Introduction

> And that no man should make a doubt that there is great Art and cunning herein, doe but marke, how there is not one Nightingale but hath many notes and tunes. Againe, all of them have not the same, but every one a speciall kind of musick by her selfe: nay, they strive who can do best, and one laboureth to excel another in varietie of song and long continuance: yea and evident it is, that they contend in good earnest with all their will and power: for oftentimes she that hath the worse and is not able to hold out with another, dieth for it, and sooner giveth she up her vitall breath, than giveth over her song. Ye shall have the young Nightingales studie and meditate how to sing, by themselves: yee shall have them listen attentively to the old birds when they sing, and to take out lessons as it were from them, whom they would seem to imitate staffe by staffe. The scholler, when shee hath given good eare unto her mistresse, presently rehearseth what she hath heard; and both of them keep silence for a time in their turnes. A man shall evidently perceive when the young bird hath learned well, and when againe it must be taught how to correct and amend wherein it did amisse: yea and how the teacher will seeme to reproove and find a fault.
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> – Pliny the Elder, *Naturalis Historia* (77AD)

Recent studies have emphasised the dangers of anthropomorphism in the interpretation and representation of other species.[1] In particular, scholars from across the arts and sciences have drawn attention to what Daniel Karlin describes as the 'irresistible' pressure of the figurative in poetic renderings of birdsong: the tendency not only to impose human motives and values upon an animal mind that exists properly outside the poet's own frame of reference, but also, on a deeper and more fundamental level, to inevitably '(mis-)translate' a non-human sound into human forms of signification – words, music, poetry.[2] While Karlin and others have observed the apparent and irreconcilable differences between the bird's own voice and the human forms that attempt to, in John Clare's phrase, 'syllable the sounds', this book

outlines an alternative approach to the 'Art' of birdsong.[3] Whatever the formal differences between birdsong and human speech, between what is sung and what is said, writers from Pliny the Elder to Charles Darwin recognised underlying similarities between how the nestling bird learns to sing and how the human child learns to speak.

The following pages trace the development of a scientific analogy which challenged definitions of language and, consequently, of what it means to be human. In the late eighteenth century, the ornithologist and friend of Gilbert White, Daines Barrington, conducted a series of experiments on three nestling linnets from which he concluded that 'notes in birds are no more innate, than language is in man'.[4] In a passage strongly reminiscent of Pliny, Barrington delineated the process by which the nestling listens to, recites and eventually perfects the song of its parents:

> Whilst the scholar is thus endeavouring to form his song, when he is once sure of a passage, he commonly raises his tone, which he drops again when he is not equal to what he is attempting; just as a singer raises his voice, when he not only recollects certain parts of a tune with precision, but knows that he can execute them.
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> What the nestling is not thus thoroughly master of, he hurries over, lowering his tone, as if he did not wish to be heard, and could not yet satisfy himself. (p. 251)

This book explores the 'science of birdsong' as it developed from Barrington's innovative analyses to Darwin's use of such findings in increasingly controversial, evolutionary arguments in *The Descent of Man* (1871). It traces the development of this line of scientific thought, the threat it posed to the perceived uniqueness of human language and the heated arguments that consequently arose between evolutionary scientists, notably Darwin, and established philologists, such as Max Müller. My research in this area seeks to reveal a legacy of thought which informs, and consequently affords fresh insights into, a canonical group of poems about birdsong in the Romantic and Victorian periods. Focusing especially on the writings of Samuel Taylor Coleridge, William and Dorothy Wordsworth, John Clare and Thomas Hardy, I elucidate how these writers used birdsong as an analogy through which to explore the faculty of language: how language is learned and how it may have evolved, and what this may further tell us about how poets compose.

Birdsong, which Darwin termed the 'nearest analogy' to human speech, raises a set of questions about how language works: how it is acquired, how

it is transmitted across generations and how it may have evolved.[5] In exploring the deep connections between how birds learn to sing and how infants learn to speak, this book seeks to redirect attention away from the form to the *faculty* of language in literature. Throughout the long nineteenth century, poets like Clare drew parallels between the 'muttering' of the bird while learning to sing and the poet's own processes of composition:

> When first we hear the shy come nightingales
> They seem to mutter oer their songs in fear
> & climbing e'er so soft the spinney rails
> All stops as if no bird was any where
> The kindled bushes with the young leaves thin
> Lets curious eyes to search a long way in
> Untill impatience cannot see or hear
> The hidden music—gets but little way
> Upon the path—when up the songs begin
> Full loud a moment & then low again
> But when a day or two confirms her stay
> Boldly she sings & loud for half the day
> & soon the village brings the woodmans tale
> Of having heard the new come nightingale.[6]

As they observed the young nightingale in its first, faltering attempts at song, poets like Clare were, throughout this period, led to reflect on the creative processes at work in the making of poetry. In tracing this analogy, this book seeks to analyse, test and break down some of the binary distinctions which continue to structure responses to Romantic and Victorian poetry: 'natural' and 'artificial', 'instinctive' and 'learned', 'spontaneous' and 'premeditated' art. As this book will seek to show, birdsong provided poets in this period with a crucial analogy for exploring some of the most vexing questions surrounding the art of composition in the long nineteenth century.

I

In his highly influential book *Why Birds Sing* (2005), the musician and philosopher David Rothenberg draws together the different ways through which human beings have interpreted, and sought to understand, the song of birds. Rothenberg traces our engagement with birdsong all the way back to our first and most rudimentary attempts to 'translate' these sounds into human words and phrases:[7]

Eastern towhee:	Drink your tea!
White-throated sparrow:	Old Sam Peabody, Peabody, Peabody.
Yellowhammer:	A little bit of bread and no cheese.

These traditional birdsong mnemonics have throughout the centuries proved useful in enabling ornithologists and amateur birders to remember and distinguish between the notes of different species. But it is not difficult to see the problem here. Some of the rhythms of the white-throated sparrow may be captured in that repetition of 'Peabody, Peabody, Peabody'. And the yellowhammer's patter of notes with its prolonged closing wheeze may also be detectable in 'a little bit of bread and no cheese'. But is the eastern towhee really telling us to drink our tea? Of course, the birds are not really speaking, not to us anyway. Whenever human beings attempt to 'translate' the sounds of birds into our own words and phrases, we are always thus in danger of descending into anthropomorphism and absurdity – of making the birds sound ludicrously like ourselves. In many ways, the transcription of the yellowhammer's call tells us less about the bird itself than it does about the very thin and very hungry ploughboy whom the writer and naturalist Richard Jefferies heard repeating its phrases over and over to himself in the late nineteenth century: 'for', as Jefferies dryly noted, 'to have only a hunch of bread and little or no cheese' was all too frequently this poor boy's 'own case'.[8]

In one respect, musicians may appear free from this problem of having to 'translate' a bird's song into words. In the seventeenth century, the Jesuit scholar and polymath Athanasius Kircher attempted to transcribe the notes of birds in musical notation (see Figure 1). Kircher's transcriptions are part of a work in which the composer seeks to reveal a universal harmony uniting all creatures of the earth: *Musurgia Universalis* (1650). In this rather literal attempt to *fit* the notes of birds to human music, however, Kircher betrays an inability to fathom any alternative sense of harmony from his own. Where composers have experimented with those more irregular, alien rhythms of birdsong, the result has sounded distinctly unmusical to human ears. In tribute to a much-beloved pet starling, Wolfgang Amadeus Mozart composed 'A Musical Joke', which all too successfully emulated the disjointed songs of its subject: 'in the first movement', observed one commentator, 'we hear the awkward, unproportioned, illogical piecing together of uninspired material'.[9] Whether or not the 'joke' was intended, Mozart's cadenza points to an essential irony in musical renderings of birdsong: the more closely the composer attempts to emulate those alien, inhuman rhythms, the further they stray from our own sense of harmony

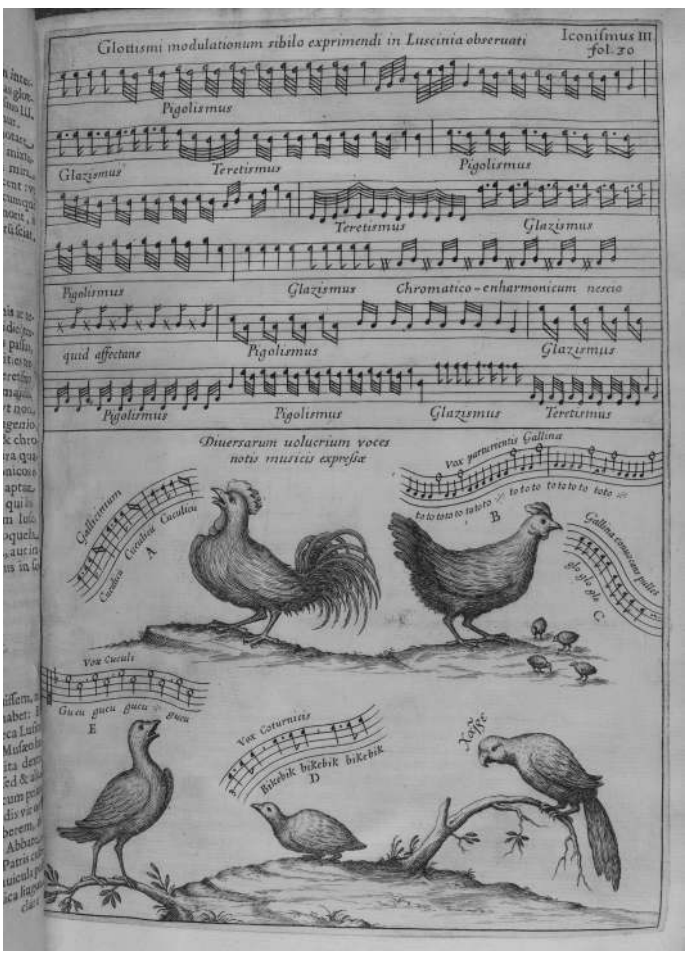

Figure 1 Athanasius Kircher, from *Musurgia Universalis* (1650).

and music. In their attempt to make the birds keep time with them, musicians are ever thus at risk of imposing their own order upon avian voices that sing, as the composer Olivier Messiaen observed, 'in extremely quick tempi' and 'excessively high registers' which are 'absolutely impossible for our instruments'.[10] Throughout the centuries, composers like Messiaen have been drawn to the 'strange, iambic rhythm' of the corncrake precisely because those rhythms at once tantalise and elude every attempt to 'translate' them into our own human music.[11]

In the 1950s, the scientist William Thorpe was able to obtain a far more precise *picture* of birdsong following the advent of a new piece of technology: the sonogram. Figure 2 shows Thorpe's sonogram recording of the male chaffinch's song. The sonogram enabled scientists like Thorpe to slow down and visually analyse the complex patterning of a bird's voice: here we have a precise visual *picture* of the sounds the bird is making. Notice the timescale at the bottom of the diagram. These are sounds and structures which escape the human ear, which we cannot hear in the bird's own time, never mind translate into our music or, least of all, our language.

So where does this leave poetry? In comparing different interpretations of birdsong in science, music and poetry, Rothenberg's interdisciplinary approach raises certain questions about poetic form. His book invites its readers to compare, for example, the precision of the sonogram with some rather less precise, though in many ways more evocative, renderings of the nightingale's 'fast thick warble' in poetry.[12] Consequently, Rothenberg's study has inspired scholars in my field of literary criticism to reflect on the *difficulties* of representing birdsong in poems, and what poetic attempts to 'translate' this sound into written words may tell us about the medium of poetry – what poetry can and cannot do, and how it differs from, for example, a piece of music. Rothenberg's analysis is central to Karlin's careful scrutiny of birdsong as a figure for poetry in *The Figure of the Singer* (2013).[13] Set within a work which outlines 'the long quarrel (which is also a love-affair) between poetic language and song', Karlin's chapter on birdsong questions its status as an inimitable ideal in nineteenth-century poetry; in the various efforts of Romantic and Victorian poets to emulate the songs of birds, Karlin detects an underlying and 'subversive tendency to affirm the primacy of human language, with all its failures and defects, over the ineffable idea of song to which it claims to aspire'.[14] Rothenberg's particular praise of Clare has also inspired Stephanie Kuduk Weiner's detailed analysis of this poet's renderings of birdsong and other natural sounds in *Clare's Lyric: John Clare and Three Modern Poets* (2014).[15] For Weiner, Clare's attempt to 'syllable the sounds' of the nightingale is part of a sustained and 'humbling struggle with the inspiration provided by nature's music and the difficulty of rendering his experience of it in poetic language'.[16] Both of these works, to which I am deeply indebted, are centrally concerned with the question of mimesis and poetic form. In testing the limits of language, birdsong has inspired generations of poets to experiment with as well as to profoundly reflect upon the nature of the medium in which they work.

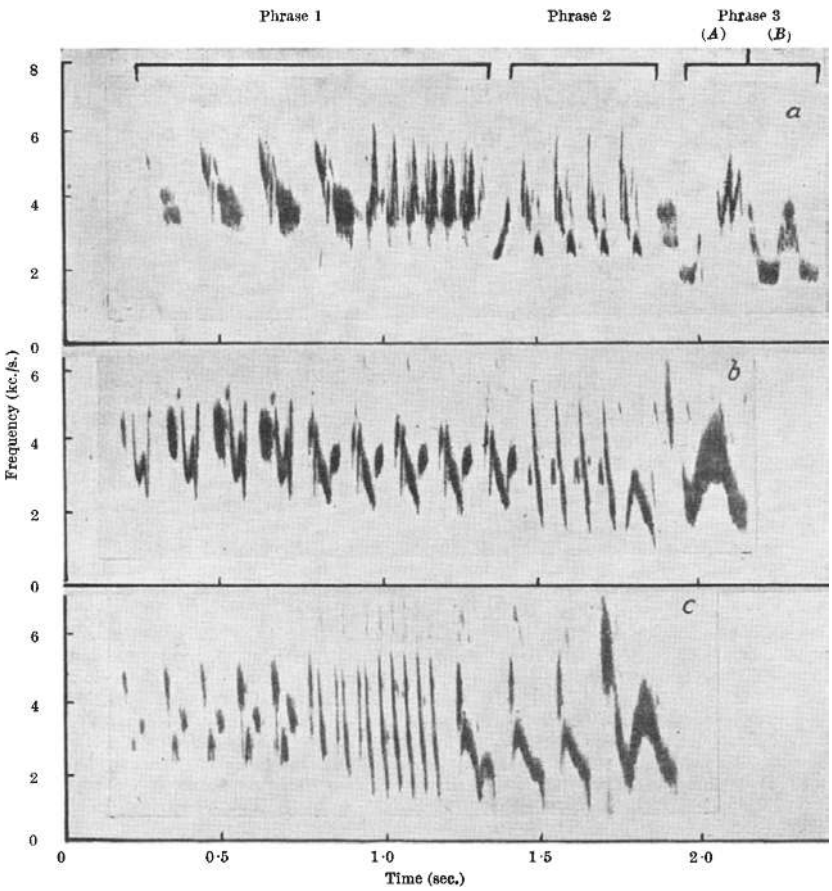

Figure 2 William Thorpe, from 'The Process of Song-Learning in the Chaffinch as Studied by Means of the Sound Spectrograph', in *Nature* (1954).

Unquestionably, the song of birds is central to a wider exploration in the Romantic period of the relationship between word and world, between poetic form and the natural sights and sounds it seeks to portray. Although poetry may never be able to disclose the secret of why birds sing, it can, as these interpretations show, tell us something about itself – about language and how it shapes our world. While Karlin and Weiner have emphasised the formal differences between birdsong and poetic language, my own approach in this book has been to draw attention to the deep and underlying affinities which have historically disturbed and unsettled our sense of

being different, and in doing so have exposed a human desire and need to be different, to be special and unique in the world. This book explores birdsong not as a figure or a metaphor or a poetic trope, but as an 'analogy' through which scientists, philosophers and poets have, throughout the centuries, explored the nature and origins of our own human arts of music, speech and poetry (Darwin, *Descent*, p. 108).

II

Recent approaches are informed by a more general attempt to cure what scientists have described as the 'disease' of anthropomorphism, which has been thought to impair our understanding of animals and chronically infect the language in which we describe them.[17] In the sciences, this 'disease' has been diagnosed and treated as a threat to objectivity; in the arts and humanities, it has been seen to result in innumerable and unscrupulous acts of cultural appropriation. As Harriet Ritvo, Christine Kenyon-Jones and other founding figures in the burgeoning field of animal studies have shown, representations of animals in literature very often tell us more about our own views and values than they do about the animals themselves.[18] Although the tendency towards appropriation has been duly noted and exposed, researchers and analysts across the disciplines have continued to question whether it is possible, or even desirable, to cure ourselves entirely of anthropomorphism or to cleanse it from our language. While scientists 'rightly want to avoid importing into their studies any false assumptions or implications that could vitiate the results', the writer and naturalist Jeremy Mynott puts his finger on the certain point at which language, when reduced to 'a system of symbols capable of describing a bird in terms only applicable to a bird', becomes 'almost by definition' a language we 'no longer understand'.[19] Writing from a literary critical perspective, Karlin not only questions the attainability of phonetic 'accuracy' in poetic representations of birdsong but also remains unconvinced that such accuracy in any case 'matters': 'if all you are trying to do is sing *like* a nightingale, why not listen to the original?'[20] For Karlin, anthropomorphism is to some extent unavoidable, and in another sense positively desirable, provided that its proper limitations are recognised and acknowledged with intellectual honesty.[21]

Others have more fundamentally questioned received definitions of 'anthropomorphism'. The philosopher Mary Midgely, for example, observes a discrepancy between the definition of the word and the

examples cited in the *Oxford English Dictionary*. Words such as '*alarm*, *hunger*, *surprise* and *pain*' have, Midgley argues, 'no bearing on personality', but are 'common aspects of animal life'.[22] In his study of Richard Garner's attempts in the late nineteenth century to compose a 'vocabulary' of primate calls in *The Simian Tongue: The Long Debate about Animal Language* (2007), the cultural historian Gregory Radick has traced this scholarly concern with anthropomorphism back to the 'extreme skepticism' of Victorian science.[23] Throughout the nineteenth century, Darwin's opponents inveighed against what they categorically dismissed as 'figurative', 'personifying' and 'anthropomorphic' interpretations of the lives of other species. Georges Cuvier, for example, criticised the 'puerility of those philosophers who have conferred on Nature a kind of individual existence, distinct from the Creator', and praised those in the 'advanced' sciences who had 'renounced the paralogisms which resulted from the application of figurative language to real phenomena'.[24] In a review of Darwin's *Origin of Species* (1859), Cuvier's protégé and successor at the Collège de France, Marie-Jean Pierre Flourens, similarly noted that 'the author throughout uses figurative language without being aware of it' and this language 'deceives him as it has deceived all others who have used it'.[25] One of Darwin's most outspoken adversaries, the first professor of philology at the University of Oxford, Max Müller, attributed the 'reopening' of 'the floodgates of animal anthropomorphism' to the 'rise of Mr Darwin's theories'.[26] As John Holmes broadly summarises, Darwin's attempt to demonstrate 'a continuity between the behaviour and emotions of human beings and those of other animals' was 'dismissed as naïvely anthropomorphic for much of the twentieth century'.[27]

'We are incessantly at fault in our tendency to anthropomorphise, a tendency which causes us to interpret the actions of animals according to the analogies of human nature', concluded George Henry Lewes in *Sea-Side Studies* (1858); human observers must resolutely remain, Lewes insisted, 'on our guard against the tendency to attribute psychological motives to the actions of animals'.[28] In an article on 'the anthropomorphic fallacy', Alexis Harley has identified the 'intractable methodological problem' faced by Lewes and others.[29] Confronted with the question of 'what it feels like' to be another species, philosophers such as Lewes were rightly nervous of speculating about how other species experience emotions such as pain or pleasure. As the American philosopher Thomas Nagel would later reformulate the problem in his classic essay 'What Is It Like to Be a Bat?' (1974), human beings can never know what it is like to be another organism because we can never enter another creature's mindset and share

in their experience of the world.[30] Or, as Ludwig Wittgenstein famously put it in the 1950s, 'if a lion could talk, we could not understand him'.[31] In showing respect for the differences between human beings and other animals, however, philosophers such as Lewes, as Harley points out, 'risked falling into another methodological error': namely, that of 'construing more *difference* between species' phenomenological experience than he could possibly verify'.[32] In what one commentator has identified as 'possibly the most important single sentence in the history of animal behaviour', the ethologist Conwy Lloyd Morgan concluded in the 1890s that 'in no case' should any 'animal activity' be 'interpreted as the outcome of the exercise of a higher psychical faculty, if it can be fairly interpreted as the outcome of one which stands lower in the psychological scale'.[33] Ironically, such 'objectivism', which insists that an animal must be presumed without reason until it can be proved otherwise, may be seen to base itself on a no less subjective *a priori* mode of reasoning. As the primatologist Frans de Waal has argued, the scholarly obsession with anthropomorphism all too easily slides into a form of what he terms 'anthropodenial': 'the *a priori* rejection of shared characteristics between humans and animals' which 'denotes willful blindness to the human-like characteristics of animals or the animal-like characteristics of ourselves' and 'reflects a pre-Darwinian antipathy to the profound similarities between human and animal behaviour (e.g. maternal care, sexual behaviour, power seeking) noticed by anyone with an open mind'.[34] Whereas de Waal and others have called for a more open-minded approach to the behavioural parallels which connect human beings with our nearest relatives, the primates, I have in this book sought to sketch out a long history of 'willful blindness' towards the special affinities between birdsong and human speech.

'I am a firm believer, that without speculation there is no good & original observation', wrote Darwin in 1857.[35] For Darwin, speculation about the lives of other species was crucial to scientific thought and progress; without some degree of speculation, for all its attendant dangers and risks, the scientist risks becoming beholden to the accepted views and theoretical assumptions of his or her predecessors. Such conformity inhibits intellectual progress, as it prevents scientists from making the kind of 'good or original observation' that derives from their own independent analysis of the flora and fauna that surrounds them. When he was presented with a copy of Müller's *Lectures on the Science of Language* (1861) by the author himself, Darwin scribbled on the back leaf: