Location, Location, Location: Auditioning the vocalizations of the Australian pied butcherbird

By Dr. Hollis Taylor

A soundscape recordist I am not, although when "ideal" conditions present themselves, I make a stab at it. I am immersed in the sound world of another species, and towards that end I make field recordings. My research celebrates the vocalizations of Australia's pied butcherbird (*Cracticus nigrogularis*), a mid-sized black and white songbird known for its habit of impaling prey (such as lizards and small birds) on branches or thorns for later consumption.

Other wildlife recordists were generous in sharing their extant recordings with me, but I quickly discovered the advantages of experiencing pied butcherbird vocal behavior firsthand and making my own recordings. "Jazz is like bananas—it must be consumed on the spot," Sartre recommends (1947, 48). So too, birdsong. Like the town clock, the dawn chorus is a *soundmark* (Truax 2001) for birds and humans, an aural counterpoint of events with a wide range of frequencies, amplitudes, timbres, and sound sources. Unlike the town clock, with birdsong there are dramas. Feathered choirs compete intensively for broadcasting space and time. The acoustic complexity in these crisscross patterns is the ultimate in perceptual surround-sound. When present, pied butcherbirds make a compelling contribution to the dawn (and pre-dawn) chorus.

Pied butcherbird musical culture

In his survey of musicality in Australian songbirds (with the human animal's standard as his measuring stick), Hartshorne describes the pied butcherbird as "the true 'magic flute', the perfection of musical tonality coming from a bird" (1953, 118). He continues, "I doubt any European will have heard anything so richly musical from birds" (ibid.). In the literature, the metaphor of a piping flute, a cornet, or an organ is often noted (Taylor 2008, 37).

Males sing pre-dawn song in the spring, and on moonlit nights may sing five hours or more. This gives their performance a special focus, as it is bracketed off from their ordinary life. Birds in adjacent territories can hear and adjust their singing to one another. The timing of countersinging can be concurrent, alternating, or overlapping. When type-matching is in place, even if the entrances seem haphazard, a clear canonic t reatment is established. The result is a "performance" canon, not a notated one, reminiscent of Thelonius Monk and Charlie Rouse breaking into an improvised canon on a chorus of "Bemsha Swing." (Monk, 1986) While the function of countersinging could be a vocal contest (a "cutting session" in jazz parlance), a sure ploy for getting attention (playing on a rest beat), or a competitive advertisement (a commercial jingle) (Horn and Falls 1988, 337), the effect is a highly musical one.

Space is an essential aspect in music (Brant 1967, 223–242). Anthropomorphism forbids speculation on the possibility that creating an aesthetic experience is part of the function of countersinging, but almost anyone hearing it would dare to think so. Are pied butcherbird phrases formed with the instinct that they must work together when more than one singer is broadcasting in the "acoustic horizon" (Blesser and Salter 2007, 22)? Is a bird merely minimizing the competitive background noise through "song asynchrony" or "displacement patterns," as the biologist might characterize it (Cody and Brown 1969, 778–780), or could these emerging and fading song phrases from the avian song community have a musical purpose?

Female song plays a key role in pied butcherbird duetting and antiphonal song (with up to six, and sometimes even more, participants); unfortunately, since the sexes are indistinguishable, the female contribution can only be speculated upon. Duets often sound as if emitted from a single bird. Since the contributions do not parse easily, they must be noted by the recordist in the field. When singing, pied butcherbirds alternate a standard upright posture with raising the bill high, and then sinking it on the breast, which assists in part identification. Such precision calls to mind the dovetailing of the medieval hocket to create the effect of a single melodic line.

In addition to singing antiphons, pied butcherbirds mimic, appropriating from conspecifics, other bird species, and unexpected sources. Their mimicry cycles are virtuosic and aesthetic extravaganzas. Mimicry's function is poorly understood, and no single explanation appears to suffice (Chisholm 1946; Marshall 1950; Baylis 1982; Kroodsma 2004: 128–130). What does seem clear is that in mimesis, birds are emancipated from their species-specific templates and able to comment on their landscape.

[Online track:] For example, one bird contributed two notes to antiphonal song that sounded suspiciously like a reversing truck alarm (first heard at 1:27 in). Later that morning, I recorded a truck for comparison: the bird had matched pitch, timbre, and duration.

[Online track:] On Magnetic Island, a resident volunteered to record pied butcherbirds on a cheap cassette recorder perched on her windowsill. A mimicry cycle sees portions of the bird's own song notes mixed with a mishmash of various other birds and unidentified sounds. Mimicry sets up the potential for narrativity. An animal at play is telling a story about its environment (Lestel 2002, 42). The fragment appears to be bookended by 'meow' and 'woof', mimicry of her cat and dog.

[Online track:] At 1:50 into this abridged track, our soloist abandons his formal song with a coda of *sotto voce* mimicry and then flies off to continue in the distance. The mimicry suggests that this bird hears similarly to humans, with an appreciation of alien songs and sounds in his environs.

Birdsong analysis and the trained ear

The study of birdsong remains largely unattended by musicians. When recording equipment and sonographic analysis became avail-

able, biologists apprehended the field, although not with a trained ear so much as a trained *eye*. Galison writes about the impact of modern technology on science, including how "the pictorial (image) tradition" influences science's bottom line (1997, xix). (This is echoed in Western classical music with the score becoming privileged above the sonic experience.) The sonogram does not necessarily represent what the human ear, and likely the bird's ear, hears.

Another potential shortcoming of visual analysis is that the image in the sonogram window can be altered; we adjust it, imagining the act as an objectification of perception, until we see what we want (Rothenberg 2005, 90). Any thought that a commonality of technological tools has made for an even playing field between scientist and musician ignores at its peril the trained ear.

Birdsong notation and composition

Although music is an abstract form, it contains within it the sounding and encoding of location. No stereotypical pied butcherbird song exists. I am an avian cartographer searching continent-wide for principles of design in their song. In order to get a handle on their dynamic sonic landscape, in addition to the use of sonograms, my analysis includes repeated listening, music notation, and composition, each complementing the others. Multiple ways of knowing are required for the fullest picture possible.

A pied butcherbird at Wogarno Station, Western Australia.

Music notation implies extensive involvement by the ear. Western music notation crosses borders and languages with ease and is a lingua franca for many musicians who choose to read music. However, Bartók cautions, "The only really true notations are the soundtracks on the record itself" (Bartók and Lord 1951, 3). Even a recording is not a tangible fact (or a firsthand field experience), nor is a sonogram. Technology can help us with things that we grasp intuitively (List 1974, 375). In matters of pitch or rhythm, I trust my ear first, and then the measurements. Of course, notation suffers inadequacies for birdsong, but the same can be said for even Western art music. My solution is to supplement notation with sonograms, verbal descriptions, and a wide variety of analysis (distributional, musicological, and computational).

Pied butcherbird vocalizations are a cultural phenomenon learned from conspecifics and adaptable to circumstance. Components from their rich and nuanced repertoire are subject to recasting, some via elaborate strategies, and many lend themselves to reframing within the human animal's tradition as fruitful compositional catalysts in matters of melody, rhythm, timbre, form, and wonder. My portfolio of compositions based on their vocalizations commenced as a means of putting birdsong on display but quickly extended its reach: composition informed and became a central part of my analysis. Sonograms, notations, compositions, analyses—all are contingent upon field recordings.

Recording quality and sonic archiving

Kunst puts the entire field of ethnomusicology in debt to recordings: "Ethnomusicology could never have grown into an independent science if the gramophone had not been invented" (1974, 12). Recordings provide more than just a second check on the ear; they provide an opportunity for the collection of a vast amount of data and potentially for great familiarity with the subject. However, they also allow the researcher to content herself with "homework" rather than "fieldwork."

As for the artifact itself, whether in the form of cylinder, tape, disc, or file, the recording is now perceived from many, some hostile, viewpoints. For some, the recording tends to be accepted as the music, score, performance, and representation, arriving in a complete bundle, whereas others maintain recordings are not "the real thing"—they are merely a frozen snapshot in time (and thus in terms of a transitory medium like music, a false representation).

It is clear that neither the birdsong notation nor the recording for me is "the real thing." However, while often I sing the praises of being in situ to record birdsong, I do not romanticize it. Since pied butcherbird territory does not extend to where I live, the most obvious limitation to fieldwork is the cost of travel in terms of both time and money. Another limitation is access to potential recording areas. A road into the site is required, even with a 4-wheel drive vehicle, but a road implies the presence of other people and the attendant noise, private property, and safety issues.

I conduct pre-dawn recording in complete darkness (unless there is some moonlight). Snakes, spiders, ticks, dogs, disease-bearing mosquitoes, and the human animal make up my chief safety concerns. Dingoes, feral camels, and a herd of 27 running cattle have all approached me. A kangaroo bounding towards you in the black of the night is a terrifying sound in headphones, despite the fact that they are relatively harmless (unless you count a heart attack). And although some have, I have never been attacked by a pied butcherbird.

Pied butcherbirds thrive near humans. I discovered some of the most intriguing singers in outback towns and campgrounds, venues traditionally ignored by soundscape recordists who understandably aspire to more pristine conditions. Songbirds have to contend with the full reality of today's acoustic ecology. When recording their songs, if a car or airplane intrudes, I remind myself that such machines brought me to that location.

Science excels in the telling; music suggests. Field recordings sit somewhere between the two, invaluable tools on the one hand but sonic displacements of the experience of being in the bush on the other. Just as facts can be deficient, so too can recordings. For example, the aural depths of field—the foreground, middleground, and background—and the shifting of perception as sounds unfold

(Vella 2000, 132) are flattened in recordings. And the quality of the experience—the theatrics of the sonic story of birdsong—is not entirely told in a recording. Nevertheless, since field recordings do much of the heavy lifting in my subsequent analysis of birdsong, it is crucial that I have made them myself, allowing the fieldwork to inform and shape the deskwork.

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Hollis Taylor was born in the USA and has been a Sydney resident since 2002. Her PhD from the University of Western Sydney is on the song of the Australian pied butcherbird. Her portfolio of compositions based on birdsong won the 2008 UWS APRA award and was featured on ABC Classic FM's *New Music Up Late* and at Violinale 2009 in Berlin. Taylor's sound/video installation *Great Fences of Australia*, in collaboration with Jon Rose, has seen numerous international performances. She has written a full-length book entitled *Post Impressions* based on her and Rose's 35,000 kilometre journey as cartographers making a sonic map of the great fences of Australia.