendium, the illustrated book market adopted the same printmaking technique and these publications became considerably cheaper and more accessible to a wider readership.

At the end of the eighteenth century and especially throughout the nineteenth century, bird-watching became a popular hobby due to the public's fascination with the variety of bird species that inhabited the urban landscape in parks and menageries or in the Zoological Gardens where visitors could observe many of the birds portrayed and described in ornithological publications. These frequent visits to animal exhibitions soon became one of the habits of Victorian families who used to take their children to observe animals in captivity during the weekends or holidays. This leisure activity also had a pedagogical aim as children learned from a very young age to respect animals, to identify different species and to learn more about the food they ate and the habits of the species being exhibited. Thus many developed an interest and wanted to read more about their favourite animals, the animal kingdom in general or simply about their pets.

In this context, illustrated natural history books created a new bridge between scientific knowledge and its visual representation, which attracted many animal

enthusiasts regardless of their level of zoological knowledge. Curiously, during the Victorian age, the interest in publications about specific bird species was associated with a particular social status. Members of the country aristocracy who appreciated hunting in rural environments such as the Highlands (Mackenzie 32-3) were avid purchasers and readers of books about pheasants, partridges and ducks whereas the urban upper class preferred reading about exotic species, often imported, such as peacocks with their colourful tails, which fascinated the more modern and urban readership that regularly visited the city's parks where these species could easily be found and observed.

This clear division between different interests in specific ornithological publications, and consequently in bird species, leaves us with a relevant question: where did the Royal Family's reading interests, particularly those of Queen Victoria (1819-1901), lie? Queen Victoria was a well-known animal lover and the first Royal Patron of the RSPCA: Royal Society for the Prevention of Cruelty to Animals (Cartmill 140-2). She herself had many pets that she treated as family members, spoiling them with good quality food and commissioning portraits of them from the most renowned animal painters of the day like Sir Edwin Landseer (1802-1873), who painted two of her favourite bird species: the macaw and the lovebird. Despite this fascination with colourful exotic species like the macaw (and probably peacocks), Queen Victoria and Prince Albert (1819-1861) often visited the Highlands during the hunting season, particularly during autumn, which also made them great enthusiasts of the same bird species as the country aristocracy. As a result, the monarch's ornithological reading interests alternated between these two different types and possibly included many others because of her fascination with animals in general.

During the nineteenth century, as a consequence of the frequent expeditions undertaken all over the world for scientific purposes, visual imagery constituted a relevant source of scientific knowledge and gradually scientific publications

recognised the importance of visual representations and their direct relation to the object they aimed to reproduce. Until that time, the presentation of scientific conclusions and critical reviews in scientific publications were still dependent on textual descriptions. These recurrent expeditions during which different species were studied explained the need for a new scientific practice that Julia Voss describes as "discovery and display" (Voss 23). All the species collected needed to be further dissected, examined, classified and catalogued, but it was also necessary to understand the interplay between different life forms and how they adapted to the conditions of their natural environment. Gradually, the limited view of nature as the creation of a supreme creator conveyed by the supporters of Natural Theology like Thomas Bewick gave place to the conception of an endlessly dynamic nature where all beings were ruled by natural laws in a balance of forces and not by God.

During the second voyage of H.M.S. Beagle between 1831 and 1836, Charles Darwin's field observations of new species and their adaptive features, particularly the Galapagos finches, later catalogued by the renowned ornithologist of the Zoological Society of London, John Gould (1804-1881), played a vital part in the conception of Evolutionary thinking. Natural Theology's harmonious understanding of the animal kingdom was soon discarded by Darwin as his conception of survival necessarily implied different efforts and moments of struggle and violence that should be depicted in visual representations of each species' way of life. But the question was: how could Darwinism, controversial as it was, and its followers replace the peaceful visual representations of the natural world that delighted readers like the young orphan in Charlotte Brontë's novel? As regards the illustrations in Charles Darwin's publications, particularly those included in *The Descent of Man,* most of which were done by Alfred Brehm (1829-1884), one can understand that the way he chose was to adopt the already existing visual conventions of illustration and gradually present his new perspective on such controversial topics of Evolutionary thinking as the utility of beauty as a key aspect

of sexual selection in some species (cf. Donald and Olsén 101-117). Until that time, scientific illustrations had standardised the animals depicted in profile images and relegated beautiful plumages and particular ornaments to gifts attributed by God for the delight of humankind.

In *The Descent of Man*, in many cases Darwin adopted the profile depiction in the centre of the illustration as used by his predecessors such as Thomas Bewick, Eleazar Albin or George Edwards, but the ornaments that different bird species used to catch the female's attention were given special relevance in visual Darwinism (Picture 3). Moreover, the specimen was rarely depicted alone so as to show, in the case of sexual selection, the interaction between male and female. When the bird was depicted in isolation, Darwin's primary intention was to highlight the features of the animal's body that performed a core function during the process of sexual selection (cf. Munro 253-289). For example, in the case of the humming-bird, thoroughly studied in *The Descent of Man* and also by John Gould before Darwin, male humming-birds are described by Charles Darwin as a species that

> almost vie with birds of paradise in their beauty, as every one will admit who has seen Mr. Gould's splendid volumes, or his rich collection. It is very remarkable in how many different ways these birds are ornamented. Almost every part of their plumage has been taken advantage of, and modified; and the modifications have been carried, as Mr. Gould showed me, to a wonderful extreme in some species belonging to nearly every sub-group. […] with humming-birds, birds of paradise, &c, […] the selection [is made] by the females of the more beautiful males. (Darwin 436-437)

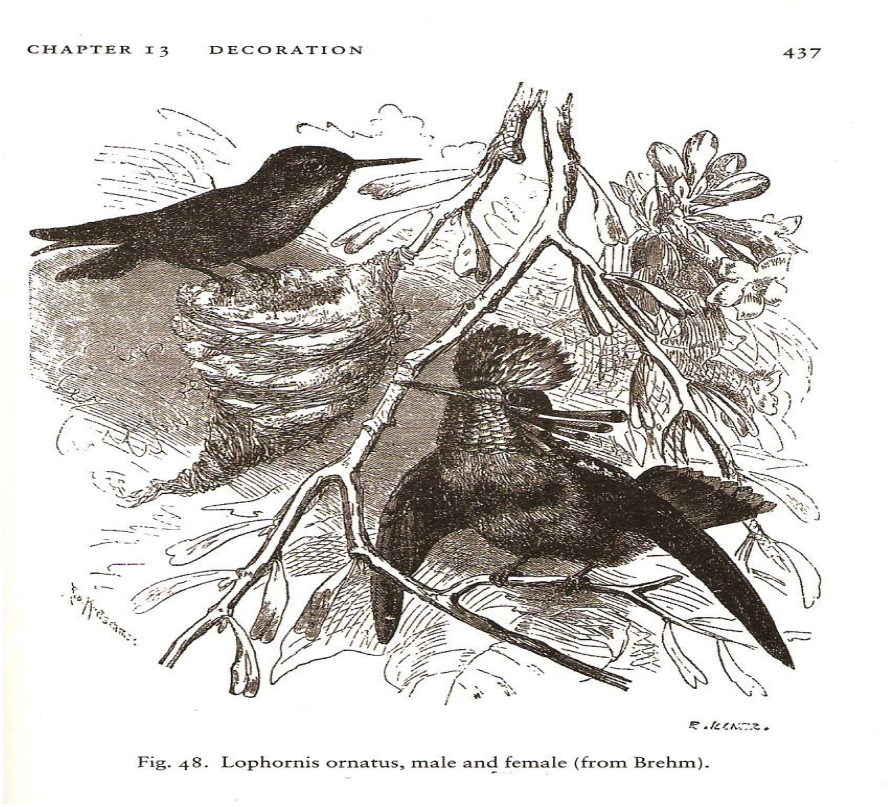
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Fig. 48. Lophornis ornatus, male and female (from Brehm).

Picture 3 - Charles Darwin, *The Descent of Man*, 1871, page 437.

As regards the environment, there are no significant changes when compared to Bewick's incipient depictions of the natural environment as Darwin aimed to emphasise not the environment itself but the adaptive features of the animal in order to explain them from an Evolutionary perspective. He also relied on textual descriptions to clarify these complex processes, mechanisms and natural laws so that readers, used to the visual conventions prior to the publication of his Evolutionary views, could follow these new perspectives of the natural world and its laws. For example, to draw the reader's attention to the influence of climate changes on the modifications of the adaptive features of the animal's body (in this case the plumage), one species Darwin described was the ptarmigan, twice depicted by the animal painter Sir Edwin Landseer before the publication of *The Descent of Man*.[4] In Darwin's words,

> with respect to the cause or purpose of the differences in colour between the summer and winter plumage, this may in some instances, as with the ptarmigan, serve during both seasons as a protection. When the difference between the two plumages is slight, it may perhaps be attributed, as already remarked, to the direct actions of the conditions of life. (Darwin 440-1)

On the whole, Darwin's adaptation of the conventions of ornithological publications prior to his own studies was a selective process since the English naturalist decided to maintain some of the features used by Thomas Bewick and his predecessors in their ornithological illustrations, such as an incomplete visual representation of the species' natural surroundings, while relying on the textual descriptions to shed light on the explanation of the natural processes. The unsatisfactory use of image in the ornithological publications of eighteenth and early nineteenth century authors was associated with a clear selection of what could and could not be depicted according to the principles of Natural Theology. On the contrary, Darwin's aim was to make use of the illustrations to highlight the importance of the animal's physical adaptive features. Up to this time, these had been considered to be ornaments offered by God for Man's delight and for the embellishment of the animal itself with no other purpose than that incipient explanation provided by natural theologians. Visually, the utility of beauty proved to be one of the most controversial subjects of Evolutionary thinking due to the careful choices that Darwin had to make concerning the representation of this new perspective on Evolutionary aesthetics and the dynamics of nature ruled by natural laws.

To conclude, the exoticism of bird species and the peacefulness portrayed in the illustrations of Thomas Bewick's *History of British Birds* were the visual representations of a harmonious nature assured by a generous divine entity that guaranteed and maintained order in the animal kingdom as was argued by natural theologians. For all those readers of illustrated natural history books, like the young

Jane Eyre, who longed to find in these readings the order and the tranquillity that lacked in their own lives, eighteenth and early nineteenth century ornithological publications were the perfect gateway as visually they did not offer any scientific explanations about the dynamics of nature. In fact, some of the answers were later provided by Evolutionary thinking which faced the difficult task of adapting the existing conventions of ornithological illustration to their own purposes. This implied acknowledging that divine creation had been a blindfold that did not allow people to perceive the natural world and its human and non-human denizens from a true and accurate scientific perspective.

[1] This paper was presented at 'Relational Forms II *Ex certa scientia:* Literature, Science and the Arts. An International Conference' in one of the two panels dedicated to works developed within the "Science & Culture in Britain (19th and 20th centuries) Project" by the "British Culture and History" Research Group of CETAPS (Centre for English, Translation and Anglo-Portuguese Studies).

[2] As Thomas Bewick recalled in the preface to the first volume of his compendium, *History of British Birds*, Buffon's studies provided fundamental new approaches to the organisation of the world and its inhabitants. Nonetheless, the English ornithologist claimed that "in many instances that ingenious philosopher has overstepped the bounds of Nature, and, in giving the reins of his own luxuriant fancy, has been too frequently hurried into the wild paths of conjecture and romance" (Bewick, I, iv). What Bewick called "conjecture and romance" were the innovative views presented by the French naturalist about the urgency to consider the influence of the conditions of the natural surroundings on the animals' way of life, anatomy and consequently their own survival and the survival of their species. Even though Thomas Bewick referred to the locations in general terms, these descriptions did not make an accurate association between the conditions of the natural habitat and, for example, the adaptive features of the animal.

[3] During the eighteenth century, there were several menageries in London, such as the Royal Menagerie at the Tower of London and at Kew and Windsor. There were also several aristocrats who imported animals from other parts of the world and maintained their private collections of animals. Before the opening of the Zoological Gardens in 1828, ornithologists, anatomists, animal painters and the public in general used to visit the menagerie at Exeter 'Change in the Strand as well.

[4] Landseer had studied the ptarmigan *in loco* on several occasions during his visits to the Highlands. As a result, the animal artist depicted this bird species in two paintings: *Ptarmigan* (1833) and, later on in his career, *The Ptarmigan Hill* (1869). In both these works, Landseer portrayed the bird with its white winter plumage so as to capture the modification that occurs in the animal's plumage in winter, changing from a brown plumage in summer to a white plumage during the cold season as a way to camouflage itself in snow and prevent an attack from a predator.

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