
Songs Soaring

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About Songs Soaring

This is the English original of an essay that I wrote as a contribution to the catalog of the festival *Whistling in the Dark/Pfeifen in Walde* that was organized by Matthias Osterwold and Nicolas Collins in Podewil, Berlin (Germany), 9 to 18 September 1994. The article was translated into German by Wolfgang von Stürmer. The catalog is a hardback book designed to look like an encyclopedia. Its full title is ***Pfeifen im Walde - Ein unvollständiges Handbuch zur Phänomenologie des Pfeifens***. Publishers are Volker Straebel and Matthias Osterwold, in association with Nicolas Collins, Valerian Maly and Elke Moltrecht. Distribution through [Podewil](#) and [Maly Verlag](#).

Songs Soaring is dedicated to Paul Panhuysen, artist and director of Het Apollohuis in Eindhoven, the Netherlands. It was written with him in mind. Paul re-awakened my interest in birds through his work with canaries and his support of the work of the American sound recordist and composer Doug Quin. I made a one-only copy of the essay as a present for Paul's 60th birthday, designed a new layout and a cover, added illustrations; I also compiled a 60 minutes tape with sound examples as elucidating embellishments to the printed word. The tracks are annotated at the end of the paper.

SONGS SOARING

(or: do birds read music?)

Essay for the 60th birthday of Paul Panhuysen, artist and director of art venue Het Apollohuis in Eindhoven, the Netherlands

It is a well known fact that for ages birds have inspired Western composers to write music. The Nightingale, always widely admired for its song, is a famous case in point. Songs get compared to masterpieces, species to masters. In varying degrees of divergence from the original, renderings of bird vocalizations have found their way into compositions. To analyze and demonstrate their musical content the melodies are often translated into notation, written out on staves.

From our point of view this makes perfect sense. Our culture is based on writing things down -- in order to fathom and assess, to preserve statements and findings. We try to fit what occurs around us into schemes meant to facilitate understanding. If necessary we can access such data again anytime we want, no matter how long ago they were entered. They are fixed. We will always be able to invoke and interpret them in exactly the same way. That is: as long as reading methods (human or mechanic/electronic) don't deviate too much from conventions ruling at the time when these data were inscribed on a medium, and as long as the physical state of the medium itself does not decline beyond legibility. Apparently, central motivation is to have standardized objective representations of any perceptible phenomenon that can always be referred to.

These are our maps of territory wrested from the unknown. Like maps they are schematic, made for the sake of convenience. How close the image will be to the original is quite another matter. Several types of filters stand between the two: the physical, mental and emotional limits to perception, and systems developed and used for inscription and reading. The question is, how this applies to bird song and the human concept of music.

The score

Before the computer became the tool for analyzing bird vocalizations, various methods have been used to record the soundings. Syllabic representation (to be found in field guides) conveys in the choice of consonants and vowels something of the timbre and of melodic bending (coowee - upward; pee-ooow - downward), but is totally inadequate as regards pitch and rhythm. It is quite subjective: a transliteration that satisfies one person, could be unacceptable to another. Also, the pronunciation of syllables can differ considerably according to dialect; each language uses a different way of transcribing one sound. Does a cockerel crow cock-a-doodle-do as it does in English, kikeriki as in German, or a Japanese kokke-kokkô?[1](#)

Musical notation hardly gives a clue as to the quality of the sound. Moreover, it suggests interval values one will hear from a piano rather than from a bird's syrinx. If a bird uses a definite tuning in its song, it is for certain not a tempered scale of half tone steps^{*}.[2](#) Some species seem to sing in just intonation; one can often hear microtonal differences in pitch. However close the tones in a melody may come to a system, it is never followed strictly. Likewise, rhythm patterns are never rigid. Even when a species has only a very simple phrase, it never exactly repeats this. Periods of silence between the calls of one and the same Cuckoo are always different in length: one should just try to predict when it will give out the next call in a series to appreciate how far removed the cuckoo-clock is from the live bird in its soundings.

Both methods lean heavily on the qualities of the human ear, which are limited. The Whip-poor-will (an American relative of the Nightjar, *Caprimulgus*) echoes in its name the sound it is supposed to make. By slowing down recordings he made from the species, Hudson Ansley³ found that its call comprises two or three distinct, but very rapid, extra notes (and therefore syllables) besides the three that our ears distinguish. He goes on to prove that birds do hear the call as it is: a slowed down recording of a Mocking Bird mimicking the Whip-poor-will reveals the former accurately pronouncing all syllables.^{*}

Charles Hartshorne discusses types of notation that combine three methods: the two mentioned here, and graphical notation. Best for those able to use it, according to him.[4](#) This is not a superfluous remark, as this notation makes writing down just a two seconds' snatch of a Nightingale's song more than a little elaborate. On top of that, it is a snippet from one individual in one particular place in Europe at a precise moment in time. Imagine someone writing out a song completely, selling that as a score for people on the continent to use it when attending a bird concert in the wild.^{*} Chances are slight, indeed, that anyone would go out and be able to hear a song that corresponds with what is on the paper - provided it is legible at all, considering the time of day and the absolute need not to perturb the artist (e.g., by using a flashlight). Obviously this notation is intended for ornithologists, who can read from it that the Nightingale's song is not highly melodic or tuneful, relying heavily as it does on reiteration of single notes, and employing some noisy sounds.[5](#)

Bliss

One major disadvantage of recording bird vocalizations (regardless of whether the medium is

pen and paper, computer graphics or a sound record) is that it standardizes the samples at hand. Deviations from the standard tend to be relegated out of sight. This may apply to differences within the individual: day to day variation; development of singing during a season; the way a bird may have to build up a new repertory after moulting. On the other hand it may apply to differences between individuals: older birds can display expertise exceeding that of younger ones by far; some individuals have a more variegated repertory than others; a keen ear might even detect differences in the basic timbre (clarity vs. hoarseness); birds may adapt their song to the characteristics of their habitat; in their song birds may show regional dialects.⁶ Another shortcoming of recording bird sounds is that it usually treats the items in isolation. This is obvious in the case of notation, but even sound records often focus on individual species. Singling out one bird at a time, sonic field guides aim at helping enthusiasts to recognize separate species, rather than at the appreciation of a total sound image and the interplay going on in it. Take *Bird Songs in Cuba*,⁷ for instance. Advertised with "Experience Cuba!" by the publisher, it is so complete as to include the Ivory-billed Woodpecker (not recorded on the island, not to be recorded anywhere anymore: it is extinct) and the humble House Sparrow. After hearing it you do have the feeling that you've heard them all; you do not, however, feel that now you know what Cuba sounds like, any more than an econometric analysis of the island's situation will give you a sensation of what life is like there.*

Our culture seems to have a predilection for pure facts. Items are stored away in isolation, like the different species on the Cuba album. All these facts (isolated, monitored and analyzed) fill us with blissful security: everything is understood, all is under control. This approach, however, sets us apart from the world we view - which is the world we live in.

Something lacking?

Every bird sings and calls within a context. On the one hand that of its own motivations. It may sing to define its territory acoustically, to attract a female. Young Blackbirds perform singing exercises. There are species that sometimes sing for no apparent reason at all, just for the fun of it. There are various types of warning signals. On the other hand, one doesn't hear birds in isolation. Blackbirds remain within hearing range of each other. As a result several individuals are often audible at the same time, but other bird species as well; and insects, and the rustling of leaves - the whole environment sounds.

What's more, listening to a number of Blackbirds one cannot but conclude that each listens to the others, spacing its song in a way that enables the others to fill in phrases, sometimes mimicking those others or even other species - reminiscent of weaving patterns, patterns of call and response. These animals adjust their song to the circumstances.

The patterns that one can hear in nature, are considerably more complex than renderings of them in notation - in the structure of the utterings, their unpredictable occurrence (as to spacing and reiteration), a stratification with other soundings and interrelationships between these layers. Such surroundings are always shifting. In comparison our world (the environment of urban culture) with its concrete buildings, its paths of tarmac, its huge depositories of data, its mechanization and automation, is rigid.

Noting down music one cannot respond to those for whom one is writing. Through notation a composition will have an unalterable, definitive version. Musicians usually are to play it in a space where, ideally, no intrusion of sounds from the outside world occurs; even the audience itself is not supposed to interact with it. This shut up and listen-convention precludes people from spontaneously and actively participating in the event.

Therefore, one may wonder how successful the composer and ornithologist Olivier Messiaen actually was in transforming bird song into music. His rhythmic system (using deci-tâlas, augmentation and diminution of values) invites being interpreted as a method to approach the complexity of divisions of time found in nature. The accuracy of his transcriptions* is widely acknowledged.⁸ And yet somehow he missed the gist by ignoring the fleeting and interactive character of vocalizations in a natural context, replacing fluid structures with fixed patterns, however sophisticated and ingenuous they may be in their apparent irregularity. It makes one think of a visit to a natural history museum. One may be confronted with a stuffed bird, and be told that this is an eagle. Well, it sure does look like one, thoughts could run, but isn't something lacking?

A waterfall in the head

There is a striking contrast between this rather rigid concert-hall approach and the way sounds from nature can play a role in the life of people, who have not yet entered the age of industrialization. Sometimes one can hear something of it on recordings of their music. Very rarely, to be sure, as ethnomusicologists have the all too familiar habit of striving to eliminate background noise in what they put on tape.* Thereby they exorcise the spirit of the event: its connection with people's surroundings, as testified in sound.

Something of the artificiality of a recording session, that sets it apart from everyday reality, is reflected in the title given by a Romanian herdsman to a signal piece he played for folk music researcher Constantin Brailoiu in a studio in 1936. He did not call it *la oi* (to the sheep) but *ca la oi* (as to the sheep), expressing his awareness that in the studio the piece is out of context.⁹

On some recordings, however, the setting is retained. One hears the people present, the village dogs, but also the animals of the forest. Compared with those that have excluded such elements it is as if windows are thrown open: not only does one know what is inside a room, now the position of these items in relation to each other becomes clear.

Anthropologist Steve Feld has taken this one step further. In his work he highlights the interrelationship between the Kaluli from Papua New Guinea and the forest that is their home.¹⁰ When listening to *Voices of the Rainforest* one can hear no strict separation between nature and culture. The call of a bird (three whistled tones slightly tilting downward) is taken up by a woman in the song she sings while working.* The liner notes to the CD are quite revealing. Water also figures in the way Kaluli think about song. Like water, song must flow with immediacy and presence. Composing a song is said to be like having a waterfall in your head. That's why Kaluli men and women often compose or practice their songs sitting by a stream.* They say the flow of water fills their minds with ideas.

About a drumming ceremony: The four performers...dance the drum back and forth down the house's central corridor, always returning to their places at either end of the house, about sixty feet apart.

I recorded this from the center of the house so you could hear the movement of the crisscrossing dance and drumbeats the way a Kaluli listener would during a ceremony...The symbolism of this drumming is as intense as the sound is loud. Kaluli hunt a *tibodai* bird, a Crested Pitohui, sacrificing its throat into the cut wood when a drum is first being shaped. The drum is thought to assimilate the extraordinary properties of this bird's call, principally a long throbbing pulsation -- sometimes up to ten minutes! -- without a gap. Inside the voice of the drum Kaluli can hear the voice of a *tibodai* bird, pulsing with its distinctive call of tibo tibo tibo tibo...

The drumming goes on for several hours. Players and audience become more absorbed into the intensity of the sound. The drum's voice transforms through this intensity, now saying dowo dowo dowo dowo..., which means father. Whistling birds like *tibodai* are said to be spirits of dead children. So inside the voice of the bird Kaluli hear the voice of a child. When the spirit of a dead child calls through the drum for its father, men in the audience may be moved to tears.*

Central in the Kaluli's acoustic conception of the interrelationship between them and their environment, is what Feld calls lift-up-over sounding, a translation of an expression these people themselves use. They mean by it that all sounds in their world are interlocked, no matter whether they come from an animate or an inanimate source - which includes the sounds they themselves make, musical and non-musical. As the quotations from Feld's notes suggest, this connection is not restricted to sound as such: it also works on a conceptual and a spiritual level.

A gliding scale

Comparing bird song with human music, it appears much closer to music from oral tradition than to Western composed music. This seems to echo what the zoomusicologist Péter Szöke from Budapest, Hungary, says about the song of the Hermit Thrush. There is a remarkable difference, however, in that Szöke reached this conclusion after research into melodic structures.* In the same city Ferenc Sebö, ethnomusicologist and founder of the Hungarian folk music revival movement in the early '70s, investigates the way one folk song may transform into another. This is relatively new: since the Hungarians began structural research into their traditional music they have put all their effort into compiling a huge collection of songs, treating and noting down each variant as a separate entity. Sebö replaced this model of discrete steps with that of a gliding scale, thus approaching the similarity between human and avian vocalization from the opposite direction.¹¹

Towards a free flow?

Several contemporary composers/musicians base their work on the interrelationship between nature and culture. Among them are the American Douglas Quin and Peter Cusack from the United Kingdom, to name two people represented in this festival. Both record sounds in nature. The attitude from which Peter Cusack makes his recordings reminds one of Steve Feld's aims: if people make use of an environment, they are a part of its total sonic make-up and therefore should not be edited out on tape. Cusack, however, makes most of his recordings in Thetford Forest, Great Britain. He portrays the place (and details of it) in a wide range of aspects: the sound characteristics of a particular spot as taken from different sides and distances; species that are typical for the place; audible features that are basic to the different seasons. His recordings are more than just soundscapes - there is something distinctly musical about them. However, none of the sounds on these tapes came together deliberately, they were not composed. And yet, in the way their interrelations seem to transcend randomness, one hears a sense of purpose: of the man who made the selection. One also hears how perceptive his ears must be.*

In concerts Cusack processes his own recordings and those of others with electronic equipment hooked up to his bouzouki. Thus he is able to compose pieces extempore, sometimes modifying the sounds beyond recognition.

Douglas Quin has undertaken extensive recording trips to Madagascar, Kenya and Brazil, gaining inside knowledge of the species that he puts on tape, and of their habitat, through direct observation and experience. The sounds and songs he has caught constitute a thrilling

encounter with the sonic riches and diversity of the world we live in. In his compositions he may use these sounds as such, transcriptions of them into musical notation, their structure as a clue for performing musicians, and electronic modifications*-- choosing for each piece the methods he feels are most appropriate.¹² Even though to a certain extent he, too, makes the free flow of vocalizations coalesce to a fixed state in his work, he allows performers enough freedom to make interplay possible and unpredictable.

For storing, analyzing and processing his recordings, Quin uses a computer: the most important current tool for this complex of tasks. Together with the unabated and universal popularity of the television, the advent of the computer and electronic technology seems to foreshadow significant changes in Western culture. The former has shifted emphasis in our culture away from writing as a means of communicating information. The latter expedites processing of information. On the face of it the conclusion seems justified that our culture is moving again in the direction of a more fluid state, comparable to that of the Kaluli's lift-up-over sounding. If this is so, there is at least one major difference: it appears that from the environment we currently shape, we gradually withdraw our physical presence, involvement and commitment.

Out there

The development of musical notation greatly influenced our conception of music. Intended as a mnemonic device for relative differences in pitch, it transformed into a system of fixed frequency tones in scales where the size of all subsequent steps got mediated to make transposition possible. This in itself implied a formal melodic and harmonic approach. Composition throughout the ages has always had this formal aspect, from Bach's inversions to serialism and Messiaen's rhythmic structuring. Because they are writing, composers can refer to earlier lines and pages, and build constructions on paper. These are reminiscent of architecture in the way they are conceived, but one simply cannot pretend that listening to a composition is like looking at a building: one is based on change in time, the other is meant to be immovable, all there at once. It is quite difficult (to say the least) to discern structural games in a composition by ear alone. Musical analysis is to some extent based on reading rather than listening.

This formal aspect makes the comparison of bird song to composed music more than a little inappropriate. The occurrence of events in a composition is fixed, whereas in nature this is much more arbitrary. In its alertness bird song rather shares characteristics with improvised music. In the end, however, all cultural constructions are fully intentional, even when chance is invited back in - the choice to use chance operations is made deliberately, it is done with a musical purpose in mind. Sonic interplay in nature is not a question of mutual agreement, has no central director. Every individual bird will have his own reasons and aims in making himself heard, the final result is totally haphazard.

It is conceivable that in the future sophisticated programs can be written and run in which the sounds of a natural environment can be simulated through computers. Random occurrence and duration could be included, interplay, and maybe even different times of the day and different seasons - all these aspects that make natural sounds too complex to be adequately noted down on paper. So, there it is: to be called up by pushing a button. Quite like the original, but isn't something lacking?

When pushing the button the sensation must needs be different from going out there to the place where the sounds originate, to be physically present there, to smell and see it, to feel the wind, and an insect that tries to feed upon you. All these things technology cannot supply - just yet, perhaps. And if it could, one might ask what is the point in putting it together

electronically, when all you need to do is go out and be there in person. That is, as long as we allow it to exist, of course.

[René van Peer](#)
July 31, 1994

Notes

1. See *Bird Song*, William H. Thorpe (Cambridge University Press, 1961), p. 13. [^](#)
2. The tracks on the cassette follow the text, where they are marked with an asterisk, their contents can be found at the end of the paper. [^](#)
3. On *The Bird's World of Song* by Hudson and Sandra Ansley (Folkways Cassette Series 06115, from the Smithsonian Institution). [^](#)
4. See *Born to Sing - An Interpretation and World Survey of Bird Song*, Charles Hartshorne (Indiana University Press, 1973), p. 84. [^](#)
5. See *Born to Sing*, p. 88. [^](#)
6. Edward A. Armstrong mentions on p. 91 of *A Study of Bird Song* (Dover Publications, 1973), that the voice of the Willie Wagtail living on the Solomon Islands is so different from that of the same species in Australia that one would hardly recognize them as coming from one and the same bird. [^](#)
7. A double-LP record published by the Cornell Laboratory of Ornithology, containing 122 different species. [^](#)
8. Jean C. Roché (naturalist and director of the French record company Sittelle that specializes in CDs of nature recordings) confirmed the composer's accuracy in an interview I had with him in May, 1994. In Messiaen's rendition of the song of the Musician Wren from the Amazonian rainforest (one of the motifs in the third part of *Et exspecto resurrectionem mortuorum*), the melody is immediately recognizable. On the other hand his instrumentation lacks the eerie, almost human, whistling timbre of the Wren, due to the use of sonorous woodwinds in the lower registers. One could argue that when he says to Claude Samuel birds are the greatest musicians of our planet, (on p. 51 of *Conversations with Olivier Messiaen*, Stainer & Bell, London, 1976) and proceeds to have their songs played by instruments, there might be some sort of contradiction there. [^](#)
9. See information booklet to *Roumanie: musique de villages* (published by the International Archives of Folk Music on VDE CD-537/539), a re-edition on three CDs of recordings made by Brailoiu in his homeland between 1933 and 1943. For reasons of sound quality Brailoiu preferred recording selected players from the countryside in studios in Bucharest to recording them on the spot. [^](#)
10. Publications include the book *Sound and Sentiment* (University of Pennsylvania Press, Philadelphia 1992, 2nd edn.), the LP-record *The Kaluli of Papua Niugini: Weeping and Song* (Bärenreiter, now deleted), and the CD *Voices of the Rainforest* (Rykodisc, RCD

10173). Quotations from the liner notes of the CD were made with the permission of Steve Feld. [^](#)

11. Though he may be unaware of it. [^](#)

1. A CD with his recordings, and music based upon them (*Oropendola. Music by and from Birds*, ACD 049413), has been released by Het Apollohuis. [^](#)

To the cassette

Side A

1. Wren (from *Az ismeretlen madárzene*, Péter Szöke, Hungaroton LPX 19347) - 0' 54" [^](#)
2. Whip-poor-will + imitation by Mocking Bird (from *The Bird's World of Song*, Hudson and Sandra Ansley, Folkways Cassette Series 06115, from the Smithsonian Institution) - 2' 00" [^](#)
3. Nightingale (from *Nocturne of Nightingales*, Jean C. Roché, Sittelle 43608) - 4' 04" [^](#)
4. Cuban Solitaire, Greater Antillean Grackle, Gray Kingbird (from *Bird Songs in Cuba*, Cornell Laboratory of Ornithology) - 3' 17"
Similar species among others, in a soundscape recorded on Martinique (from *Forêts et lacs américains*, Jean C. Roché, Sittelle 22405) - 9' 02" [^](#)
5. Musician Wren (from *Forêts et lacs américains*, Jean C. Roché, Sittelle 22405) - 1' 30"
Messiaen's woodwind interpretation of the species' song in the third movement of *Et exspecto resurrectionem mortuorum* - 0' 30" [^](#)
6. My beloved reindeer (from *Kolyma, Chants de nature et d'animaux*, Buda Records 92566-2) - 2' 02"
Marenarue (from *The Bororo World of Sound*, Auvidis-Unesco D 8201); mark the difference in spaciousness resulting from the way these tracks were recorded - 2' 11" [^](#)

Side B

7. Soundscape and sago making with songs (from *Voices of the Rainforest*, Steve Feld, Rykodisc RCD 10173) - 5' 37" [^](#)
8. Relaxing by a creek (from *Voices of the Rainforest*, Steve Feld, Rykodisc RCD 10173) - 5' 50" [^](#)
9. Drumming (from *Voices of the Rainforest*, Steve Feld, Rykodisc RCD 10173) - 4' 28" [^](#)
10. Hermit Thrush (from *Az ismeretlen madárzene*, Péter Szöke, Hungaroton LPX 19347):
The highest and most human-like peak of the musical sound evolution in birds.
Hylocichla guttata (Hermit Thrush, Canada): seven different micromelodies of true folk-song form (in natural and slowed down versions).
Conjuring of a folksong-like bird melody out of its natural hidden form and then back to the same microacoustical hiding-place: at first the melody is indistinguishable, however

it is slowed down step by step, and then the slow bird melody is sung by the author (in a nasal voice). This human version is gradually speeded up until it reaches the high register and the short duration of the original (natural) bird song, and the melodic shape is lost to our ears. Immediately after it we hear the original song produced by the bird again enabling us to make a comparison between them. - 4' 20" [^](#)

11. Nightjars and Roe Deer, and Squabble (both from CD to Musicworks #59, Peter Cusack) - 3' 35" [^](#)

1. Green Oropendola and Kingdoms and Phyla: Part 3 (both from CD to Musicworks #59, Douglas Quin) - 4' 57" [^](#)

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René van Peer (1956, the Netherlands) is a freelance journalist who writes about experimental art, contemporary and experimental music, and traditional music. He works for several Dutch newspapers and magazines. He has written articles and reviews for the US magazine Experimental Musical Instruments. The Canadian magazine Musicworks has printed his articles. Art and music venue Het Apollohuis in Eindhoven, the Netherlands, commissioned him to write 'Interviews with Sound Artists', a book that was published in 1993. His interest in sound developed from his acquaintance with unconventional music. A survey article of his about European record labels for traditional and world music appears in the magazine of the Society for Ethnomusicology (Summer 1999). An interview with sound recordist and composer David Dunn (Santa Fe, NM) appears in Leonardo Music Journal (MIT-Press) of 1999.

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