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CHAPTER 6

Sound as a Symbolic System: The Kaluli Drum

Steven Feld

How do sounds actively communicate and embody deeply felt sentiments? This question should be at the core of any ethnographic, humanistic, or social scientific concern with music, yet ethnomusicology is just beginning to untangle issues of the musical sign, the relations between symbolic form and social meaning, and the performance of sounds as communicative action. In this essay I wish to contribute an empirical example of how one class of sounds is socially structured to convey meaning. In doing so I will also try to raise issues that are generally relevant to theories of musical meaning and symbolism. By concentrating on the invention, performance, and understanding of drumming among the Kaluli people of Papua New Guinea (PNG) I will show that while these sounds overtly communicate through and about acoustic patterns, they are socially organized to do far more, by modulating special categories of sentiment and action when brought forth and properly contexted by features of staging and performance. This example illustrates how the study of sound as a symbolic system is situated at the intersection of acoustical and cultural analysis, in that such a study involves both an account of the physical or material conditions of sound production and the social and historical conditions of its invocation and interpretation.

There are two opening contexts, one anthropological, the other musical, which form the present arena in which PNG drums are ideologically situated. First is the social reduction of a sound to its visual source. Museum collections throughout the world contain drums from Papua New Guinea; books and catalogues of 'primitive art' are filled with their images. These celebrate shape, carving, patina, and decoration, often

indulging in superlatives about delicate lines, glistening colours, and intricate designs. But what is the consequence for sound? What do we know from these visual displays about the social life of the drum, which is its sound in performance? Unfortunately, all too little. At this point the sounds of PNG drums are rarely heard by outsiders who discourse about them; the sounds have become secondary to their source and the instruments are primarily objects for our visual contemplation. Of the thirty-five or so generally available commercial recordings of PNG music few devote much space to the presentation and analysis of drumming, and a search through Melanesian and Oceanic bibliographies and instrument catalogues (Chenoweth 1976; Fischer 1986; Gourlay 1980; Gourlay et al. 1981; McLean 1977, 1981) indicates a general lack of attention to the cultural analysis of drumming and drum symbolism; most articles focus on the construction and visual-material dimensions of drums and drumming, and comparatively greater attention is paid to the *garamut* wooden log 'slit-drum,' an idiophone, than the *kundu* skin-headed drum, a membranophone (for some of the significant literature see Larias 1983; Niles 1983, 1985; Penney 1980; Webb 1987; Zemp and Kaufmann 1969). It is just recently, with the publication of the first annotated audio survey of PNG music (Niles and Webb 1987), that one can hear some ninety examples of the varieties of *kundu* drumming in Papua New Guinea; unfortunately there is still little detailed acoustical or ethnographic information about these traditions.

Musicologically there is a deeper problem. The axiom of much work has been: when a sound is not complex in the material aspects of its acoustic organization, assume that its social meaning is essentially shallow. Musical meaning, in this view, is essentially 'in the notes' and not 'in the world.' The melodic, metric, and timbral organizations of sounds are taken as indexes of the social significance of musical action. For PNG drums, the consequences of such a view are considerable. Writers of general books, articles, and record jacket notes have assumed a kind of minimalism regarding the meaning of the drum sounds. Such assumptions rest simply on external auditory grounds: the singular timbres, isometric patterns, solo or group performances in or out of synchrony with singers, and lack of use in large multipart percussion ensembles that characterize PNG drum sounds have been read as if they were indexical to 'thin' social significances. The general Western colonial fascination with solo and ensemble technical virtuosity (the musical feature which aligns the 'musical genius' of exotic populations with that of Europe) and the simultaneous fascination with rhythmic and metric complexity unknown in Western traditions (hence an enduring mark of 'otherness') was never extended to Papua New Guinea, and with good

reason. What we are now discovering about the dynamics of the *kundu* involves a very different aesthetic, one that cannot be grasped or appropriated to the West within the same kind of framework that was extended, often positively, to the musics and especially the percussion traditions of Africa and Asia.

Without engaging in further polemic about the form and implication of these closures I hope to open some significant issues by addressing this question: What does it mean when a relatively simple acoustical phenomenon can *only* be apprehended through recourse to complex social facts? Treating the Kaluli drum sound as a symbolic system, rich both in the particulars of its situated meaning and in the general scheme of how Kaluli make sense of their world, we might also come around to the realization that acoustic organizations are always, at a prior level, socially organized.

People and Place

The Kaluli are one of four subgroups (culturally identical but differentiated by slight dialect variations) who collectively refer to themselves as *Bosavi kalu*, 'Bosavi people' (book-length ethnographic accounts are Feld 1982; B.B. Schieffelin 1990; E.L. Schieffelin 1976). They number some twelve hundred and live on about five thousand square miles of tropical forest lands just north of the slopes of Mount Bosavi on the Great Papuan Plateau in the Southern Highlands of Papua New Guinea. They traditionally resided in longhouse communities separated from each other by an hour's walk along forest trails. Each community was made up of members of two or three named patrilineal descent groups, comprising about fifteen families or, in all, some sixty to eighty people. Today this pattern has been modified; communities move less frequently, and in addition to a main longhouse, each community consists of a number of smaller single or double family dwellings. These changes have been promoted by a number of factors and sources, including government and mission. Kaluli people are swidden horticulturalists whose staple food is sago; they also maintain large gardens and hunt small game, wild pigs, and birds in the surrounding primary forest.

Traditional ceremonial life in Bosavi was prolific. In addition to one major ceremony of local invention, several other ceremonies, incorporated from the Lake Kutubu area to the east, the Kamulu area to the south, and the Lake Campbell area to the west, gained great popularity. While Kaluli music activity is primarily vocal, mussel shell (*sob*), seed pod (*sologá*), and crayfish claw (*degegádo*) rattles are used in song accompaniment for various ceremonies. It is in this instrumental and

ceremonial context that skin-headed drums have made their way into Kaluli ceremonial life, coming from the south side of Mount Bosavi in the last one hundred years. They are played in several settings, principally as a late-afternoon prelude to an all-night ceremony.

The Artefact

The Kaluli drum is single-headed and conical, just short of three feet long, and generally measures about five inches across each opening. It is always decorated by a set of carved ridges above the open end, and painted with natural red, white, and black substances. Kaluli call it *ilib*, a polysemous term which also designates 'treehole,' 'chest' (of the body), or 'resonant chamber.' All drum parts are named with human body-part terms; most important here are the inner terms *us*, *dagan*, and *megyf*. *Us* is the term used to describe the upper portion of the drum's inside chamber, below the skin *mise*, 'head' (note the same bodily metaphor in English percussion terminology). *Us* is also a polysemous term which equally designates 'egg,' 'nut,' 'phlegm'; it has been semantically extended too in recent times to include significant aspects of the ethnographer's cargo, namely, 'batteries,' 'film,' and 'audio tape.' In effect *us* denotes an outer hard shell or coating covering a softer inner substance that has some essence, living power, or quality. *Dagan* signifies 'voice' or 'throat'; this is the area just above the open *megyf* or 'mouth' end of the drum. To produce sound from its *domo*, 'body,' a drum must resound from its 'head,' resonate in the 'inner chest,' and speak from its 'voice' and out its 'mouth.'

Drums are made, owned, cared for, passed on, and played by Kaluli men. No special status is attached to these activities and drums are not considered 'secret' or 'sacred' like the flutes, bullroarers, or *garanius* (slit drums) found elsewhere in Papua New Guinea which figure prominently in initiation or otherwise in male-female relations (Gourlay 1975). While Kaluli women do not touch the drums or know about drum construction or magic, drums are kept in open view for all to see in the longhouse. There are no ritualized sanctions surrounding the gender specificity, and men do not go to elaborate or deceitful ends to hide drums from women, again quite in contrast to the aforementioned pattern surrounding certain instruments elsewhere in Papua New Guinea. Gourlay (1975) argues that social stratification and elaborateness of male initiation in PNG societies correlate closely with the secretiveness of their ritualized association with male antagonism towards women. While male-female differences in Kaluli life are clearly marked

and socially salient, gender oppositions, including those in the expressive cultural arena, are often balanced by forms of complementarity; social patterns of male dominance, antagonism, secrecy, and violence well documented in the PNG Highlands are clearly muted here, as they tend to be in the smaller-scale forest and 'fringe' societies (Brown 1978), relative to the New Guinea Highlands proper (see E.L. Schieffelin 1982; Feld 1984 for further discussion). Hence there is a lack of specialness to drums, and certainly no cult of secrecy or highly ritualized behaviour surrounding their use or performative efficacy. At the same time there are dimensions of magic and secrecy that surround Kaluli drumming, and these will be detailed below.

The Sound

Aside from these initial observations, the most striking impression that quickly develops about Kaluli drums derives from the sound. The drum pulse is regular and isometric, beating between one hundred and thirty and one hundred and forty times per minute of play. The pitch is singular, a low-frequency complex with a clear separation of the sound of the slap and the sound of the main pitch, the slap being the fundamental frequency (usually in the area of CC or 65 Hz) and the main audible pitch the first overtone one octave higher (in the area of C or 130 Hz). Additionally, the second overtone (in the area of G or 196 Hz) and the third overtone (in the area of c or 261 Hz) are quite prominent. The fourth, fifth, sixth, and seventh overtones are also relatively strong; there is no rapid falloff until this point. The resultant auditory sensation is a shifting figure and ground, with strong sense images of the octaves at C and c, and their inner fifth at G. The spectral display of five drum pulses in Figure 1 illustrates this overtone pattern in visual grey scale.

The pulsation is regular, neither a slow throbb nor a rapid warble. The envelope shape of each pulse is marked by a sharp and definite attack with no hesitation, a brief but full body sustain, and a long decay with no trailing effect. Each pulse continues to and overlaps the next; there are no discrete sound breaks or silences in between one pulse and the next. Figure 2 illustrates the waveform of a single drum; first five consecutive pulses, each three- to four-tenths of a second long, indicating a slightly different density yet constant distinguishing shape with no break between pulses; then a single pulse in a more microscopic view, illustrating the envelope shape with dense attack, very rapid body, and amplitude and waveform integrity throughout the lengthy decay.

A slight reverberation from angling the drum towards the house floor is also apparent, but the general sensation of resonance – a thick, densely

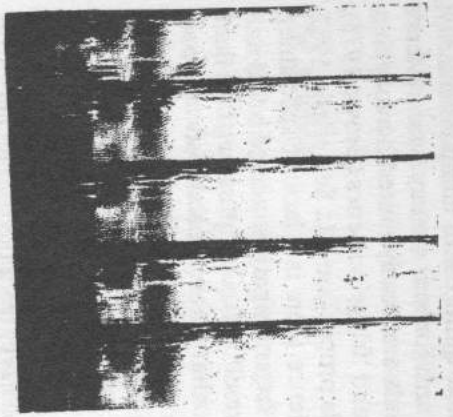


FIGURE 1
Spectral display of five drum pulses

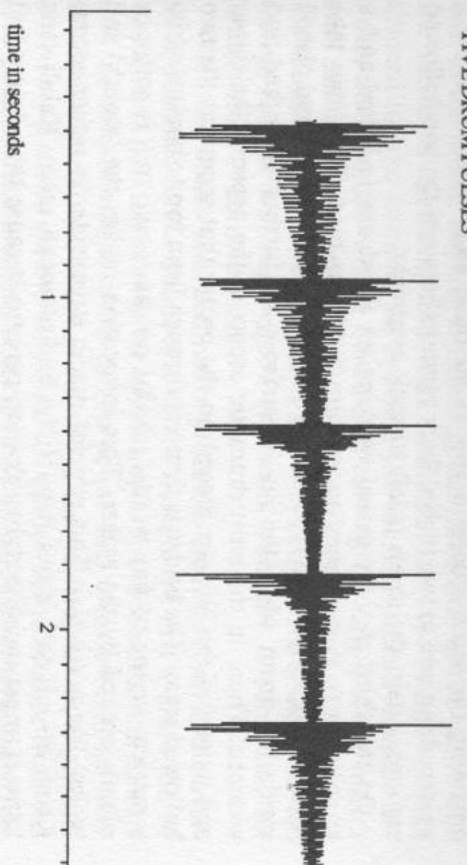
textured overlapping pulse – is not primarily an echo effect. Rather it derives directly from the instrumental materials and the prescribed manner of playing. The dynamics are held constant at one level once the drum pulsing begins. At five feet from a player the drum is one of the loudest sounds Kaluli make or hear; at about 80 decibels on the A scale (up to 85 dB with two or more players) it is easily two to three times louder than a normal face-to-face conversation. In summary, the immediately salient acoustic features of drumming are the loud intensity and regularity of pulsation, the denseness of the sound as a continual overlapping throb, and the layering quality of the pitches, with clear overtone octaves and the inner fifth constantly shifting figure and ground.

Construction

The process of constructing a drum involves a magical mediation to impart sonic pattern to the material object and infuse it with aesthetic power. If pursued in a linear manner (which is rarely the case), it takes about six days for Kaluli to make a drum. On the first day a *dona* tree (a magnolia, *Elmirillia papuana*) is cut and a four-foot-long section is chosen, soaked in water, and prepared for hollowing. While four or five other tree types are occasionally used, *dona* is preferred by most Kaluli drummers because of its lightness and resonant qualities.

On the second day the soaking log is removed from water and one

FIVE DRUM PULSES



SINGLE DRUM PULSE

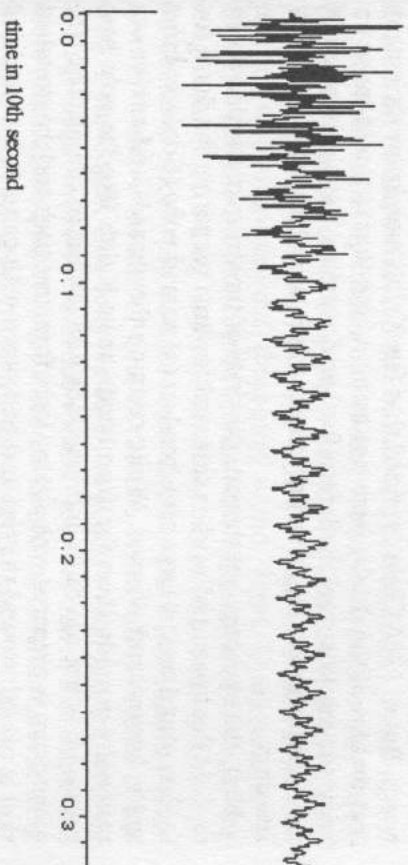


FIGURE 2
Waveform of a single drum

end is hollowed in about two feet in length and two or three inches in diameter. Traditionally this was done by a combination of burning, scraping with bamboo, and sanding with rough leaves. Since the intensification of outside contact in the 1960s, and the greater access to steel tools that has been one of its consequences, machetes and small knives are also used today to quicken this process. Once one end is successfully

hollowed, the same process begins at the other end. When completed, a ridge about one to two inches thick remains between the two hollowed sections. Again the drum is left to soak overnight.

On the third day the actual working on the drum is halted and a hunting party is convened to capture a *tibodai* bird. This may take several days. Once the bird is caught the feathers are plucked and placed inside the drum while the inside surfaces are further smoothed and widened. Then, in the most dramatic aspect of the process, the throat and tongue of the bird are placed on the bridge that separates the two hollowed areas. The bridge is then cut through from top to bottom while a magical saying of five words, *tibodai ean ko tagale toli*, is softly or silently recited by the maker. This invocation makes the 'mouth' and 'voice' like a *tibodai*. This *tibodai* magic is considered rather secret; Kaluli do not talk about it publicly, and although many Kaluli men know it, most insist that they do not, perhaps because they do not feel that they have acquired it properly. During my fieldwork in 1976-7 and again in 1982 this magic was revealed to me, as it had been to E.L. Schieffelin in 1967. At this time I was asked not to reveal these five words. But in 1984 Gigio confided that few Kaluli men knew the magic, that makers of the drums were not using it, and that it would cause no harm for me to reveal it. Before further discussing the significance of the *tibodai* throat and its verbal magic, this is what happens in the next few days.

First, the openings are shaped, the ends of the drum are scaled down to their final size, and work is oriented towards preparing the drum for its first sound test. A large anglehead lizard named *yobo* (*Gonocephalus* sp.) is hunted and skinned. While certain other lizards and snakes occasionally provide skins for drumheads, most Kaluli like the *yobo* best because it is not too thick and responds well to heat in tuning. The rim of the drum is prepared with a gluey latex from tree bark and the stretched skin is placed around the rim and tied down with cane. It is then dried in the sun or by a low fire; fresh ashes are often spread over the head to heat it evenly.

Next, four lumps of beeswax are placed on the head, centred, and shaped. They are designated *kol* but metaphorically referred to as *seida gasa kelen id*, 'bush dog ear shit.' When these are attached another saying is softly recited so that the head of the drum will assimilate the quality of a *seida gasa himu* or 'bush dog heart.' The beeswax bumps are thus empowered to throb and pulse like the heart of a bush dog on the chase. Sound tests then may take several hours. The *kol* are shaped and reshaped, heated and reheated; the head is 'fed' chewed ginger or cordyline leaf; players chew and then spit these substances into the open

end of the drum, thereby moistening the inner side of the skin while the outside is tightening from heat. Simultaneously the drum is played, listened to, and commented upon. If the sound 'hardens,' *halaido domel*, the final day will be devoted to carving the ridges at the mouth end, sanding and refining the inner and outer surfaces, and painting. If the sound does not 'harden,' then another skin will be sought and the testing process will begin again. If several skins are unsuccessful the drum shell will be discarded.

While the final visual decorative processes are important in the overall appearance of the drum, it is worth noting here that a drum can be washed and painted in a matter of two hours. In the construction process it is the determination of the proper sound that takes precedence over all visual dimensions of the instrument. The painting materials consist of *sowan*, a white ground clay; *bin*, an orange-red substance from the seed pods of *Bixa orellana*; and *tig* or *asyn*, black from tree resins (or, more recently, burnt rubber). Since it is the shiny, glistening quality of the paints that is most essential, particularly in their interaction with the colours and materials of the dance costume, it is important that the decoration be done within a day or two of the ceremonial performance.

Now back to the significance of *tibodai*. This bird is the crested Pirohui (*Pitohui cristatus*), commonly known as the Papuan bellbird (see Figure 3). The name derives from the way this shy little bird calls from tree perches with a continuous throbbing sound. Jared Diamond (1972: 293-4), a prominent observer of Papua New Guinea birds, writes: 'The song consists of a long series of identical notes which are initially all on the same pitch at equal time intervals. The pitch lies approximately an octave above middle C. One of the two remarkable features of the song is the length. One song which I timed and which seemed to be of average length lasted 175 seconds without interruption ... The other and more remarkable quality is the unusual throbbing ... Although the song is muted and not loud it carries for long distances of up to a half mile ...'

These qualities, equal pulsation at the same pitch, extraordinary length and consistency, throbbing quality, and resonant carrying power, are in fact the most desired acoustic properties of the drum. Breaking through the voice of the drum with the voice of the *tibodai* bird is a process that insures the drum its basic sonic character. Figure 4 illustrates the sound of this bird; notice how the throbbing pulses, four or five per second, have a parallel quality to the waveforms of the drum in their lack of discrete breaks between pulses.

But what is the significance of choosing a bird as the mediator of human instrumental sound? Kaluli classify birds both morphologically

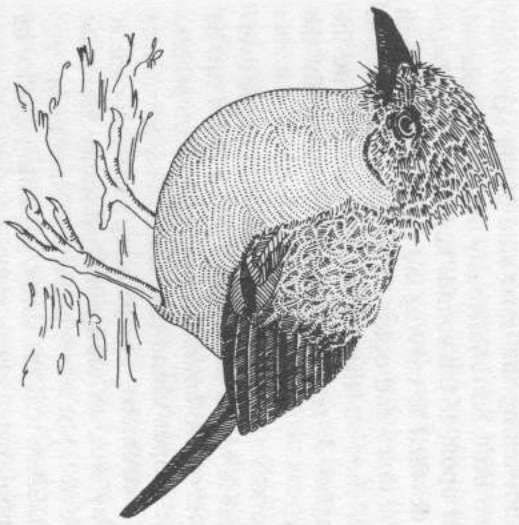


FIGURE 3
The *tibodai* – crested Pitohui (*Pitohui cristatus*) (after Brian Coates, *Birds of Papua New Guinea* [Port Moresby, PNG: Robert Brown and Associates] 1977)

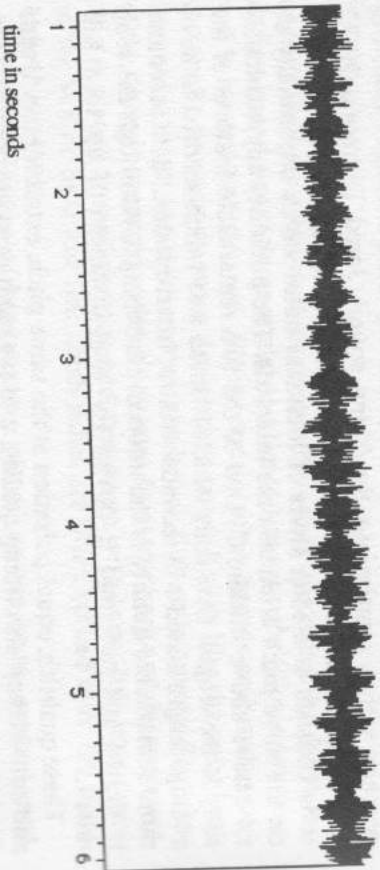


FIGURE 4
Song of the *tibodai*

(Based on similarities of beaks and feet) and by families of sound (Feld 1982: 44–85). The sound classification is more widely shared, and relates salient taxonomic categories to myths about the origin of sounds as well as congruent taboos and magical sayings. Additionally, in the tropical

forest sound is the principal means through which Kaluli recognize birds. They hunt by sound (mimicking the calls), relate to the cycle of daily and seasonal time by the cycle of bird calls and migrations, reckon space by acoustic indications of distance where one cannot see through the forest, and generally associate birds with the sounds they hear around them. In part, the reason for this is that birds are also *ane mama*, 'gone reflections,' spirits of the dead. Thus, categories of bird sound are also categories of spirit-human vocalization. There are seven sound groups: 'those who say their name,' *ene wi salan*; 'those who make a lot of noise,' *mada ganafodan*; 'those who only sound,' *imilisi ganalan*; 'those who speak the Bosavi language,' *Bosavi to salan*; 'those who whistle,' *holan*; 'those who weep,' *yelan*; 'those who sing,' *gisalo molan*. *Tibodai* is in two of these groups, those who say their names and those who whistle. The 'says its name' classification relates the name *tibodai* to the double pulse onomatopoeia in *tibo tibo tibo tibo*, a vocal representation of the throbbing sound. The 'whistle' classification is more significant. Birds with whistling voices are considered a special category of spirits whose sounds are often associated with the 'gone reflections' of dead children. Thus we have the notion that bird sounds are not only natural indicators of the Bosavi avifauna: they are equally considered communications from the dead to each other and to the living. As such, bird sounds and sound categories are powerful mediators: they link sonic patterns with social ethos and emotion. When Kaluli hear *tibodai* call they are apt to remark that it is the sound of a young child calling for its father.

Play and Performance

Drumming is generally performed for four or five hours as a late-afternoon prelude to an all-night, major ceremony. This type of performance is called *ilth kawo* (literally, 'cut drums'). One to five costumed dancers perform continuously. The usual number is four, typically organized in two groups of two, separated at either end of the longhouse, about sixty feet apart. They first play in place, bobbing up and down as they perform. Once the sound has 'hardened,' that is, has begun to pulsate strongly, the two groups may dance directly down the long corridor, with a skipping step, and switch positions at the *migi* and *sosa*, or 'front' and 'rear' entrance-ways to the house, then return to their own starting points.

If a drum sound becomes 'unhard' the player stops immediately and begins to rework the beeswax bumps. In this activity the actual performance of the drumming integrates the exercise of tuning. It is the continual reworking of the *kol* on the head and the 'feeding' of the ginger

or cordyline that is most important here. When queried about this 'feeding,' Kaluli often responded that like a child, whose language is 'unheard,' the drum must be fed so that its sound will 'harden.' As in the realms of maturation and language acquisition, *halalido*, 'hardness,' is a basic prerequisite of dramatic evocation.

In performance too, Kaluli cannot stand still when they tune or practice drumming. They bob up and down, sway to the side, and always remain in motion. Drumming must be a full bodily sensation, never just the slap of the wrist or palm onto the skin surface. The drum is usually held in the left hand; as the body moves up and down, the left hand pumps the drum so that it both angles down to the floor and meets the right hand which is swinging in a pendular movement. The right hand hits the *kol* squarely against the thick parts of the upper palm and lower portion of the third and fourth fingers. There is just the slightest flex of the wrist. When teaching me to drum and dance, Kaluli always stressed that I should feel the pulsing sensation in my upper arms and chest, not just in the lower hands and fingers.

This movement complex is related to both a conceptualization of dance and the nature of the costume worn for drumming. Like other expressive modalities (weeping, poetics, song), dance originates with a bird, *wokwete*, the giant cuckoo dove (*Reinwardtioena reinwardtsi*). Cuckoo doves nest in rock gorges near waterfalls, and their calls are a two-part *wok-wu*, heard above the sounds of water. In motion the bird bounces up and down in place, stable on the first syllable (*wok*), bouncing up and on the higher outward syllable (*wu*). Kaluli dancers must move up and down like *wokwete* in front of a waterfall. In the rear of their costumes are palm streamers that spring from the waist to the shoulders and then fall down to their ankles. In movement these streamers, called *fasetla*, make a *shhh* sound like a waterfall as the dancers move up and down creating their flow. The dancer's voice (or, in this case, drum) sounds above the continual *shhh* of the waterfall, like a *wokwete* in a rock gorge.

The drum costume contains another important feature, a crayfish claw rattle, designated *degegada*. *Dege* is the onomatopoeic sound of crisp rustling pulses of the shells; *gado* is the term for drooping cordyline leaves. This rattle consists of a piece of thick cane arching up and out of the dancer's waist bark belt, and bent around to suspend a cluster of fifteen to forty individual crayfish claw shells, loosely woven together into a packet with bark string. As the dancer bounces up and down the shell rattle pack makes a flapping motion, visible in the rear as an image rather like a continuously flicking wrist, and strongly audible overlapping each of the drum pulses.

Figure 5 illustrates the echo-pulsing of the rattle, less than two-tenths

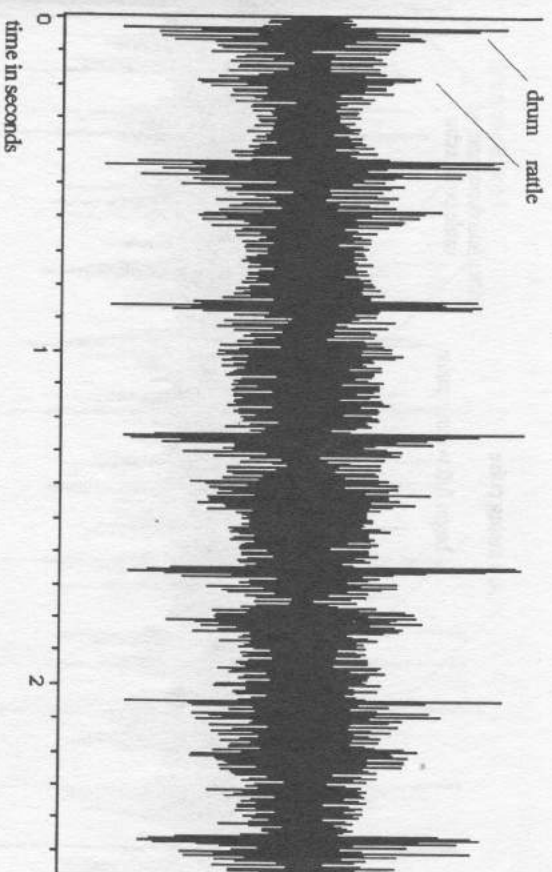


FIGURE 5
Single drum and crayfish clawrattle

of a second after each drum pulse. The acoustic sensation of the overlapping crisp high-frequency rattle and booming low-frequency drum is very dense indeed, and Kaluli point out that the double-pulsing is like that of the *tibodai* bird as well. They vocally render the interaction of the drum and rattle with the two syllables of the onomatopoeic bird call: *bo* for the strong drum pulse, *ti* for the sound of the rattles. Note here that there is a strong iconic relationship between the resounding character of the drum sound and the syllable with a plosive and mid-back vowel, and the high-frequency character of the rattle sound and the syllable with a dental and high-front vowel (for a complete analysis of the iconic symbolism of Kaluli sound words, see Feld 1982: 144-50).

Kaluli exhibit a marked preference for dense, overlapped, interlocked, alternating sounds, and term this kind of production *dulugu ganalan*, 'lift-up-over sounding.' This kind of sound is the natural and preferred pattern for all instrumental and vocal music; additionally Kaluli liken the densifying interaction of visual costume layers, colours, and materials to this natural sonic pattern, and also use this notion to describe the layering of natural sounds in their tropical rain-forest environment (for an extended analysis of 'lift-up-over sounding' as a cross-modal Kaluli style trope, see Feld 1988; also Feld 1986; examples of all varieties

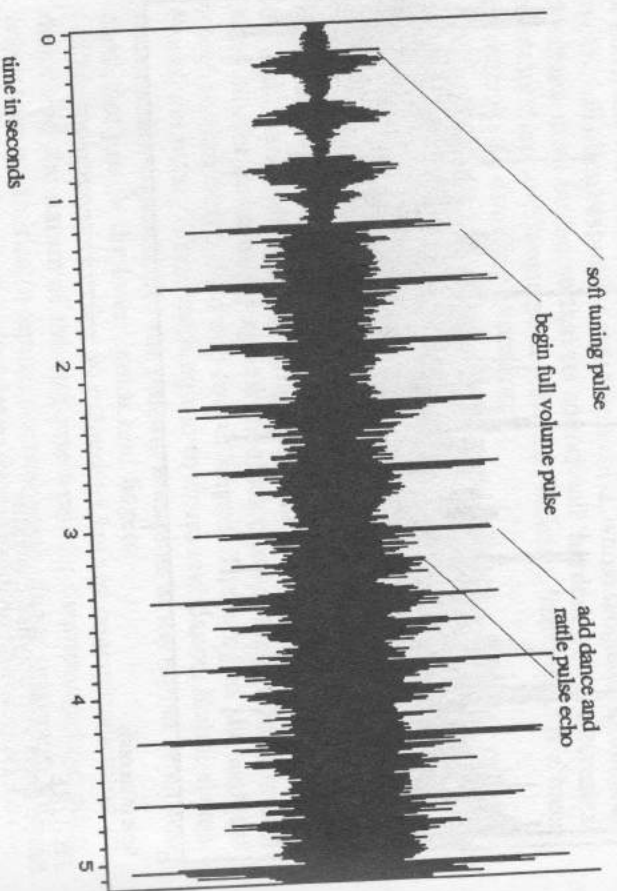


FIGURE 6
Sequence of tuning and dancing in place

of Kaluli soundmaking illustrating this pattern for vocal, instrumental, and natural sound can be found in Feld 1981, 1985).

Figure 6 illustrates the progression from tuning, to playing the drum alone at full volume, to the 'lift-up-over sounding' of the drum and rattle as the dancer then begins to bob up and down in place. In Figure 7 the density of the drumming is further intensified as a second performer begins. Notice that performers never attempt to synchronize in unison so that their drum pulses and rattle pulses coincide; just as rattles 'lift-up-over' the drum sound, so each performer must 'lift-up-over' the sound of all other performers. Not only does this create a sound that is texturally dense, with no moments of quiet, no breaks or 'cracks' in the ongoing stream of sound; it also creates the sense that the drummers are in synchrony or playing together precisely by being out of phase, that is, each at a different point from a hypothetical unison. Avoidance of unison sound is a basic premise of all Kaluli soundmaking, and the principle is illustrated quite powerfully when two, three, or four drummers perform *ilib kuw*?

These performance dimensions of motion, costume, and sound are

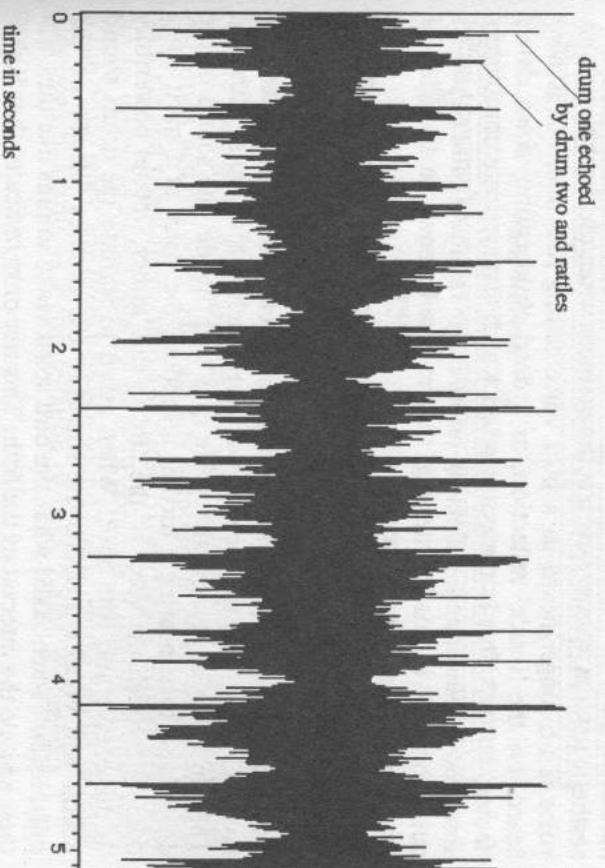


FIGURE 7
Two drums and crayfish clawrattles

not just features of an abstract aesthetic; they are meant to enhance the purpose of drumming by drawing the audience into a nostalgic, sentimental, and reflective mood by filling the house with an intense continuous sound. Like the ceremonial songs to be sung later in the evening and which are aimed at making audience members so sad that they are moved to tears, drumming, while technically a 'warmup' to an evening ceremony, occasionally provokes people in the same way. Indeed, audience members can become so overwhelmed by the experience of *ilib kuw* that they not only will be moved to tears, but will then thrust their way out onto the dance floor, sobbing loudly, and brandishing a resin torch, strike and burn the drum whose sound moved them so deeply. This parallels the burning of the dancers that takes place in response to songs that are similarly evocative (see E.L. Schieffelin 1976, 1979).

Kaluli say that this process of evocation is dependent upon the 'hardening' of the drum sound in performance. Once the drummers 'harden' the sound and begin a long stretch of continuous pulsation, Kaluli are apt to remark, *dagano halaladesge, kalu yelimel-ke!*, 'the voice having

hardened, people will really weep! 'Hardening' then is the locus of aesthetic tension. Concretely, it is the moment when the throbbing drum voice is no longer heard as a bird voice calling *tibo tibo*, but is now heard, on the 'inside' reflection, as a dead child calling *dowo dowo*, 'father, father.' This is the point when Kaluli listeners are completely absorbed by the sound, reflecting on its inner meaning rather than its outer form. It is this 'hardening' that moves listeners to thoughts of deceased children and to tears.

There is an acoustic reality to these sensations that takes us back to why it is essential to understand the actual physical patterns of drum sound. Figure 8 illustrates the overtone series of the drum. Recall the importance of the figure and ground shifts between the prominent octaves (C and c) and the second overtone which is their inner fifth (G). The sensation of hearing the voice of a bird 'inside' the sound of the drum, and then hearing a further reflection, the voice of a spirit child coming through the voice of the bird to call 'father,' relates powerfully to the octave and fifth shift. When asked to imitate the drum sound the Kaluli will vocally produce the sound of the octaves, usually on the syllable 'bo'; when asked what the bird spirit voice sounds like they will then whistle the interval of the fifth. This not only indicates that Kaluli are aware of the separation of the overtone series, but that they map this acoustic reality into their symbolic constructs, and further map their metalinguistic notions of outer and inner (or 'reflection') onto the spatial reality of acoustic form.

The metalinguistic prescription about 'hardening' in evocation also surrounds the process of talking about drumming. Drums must 'talk'; a wobbly or punctuated non-resounding drum is said to be *lowo mola*, 'not talking words'; it is *halaidoma*, 'unhard.' When it is 'talking,' *tolan*, it is saying *dowo*, 'father,' and the sound is 'hard' in both the linguistic and aesthetic senses of that metaphor. Similarly, aesthetic evaluation concentrates on the 'hardness' of the drum sound as it 'carries,' *ebelian*. This verb is usually used to describe water motion that is visually evident at one place but then flows out of sight. This carrying property extends to indicate continual auditory sensation and feeling beyond the production of a sound. Sound is 'hard' when it stays in your head and forces its presence on your feelings.

Like the construction of drum sound in its material and cultural senses, play and performance aim to crystallize a core set of Kaluli sensibilities about sound and persuasion. Substances are not only infused with meaning; an arena is created for those meanings to be actively performed and communally reconfirmed.

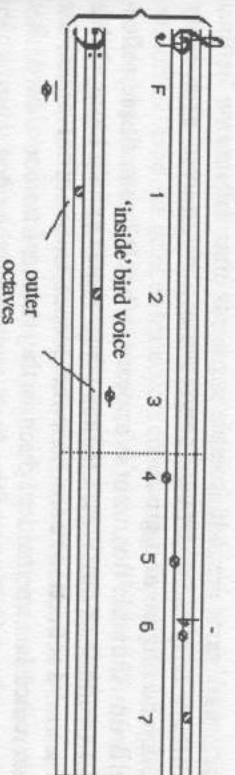


FIGURE 8
Drum overtone series

Adding the Metaphors

Claude Lévi-Strauss argues that one way to approach the complexities of human activity is to abstract key symbols from their experiential contexts and recast them onto a vertical, paradigmatic axis so that they can be observed like a cultural table of contents. Looking at the layers of the drum story, the links between sound and meaning can be initially addressed this way, as a constellation of basic Kaluli metaphors.

- 1 The drum is a body. The hard decorated outside covers the substantive living, resounding, inside. Sound must be formulated from head to voice before it can forcefully burst onto the scene.
- 2 The drum voice is a *tibodai* bird voice. The qualities of pulsing, throbbing, carrying, and continuous sound are those selected and arranged as meaningful. Starting from a punctual *bo ... bo ...* it swells into an intense *tibo tibo tibo tibo tibo*, with each sound, like the double-syllable name, overlapping the next.
- 3 The drum pulse is the heart of a bush dog. It pounds out the chase, intensifying until the catch is made.
- 4 The drum speaks like a child. Like Kaluli children, drums must be 'fed' prechewed food so that their language 'hardens' to a well-formed and grammatical pattern. Drum voices mature from the onomatopoeia of bird language to the 'hardness' of human words, ultimately saying *dowo dowo dowo dowo*, calling for 'father.'
- 5 The drum pulse must 'flow.' Like water, which can flow beyond perceptual immediacy but remain in a mental map, sound must 'stay with you' once it perceptually ends. Drum sound is forceful when it transcends the event and remains in your head, continuing to flow.
- 6 The drum pulse is not discrete. The sound carries in layers of canonic density, whether one drum or several are playing. There are no sound

persistent theme in these stories is Newelesu's desire to take a wife, and the ways he consistently loses control, invokes wrong or inappropriate strategies, and is left panting on the sidelines, envying his cross-cousin's slick moves.

Once, at a ceremony, Newelesu is taken by the beauty of Dosali in full costume, drumming *tib kuw* to a cheering and enthusiastic crowd in the longhouse. He realizes that a potential consequence of such powerful evocation is at the centre of his own desires: causing a woman to lose her heart to a man, leading to elopement and marriage. The possibility is thrilling, and he decides to perform at the next ceremony. But he is carried away; in his fervour he gets confused and ends up cutting down the wrong tree. Finding it too difficult to hunt a *tibodai* he simply snares a kingfisher from his garden and sacrifices its voice. Being too tired to get up early to catch an anglehead lizard he decides that any old snake will do. And so on, down to the very last aspect of his costume and the painting for the drum. The result, predictably, is disastrous: his drum sounds *donk donk donk donk*, the pulse does not 'harden,' no one is the least bit moved, and the performance is a sham. Once again, no control, no evocative power, no woman.

While this story reconfirms the importance Kaluli attach to detail and to the ability to turn substance into communicative form, it also states something deeper about life: understanding how to make, listen to, and feel the force of drum sound runs right to the core of knowing how to be Kaluli. Newelesu, like a character straight out of Samuel Beckett, is both profoundly funny and sad because his mistakes are so obvious and the action of making them so existentially salient. In the end, when we come through analysis to synthesis, it is clear that drumming is not superfluous action in which Kaluli need make no emotional investment. Rather it is purposive action, for which Kaluli are called upon to engage personally. To participate is to interpret drum sound by animating the most basic Kaluli aesthetic strategies: find the 'inside' of the 'layers,' observe the 'hardening,' and feel the 'flow.'

Aside from the specific means Kaluli utilize to interpret the message of drumming, it seems there are other implications here for the study of musical meaning. What drummers make and what listeners hear is acoustically and socially, outer and inner layers of structure. But meaning is more than pattern alone, more than a mirror image of structure. For Kaluli, meaning resides in the knowledge that a sound is always more than it appears to be; that pattern is a clue to finding the 'inside,' or the 'inner reflection.'

Meaning then, in a communicative sense, is dependent on interpretive

action, action which is the alignment of cultural knowledge and epistemology with the experience of sound. Meaning does not reside 'in the notes' because the way the notes are formed, listened to, and interpreted derives from prior social imposition. Hearers of Kaluli sound share a logic for ordering their experiences. That logic says: hear sound as mediated, hear mediation as a bird, hear bird sound as a spirit voice. In its most general form that logic claims: all things have an inside and the inside is a reflection from the spirit realm. Such a logic is called into play every time Kaluli listen to or produce musical sound. What is essential, then, is not that we have a motivated and somewhat iconic correspondence between the character of *tibodai* sound and the character of drum sound. Rather, it is that Kaluli have invented an interpretive logic for hearing that correspondence and deciding what it is about once it is acoustically perceived. Sounds actively communicate and embody deeply felt sentiments for Kaluli because their listeners know they must be prepared to find the 'inside,' and because they know that 'reflections' are socially real.

Note

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