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Birdsong and Music Transcript

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Birdsong and Music

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I'm going to start with a typical spring dawn chorus somewhere in the English countryside. You can hear a solo song thrush in the foreground against a background mostly of blackbirds.

Ex.1, English dawn chorus

Though this time of midsummer is delightful, I also can't help feeling a certain sadness because the birds have now mostly ended their long period of spring song, which began at the new year. Some birds stopped already at the beginning of June; the blackbirds, the great songsters of town and country here in Britain, are almost the last to finish. On my regular early morning walk in a wood near my north London home, except for the rasping of magpies and crows and our latest arrival, ring-necked parakeets, there will soon be silence until, in mid-August, the robins begin to stake out their territories, marking their boundaries with outbursts of their cheerfully melodious song. The robin, recently voted our national bird, is incidentally among the most aggressive of all creatures, and robins will sometimes fight to the death over territorial disputes.

Territory is one of two main reasons why birds sing; the other of course is to attract a mate. Only male birds sing; unlike humans, no females sing to their young. Song varies immensely: many birds have just a single phrase which they repeat over and over, like the chaffinch, or the chiffchaff, which makes endless repetitions of its name. A few, particularly from the thrush family, are extraordinarily inventive. No two blackbirds sing entirely the same, nor do song thrushes or nightingales. The nightingale has a repertoire of truly amazing sounds:

Ex.2, nightingale song

I find it hard to believe that the quality of this song can be explained in purely evolutionary terms. The nightingale is a drab brown bird, so presumably needs to sing something more special than usual to attract a mate. The peacock, which goes furthest in the other direction in using its spectacular plumage to appeal to the opposite sex, has unsurprisingly no song at all, only a yelp familiar to those who watch television serials set in stately homes. But why is the nightingale's song so rich and complex? And why does he sing all night? Is there perhaps an element of artistry? Is the nightingale, or the song thrush, or the blackbird perhaps a composer? In his book *Why Birds Sing*, the American musician, philosopher and ornithologist David Rothenberg asks similar questions. He comes to conclusions I would agree with:

Why do birds sing? For the same reasons we sing - because we can. Because we love to inhabit the pure realms of sound. Because we must sing - it's the way we have been designed to tap into the pure shapes of sound. We celebrate this ability in our greatest tasks, defining ourselves, defending our places, calling out to the ones we love. But form remains far more than function . . . No explanation will ever erase the eternal need for song.

There can be no proof of what Rothenberg says, but I think he's right, certainly with regard to those birds he calls 'open-ended learners'. He distinguishes these from the 'closed-ended learners' that make up the majority of birds that sing - birds like the chiffchaff or the chaffinch. Take the blackbird. At the beginning of spring, in mid-February, he starts his song with a number of fairly simple phrases. Over the course of the next three months he will chose particular phrases, gradually elaborate these and introduce more and more, so that by June he has 'composed' a substantial piece. There is no strictly scientific explanation for why he does this, just as there is no strictly scientific explanation for why humans compose. The blackbird sings because he can, and probably because he enjoys singing - and thank goodness for that.

Birdsong has been celebrated by both poets and composers. The poets came first: the medieval poem 'Sumer is icumen in' praises the arrival of the cuckoo, welcoming the spring. The cuckoo and the nightingale are by far the most popular birds to be found in English poetry, the cuckoo of course not just for its role as the herald of spring but for its casual attitude towards family life - the word 'cuckold' derives from its anti-marital habits. There are a number of Elizabethan poems about cuckoos and nightingales; one of the best-known is Thomas Nashe's 'Spring, the Sweet Spring', memorably set to music by Britten in his *Spring Symphony*. Britten reproduces the cuckoo's call, but he makes no attempt to imitate realistically the calls of the two other birds alluded to - nightingale ('Jug-jug, puwe!') and tawny owl (Towitta woo!).

Ex.3, *Spring Symphony*, 'Spring, the Sweet Spring'

The 'Towitta woo!' of the tawny owl, more commonly written as 'To-wit, to-woo' combines the call of the female, 'ke-wick', and the hoot of the male, 'hu-oo, u-hu-hu hu-oo' (memorably notated by Janacek in his piano piece from *On an Overgrown Path*, misleadingly known in English as 'The barn owl has not flown away' - the barn owl in fact shrieks). The obsession with the nightingale reached its climax in the early 19th century, with John Clare's *The Progress of Rhyme*, which describes the nightingale's song more precisely than any previous poet had done (though notice that he thinks it's a female bird he's hearing):

The more I listened and the more
 Each note seemed sweeter than before,
 And aye so different was the strain
 She'd scarce repeat the note again:
 'Chew-chew chew-chew' and higher still,
 'Cheer-cheer cheer-cheer' more loud and shrill,
 'Cheer-up cheer-up cheer-up - and dropped
 Low 'Tweet tweet jug jug' - and stopped
 One moment just to drink the sound
 Her music made, and then a round
 Of stranger witching notes was heard
 As if it was a stranger bird:
 'Wew-wew wew-wew chur-chur chur-chur
 Woo-it woo-it' could this be her?
 'Tee-rew tee-rew tee-rew tee-rew
 Chew-rit chew-rit' - and ever new . . .

It's almost a piece of music. Then there's Keats's *Ode to a Nightingale*, one of the greatest poems in English, which doesn't describe the nightingale's song but its effect on the poet. Alas, the days when you could hear nightingales in Hampstead are gone (I don't think they were ever in Berkeley Square, by the way).

Music inspired by birdsong goes back at least as far as the 16th century, when the French composer Clément Janequin wrote chansons with imitations of the skylark and the nightingale. A number of 18th-century composers wrote descriptive pieces, such as the 'Goldfinch' Concerto by Vivaldi or Boccherini's 'Aviary' Quintet, which have very stylized bird songs. The only bird to be reproduced accurately was the cuckoo, for example in Daquin's harpsichord piece *Le coucou*, which I learned to play as a boy. Blackbirds and song thrushes sometimes sing identifiable pitches (as I was writing this talk, outside my window a Blackbird was singing [illustrate], but the cuckoo is the only European bird that sings exclusively two easily recognizable pitched notes, a descending minor or major third [illustrate]). In my experience the cuckoo begins with mostly minor thirds in April, shifts to major thirds in May, and in June, as the popular rhyme goes, 'he changes his tune' - and starts forgetting how to sing 'cuckoo', substituting odd sounds like [illustrate]. Cuckoos also seem to sing in the key of C. There are a number of pieces of music that use cuckoo calls, for instance Delius's *On Hearing the First Cuckoo in Spring*, and Mahler's First Symphony; however, Mahler makes the cuckoo sing a descending fourth, because that fits better with his thematic material. The most famous example of a cuckoo call in music is in Beethoven's *Pastoral*/Symphony, where at the end of the second movement, the 'Scene by the Brook', there is a cadenza for three birds: a flute imitates a nightingale, evocatively if not all that accurately; an oboe the quail, quite precisely; and a pair of clarinets the cuckoo - Beethoven realising that two clarinets in unison convey the peculiarly muffled resonance of the cuckoo's call better than one.

Ex. 4, *Pastoral*/Symphony, end of 2nd movement

The musicologist Sylvia Bowden has drawn attention to the inspiration of birdsong in other Beethoven works. Beethoven went for daily early morning walks in the countryside outside Vienna, and he always took a sketchbook with him and wrote down ideas in it, some of them, it seems, derived from the birds he heard. Bowden mentions in particular the song of the yellowhammer, which is often represented as 'a little bit of bread and no cheese' - it's a number of short notes at the same pitch followed by a long one. Ideas in this shape occur at the beginning of Beethoven's Fourth Piano Concerto and the 'Waldstein' Sonata, and Carl Czerny said that the opening of the Fifth Symphony derived from the yellowhammer, which is just possible. (Actually the opening of the 'Waldstein' Sonata sounds more like the chaffinch.) Bowden suggests that Beethoven may have also taken song fragments from blackbirds and song thrushes, which can be traced to motives in, for instance, the Ninth Symphony and the *Grosse Fuge*. In all these cases it's not a question of Beethoven trying to imitate birdsong, but of birdsong sparking off ideas that Beethoven then transformed into his own music.

The *Pastoral*/Symphony greatly influenced the early Romantics, many of whom were concerned with evocations of landscape in music. The 'Scène aux champs' in the *Symphonie fantastique* was Berlioz's direct response, and you can hear Beethoven's quails in one section. Wagner's 'Forest Murmurs' from *Siegfried* are closely modelled on Beethoven's scene by the brook, with similar string undulations which then become a background for bird-calls on the woodwind; though Wagner makes no attempt to imitate real birds. Oboe, flute and clarinet play phrases which, when Siegfried has killed the dragon Fafner and has accidentally tasted his blood, he will hear again as words of advice sung by the soprano voice of the Woodbird. Wagner's stylized birdsong is based for the most part on the notes of the triad. In the *Ring*, he uses pure triadic harmony when he wants to express the elemental quality of the natural world, as at the very start of the *Ring*, in contrast with the more chromatic harmony he uses for the complexity of human emotion. In all his nature painting, Wagner employs musical metaphor rather than depiction, to make Berlioz's useful distinction, and the effect is I think more genuinely poetic.

Ex.5, *Siegfried*, 'Forest Murmurs'

The culmination of composers' attempts to combine evocation of landscape with birdsong was reached in Ravel's

Daphnis and Chloe, in the famous passage describing the dawn chorus, not only in my opinion the most poetic use of birdsong in all music, but also one of the most beautiful orchestral sounds ever written.

Ex.6, *Daphnis and Chloe*, beginning of 2nd Suite

Like Wagner, Ravel doesn't try to notate birdsongs exactly, but evokes the sound of the dawn chorus with stylized birds that nevertheless bring the experience uncannily to life. It would not have been more effective with real bird sounds: on the contrary, I find Respighi's use of a recording of a real nightingale played with the orchestra in his *Pines of Rome* embarrassingly sentimental. Other composers have gone on to use stylized birdsongs, most notably of all Vaughan Williams in *The Lark Ascending*: his violin solos are nothing like the skylark's actual song, but the piece says something profound about the English countryside and the importance of the lark as a symbol within Vaughan Williams's evocation of that countryside; so much so that for several years listeners to Classic FM have voted it their favourite piece, and Radio 4 listeners have just chosen it as their number one desert island disc.

Olivier Messiaen did attempt to notate birdsongs precisely and included them comprehensively in his music from the 1950s until the end of his life. Messiaen's interest in birds was very serious - he can be called an ornithologist rather than merely a birdwatcher - and as a deeply religious man he regarded birdsongs as the voice of God. As a student, he had taken notice of his teacher Paul Dukas's advice to "listen to the birds! They are great teachers", and birdsong appears sporadically in his early works. But in the 1950s he began to use birdsong in a much more comprehensive and systematic way, at first in an orchestral piece called *Réveil des oiseaux*, where 38 different birds appear, then in *Oiseaux exotiques* for orchestra without strings, and the huge *Catalogue d'oiseaux* for piano, 13 extensive pieces lasting almost three hours (the central piece based on the reed warbler alone lasts half an hour). Messiaen's own transcriptions of birdsong which he made in the field were done with immense care and scrupulousness. No composer had done this before, and I know myself from trying to transcribe birdsong just how difficult it is, as most of the sounds are extremely high, rhythmically very complex, and not always on definite pitches; even Messiaen has to compromise somewhat in the *Catalogue* as he is writing for piano and so cannot use quarter-tones. His pursuit of accuracy is admirable, yet I wonder sometimes if it was an obsession that got out of hand. I remember listening to a radio programme on the *Catalogue* where sections of the piano pieces were played and put alongside recordings of the actual birds from the places where Messiaen had notated them, and I thought that the birds were more musical, while Messiaen's transcriptions seemed just too coldly scientific. In his *Quatuor pur le fin du temps*, however, the piece for clarinet, violin, cello and piano he wrote while a prisoner of war in 1940, and which like many others I think is his masterpiece, Messiaen begins with a movement called 'Liturgie de crystal' in which clarinet and violin play, very quietly, phrases marked 'comme un oiseau', but which he says in his preface to the score are based on the blackbird and the nightingale. Here Messiaen, like Ravel before him, achieves an effect of real poetry.

Ex. 7, 'Liturgie de crystal'

Now I want to go to the other side of the world, to Australia. I first visited Australia in 1974, to assist Peter Sculthorpe with his music theatre piece *Rites of Passage* for the Sydney Opera House, and since then I've been returning every few years. As well as the feeling of remoteness from Europe, and the strange beauty of the landscape, I was immediately impressed by the sound of the birds, quite different from those we hear in Europe. Here's an Australian dawn chorus recorded at Cambewarra Mountain, New South Wales, by the composer David Lumsdaine. You'll hear at the start the melodious warbling of Australian magpies, then the rather less melodious kookaburra, then, as the scene shifts to a new location, a clamorous outburst of many bird species together.

Ex.8, Australian dawn chorus

Peter Sculthorpe's music is deeply concerned with Australia and its landscape, and I find it as poetically evocative of Australia as the music of Vaughan Williams is of England. Peter was born in Tasmania and spent his childhood and youth there before eventually moving to Sydney. He wrote the following to me:

I grew up in the country and I suppose I took birds for granted. They were everywhere. To protect their young, plovers would often attack us out in paddocks near our house. My real caring for birds began when my father pointed to a flight of ducks in the sky. One was flying alone. My father told me that it had lost its mate and would forever fly alone.

The first piece of Peter's music overtly to use bird sounds is *Irkanda I* for solo violin, which he wrote in 1955. 'Irkanda' is an aboriginal word meaning 'a remote and lonely place'. The piece ends with a passage suggesting a bird flying high in the sky: one of the few passages in Peter's music that represents a single bird. Here it is, superbly played by Richard Tognetti:

Ex.9, *Irkanda I*, ending

No particular bird is intended here, and for the most part Peter's bird sounds are choruses of undefined birds whose voices are evoked by various types of string harmonics and bow-tappings, and which remind me strongly of the birds at the end of the Cambewarra dawn chorus I played you. Here's an early example of one of these string harmonic choruses; it's from the suite Peter extracted from the film music to *Essington*, a television

drama on which we collaborated on my 1974 visit. The story concerns the unsuccessful attempts in the 19th century to establish the settlement of Port Essington, in the Northern Territory. It failed because the settlers, unlike the aboriginal inhabitants, could not adapt to the peculiar conditions of the land. The suite contrasts Victorian drawing-room music with the sounds of the bush: this short movement is called 'Phantasy: Unrest' and deliberately presents the natural sounds of the bush as strange and wild, and also emphasizes the loneliness of the settlement. The essential loneliness of the Australian landscape is epitomized by Peter's boyhood memory of seeing a single lonely bird in flight. Like almost all his birdsong passages, this one is marked 'Come veduta a volo d'uccello' (as from a bird's eye view). "At the back of my mind", Peter wrote to me, "is the thought of flights of birds looking down upon the foibles of humankind."

Ex.10, *Port Essington*, 3rd movement

Here's another chorus from the remote bush; it's from the orchestral piece *Kakadu*. As Peter has pointed out, 'kakadu' is the German word for cockatoo - and there are cockatoos in the music; but the title is also an aboriginal word and refers to the Kakadu National Park near Darwin, which Peter first visited in the 1980s. The bird sounds here are mingled with the beating of drums, in what is quite a scary soundscape. Peter wrote to me: "somebody once said that the birds in *Kakadu* sound like birds that bite."

Ex.11, *Kakadu*

The last example from Peter's music I want to play is from his 16th String Quartet, composed in 2005. This piece, he writes, "was inspired by a book of extracts from letters written by asylum seekers in Australian detention centres . . . the music . . . addresses the plight of asylum seekers everywhere. . . . Throughout the work, there are occasional bird-like sounds: many of the asylum seekers write about birds being free to fly in and out of the 'refugee zoos'." The first movement uses an effect he calls 'seagull sounds'. They are produced by a glissando in harmonics played on the cello - a cellist in the Yale Quartet, Aldo Parisot, showed this effect to Peter in the 1960s and he's used it frequently ever since. Incidentally, in his autobiography Peter tells an amusing story about a rehearsal in Tokyo of his orchestral piece *Ice Carving*, in which the players are instructed to make random seagull sounds quite independently of each other. "Because of the Japanese love of conformity", he writes, "for quite some time this section of the piece sounded like one Big Bird."

Here's the whole of the brief first movement of the 16th Quartet, called 'Loneliness'.

Ex.12, String Quartet 16, 1st movement

No other Australian composers have been so concerned with the sounds of birds as Peter has, but Ross Edwards, who studied with Peter, shares Peter's love of wild nature and his concern for the preservation of the natural world. Ross has introduced many natural sounds into his music, especially insects. But here's the start of a piece inspired by a bird, a joyful dance for clarinet and aboriginal clapping sticks called *Binyang*. Ross explains: "Captivated by a persistent and strikingly melodic birdcall I derived from it the scale underlying *Binyang*, [which] means 'bird' in the now defunct Sydney aboriginal language. The identity of the bird remains a mystery, my whistling its call over the phone to ornithologists having left them stumped."

Ex.13, *Binyang*

Ross Edwards refers to the "strikingly melodic birdcall" that inspired him. One of the first things I noticed about Australian birds, unlike European ones, is that quite a number of them sing clearly pitched notes that you can easily write down. In the Cambewarra dawn chorus I played, you heard the sounds of Australian magpies, which unlike their British counterparts have melodious, diatonic songs. On a visit to Australia in September 2000, I stayed with friends near Canberra, and they introduced me to the song of their resident magpie, which they had named Munro (he had a wife called Marilyn). Munro's song was outstanding, and went like this: [illustrate]. I wrote down this haunting song, hoping to use it in some way. A few weeks later I was staying with some other friends at Nimbin in northern New South Wales, and I noted down three more songs, two of them distinctively melodic. The koel, the Australian cuckoo, had just arrived from the north - it was spring - and sang day and night. Koels sing the interval of a third like the European cuckoo, but rising instead of falling - in other words upside down, as one might expect from an Australian bird! Koels usually begin with a minor third, rising to the major, then a fourth and sometimes higher [illustrate]. The pied butcherbird sings three notes, typically a falling major second followed, most unusually, by a rising augmented fourth [illustrate]. Lastly, the eastern whipbird has a crescendoing high note followed by a whip-crack - an extraordinary sound [illustrate]. I found these four calls so interesting I eventually made three pieces out of them: a series of four pieces for solo violin, one for each bird; and two versions of the same piece, one for chamber orchestra and the other for string quartet, which begin with a little dawn chorus. I developed the initial eight notes of Munro's song into a long violin melody; then come the three other bird calls, followed by a more elaborate reprise of the violin melody on cello. All the instruments use metal practice mutes so the sounds are as if overheard from a distance. The music is marked 'Lontano' - far away - and when I hear it now it sounds lonely and indeed far away. Here is the beginning of the orchestral version of the piece, called *Aubade*.

Ex.14, *Aubade*

The two pieces have different endings, and the string quartet version ends with the familiar falling third of our

cuckoo call, as if to acknowledge that the music has now moved back to this side of the world.

Ex.15, String Quartet 10, ending

Since writing these pieces I've gone on to include birdsong in other works, including another dawn chorus of Australian birds in my Sixth Symphony. I'm more and more drawn to birds as an enlivening element in my attempts to revivify the pastoral, a genre that has been derided by some, but for me one that must survive and perhaps in a small way even help our precious landscape to survive. Many of our birds are in decline - the cuckoo among them: fewer people now hear this essential sound of spring. Fortunately we still have blackbirds in great numbers, but we had better take care of them, and our other songbirds, otherwise we shall end up with the silent spring that Rachel Carson warned us of in her famous book of that title. Birds were singing millions of years before we evolved: they were the inventors of music. Maybe our future depends on theirs.

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