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A Note About Discipline: Analysis, Performance, and Birdsong

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The past decade of performance analysis has been directed to a large extent by two approaches. The first makes use of empirical methods, and it uses large data sets to analyse sonic resources. This approach established recordings as a major source for corpus analysis and for the analysis of particular performers and performances. The aim of this approach has mostly been to describe historical shifts in performance practices and styles of performance. The second approach draws on ethnographic methods and it has focused on tracking creative practices in the development of new music. This approach has reconceived performance in terms of distributed creativity. Both ways of writing about performance form part of a much broader critique of hierarchical presuppositions about relationships between performance and composition, and between performers and composers.

This article seeks to escape the disciplinarity of both strands and instead brings together some of the ongoing arguments about non-human performance, particularly as it is related to listening, with theoretical work about associative organisation. Performance analysis has often been cast in terms of an ontological challenge to the primacy of composition. This article seeks to intervene into this debate by considering a situation that radically stretches the ontologies that are often invoked (which I will discuss below) and by bringing together fields that are rarely brought into contact.

In the first part of the article, I begin by tracing some of the arguments about why performance should be a musicological focus. This leads into a discussion of *Werktreue* and from there to a consideration of work itself in the production of music and musicological prose. With work in mind, I then return to some discussion of performance analysis and improvisation. The second part of the article presents an analysis of a recording of birdsong. The analysis focuses on the segmentation of the recording into motifs. The recording in question is of a single Superb Lyrebird, a species known for its mimicry, and so returns representation as a problem of motif formation. The second part of the article concludes with an analysis based on the ideas of Gilles Deleuze and François Bonnet.



Part 1: Musical Ontologies and Production

One way to respond to ontological questions raised by the notion of performance as distributed (in contrast to models of creativity that give composers sole authority and performers the task of reproduction)¹, is to look beyond canonical repertoires. Arguments about representation are often attached to music of a particular historical period, something which constrains their form in ways that are frequently not acknowledged. For example, discussions of the music of the early nineteenth century are dominated by the concept of *Werktreue*. Whilst the co-locality of music and philosophy of *Werktreue*-in-operation is useful in addressing histories of how nineteenth-century music has been understood, it also fulfils a regulatory function to exclude new approaches to that repertoire that are ill-suited to *Werktreue*'s economic basis: to the distinction between the work undertaken by a performer and a composer. My inclusion of birdsong as music, and in particular as music that is far outside mainstream aesthetics, is therefore to enable a more radical reconsideration of both composition and performance. Ultimately my interest is in human music making and human performance in particular. But, to question performance as part of human music making requires being able to step outside the opposition of performance vs. composition.

My earlier scholarship ([Hooper 2012a](#), [2013](#), [2015](#)) reworks the relationship between performance and composition by adding a third term to the traditional opposition and it does so by exploring the role that instruments play as significant mediators in collaborative encounters. Others have done something similar, by using improvisation alongside composition and performance, to step outside the ongoing arguments that rely on composer or performer identity. But, since my concern here is to question assumptions about performance analysis, a more decisive third term is necessary. The distance of birdsong from our usual aesthetic preoccupations is therefore useful to bring undone performance research by making the ontological aspects of the performance- or composition-centred argument more apparent.

Since performance and analysis are my focus, I will risk dubious biology for the sake of music theory. This is necessary given the reliance in ornithological study of large sets of data, which, as I wrote above, is one of the approaches that I am here suspending. I shall argue that the resources for data analysis are not always available and that this ought not be seen as an impediment to saying something about specific musical instances. This is the case for birdsong and humansong. My analysis of birdsong includes detailed consideration of specific sonico-musical materials, to interrogate some of the ontological and epistemological priorities that have characterised performance research in more familiar musics. Although these musics are not discussed in this article they drive its argument. This implicitly calls attention to the overreliance on style within existing analyses of performance and questions the methodologies that inevitably lead to comparisons of different recordings. Reliance on style is most problematic when the comparison is made between different performances of (what is often referred to as) the same composition even though each performance is distinct. So the analysis of birdsong usually considers a single recording, alone.

Music as Performance

Much has been written about ontology, over the past decade, in the argument in favour of performance analysis. Mine Doğantan Dack, for example, has argued extensively for '[music as performance](#),' explicitly in terms of ontology. For example, she writes that:

As musicology's ontological and epistemological landscape continues to shift so as to endorse the idea of music as performance, researchers will need to scrutinise in greater detail the relationship between artistic expression and all kinds of *embodied processes* — including those based on culturally non-dominant sense modalities — involved in skilled interaction with musical instruments, in order to be able to widen our understanding of 'how performances afford the production of meaning' ([Doğantan Dack 2015: 175](#), [quoting Cook 2013: 1](#)).

Her approach extends from the argument summarised by Nicholas Cook in 'Plato's Curse', Chapter 1 of *Beyond the Score* (2013) which is a summary of '[the work concept](#)' ([Cook 2013: 22](#)) that separates composition from performance, and production from reproduction. His discussion seeks to redistribute the '[production of meaning](#)' ([Cook 2013: 24](#)) that ties ontologies of music-making to ontologies of meaning production. He mentions briefly a parallel between music and '[the standardised products of the big breweries](#)' ([Cook 2013: 26](#)),



but there is no substantial consideration of the implication of production itself, outside the production of meaning, and none that address the challenges that this production involves in explicitly economic terms². Although I therefore disagree with his argument (via Aaron Ridley) about the ‘unproductive ontological fixation of philosophical approaches to works and performances’ (Cook 2013: 240), I do so only because those ontological fixations have been too narrow, replicating time and time again familiar arguments about composition and performance as separate endeavours. Certainly, we are now all aware of the ontological distinctions that flow from Lydia’s Goehr’s historicisation of the work concept, in terms of performance and composition (Goehr 2007).

What is now needed is a more nuanced discussion about what that ontological challenge actually comprises and how music (performed, embodied, etc.) forms new ontologies. This leads to a further challenge which is to move beyond experience as the place of ontological consideration and to include analysis. For an example of how experience is often centralised, consider comment in the endnotes to Darla Crispin (2015): ‘Artistic Research *is* interested in expertise, since “there is a pleasurable intensity of objectual relations as experienced by experts, in tune with ontological re-orientations toward experience”’ (Crispin 2015: 70, quoting Knorr Cetina; the italicisation is Crispin’s). In scholarship about music, such regard for expertise tends to overlook the formation of the objects of ‘objectual relations’ even though the making of such objects is exactly what makes expertise properly subjective. The danger is that considerations of ontologies in discourses of performance prioritise hands-on experience to the exclusion of objectual relations. For example, John Rink writes that ‘[h]ow the unfolding music feels to the performer — that is, how it is embodied — is a key element of both performance experience and the music’s ontology’ (Rink 2015: 137). This restricts analytical access to those who are doing the performing or to the experience of listening³. This is especially the case for empirical approaches founded on music psychology where listener response remains the gold standard.

The Work of *The Work*

Although Cook does not dwell on the production of meaning, he does relate such production to the literary criticism of Roland Barthes (Cook 2013: 24). More recent literary criticism, and particularly the study of modernist literature, has sought to problematise the topic, particularly through Marxist conceptualisation of literary works⁴. This has involved an emphasis on the work of the work more explicitly than in music scholarship. Partly this has arisen with a return to Marxist conceptions of labour, and an increased awareness of literature’s materiality. In this move, writing has come to the fore as a site of material work, and reading, too, has come under consideration as labour, especially within the economics of academic organisations. As a corollary to the emphasis on the work of the work, the work that writers undertake to hide the labours of writing is also significant. The work of the work, then, involves reader and writer, reading and writing, in the formation of objects and subjects in the work that the work undertakes. This has seen a new attention on distributions of work — from the global disseminations of books to the individual readers of texts — which has itself brought new attention to the academic work of reading, writing, and teaching, and to questions about the mediation of these forms.

Although Cook’s comments about production may seem distant from the analytical problems of segmentation mentioned earlier (that I will deal with below) Cook has, as part of his broader consideration of distributed creativity, opened up the possibility of segmentation-as-distribution in socially and musically analytical contexts through his study of collaboration: ‘production is a social activity, located within a highly segmented context of collaboration’ (Cook 2013: 378). In other words, segmentation problems are problems of production and distribution in analysis of music as in the study of collaboration. Where specific recordings are mostly associated with performance, as multiple instances of a single composition, I will apply methods of segmentation analysis in a new and ontologically problematic example to critique the work, and to motivate some of the methodologies of artistic research⁵.

Academic Labour

Although academic labour has been less of a scholarly topic in music than it has in other fields, musical performance studies have sought a similar way of explaining the roles that different people take in the production of music and part of that interest has made collaboration a significant part of performance studies. The result of this has been far-reaching, for example, in the way that the study of artistic process has come to the fore. Friedemann Sallis reconceives sketches purchased in the 1799 sale of the Mozart *Nachlass* as traces of work: sketches, he contends, were crucial to the formation of the work concept (Sallis 2015: 15); and, as an example of the current use of sketches, he cites the ‘Tracking the Creative Process in Music’ conferences (Sallis 2015: 33), which considers sketches as



evidence of artistic work that is otherwise hidden from view. Together with the activities at the Centre for Musical Performance as Creative Practice (CMPCP), and the wider interest in ethnographic method, a focus on collaboration has become a significant part of performance scholarship. Nevertheless, work itself has been sidelined even though it is prevalent in so many of our conversations. For example, the following comment by Neil Heyde is quoted by Amanda Bayley in her 2011 article 'Ethnographic Research into Contemporary String Quartet Rehearsal': 'we're more interested in trying to *work* out corporately what it is we're trying to agree. And then going away and *working* on it and then coming back and that's almost always how it *works*' (Bayley 2011: 389; my italics). Within this quote is a surfeit of work, and a conception of working as individuals, together and corporately. In the documentation of collaboration we have works, working, and workshops, in which there is an easy transfer between the work, '*working on it*', and '*how it works*': composers, performers and musicologists move easily between musical products, production, and analysis. So easily, in fact, that the categories of composition, performance and musicology are often difficult to fully distinguish.

One of the functions of the documentation of collaboration is to discern the particular conditions under which performance and composition emerge. Those conditions have been the material that articles such as Bayley's have sought to detail. In such close collaborations the category of analysis itself is entangled and the result of that analysis can be understood as work undertaken by everyone involved: sometimes analysis produces articles, sometimes sound, sometimes notes on paper. The limits of these roles are negotiated within the collaboration and so I agree with Bayley that:

Constraints of time with professional musicians combined with the formality of the concert performance environment provide limiting factors and boundaries within which a researcher must work and therefore tend not to offer the flexibility that an informal or amateur group might (Bayley 2011: 408).

The strongest critique of the work concept that this ethnographic focus on collaboration makes results not in the dissolution of the concept through the details of the processes of composition or performance, so much as the way that working itself emerges from all that is being undertaken and the role of analysis is to track, document and describe the work's distributions and functions. It is important that analysis does this without becoming synonymous with composition or performance and also without being totally distinct⁶, just as it is important that the roles of composer and performer are not so distinct that the people who occupy those roles never meet⁷.

Composers and Performers and ... ?

The intersection of roles in the study of collaboration has nevertheless tended to reinforce their (the roles') necessity. Performance and composition arrive already defined and they often leave without redefinition too, fetishising improvisation specifically and collaboration in general as the discipline's core concepts of mediation between one and many musicians. There is, I should say, much to be gained from this and I have participated in its forms (Hooper 2012a; 2013; 2014; 2015). But I want to step away from this for a while and to begin by setting aside the difference that gives this aspect of musical detailing its identity (as performance studies) and instead to focus on a situation in which the difference between performance and composition is not one of identity but a problem of identification. My earlier work sought to address these problems by focusing on the way that an oboe functioned within a collaboration of a performer, a composer and an instrument. I wrote about how the instrument exists beyond its instrumental function and instead mediates the musical relationships that produce the identities of composer and performer.

Jeffrey Swinkin's *Performative Analysis* (2016) is indicative of the ongoing desire to problematise the work concept's regulatory capacity, and for the '*doing*' (Swinkin 2016: 10) of analysis to be foregrounded as part of that process and he looks briefly to ethnomusicology for an example of a discipline that is focused on musicking:

For ethnomusicology, of course, performance has always been a primary locus of inquiry, since non-Western and popular musics rarely revolve around extensively notated scores and the hypostatized works they are typically taken to indicate (Swinkin 2016: 10).

Writing about performance avoids the problems of writing about composed works but it also opens up a series of new problems. The first, and most significant, is that performance is difficult to study since most analytical methodologies rely on repeated examination and the



shortcut has been to study recordings. Although the scholarship undertaken in this field by those in the Centre for the History and Analysis of Recorded Music (CHARM) and elsewhere has been valuable, its value is primarily in demonstrating how durable the work concept is. Swinkin's (2016) analyses question disciplinary lines and his book aims to change the relationship between performance and music theory — the subtitle of his book is *Reimagining Music Theory for Performance* — and he consistently puts into question existing notions of performance as subservient to composition. He writes about performative analysis' critique of the work concept (Swinkin 2016: 17) at the same time that he argues that 'music theory is not unlike the work concept' (Swinkin 2016: 210) and so his research can be considered as a collaboration between music theory and performance, critiquing one through the other. Swinkin further criticises the asymmetry that derives from the 'ontological stance' that first separates performance from composition, and then privileges 'structural features', since this kind of analysis is 'uniquely capable of discovering such properties' immanent in performance (Swinkin 2016: 22). The vision with which he concludes is less radical than his opening suggests since 'an outstanding performance will stand out as a performance' (Swinkin 2016: 218; his italics), which is to say that little has been done to move away from the problem of the work as one involving a composition and a performance. That problem is not just a problem of how to secure the categories of performance and composition (though these problems are important), but the problematic notion of categorisation itself. We should be sceptical of oppositions between composition and performance that continue to regenerate arguments about ontology as arguments of representation.

... and Improvisation?

Although I make few claims for the birdsong that I will soon discuss as improvisation — the distinction between improvisation and composition here is endlessly problematic — it is worth considering very briefly some of the extensive literature about improvisation, since it has been one way of arguing away from the work concept⁸ and rethinking notions of representation. In *The Oxford Handbook of Critical Improvisation Studies*, Davide Sparti begins his essay 'On the Edge: A Frame of Analysis for Improvisation', with the assertion that 'all human agency unfolds with a certain degree of improvisation ...' (Sparti 2016: 182). He compares 'the practice of improvisation to the notion of a musical "work"', and in so doing, 'five such criteria are established: inseparability, irreversibility, situationality, originality, and responsiveness' (Sparti 2016: 198). His criteria are definitional: 'the focus is on the criteria that must be satisfied before one may accurately ascribe to an act the concept of improvisation' (Sparti: 2016: Abstract). These five criteria structure the essay and, whilst I do not have much to say about the criteria in question, I do want to consider criteria as a way of beginning and proceeding and as a model (a mould) for containing different ideas and materials. Given that his criteria are not applicable to my example, the following analysis aims to show that definitions of criteria need to be redefined as part of the analysis if the analysis is to be attentive to the analytical project. In other words, criteria should be emergent rather than methodological; particular to the music at hand, rather than the basis for comparison across performances.

In the article, 'Time, Territorialization, and Improvisational Spaces', Chris Stover considers improvisation to be 'nonsyntactic' (Stover 2017: [4.17]), since, in improvisation 'there need not be a sense of, for example, specific kinds of consequent events being determined by antecedent events' (Stover 2017: [4.17]) The result of this argument is that:

Whatever comes next as the result of an ongoing eventful context is not motivated by a desire that stems from lack: rather, that a continuous series of antecedent events poses an ongoing series of 'what next?' questions; *this* is what motivates the emergent identity of the performance (Stover 2017: [4.17]).

Although my concern is not for the identity of a performer, it is for the identification of segments in a 'continuous series' of motifs that are, analytically, formed into a sequence of 'antecedent events' that pose 'an ongoing series of "what next?" questions'. Stover ends the thought with a call for more work in this area, since:

This has far-reaching implications for thinking through musical process (in much more than just improvised music) without recourse to mechanism, teleology, or a priori syntactic considerations (Stover 2017: [4.17]).

Most tellingly, he footnotes his statement with a comment about 'Adornian critique' and new music aesthetics (Stover 2017: n. 52). Precisely the way in which this intersects with my consideration of birdsong is through the Adornian critique of the fetishisation of improvisation and



collaboration as a determining identity, be it a performer's or a composer's, which are roles that are frequently configured as free from the politics of analytical work. Such leaps into the dark⁹ obfuscate very real work being done in the creation of new musical subjectivities and the centrality of analysis in the process. Following this argument, we ought to consider ideas of composition, performance and writing as questions of distributions of labour. We ought also to talk about work as distributed in and by musical works, the work of the work, the work of listening, and the work of analysis. My aim, in the next section, is to slow down the processes that lead theorists to consider performance and composition as already given categories. In other words, I will step back from the current arguments about performance analysis and rethink some of the assumptions that we often skip over in our zeal for analysis.

Part 2: Birdsong

Birdsong is useful for reconsidering these problems specifically because we have fewer expectations about representation, improvisation¹⁰ and collaboration when birdsong is concerned and because the ontological challenges of birdsong often seem pressing¹¹. The Superb Lyrebird, in particular, is one of the most sonically impressive in the animal kingdom even though it has received little attention. This is due in part to its vocalisation being made up of extensive mimicry, which, from the point of view of those seeking to understand avian compositional prowess, is troublesome, because the mimicry makes it difficult to attribute compositional originality. The increasing prevalence of performance analysis therefore suggests a way to revisit this bird's vocalisation. For some readers birdsong may not be music and it may also fail to be performance or composition and so this article seeks to go back to a point of agreement: it assumes that we all agree that it is sonorous — that it sounds. Perhaps this article is directed ideally at those who are dubious about birdsong's status as music, since, if we can be satisfied that it is possible to musically unfold some birdsong then we ought to be clearer about the labour by which the technologies of that unfolding are made and from there we can be clearer about distinctions that go with representation and reproduction, which are dominant modes of negotiating permanence¹². The particular birdsong is itself ontologically provocative given that lyrebirds are such good mimics. If the lyrebird's vocalising is musical, then it is music that includes a wide range of species, which are connected and disconnected in a flowing, constantly transforming manner. To track this I have adapted some of Dora Hanninen's *Theory of Music Analysis* (2012): the analysis's nomenclature follows her lead.

The particular choices of birdsong were used in a class I taught on analysis. I wanted to teach my students something about motivic transformation without asking them to commit to conceptualising motivic transformation in terms of composition or performance (or, in other words, asking them to separate such transformations according to an ontological distinction between composition and performance made before the class, rather than as part of the analysis itself). Most of all, I sought to avoid the difficult question: 'What does the performer bring to this music?' The recordings came from David Lumsdaine who sent me recordings of birds that he thought were likely to be useful for an analysis class. This choice was crucial. These were not randomly chosen recordings: they were selected to facilitate analytical ideas even if the selection was not necessarily directed towards a particular musical outcome nor towards a specific analytical or theoretical problem. Possible outcomes of considering a collection of recordings was not specified by either party: there was no hypothesis and no obvious end point, just a set of potentially interesting recordings. Lumsdaine selected these recordings from the several thousand birdsong recordings that he made between 1969 and 2007, and which are now all held by the British Library. These are mostly of birds in the United Kingdom (where he lives) and Australia (where he was born and where he has spent much time). He is also a composer of notated music, published by Universal Edition and the University of York Music Press. In 2012, I published a book ([Hooper 2012b](#)) analysing the notated music that he composed between 1966 and 1981. Although there are few explicit references to birdsong in his notated music, his adaptation of serial procedures often foregrounds gradual motivic transformation which makes possible some obvious parallels with birdsong. These parallels are not my concern here, but their possible existence ensures that I do not hear his birdsong recordings as non-compositional. I do hear them as open and full of musical potential.

The following analysis shows some distributions of musical functions which I see as central to understanding one way of approaching an analysis of the recording that I consider and specifically a way of analysing the music that (i) treats birdsong as musical and (ii) is attentive to the particularity of a recording rather than considering a recording as an example of species song. The latter point is particularly important. Recordings of birdsong are mostly analysed to better understand the vocalisation of a species as a whole¹³. This is problematic, bound as it is with all the problems of synecdoche about which we would be wary in the consideration of human music. The problems are twofold.



Figure 1. The Superb Lyrebird and a field recording (**Sound Sample 1:** not of the pictured bird) of its song. Author's photograph.



Firstly, we do not have good data about the range of possible songs that so many birds sing, in part because the scientific community (that has undertaken most of the analysis) has tended to limit itself to calls and simple vocalisations that are easy to work with¹⁴. Without better data about more species, we do not know about the extent to which such representative paradigms make sense across species within a biological class. Nevertheless, this is a problem that cannot be solved for birdsong simply by bigger data sets (as for any of the arguments about representation that have taken place in philosophies of art). Secondly, to address a specific recording in terms of the species as a whole raises the problem of considering a species as an impervious ontological category. As I will show, the recording I analyse displays complex ontological shifts as part of its structure.

Superb Lyrebird (*Menura novaehollandiae*), Sydney, 1983

The recording that I will consider is Sound Sample 1 (See [Fig. 1](#)).

The Superb Lyrebird is found throughout south-eastern Australia and this particular bird was recorded at Gordon Creek, Middle Harbour, Sydney, on 1 October 1983. The recording lasts for 6'05" and Lumsdaine's field note reads:

Shares some 'Western' type sounds (gun shots, horses' hooves) with Berowra Lyrebird [i.e. a bird recorded at Berowra, in Sydney]. Quite varied vocab with a lot of beautiful mimicry starting about 2' into track. Was dancing unconcerned quite close to me under the Casuarinae. Much of its best mimicry is very quiet¹⁵.

This recording is all we have of this bird, and my analysis takes seriously the challenges of writing about a short musical recording. For the purposes of this analysis the recording is not a fragment of a longer vocalisation nor is it exemplary of this bird or of the species.



Defining Motifs

The recording, with the problems of fragments and totalities in mind, immediately prompts significant questions about segmentation since the vocalising is repetitious and made up of some sharply differentiated sonic disjunctions formed in part by the lyrebird's mimicry. The first 'what next?' is to determine some segments or motifs from which to proceed. The sections in this recording seem already to be clear and some of the motifs are strongly defined¹⁶. For me what we have of the song is structured most by the repetitions of what I call 'the boppy bit'. [Figure 2](#) shows the rhythm at the start which is transcribed in quavers¹⁷. This strikes me as distinctive and repeated. It is distinctive because there are strong boundaries between its repeating rhythms, its metre, and the non-metric surroundings. It also has a different timbre (S_{timbre})¹⁸ and dynamic (S_{dynamic}) and with these criteria the segmentation can be formally illustrated, as indicated by the brackets in [Fig. 2](#). We can also link various of these sections together, associating them because they share a sense of metre (C_{boppy} or C_{metre}). From all this we can consider the metric material to be a motif, defined as a contextual core common set 'A', or $C/\text{CRS}(A) = C_{\text{metric}}$ ¹⁹. Hanninen explains that a contextual core common set (C/CRS) is 'a succinct formal representation of (what a particular analyst takes to be) an associative set's central tendency or "sound"' ([Hanninen 2012: 115](#)). In this case the set, which is quite unlike the other parts of the recording, is marked as metric and this quality is most characteristic of the set.

There is considerable variation within this associative set and we can see that in the initial occurrence the length of the sequence of motifs A is somewhere between $11\frac{1}{2}$ and 16 quavers. Sonic Visualiser can help us to generate some data to graph all this. [Figure 3](#) shows a spectrogram of the start of the first occurrence of motif A. [Figure 4](#) graphs the overall distribution of the motif in the recording. [Figure 5](#) graphs the time between each repetition of A. One can see that there is a certain evenness between each repetition of the short motif and then some longer spans before the motif returns and also some tendencies: five of the gaps are between 8 and 15 seconds; two of the gaps are within half a second of each other (26.8" and 27.4"); with one gap being slightly over a minute. [Figure 6](#) graphs this as a line so that it is easier to see how consistent the basic rhythm is. This shows the gaps between events with the long interruptions removed. The spacing becomes much more consistent after the first two interruptions (from 1'12"). The regularity is also something that is meaningfully varied, since within the range of timings between motifs the maximum times vary more than the minimum times: the peaks of the hills are more varied than the troughs of the valleys. [Figure 7](#) excludes the very long gaps between the sections with motif A and sorts the intervals by duration to show variability of the rhythm of the remaining durations more clearly. The basic rate of repetition is about 1.9 seconds (which gives a tempo for the transcription in [Fig. 2](#) of dotted crotchet = 126). The graphs demonstrate that there is a tendency towards regularity in the rhythms and pacing of the song. In other music we would call the repetition of a metric motif such as this a refrain²⁰.

The analysis of the refrain is a process of territorialisation, as the refrain itself re-territorialises, since that is what refrains do. For Deleuze: 'The refrain is rhythm and melody that have been territorialized because they have become expressive — and have become expressive because they are territorializing' (quoted in [Bonnet 2016: 127](#)). The diagrams of the analysis map one path through this landscape. In the repetition of these sounds, in the refrain's 'becoming-autonomous' ([Bonnet 2016: 125](#)), the refrain also deterritorialises because it 'calls into question that from which sound is extracted and autonomized' ([Bonnet 2016: 127](#)), which is why the analysis of the refrain is not the only possible route, since my definition of the motif as $C/\text{CRS}(A) = C_{\text{metric}}$ relies on sonic disjunctions (S_{timbre} , S_{dynamic}), but has nothing to say about the other side that is reterritorialised by those disjunctions (and which my analysis has not so far named). The analysis therefore shows a process of stratification and of destratification as other sounds compete for dominance in a different territorialisation (one that does not privilege the refrain). As Bonnet argues about refrains in general: 'The refrain thus proceeds according to a twofold movement of migration, always extracting itself from its territory in order to re-form it once again; it is at once a conquest of territory and an evasion of territory' ([Bonnet 2016: 127](#)). This is a process of listening analysis but it could also be one of compositional analysis, for example, in a composition that in some way regards the birdsong as repetitive (as repeatable), or of performance analysis, for example in a performance that includes a repeated, distinctive and prominent feature.

We might, with territorialisation and deterritorialisation in mind, start to elaborate other motifs, to see how motif A actually functions in interaction. Let us start again from the beginning: motif A, motif A, motif A and then there are some beaksnaps — three of them followed by four of them (from 11.4 seconds, see [Fig. 8](#)). Then motif A returns, then beaksnaps. One can make a segment based on the



Figure 2. A transcription of the rhythm of Motif A (the refrain), from 4''

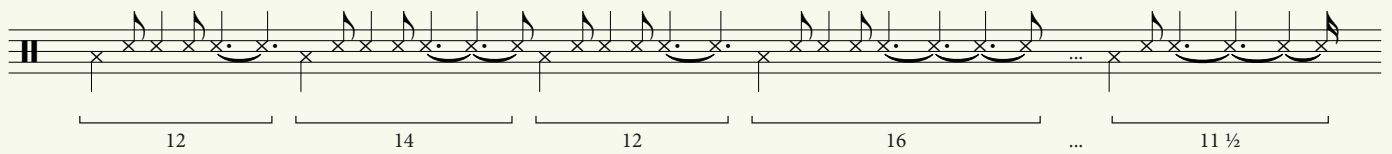
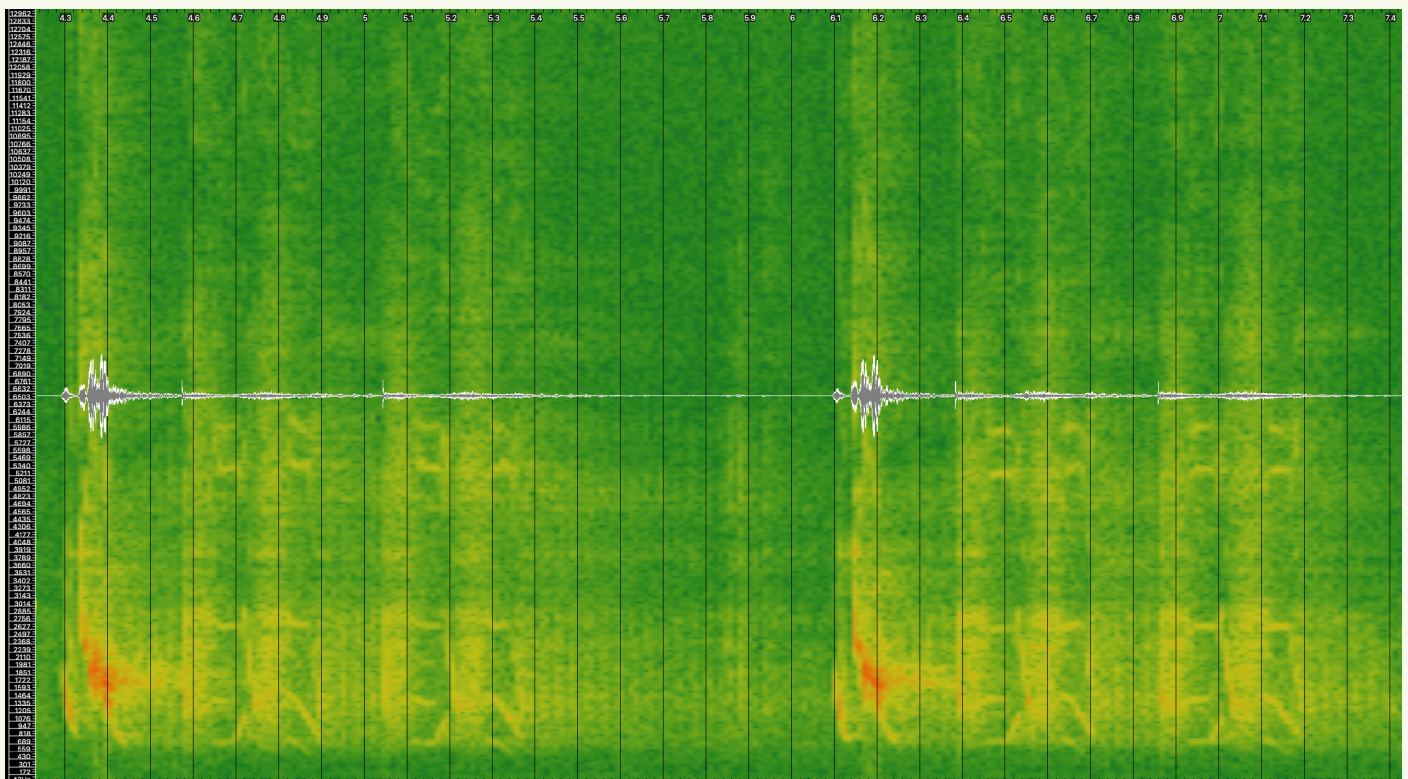


Figure 3. A spectrogram, overlaid with the waveform of the recording, from 4.3'' to 7.4'', showing the start of Motif A



association of these snaps by defining a pattern called $C_{BS \langle 3, 4 \rangle}$: that is, by using the contextual criteria associated with repetition of $B_{[eak]}$ in the pattern of 3 and then 4 snaps. Then motif A, then beaksnaps. But some versions of the motif have only 4 snaps (such as at 16'', not $\langle 3, 4 \rangle$). Certainly, we can broaden our definition of the beaksnap motif (B) as a series of beaksnaps rather than 3+4 beaksnaps: $C/CRS(B) = C_{BS \text{ series}}$. We might not need to say more since this is so distinctive and although we lose specificity we gain broader applicability. We could consider the times when the motif is 3+4 and when it is otherwise to get a feel for the distribution of those variations. The significant outcome of this consideration is that when motif B is only 4 snaps the motif A just before it is also shortened (this occurs at 15''). This raises a further question: is there a functional relationship between the two motifs? A short answer is 'Yes'. But, the longer answer is that we do not have the data to be able to say more in response to that question and so, more provocatively, we might instead favour an analysis that defines the beaksnaps in terms of a change of species. The snaps are probably the lyrebird mimicking honeyeaters (the *Meliphagidae*) and motif A is the lyrebird's own (rather than the lyrebird's mimicking of another bird). In Hanninen's theory this would fall within Structural Criteria (T) since it is conceptual not perceptual. Here, structure describes a realm of making a theoretical statement: in this instance $T_{\text{ontology} \langle \text{Menuridae}, \text{Meliphagidae} \rangle}^{21}$. Once defined, one can then define contextual associations based on ontological change and sonic criteria, for example, to actually track distribution, which opens up the possibility for a new methodology for analysing birdsong with its particular richness of cross-species musical utterance. Certainly, paying attention to the precise definition of each motif suggests that



Figure 4. A graph of the whole recording with vertical lines indicating the presence of Motif A.

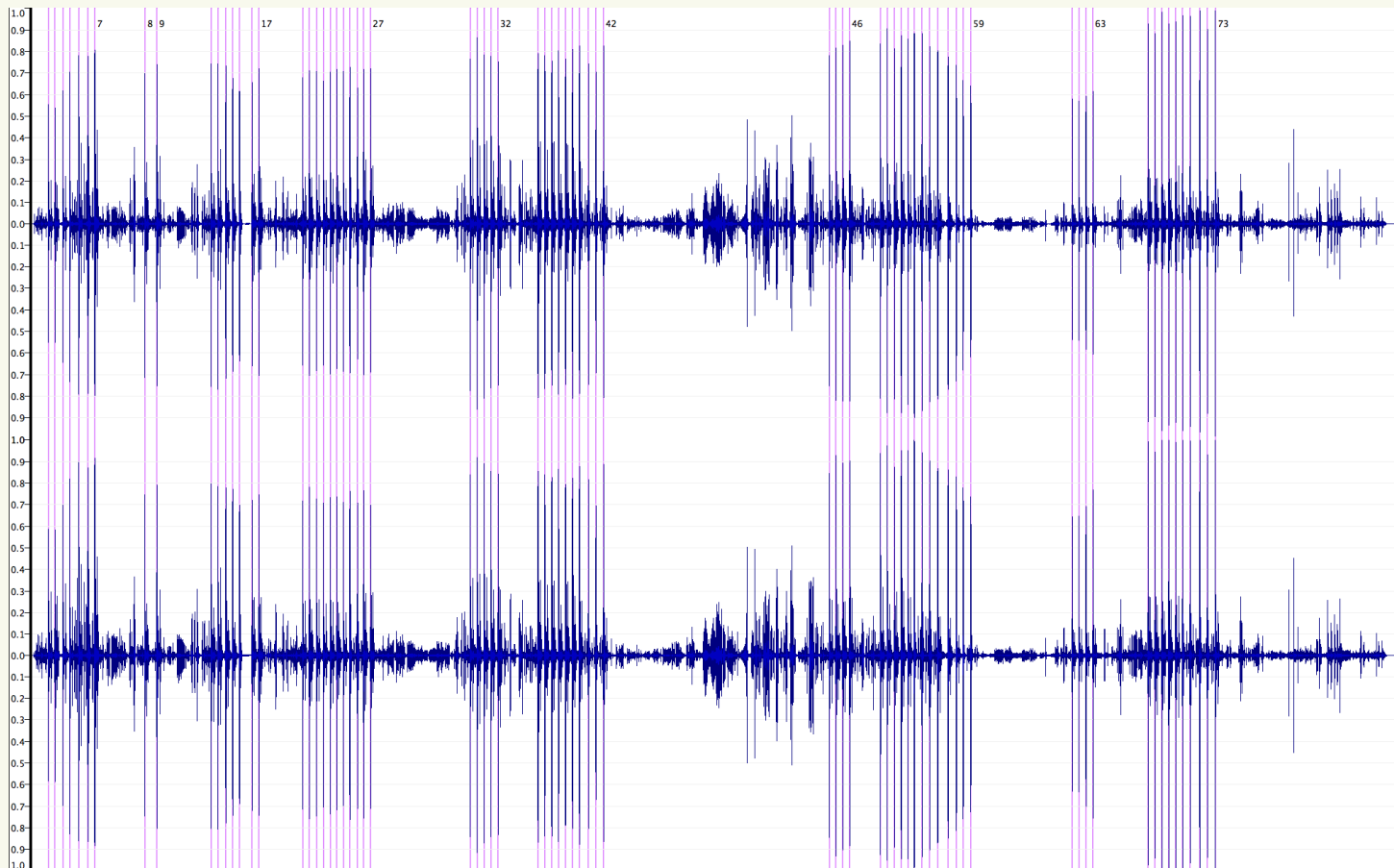


Figure 5. A graph of the instances of Motif A in the entire recording indicating the spacing between instances

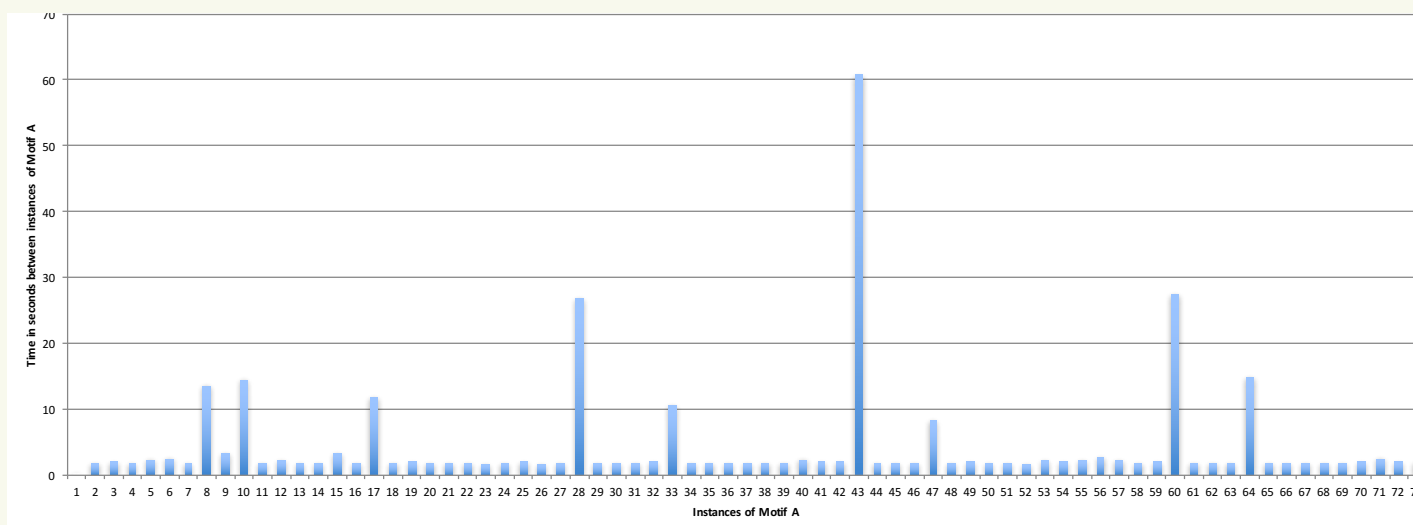




Figure 6. A line graph of the data shown in [Fig. 4](#), with the long interruptions removed

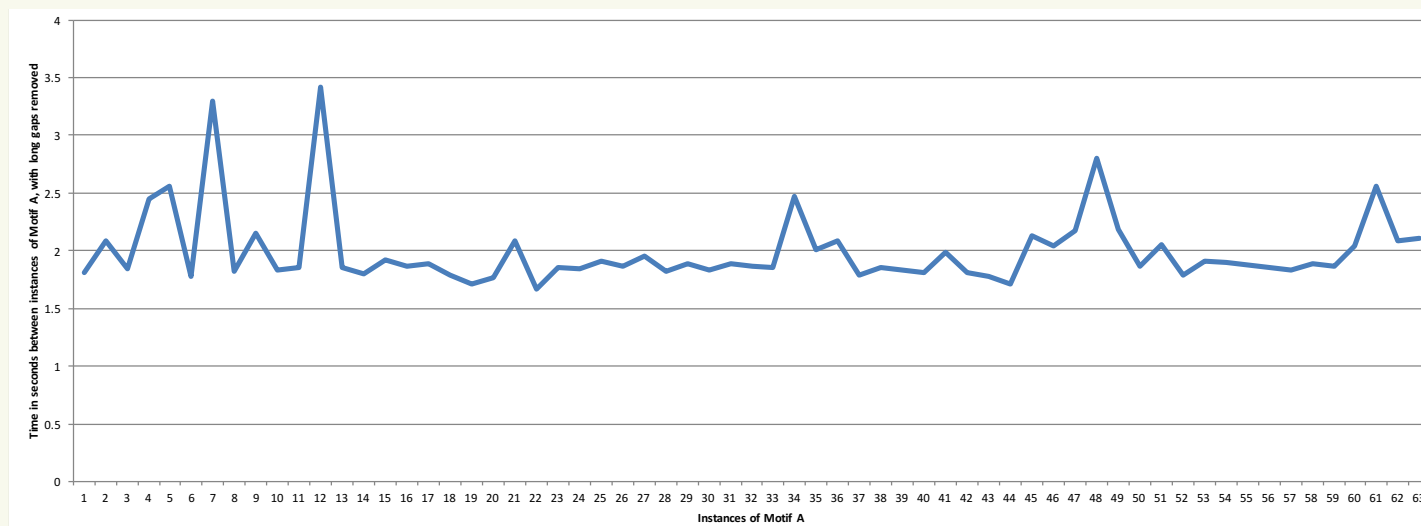
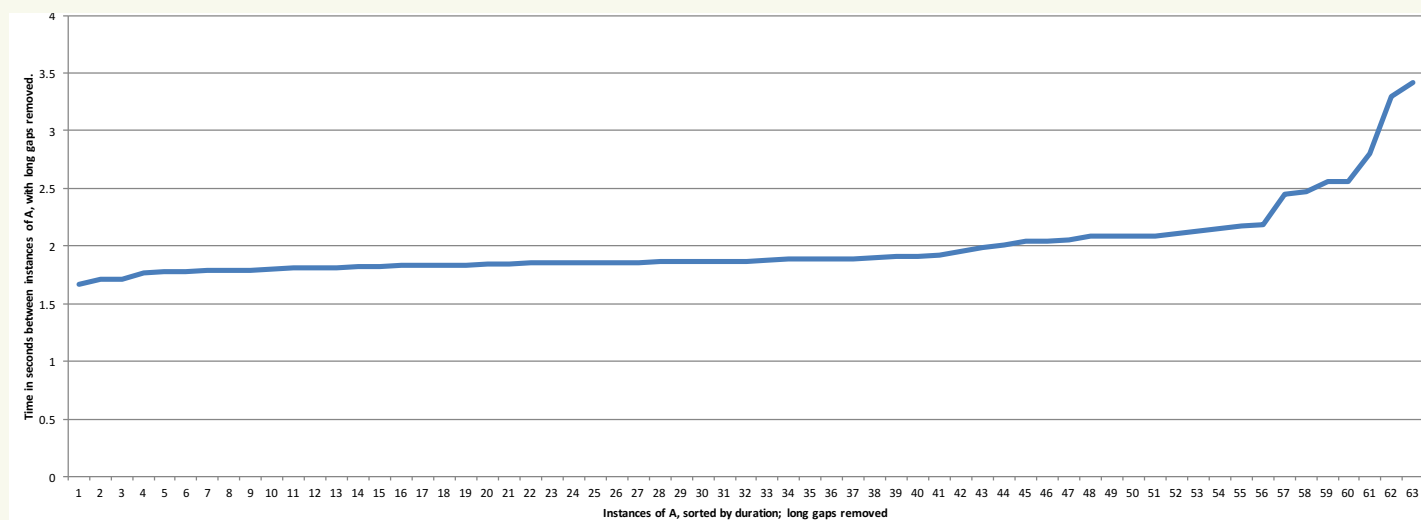


Figure 7. A graph of the instances of Motif A, with the long interruptions removed, and the time intervals between instance of the motif sorted by duration



there is some interaction that we could work through, be it sonic, contextual, or ontological. This is, in other words, a problem of deployment and we can make some graphs of distributions of what we have of the song: [Fig. 9](#) shows motif A in association with motif B (it often occurs with motif B, as seen in [Fig. 12](#)). As shown in [Fig. 10](#), we have associative set A and an associative set B and also an associative set AB since the two seem to go together. Notice that this set is neither even nor uniform and that there are more As than Bs and that the Bs come later in the set. This has a kind of flow to it, moving from A to A+B. We can also group a longer section of the performance and make the associative set AB clear (see [Figs. 11](#) and [12](#)). Note that in [Fig. 13](#) not all motifs A or B are part of associative set AB.

Motifs A and B are clearly closely related. ‘What next?’ is to address the music that comes before and after the refrain. Immediately after the first refrain is a sequence of chips: at first 2, then 2+3. This suggests some association between the beaksnap as a series of sharp singularities and a more continuous sonority, albeit a sound that is not a song. A long sequence of continuous chips then sounds: 10 in a row at 2’54”, all rhythmically irregular and most succinctly defined within the context of the vocalisation as C/CRS(Chips)_{<non-metric, continuous>}. These occur after each of the refrains and are reminiscent of the vocalisation of the White-Browed Scrubwren (*Sericornis frontalis*),



Figure 8. A spectrogram, overlaid with the waveform of the recording from 10.1” to 12.8”, annotated to show the beaksnap of Motif B

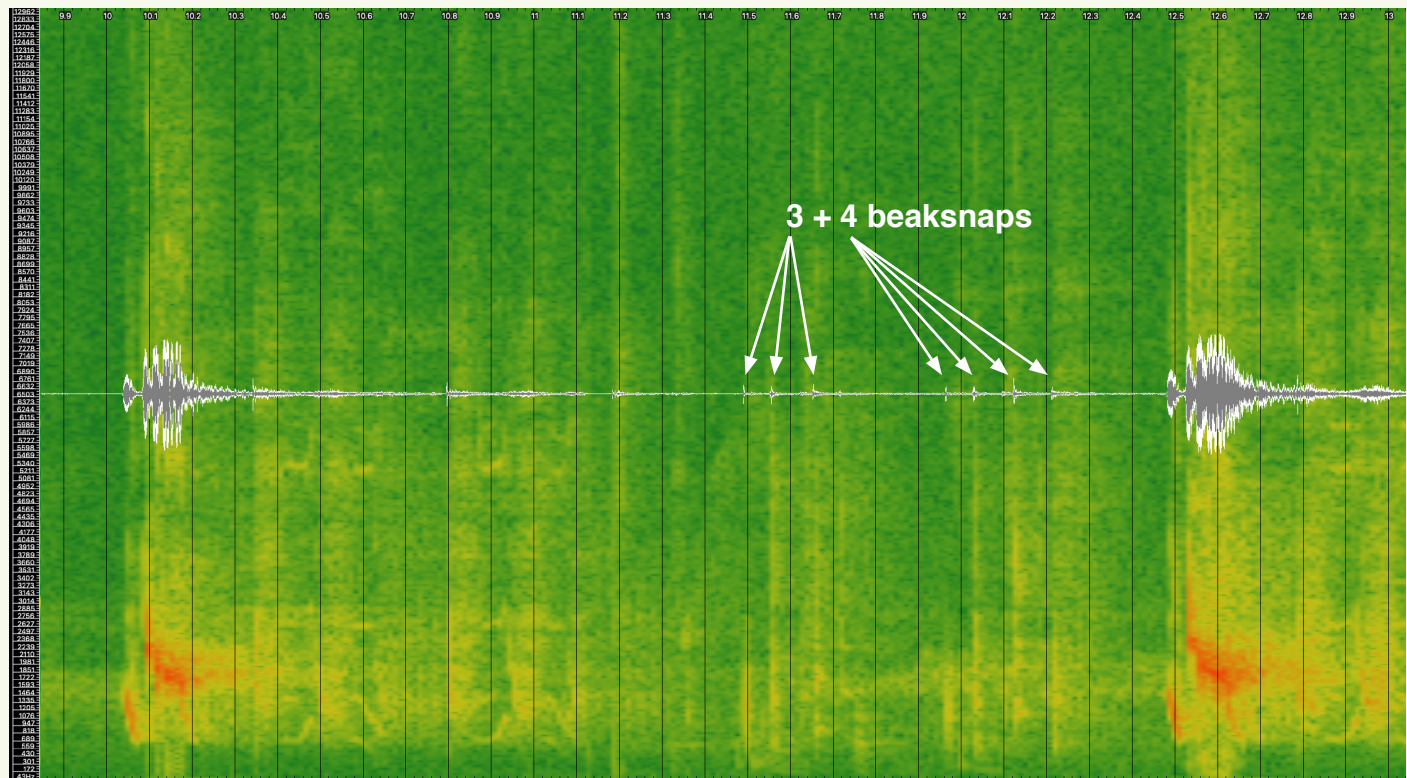


Figure 9. Distribution of Motif A from 2’16” to 2’36”, showing associative set A

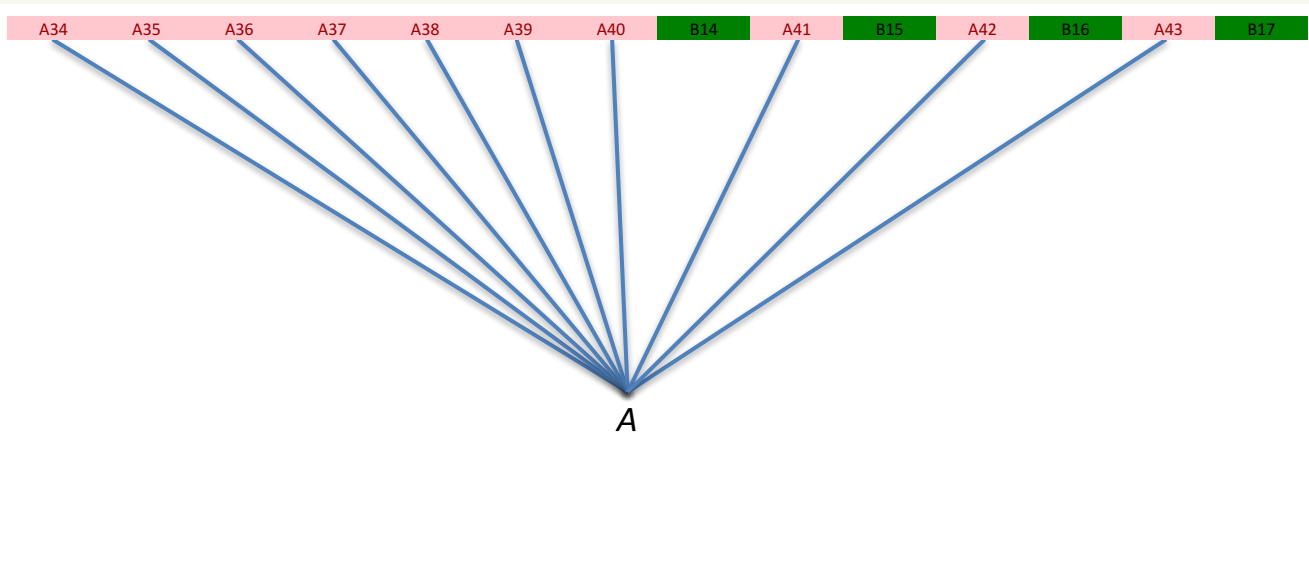




Figure 10. Distribution of Motif A and Motif B from 2'16" to 2'36", showing associative sets A, B and AB

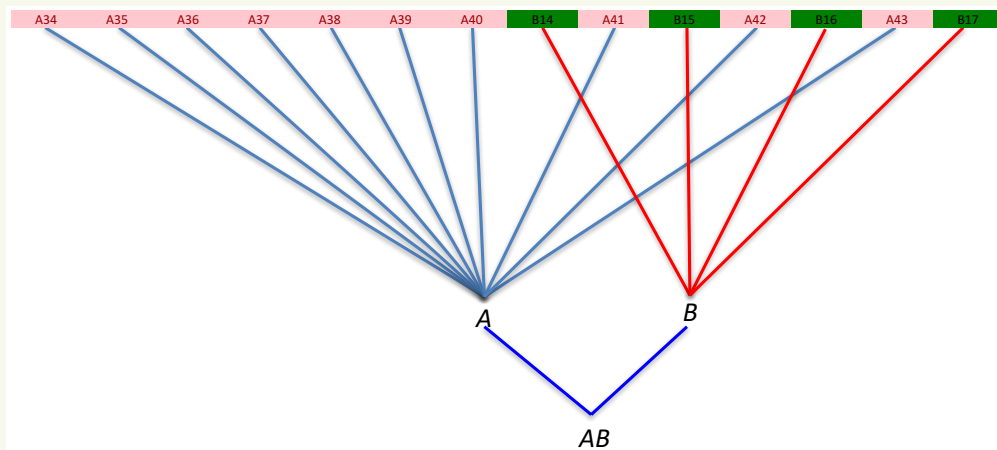


Figure 11. Distribution of Motif A from 4" to 1'31", showing associative set A

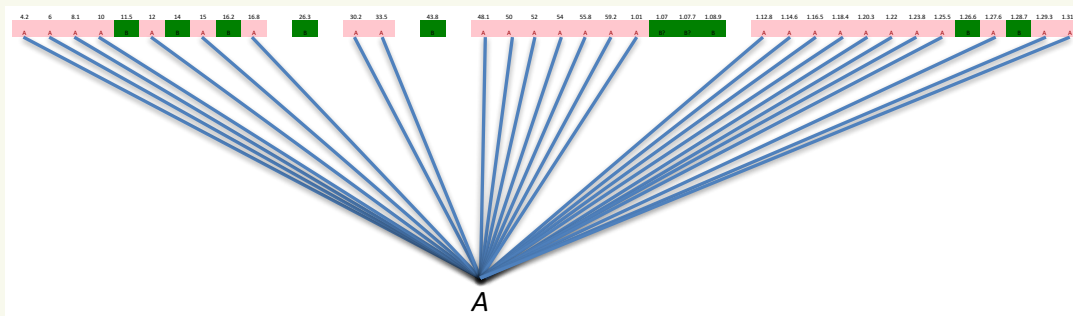


Figure 12. Distribution of Motif A from 4" to 1'31", showing associative sets A, B and AB

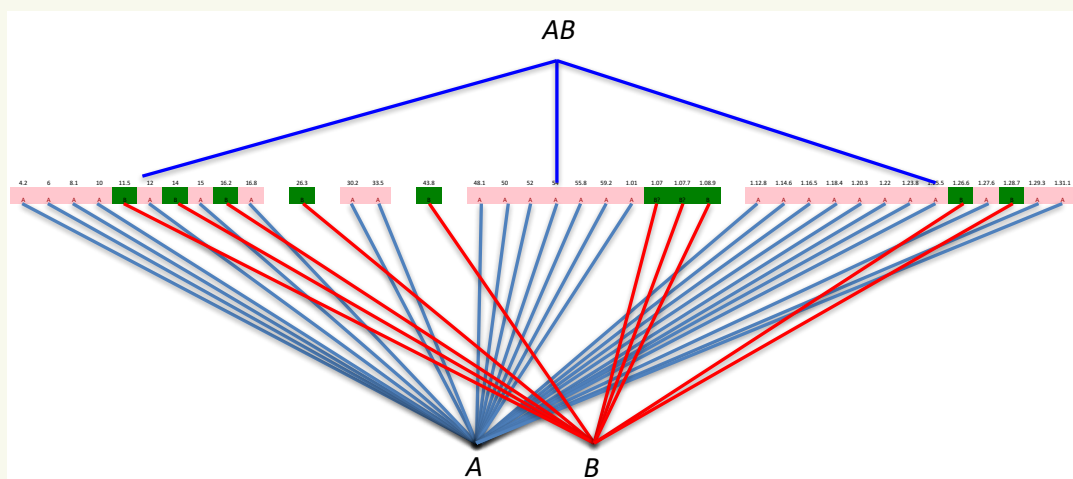
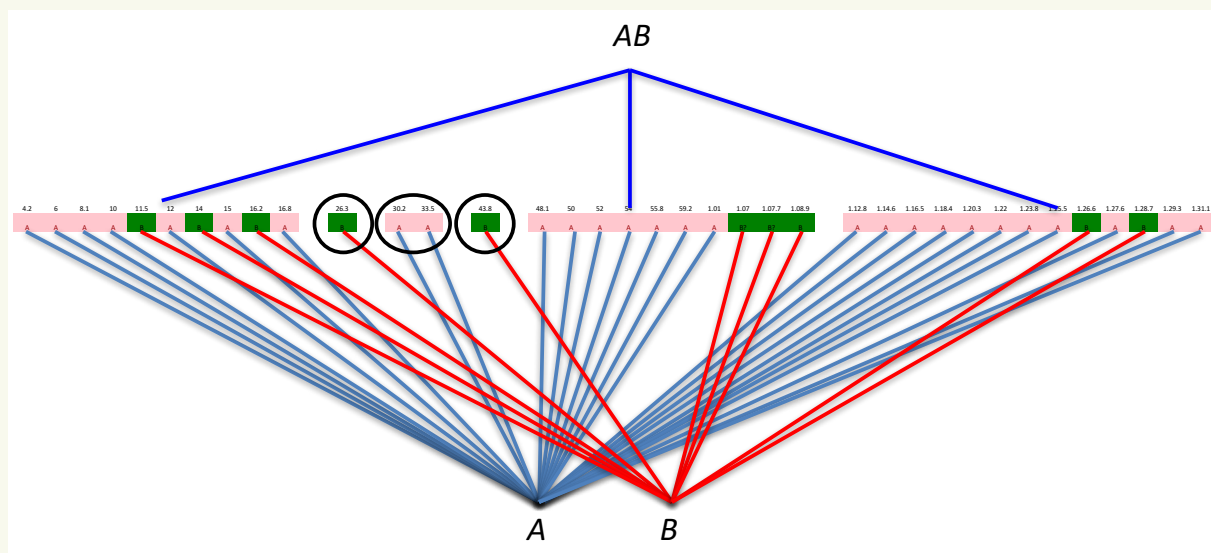




Figure 13. Distribution of Motif A from 4" to 1'31", showing associative sets A, B and AB. The circled motifs show that not all instances of Motifs A or B are part of associative set AB



though there is a range of possible species that produce similar sounds. The most interesting instance occurs at 1'41" (see [Fig. 14](#)), where the call is transformed by being interlaced by the call of a different species and then unwoven several seconds later. This particular transformation is much more likely to be a combination of different mobbing alarm calls, such as by the Eastern Yellow Robin (*Eopsaltria australis*) and Brown Thornbill (*Acanthiza pusilla*). Both these species are found in habitats similar to that of the Superb Lyrebirds and their chip calls differ in roughness. This suggests that the lyrebird is vocalising contrapuntally, which inter alia, further supports motifs A and B as distinct but related. Much more speculatively, it raises the possibility that motif B overlays motif A and that the motifs in these moments are sonically sequential but functionally contemporaneous. Since the birds being imitated share similar habitats and their vocalisations are distinct, they need to be sonically differentiated precisely because they occupy similar territories. In other words, perhaps the lyrebird is mimicking the interrelations of bird-vocalisations in a habitat²², which we hear in the recording as the transformation of related sounds.

It is important to have clear definitions in deciding on these motifs, or segments. Motif C, which comes before each instance of motif A, is therefore problematic. It precedes the refrain each time, but is characterised by burbling. My initial notes describe it as: 'Burbling and squeaking. F# or microtonal deviation, descending. Sometimes 1 pitch only.' It sounds like a Satin Bowerbird (*Ptilonorhynchus violaceus*), to which I will return below, but more importantly for now, the vocalisation also always contains pitch. For example, at 46" the motif has two clear notes at G-12c and F#-6c (see [Fig. 15](#)). At 2'14" it includes three pitches, F#+21c, F# exactly and F#-19c²³. We can say that perhaps this motif includes a flattening sequence of pitches which are somewhat variable in level but which are close to F# even when performed 2' apart. So, although this motif is more diverse than the other motifs, it always includes a descending sequence of pitches proximate to F#. It can therefore be defined as C/CRS(C)_{<burbling, descending pitch>}. Curiously, we can hear the same flat F# in the background, not sung by the lyrebird, at 3'13", when a Grey Butcherbird (*Cracticus torquatus*) descends an equally tempered fourth. The same pitch and the same background bird is also heard at 5'20.8" where it also has a sense of microtonally descending pitch. There are few other instances in this recording of background birds being clearly pitched and so this is likely to be an instance where the lyrebird is mimicking the butcherbird that also happens to have been recorded, the lyrebird first having incorporated that call's pitch into a more motivically complex song.

To summarise, [Fig. 16](#) shows that motif C (blue) always comes just before motif A (pink)²⁴. But it is not grounds for redefining motif A. The reason is simply that motif C is distinctively much more variable than motif A and motif C can include lots of sounds and always clear pitches but motif A never includes motifs other than motif B. Motif C has a strongly defined end (which is motif A's beginning) and a very loosely defined beginning. Motif A is still coherent because it sounds so distinctive but we can consider a more complex associative set made up of C+A+B. [Figure 17](#) shows all the instances of motif A and motif B. [Figure 18](#) shows set AB. [Figure 19](#) also shows set CA and set CAB (which is the same as set AB). Some motifs are more strongly associated with others. What we know already is that



Figure 14. A spectrogram, overlaid with the waveform of the recording from 1.41” to 1.44”, during which time a transition between two calls takes place

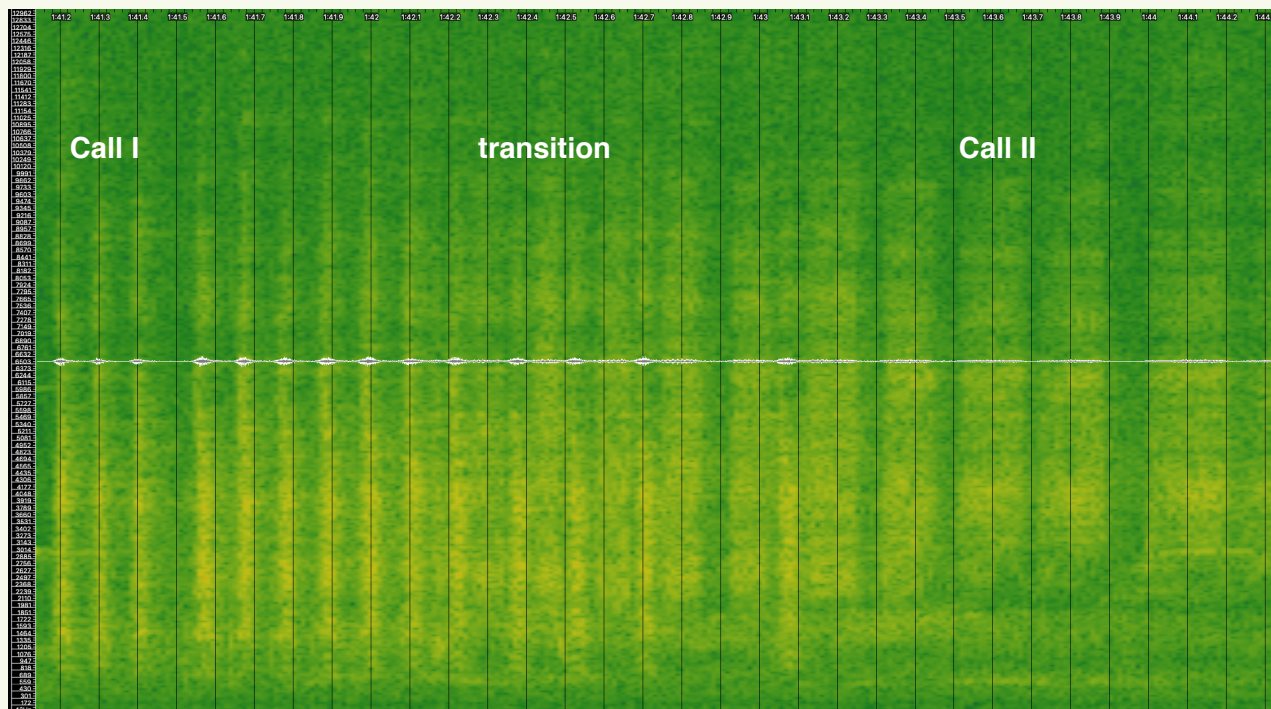


Figure 15. A spectrogram, overlaid with the waveform of the recording from 45.6” (which, in this instance, is the beginning of Motif C) to 48.7” (by which time Motif A has begun)

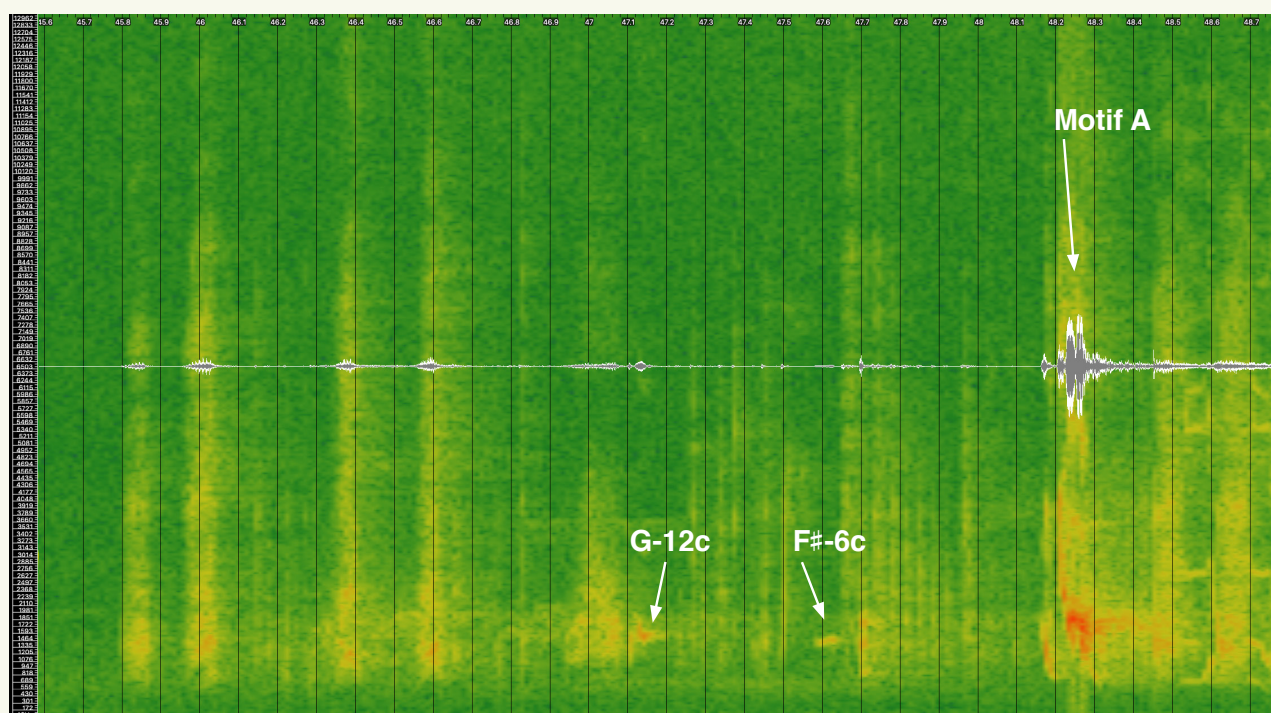




Figure 16. The distribution of Motifs A, B and C, from the beginning to the end of the recording. NB. Motif C always precedes Motif A after a break

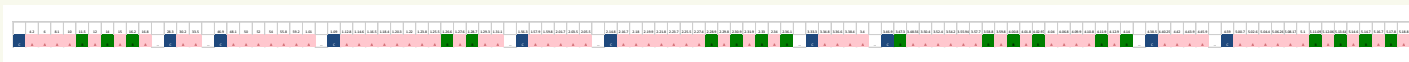


Figure 17. The distribution of Motifs A, B and C, from the beginning to the end of the recording, showing associative sets A and B

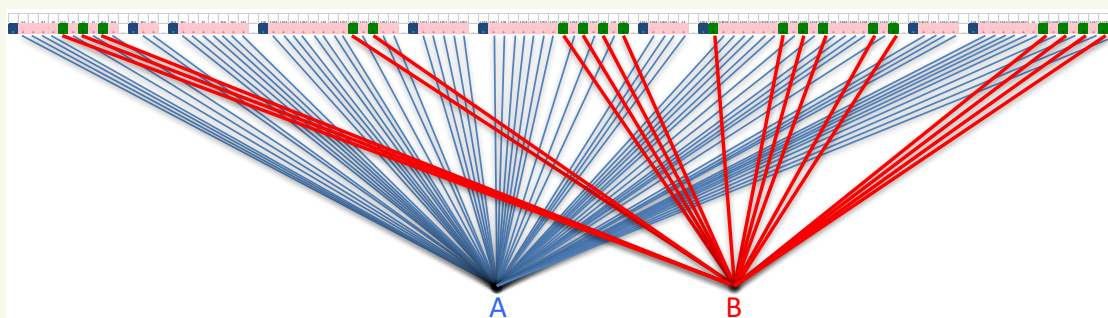


Figure 18. The distribution of Motifs A, B and C, from the beginning to the end of the recording, showing associative sets A, B and AB

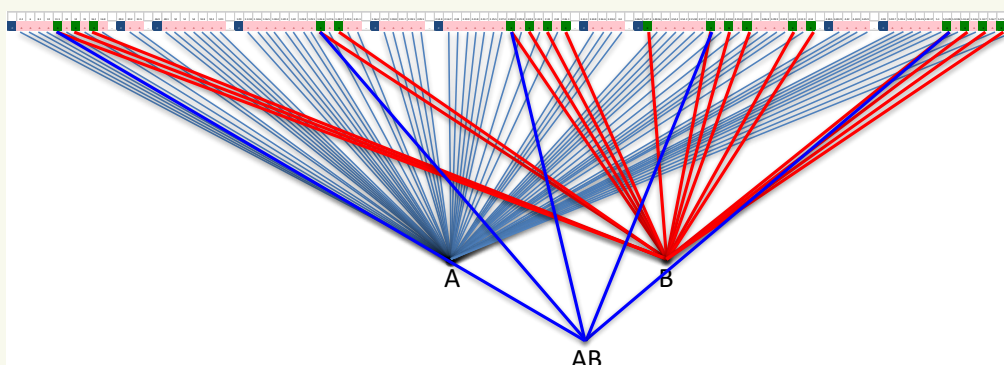
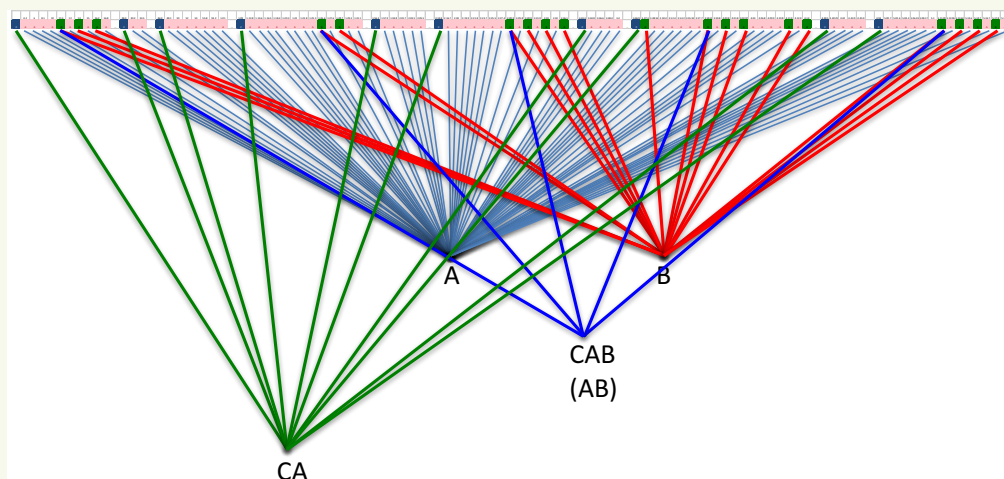


Figure 19. The distribution of Motifs A, B and C, from the beginning to the end of the recording, showing associative sets A, B, AB (indetical with CAB) and CA.





motif A is very obvious and rhythmically regular, regardless of whether or not motif B intervenes. This is why it still feels like a refrain. But set CAB sounds less like a set even though analytically we can explain it in this way. It is another uneven set because the way that we define it changes from the start (very loose definition) to the end (which is always apparent) and perhaps most challenging, it also contains uneven shifts in representational ontology. With this we have enough material to return to wider concerns.

Conclusion

The lyrebird sings a composite song: the 'distributive character of the one' ([Deleuze 1993: 126–7](#)), 'the collective character of the multiple' ([Deleuze 1993: 127](#)) and so with its song we might appreciate the changes in 'proximate dimension' (crudely background and foreground), entering and leaving the body of the bird and listener ([Bonnet 2016: 9](#)). Importantly, in this analysis, the transformations are intrinsic, connecting points on the flow of the vocalisation that have nothing to do with a static formal structure since they are meaningless in those terms. This is a vocalisation without beginning or end: it is inherently incomplete. The tangents that I have drawn form perspectives on the music and these are determined by the recording's emergent factors. Reidentification is therefore central to how this analysis is undertaken since the goal is not to classify motifs but to say something about musical relationships, transformations and distributions. For Hanninen:

reidentification seems more appropriate [to analysis, as distinct from theory], for it speaks to music's temporality, the flash of recognition that transforms predictable properties into relational ones and seeds associative sets. Whereas classification suggests static end product, reidentification is active, melding segment recognition with the creation and organization of musical relationships' ([Hanninen 2012: 158](#)).

Rather than a framework or skeleton, we should think of the schemes I have presented as unfoldings of touching surfaces that enfold and what I have presented is one possible unfolding. The unfolding of refrains 'follows the fold up to the following fold' ([Deleuze 1993: 6](#)), an undertaking here explained as associative analysis (A in contact with A, which I have labelled 'motif A'). The analysis is an unfolding of the birdsong, both a decoding (which is why it looks like formalist graphing) and recoding, as in this discourse (which is why it is not formalism) ([Bonnet 2016: 128](#)).

The concepts of spaces, temporal and otherwise, occupied by this bird and by a sound recordist, are moving. Moving spaces and complex temporalities returns us to the possibility of a lyrebird impersonating a Satin Bowerbird in motif C. This motif sounds most like chaotic burlblings, rather than clearly definable objects, which is in part why it is an interesting riposte to the territorialisation of the apparently clean categorisations of my motivic analysis of the refrain. The challenge to definition made by bowerbird song is a significant one, since bowerbirds are also excellent mimics of the sounds in their surroundings, including the sounds of lyrebirds and so I hear, in motif C, the sound of the chaotic burbling of mimesis itself, a kind of sonic turbulence ([Deleuze 1993: 17](#)). As Deleuze would have it, this is the sound of the 'erasure of contour'²⁵ and it is a sound that exceeds the limits of a single regime of representation.

The objects that I have described in this analysis are those that continually vary: they are 'objectiles', or objects in motion. The meeting of lines tangent to motifs A do not form a category that joins fragments together but a place of 'linear focus' ([Deleuze 1993: 19](#)), a point of view of variation²⁶. Graphing one instance of this does not represent the song's form any more than it does the subject's (the analyst's) position, but provides a glimpse of a process in motion. Every new motif described is a change to the vector of the whole which is why the prose of this unfolding analysis is the discursive creation of objects: the analysis creates the objects. As I wrote above, there is no whole here, only a section of tape that can be analysed to gain a 'point of view' ([Deleuze 1993: 15](#)) of the motions describing a lyrebird's singing²⁷. This is therefore about bird singing rather than birdsong. It has nothing to do with style and everything to do with analytical work (and therefore my argument is about analysing rather than an analysis).

For Bonnet ([2016: 7](#)), sound 'must leave a trace'. A trace is 'not necessarily a material, physical host; it precedes the pertinence of any such distinction. It is that which testifies to a passage, that which harbours and reveals a past presence by continuing to manifest it.' Therefore, the trace is 'the primordial means by which it can be integrated into a regime of permanence' ([Bonnet 2016: 7](#)). That passage is not transcendent, but made, just as regimes of permanence are made and they are made continually. These are, again, problems



of deployment. Bonnet argues that: ‘most of the time, listening and sound are represented under the auspices of a dualist regime that distributes them according to the axes of transmitter-receiver or object-subject’ (Bonnet 2016: 92). For him, theories of ‘event’ and phenomenology form and distribute ‘sound-objects’ within regimes of ‘transmitter-receiver or object-subject’ (Bonnet 2016: 92). What his problematisation of listening in terms of deployment offers is to highlight “subject” and “object”, “represented” and “representing”, “thing” and “thought” within a conception where distinctions are of “FUNCTIONAL order only and not at all ontological as understood by classical dualism” (Bonnet 2016: 92, quoting William James). The regimes that I am interested in here are recording, composition, performance and analytical discourse. My aim has therefore been to emphasise the process of forming ‘sound-objects’ and with them, conceptions of representation different from those received by the performance and composition bifurcation. In other words, by stepping outside the composed and performed paradigm (and, in so doing, questioning representation as a mode of describing identity) and analysing a single recording of a bird singing, I hope to have shown the significance of the work of writing in any written description of composition, performance, collaboration, improvisation, or other human musical activities.

More formally, and to return to the problem of ontology, the objects created in the analysis are meaningless except that they ‘affirm their objectal status’ (Bonnet 2016: 128)²⁸. What I have shown here is that sound objects are formed by the ‘sayable’ (Bonnet 2016: 101), with analysis as attention and nomination (Bonnet 2016: 104). They do not signify anything though they are representational in register and therefore capable of taking part in a longer discourse about representation. As such, this analysis seeks not to endow meaning where none exists but to focus instead on the labours by which this process of reification (the bringing into being of the object as object) takes place. My interest here is in the work of writing and in particular writing that brings together the challenges of performance analysis with considerations of distribution. In the process of territorialisation that I outlined (‘a utile [i.e. utilised, utilisable] sound belonging to a determinate system’ (Bonnet 2016: 128)), the analysis, which is a kind of listening, is a process of reification. To return to Bonnet:

[t]he object-sound is the formal condition of the existence of sound, of its becoming as an element of representation and as an imaginary production. It is the condition for sound’s taking up its place in modes of discourse. It is a question of territory and nothing else (Bonnet 2016: 129).

This is the case for analysis as for recording a bird singing.

This idea returns us to work, and in particular to the work of the music more familiar to us as music. The claims of composer and performer are, at least from the perspective of the philosophical questions raised, identities created in collaboration²⁹ and as such, they vary depending on the situation in which they are co-produced, including the production of analysis. A composer and a performer both undertake work for there to be the work of listening, writing and describing.

The lyrebird recording resists comprehensive analysis as do so many performances and, whilst analysts are often quick to acknowledge the partiality of the material that they publish, there is often a sense in which the analysis could continue to completion with more time and more resources. In this case one ought to abandon the desire for complete analysis more decisively: lyrebird mimicry is better considered lyrebird transformation and such transformations always continue endlessly; any analysis of these transformations also continues endlessly. Analysis sounds like motif C. Of course, there are more motifs to discover and what I have written here is only one point of view of the recording. Further motifs will not undermine the methodological or philosophical points that I have raised. This returns me to the methodological difficulties that open Hollis Taylor’s analysis of Pied Butcherbird song in which she encapsulates her approach as follows:

With no standard methodology or fixed research questions, work under this umbrella [zoömusicology] is best considered a mixed-methods, multiperspectival field rather than a discipline (Taylor 2017: 5)³⁰.

That field includes her background as a violinist and composer.

Although there are moves to strengthen performance analysis as a discipline, her approach is a useful reminder of the value of eschewing standardised and singular methods and of working outside existing disciplinarity. Much as any focus on the vocalisations of birds broadens our musical horizons, so performance analysis might be best when it is seeking new analytical ideas, rather than implementing established methodologies.

A decorative header image featuring musical notation on staves with various notes, rests, and symbols, set against a light green background.

ENDNOTES

1. See, for example, Born ([2005](#)); Clarke, Doffman and Lim ([2013](#)).
2. Cook also tends to neglect instances of the work as a useful concept. During the writing of this article I had the misfortune of buying tickets to a truly terrible performance of Beethoven, tolerable only because I knew the score well enough to take solace in my imagination of the music other than as it sounded. Those who downplay the significance of such experiences no doubt enjoy better performances of the canonical repertoire.
3. For a particularly influential and nuanced discussion of this topic, see Bohlman ([1999](#)) and in particular his consideration of 'ma' in music as being outside sound.
4. See, for example, Nealon ([2011](#)) and Attridge and Rydstrand ([2019](#)).
5. For a particularly useful critique of improvisation in the light of the work, see Goehr ([2016](#)).
6. One way that analysis is positioned as such is when Agawu (in summarising a long tradition of thinking about analysis) argued that '[analysis is like performance and also like composition](#)' ([Agawu 2004: 280](#)).
7. This, of course, is problematic for music that is not newly composed, though I hope to show some of the benefits of this emphasis on collaboration as distribution.
8. See, for example: McDonald, Wilson and Miell ([2011](#)); Sheehy ([2013](#)); Eric Clarke and Mark Doffman's recent research has also focussed on improvisation, including Clarke, Doffman and Lim ([2013](#)); Clarke and Doffman ([2017](#)) is based on improvisation within collaborative music making.
9. See, for example, Oskamp ([2006](#)). For more on the leap as a dance as a reading of Nietzsche on improvisation, see Goehr ([2016](#)).
10. There is some scholarship about improvisation and birdsong. For a discussion of improvisation in contrast to rote learning in a consideration of birdsong as music, see Gisela Kaplan ([2009](#)) Lyrebirds also sing practised, cyclic sequences and the regularity of the refrain in my case study points to such regularity, though the significant variation of material around the refrain also points to the diversity of possibilities and in the analysis that I present I am keen not to over-determine evidence for cyclic sequences, not least because the recording is so short. See Robinson and Curtis ([1996](#)) for further discussion of Albert's lyrebird's sequential song and also Kaplan ([2015: 96](#)). The rigid order of the sequential song of Albert's lyrebird is noted in the *Handbook of Australian, New Zealand and Antarctic Birds* ([Higgins, Peter and Cowling 2001: 134](#)) and it contrasts with the Superb Lyrebird's vocalisation, which is '[delivered in no particular order](#)' ([Higgins, Peter and Cowling 2001: 157](#)). Hollis Taylor makes a distinction between the mimicry of Albert's lyrebirds with a, '[regular and repeated sequential cycle](#)' and the Superb Lyrebird's, which is structured in a '[less predictable manner](#)' ([Taylor 2017: 142](#)). Against a tendency to include cyclic sequences of material, there is, in other words, an improvisatory aspect to the structure of the Superb Lyrebird's vocalisation.
11. Existing approaches to analysing birdsong are mostly still concerned with categorising parts of the song in terms of pattern recognition and quantitative approaches are far more frequent than the one that I offer here. See for example: Sasahara, Cody, Cohen and Taylor ([2012](#)). In explaining the classification procedure, the authors write: '[Each phrase was categorized into one of 182 types based on both visual examination of their sound spectrograms and auditory recognition of the recorded sound and all recognized phrases were classified with reference to a catalog of standards.](#)' They then '[trained a support vector machine ... to classify the phrase categories that been initially chosen subjectively.](#) [Therefore we conclude that our classification of phrase types, while initially subjective, was objectively confirmed.](#)' The argument that I make in this article avoids this kind of classification since it is fundamentally unable to account for the particular recording that I consider. I am also troubled by the apparent ease with which methodologies of classification are constituted as solely heuristic. For the early use of spectrograms in the analysis of lyrebird song ('Vibralysis'), see Halafoff ([1964](#)).
12. Others have accomplished much in interrogating conditions for music, though often at the cost of sound in their conceptualisation of music. See Barrett ([2016](#)).
13. Hollis Taylor's virtuosic book *Is Birdsong Music?* ([2017](#)) keeps the ontological question in play but it does so through a wide and deep consideration of the song of the Pied Butcherbird in particular and her credentials as a specialist rely on her sustained and extensive knowledge of recordings of this species as well as the species' behaviour in the wild.
14. Even some of the ingenious scholarship in this area still considers relatively simple song, such as that of the Zebra Finch by Dooling and Prior ([2017](#)). The principle exception is the work of Hollis Taylor who crosses between compositional uses of birdsong and ornithological analysis, including recordings made by Lumsdaine ([Taylor 2017](#)).



15. The stereo recording was made with a pair of Sennheiser 816 microphones on a Uher Report Monitor recorder.
16. It is not especially important here that the concept of a motif itself be defined with more precision, apart from how it forms the continuity of the music in association with other motifs (including their complication). Nevertheless, the main principle that guides this analysis is that the initial motif is distinctive and repeated and defined through contextual criteria (see: Hanninen (2004: 153) and Hanninen (2012: 49)). From the point of view of animal behavior a motif is a 'highly stereotyped song consisting of an ordering of syllables' (Dooling and Prior 2017).
17. Transcription is a form of labour central to the academic economy. See Winkler (1997). Also see Stayek (2014) and in particular pages 108–9 for a discussion of the labour of transcription.
18. S_1 types assume proximity in time, S_2 a non-temporal proximity (Hanninen 2012: 23ff).
19. C/CRS: contextual core common set = most distinctive features of the motif, most characteristic features (Hanninen 2012: 34ff.). For Hanninen 'The C/CRS can serve as a formal model of musical motif. In this view, a motive is a fairly small set of contextual criteria (relational properties) that are highly characteristic of an associative set A, in a musical context where segments of A are prominent or numerous and have special analytic significance' (Hanninen 2012: 116). Crucially, the analytical significance need not be determined from outside the music being considered. In her explanation of why the C/CRS can be the basis of motivic analysis, she argues that 'to think of motive as neither a collection of segments, nor a set of requisite features, but rather as a core set of relational properties that segments acquire in specific musical contexts suggests that "motive" is an ecological concept, not an insular or atomistic one' (Hanninen 2012: 117).
20. This particular motif is part of the species' invitation and display calls. For more about this, see Powys (2008) and for illustrative audio recordings, see Powys (2017).
21. Lyrebird, honeyeater, by family.
22. It is not my intention to enter into the ongoing classification of the sounds that lyrebirds make. The particular focus of my analysis is the transformation of short sounds, the motivic analysis itself, rather than a consideration of the distinction between vocalisation, call, song, etc. For a discussion of these and other distinctions, see Dalziell and Welbergen (2016).
23. Instances of this motif occur at 2", 28", 46", 1'56", 2'14", 3'33", 3'46", 4'38", 4'59".
24. The numbers indicate the time, in seconds, between the start of each motif and the next.
25. 'That is how we go from fold to fold and not from point to point [here sound object as motif] and how every contour is blurred to give definition to the formal powers of the raw material, which rise to the surface and are put forward as so many detours and supplementary folds' (Deleuze 1993: 17). From turbulence grows turbulence, 'inflection itself becomes vortical and at the same time its variation opens onto fluctuation, it becomes fluctuation' (Deleuze 1993: 17). This also suggests an end to considering lyrebirds and bowerbirds as mimics since there is none of the ontological stasis than mimesis requires. See Benjamin (1991: 100–1).
26. These are lines perpendicular to the tangents touching the curves of each motif (each curvature) which are in motion.
27. Here we might recall Agawu (2004: 272): 'Analysis is not ... bound by a consideration of wholes or of totality; it could just as legitimately concern itself with parts or fragments. And each analysis must produce a result unique to the work.'
28. They are 'weightless' for Deleuze (1993: 15).
29. Where, in such categories, should one place the lyrebird? And if there is not a predefined answer for the bird, then there ought not be for the humans either. After the end of dualism (performance and composition, subject and object) what is at stake is how these distinctions are functionally distributed (for whom and in what regime is a performance a performance of a composition?).
30. In Taylor's work there are several relational conceptions of music as an ontologically complex sociality. Indeed, of some microsocialities of bird song spaces. See Born (2013) for an explanation of microsocialities. These spaces are virtual. Indeed we might understand birdsong in music as (at least, as often) an attempt to work with such virtualities and we might also extend that attempt to the attempt that is made every time a recording is made.



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SOUND SAMPLE CREDITS

Sound sample 1. Recording of Superb Lyrebird (*Menura novaehollandiae*), Sydney, 1983. Copyright held by David Lumsdaine. Used with permission.

ABSTRACT

This article is about several contests. It begins with an overview of how the relationship between performance and composition has been recast in recent scholarship, focusing as it does on collaboration and improvisation, and it includes a discussion how these ideas have reformed some of the hierarchical assumptions about music making. The article then addresses ontological questions raised with an analytical focus on a recording of a Superb Lyrebird. In transforming an argument about performance and composition through the analysis of birdsong, the article aims to (i) disrupt some of the emerging disciplinarity that has been key to performance-centred research (ii) further challenge some of the disciplinary lines between performance and composition and (iii) open up new questions about scholarly work at large.

The article is therefore undisciplined, and, at the same time, it is formed from key arguments that are occupying musicology, such as — What is the role that performance plays in musicological discussion? What claims are made about musical ontologies? How can those claims be examined without relying on traditional definitions of music? How can analysis of a recording proceed without comparison with other, similar recordings? What, in other words, does performance analysis look like without the possibility of style? And, underlying all these questions, what work is undertaken in negotiating disciplinary lines?



Keywords. Performance, birdsong, analysis, music theory

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