MAN'S EARLY MUSICAL INSTRUMENTS
From Contemporary Recordings of Primitive People
MEMBRANOPHONES AND IDIOPHONES / CHORDOPHONES / ORCHESTRAL COMBINATIONS
EDITED BY CURT SACHS
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NEW HEBRIDES SLIT DRUM HEAD, COLLECTION THE MUSEUM OF PRIMITIVE ART, NEW YORK
INTRODUCTION BY CURT SACHS

The earliest men of whom we know were enthusiastic singers but had no need for instruments. In untold hundreds of millennia, music was purely vocal; only in the period that prehistorians call the Upper Palaeolithic did the history of musical instruments begin and reveal its double root.

Audible movement is one of these roots.

Here we face a complicated process of interaction: an urge to regularize the motion of our limbs' leaps to the singer's melody and with increased power an emphasis back to the body. Both become one; both will sound; both will move in rhythmical evenness. The limbs become a part of the music and form a percussive accompaniment in which the two elements support and inflame one another. Men begin to follow their singing with the metronomic beats of hands and feet: they slap their buttocks or chests or stamp the ground or clap the hands. (Examples of stamping from the Maori of New Zealand, of tap dancing from Spain, of clapping from the Bulu of the Cameroons, Bands 1-3.)

Men took the first step towards manufacturing musical instruments when they replaced their limbs by natural objects in order to achieve a stronger sound. Clapping hands gave way to agile tapping-sticks (example from Australia, Band 4), which sometimes were even tuned (example from the Philippines, Band 5). Indeed, on the level of the Bronze Age, they yielded to metal cymbals, which were harshly clashed together or softly tinkled rim against rim (example from India, Band 6). For stamping feet, the primitives used pounding bamboos (example from the Mato Grosso, Band 7), and instead of beaten abdomens we meet with beaten pots (example from India, Band 8).

Even in palaeolithic times, time was often marked by indirect percussion, by rattling or by scraping. Most rattles are made of gourds or similar fruits, with seeds or pebbles within, which answer the player's shaking motion with rustling noises (example from the Mato Grosso, Band 9). Scrapers, as a rule in the form of sticks or gourds, have notched surfaces, of which the player, in a rasping, scratching action, alternately hits the teeth and the notches (example from Mexico, Band 10).

The way to higher forms of percussion leads through the complex world of slit-drums and skin-drums. The slit-drum is a log of wood, carved and burned out through a lengthy slit, which leaves on either side a lip of different thickness and hence of different pitch when struck with one of two sticks. The log is laid on the ground with the slit on top (example from the Congo, Band 11). In this instance, the slit-drum, as frequently, is used for non-musical communication; the sequence of beats imitates the sequence and rhythm of syllables in ordinary speech, and the change of high and low according to which one of the lips is hit reproduces the natural inflection of words and sentences, so that even complicated messages can easily be sent and understood over long distances.

More frequent is the skin-covered drum proper, which exists all over the world in shapes and sizes incredibly varied. There are drums with one skin and drums with two. A few are big enough to be dug into the ground or suspended from a rafter in the assembly house; some are small enough to dangle from the player's little finger, as in the age-old European combination of tabor-and-pipe (example from Peru, Band 12). Drums are as a rule of wood, but also of bamboo or clay or metal. They can be straight or bulging, tapering, waisted, cup-shaped, or footed; and besides
these tubular forms, there are kettle-drums and shallow hoop or frame drums. The skins are glued, nailed, buttoned, necklaced, or braced; the players use bare hands with fingertips, knuckles, and palms, or sticks, or thongs. American Indians also use a water-filled drum (example from the Navajo, Band 13). Otherwise, a few examples will suffice. The frame drum is roughly made and stick-beaten in the service of healing shamans or medicine men (example from the Eskimo, Band 14), but carefully made and hand-beaten in the service of Middle Eastern women (example from Bukharan Jews, Band 15).

Drums (in all forms) come into their own in India and in Africa with its Central American dependences. The Afro-American picture is that of incredibly sophisticated cross rhythms skillfully performed by professional and semiprofessional groups of drummers (examples from the Yoruba and Haiti, Bands 16 and 17). In India, where drums accompany voices or instruments (example, Band 18), the drummers follow one of the traditional metrical patterns and often embroider it with subtle variations.

In nearby Burma, drums in decreasing sizes, at times as many as twenty of them, are tuned to form a complete drum chime and suspended in a circular trellis around the squatting player, who passes melodically from drum to drum as a pianist glides from key to key (example, Band 19).

Nearest in place and in concept is the gong chime of the Burmese in a similar trellis (example, Band 20). Unlike the Chinese 'tam-tams' of our orchestras, this kind of gong and that of the Indonesian gamelan orchestras have solid central bosses and thicker, wider brims (example from the Philippines, Band 21). Incidentally, the current confusion of gongs and bells is easily cleared up: a gong is struck in the center, while the brim is acoustically dead and serves for suspension only; the bell is beaten on the rim, while the center or apex is acoustically dead and allows for suspension. Ornamental bells in beehive form are kept in the shrines of Buddhist East Asia (example from Japan, Band 22). Inverted bells, with the apex on the ground and the rim on top like bowls, are used in India as tuned sets, similar to the Burmese gong and drum chimes, though placed on the floor, not in a circular trellis (example from India, Band 23). They are the predecessors of western carillons.

Closely related to these various chimes, in concept and function, are the xylophones or 'wood-sounders', which cover an enormous belt from the Pacific via Southeast Asia to Africa and from there to Central America. In their matured forms, they consist of thin and carefully tuned slabs in a parallel array, either on a cradle-shaped resonance box or else within a portable frame with individual gourd resonators, one to each slab (example from Equatorial Africa, Band 24). Typologically related is a unique but leading instrument of Bantu Africa: the sansa. It is a set of rattan or iron lamellas tightly strapped on a small board or resonance box; only their tips, bent slightly back, are free to be plucked with the two thumbs. The Africans, developing an astounding virtuosity on this easily portable instrument, vary ceaselessly some short theme in ever-new combinations and changes. (Example from the Congo, Band 25.)

Speaking of lamellas vibrating over a resonator leads us to the curious though universally distributed tiny instrument known as the jew's harp, a name which in the complete ab-
sence of any particular relation to Jews, stands perhaps for a jaw's harp (although it has nothing in common with the harp either): in its primitive, pre-European form it consists of a small and flattened sliver of bamboo from which a light lamella is cut. While one hand holds the sliver against the teeth and the other hand plucks the lamella, the hearer perceives the root tone of the latter and in addition the harmonics that the manifold resonance of an appropriately changing mouth position provides just as it provides the various vowels of our speech. (Example from the Philippines, Band 26)

The instruments discussed so far belong to two classes: the skin drums are membranophones or 'skin sounders;' all the other instruments, whether beaten, pounded, shaken, scraped, or plucked, are idiophones or 'self sounders,' that is, their substance is able to vibrate without the tension that a skin or a string must be given.

Wind instruments or aerophones derive from the second root in the growth of musical instruments: not rhythmical motion, but mere sound, mostly terrifying and of essential necessity in a good many magical rites in which the demons speak or must be driven away.

As far as this study is concerned, they consist of tubes whose inside air vibrates under the impact of a quickly and regularly interrupted wind from the player's mouth. The type of interrupting device is the characteristic trait of the various families.

Comparatively rare in non-western music is the trumpet, in which the player's lips, stretched to utter tension and elasticity, alternately obstruct the access of the wind and allow a short beam of breath to get through. In primitive societies they are crudely made of wood (example from Australia, Band 27). Wider, more conical trumpets are usually called horns (example from Equatorial Africa, Band 28).

Reed pipes are another family of wind instruments. The oboe, one of the sub-families, has, as the wind-interrupting mouthpiece, two tight-fitting blades of a flexible reed to serve as the lips (example from the Abruzzi, Italy, Band 29). The clarinet, another sub-family, has a single, 'beating' reed, which vibrates under the impact of the breath and, in doing so, alternately opens and shuts a rectangular side-hole near the closed upper end of the tube. There are single clarinets, with one tube (example from Greece, Band 30), and double clarinets, with two tightly connected tubes (example from the Kurds, Band 31).

A bagpipe is in fact a set of reed pipes, sometime oboes, sometime clarinets, sometimes mixed, all reaching into a leather bag, so that the reeds are concealed inside and vibrate under the pressure of the wind that the player controls with his mouth and his elbow. In its simplest form, the bagpipe has one pipe with fingerholes for the melody and another one, without fingerholes, for a sustained 'drone'; ripper forms have several drones in groundtone, fifth, and octave (example from Ireland, Band 32).

Of late, another reed instrument, the accordion, has imposed itself on styles as remote from European music as that of the South American Mestizos (example from the Mato Grosso, Band 33).

Flutes are the most widely spread family of wind instruments. In all their manifold forms, the wind-interrupting device is a hole with a sharpened edge. In a complicated physical process, the player's wind, blown obliquely across the edge, forms in quickest succession little eddies which interrupt its otherwise even flow. In a so-called vertical flute, the orifice itself has the interrupting edge (example from Yugoslavia, Band 34); transverse or cross flutes, where the upper end is plugged and replaced by a lateral hole farther down (example from Yugoslavia, Band 35); whistle flutes or recorders, endblown like the vertical flute, but with only a narrow flue leading the breath through the plugged upper end towards the edge of a lateral blow hole (example from the Flathead Indians, Band 36).

Almost a curiosity are the giant double-whistle flutes of the Mato Grosso, which reach a length of no less than seven feet (example from the Camayurá, Band 37). On the opposite pole we meet the tabor-and-pipe combination,
in which the left hand graps and fingers the flute and holds the dangling drum that the right hand strikes with a stick. This one-hand fingering is possible only because the flute has so narrow a bore that the fundamental tones cannot be obtained. Instead, the instrument overblows at once to the octave and needs fingerholes only to bridge the distance to the following harmonics a fifth above. Three such holes are sufficient. (Example from Provence, Band 38.)

We speak of panpipes (in Greek mythology assigned to the shepherd-god Pan) when a set of vertical flutes without fingerholes and therefore yielding only one note each, are tied together alongside in order to form a raft or a bundle to be shifted to and fro so that the tube momentarily needed is facing the mouth (example from Peru, Band 39). In a curious offshoot of the whole family, the nose flute, the nose, not the mouth, provides the wind, no doubt for magic reasons (example from the Temiar of Malaya, Band 40). Remarkable in this rare example is the staccato performance due to shorter breathing.

Stringed instruments or chordophones are the most recent class in the primitive world. They appear in four principal families: harps and zithers, lyres and lutes. The arbitrary, confusing use of these terms should at all events be discontinued.

In a harp, and only in a harp, the plane of the strings is at right angles, not parallel, to the soundboard; the strings run away from it, not, as on a violin, along it. One of the most archaic forms, almost extinct, is the 'ground harp'; a slender, flexible rod is planted in the ground and pulled way over by a string that connects its upper end with a piece of leather that covers a foot-wide pit as a resonator. One hand plucks the string, while the other hand presses or releases the rod in order to change the tension of the string and its pitch (example
Most harps derive from the so-called 'musical bow', a simple archer's bow with a resonator and a string to be beaten or plucked (example from Equatorial Africa, Band 42). An 'arched harp', with the narrow resonator and the long neck in one semicircular swing, is used in Burma as the last refuge of the once common Asiatic harp (example from Burma, Band 43). Mexicans avail themselves of a riper harp under the influence of European tradition (example from Mexico, Band 44).

Zither, as a classifying name, is given to any stringed instrument without a neck; the resonance body itself is used as a string holder. Most zithers are plucked, though beating and bowing occur. The classical (older) vina or stick zither of India (example, Band 45), has a round stick with two big gourds as additional resonators suspended near its two ends, one resting on the player's left shoulder, and the other under his right arm, while the stick is held obliquely across his chest. Four or five thin wire strings run along the stick over high and easily shiftable frets; and one or two delicately tinkling drones are stretched all over the length of the instrument without touching the frets. Southeast Asia, less advanced in the field of stringed instruments, uses as a ('tubular') zither a big bamboo, cut off from node to

GONGS OF THE HANUNÓO PEOPLE OF THE PHILIPPINES

XYLOPHONE USED BY THE MANDINGO PEOPLE OF LIBERIA
node and having for strings a number of narrow strips, sliced from the surface except for their ends, which are lifted and tuned by tiny bridges (example from the Philippines, Band 46). In Africa, zithers are often made in the form of shallow wooden bowls, with strings crossing the concave side from end to end (example from the Watutsi, Band 47). More elaborate is the Norwegian langleik, an actual shallow box with a flat back, low ribs, and a soundboard, plus violin-like pegs to stretch the steel strings, whose number varies between four and fourteen (example, Band 48).

Lyres have, instead of the neck, a yoke of two arms connected by a crosspiece from which the strings reach down to a stringholder on the box. Playing is usually done with a plektron or pick. The family, once of paramount importance in the eastern Mediterranean including ancient Greece and Rome as well as Palestine -- King David's famous kinnor was a lyre, not a harp -- is today restricted to a few parts of northern and northeastern Africa, especially to Ethiopia and the surrounding area (example from Ethiopia, Band 49).
The most diversiform subdivision of stringed instruments goes under the generic term lute and is defined as having a straight neck projecting along the central axis of a resonance body, like our violins, guitars, and mandolins. Although in the strictest sense a separation of bowed from plucked families is not possible (since often the same instrument is now bowed, now plucked), this easy if not always reliable classification may be applied in our short survey.

Speaking first of the essentially older group of plucked lutes, the most archaic 'long lute', with its small body and oversize neck, so well known from the excavations in Egypt and Mesopotamia, is in the Old World still alive. We find it in western Negro Africa and, in a more refined form, in parts of the Near and the Middle East (examples from Senegambia and Yugoslavia, Bands 50 and 51).

On its way to East Asia, the long lute, samisen in Japanese, assumed a strange form with three silken strings and both the front and the back of skin (example from Japan, Band 52) a trait that it shares with our banjo (example from Tennessee, Band 53). It might be welcome to compare these timbres with that of our current guitar (example from Spain, Band 54). The latter one is in the flamenco style played to an accompaniment of rapping knuckles on the soundboard, the so-called golpes or 'beats' (example from Spain, Band 55). A diminutive guitar is easily distinguished from those of ordinary size (example from the Philippines, Band 56).

Bowed instruments, or fiddles, apparently originated in Central Asia, are as a rule much less advanced than plucked lutes. There is the unwieldy, leather-covered gusla with only one
horsehair string, on which the Yugoslavian bards accompany their lengthy epics (example from Yugoslavia, Band 57); the sarinda of India and Pakistan, unique in its fantastic shape and with a tiny skin front which covers only the lower part of the interior (example from Pakistan, Band 58); the hu ch'in of China, whose neck penetrates sideways into the little bamboo body (example from China, Band 59); the Middle Eastern spike fiddle, (example from Ethiopia, Band 60). All these fiddles are held with the pegbox up and stopped without a fingerboard or frets. This is also true of the lira, which is still alive as a Balkanese and Turkish folk instrument in exactly the same pearshaped form with the three strings that it had during its first wanderings across the European continent around 1000 A.D. as the ancestor of the modern violin (example from Turkey, Band 61). Inversely, the modern violin was transformed in Norway to serve as a folk instrument: the Hardangerfele or 'fiddle from Hardanger (Fiord)'. It is red-lacquered and has four wire strings as well as a few non-bowed resonance strings like those of the viola d'amore (example from Norway, Band 62).

One bowed instrument stands quite apart: the hurdy-gurdy, which had a respected position in the Middle Ages and has survived as a lowly folk instrument in parts of France and Russia and elsewhere. It has a deep body in the outline of a lute or a guitar, but no neck proper; and the bowing is done by an upright, well resined wheel which is kept turning by a crank at the lower end of the body. The other hand manipulates an action of wooden tangents to stop the strings at the desired spots (example from Berry, France, Band 63). Here, one hears clearly that the instrument has a few empty, unstopped strings which, like the drones of a bagpipe, are ceaselessly sustained.

Orchestral combinations of these instruments occur in Asia and Europe. From East to West they change their sonorities. In Indonesia, the orchestra or gamelan consists as a rule of bronze chimes - gongs and slabs - and presents a dreamy, often sparkling filigree of arabesques (example from Bali, Band 64). Burma and Thailand have orchestras high and light, more manifold in their composition and more in a virtuoso-like concerto style (examples from Burma and Thailand, Bands 65 and 66).

In Europe, we find a fascinating contrast between the fiddle-led, thick-set harmonies of a Rumanian folk orchestra (example from Romania, Band 67) and the cobra, which with its fascinating brass instrumentation leads on the Catalan market squares the marvels of a folk-danced sardana (example from Spain, Band 68).
DISCOGRAPHY

Musical examples cited in the text above were selected from records of the Ethnic Folkways Library. Following is a cross reference to the sources. Numbers correspond to band numbers on record labels in this album.

1. P 433, Maori Songs of New Zealand, recorded by New Zealand Broadcasting Service and the Maori Affairs Department.


3. P 451, Bulu Songs from the Cameroons, recorded by Edwin Cozzens.

4. P 439, Tribal Music of Australia, recorded by A. P. Elkin.

5. P 456, Hanunóo Music from the Philippines, recorded by Harold C. Conklin.

6. P 431, Religious Music of India, recorded under the direction of Alain Danielou.

7. P 446, Music from Mato Grosso, recorded by Edward M. Weyer, Jr.


10. P 413, Indian Music of Mexico, recorded by Henrietta Yurchenco.


25. P 427, Folk Music of the Western Congo, recorded by Leo Verwilghen.


31. P 469, Kurdish Folk Songs and Dances, recorded by Ralph S. Solecki.


33. P 446, Music of Mato Grosso, recorded by Edward M. Weyer, Jr.

34. P 434, Folk Music of Yugoslavia, recorded by Laura Boulton.

35. P 434, Folk Music of Yugoslavia, recorded by Laura Boulton.

36. P 445, Songs and Dances of the Flathead Indians, recorded by Alan and Barbara Merriam.

37. P 446, Music of Mato Grosso, recorded by Edward M. Weyer.


40. P 460, Temiar Dream Songs from Malaya, recorded by the Malaya Broadcasting System.

41. P 407, Drums of Haiti, recorded by Harold Courlander.

42. P 402, Music of Equatorial Africa, recorded by André Didier.
44.P 413, Indian Music of Mexico, recorded by Henrietta Yurchenco.

45.P 431, Religious Music of India, recorded under the direction of Alain Danielou.

46.P 466, Hanunóo Music from the Philippines, recorded by Harold C. Conklin.

47.P 428, Songs of the Watutsi, recorded by Leo Verwilghen.


49.P 405, Folk Music of Ethiopia, recorded by Harold Courlander.


51.P 434, Folk Music of Yugoslavia, recorded by Laura Boulton.

52.P 429, Folk Music of Japan, recorded by Edward Norbeck.


55.P 411, Folk Music of Spain.

56.P 466, Hanunóo Music from the Philippines, recorded by Harold C. Conklin.

57.P 434, Folk Music of Yugoslavia, recorded by Laura Boulton.

58.P 425, Folk Music of Pakistan, recorded by the Government of Pakistan.


60.P 405, Folk Music of Ethiopia, recorded by Harold Courlander.

61.P 404, Folk and Traditional Music of Turkey.


64.P 504, Music of the World's Peoples, edited by Henry Cowell.


66.P 423, Music of Southeast Asia.

67.P 419, Folk Music of Rumania, recorded under the direction of Bela Bartok.

68.P 411, Folk Music of Spain.

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