

# Instruments and Ensembles ~ Bibliographic Study

## Introduction

Alan Lomax's study of instruments and ensembles, undertaken in collaboration with ethnomusicologist Theodore C. Grame and ethnologist Barbara Ayres, grew out of the more well-known Cantometrics project that Lomax developed during the 1950s and '60s. As part of the larger cross-cultural song style analysis carried out in Cantometrics, Lomax and his staff had considered the social and musical organization, rhythmic scheme, and tonal and rhythmic blend of instrumental accompaniment, as well as relationships between the instrumental and vocal parts and within the orchestra or ensemble itself. Later on in the development of Cantometrics, Lomax and Victor Grauer created a separate, supplementary coding sheet that provided for basic information about the size and composition of the performing group (Personnel & Orchestra<sup>1</sup>). The patterns that emerged from factor analysis of the Cantometrics and Personnel & Orchestra datasets produced a preliminary classification of instruments and ensembles that was consistent with the geographical patterns of singing style, dance style, and speech style found in Lomax's other research.

As with the other factors measured in Cantometrics, and in the companion studies of Choreometrics and Parlametrics, the geographical patterns of instrumentation and orchestration provided the grounds for comparison and correlation with other sociocultural conditions-- political organization, subsistence activities, gender roles, etc. These patterns

---

<sup>1</sup> For more information and detailed instructions on the Personnel & Orchestra component of Cantometrics, see *Songs of Earth* (Wood 2019).

essentially formed a world “map” of instrument and ensemble typology, as well as the basis for a taxonomy of the development of instruments and ensembles over time.

In the early 1960s, in response to these findings, Lomax and his staff developed a separate study dedicated to instruments and ensembles, focusing on cultural context and structural typology rather than performance style as had been done in Cantometrics. In accordance with this slightly different focus, the data used in the study was primarily written and visual information, rather than sound recordings. Unlike many of the other studies of the expressive style research project, the instrument and ensemble sample was sourced from a carefully selected bibliography of instruments and “accounts of musical life,”<sup>2</sup> rather than from field recordings collected by Lomax and others.

In the manuscript for a “Handbook of World Orchestras and Instruments,” (a chapter in a planned *World Song Style Handbook*, which was never published<sup>3</sup>), Lomax summarizes the findings of the bibliographic instrument and orchestration study:

We found that our bibliographic study matched and confirmed what we had found in our separate study of instruments occurring on field recordings. We also learned how the symbolism of instruments varies across culture and how the function of instruments varies in other ways. More information was gained about the relationship of sex to participation in orchestras. From all these findings, it is now possible to develop for the first time a theory of the relationship of orchestras to culture and social structure.

---

<sup>2</sup> The bibliography for the original instruments and ensembles sample is included in Appendix IV of this guide.

<sup>3</sup> The *World Song Style Handbook* is an unpublished manuscript summarizing the findings of Cantometrics and other studies under the umbrella of Lomax’s expressive style research project, such as Parlometrics and the instruments & ensembles study. Some of its contents were published by Lomax in *Folk Song Style and Culture* (1968), and others recast as necessary, with updates, in this publication and others, including the forthcoming *Songs of Earth*.

Specific correlations resulting from the study that Lomax found particularly significant include the correlation between the number of different instrument types in an orchestra and the “depth of the system of stratification” in the given culture, as well as the presence of a female orchestra leader with the gender roles in a culture. Barbara Ayres was principally responsible for finding these correlations between orchestration and social structure. See the Findings chapter of this guide for a detailed list of the correlations found in the instruments and ensembles study.

Research for the instrument study ended in the 1970s, and by 1977 the project had produced a classification scheme of ensemble and instrument types. New possibilities for orchestration were incorporated in the 1984 “Urban Strain” study of American popular music. Data and metadata from the instrument study will be published on the forthcoming Global Jukebox website; looking towards the future, we hope to be able to present audiovisual materials and/or renderings of the instruments alongside the data.

### A Note on Terminology

Lomax used the term “orchestra” to refer to the instrumentalists in a performing group-- as distinguished from vocalists, dancers, etc. Though the word may conjure up particular cultural images to Western ears, it is being used here in the broadest sense possible. Every type of non-vocal accompaniment, from two sticks or clapping to a symphony orchestra, can be described using the coding sheet for ensembles. The term “ensemble” is used to differentiate from a single instrumentalist. “Performing group” can be used to describe a mixed group of instrumentalists, vocalists, and other performers.

### A Note on the Sachs-Hornbostel Instrument Classification System

The classification of instrument types in Lomax's instrument study drew heavily from the system established by Erich Moritz von Hornbostel and Curt Sachs in 1914, and published in English in 1961. The Sachs-Hornbostel system of instrument classification categorizes instruments by their mechanism of sound production--specifically, "the nature of the vibrating body"--and places the world's instruments into the following groups:

- I.    **Idiophones.** The substance of the instrument itself, owing to its solidity and elasticity, yields the sounds, without requiring stretched membranes or strings. *Ex. Bells, rattles, percussion sticks, xylophones.*
- II.   **Membranophones.** The sound is excited by tightly-stretched membranes. *Ex. drums.*
- III.   **Chordophones.** One or more strings are stretched between fixed points. *Ex. lutes, zithers, harps, all other string instruments.*
- IV.   **Aerophones.** The air itself is the vibrator in the primary sense. *Ex. flutes, trumpets, reeds, etc.*

Sachs and Hornbostel break down these categories into much more specific subgroups in order to classify the wide breadth of world instruments that they considered in their system. Lomax's individual instruments coding sheet asks the researcher to provide the full Sachs-Hornbostel number of the instrument in question, which requires some familiarity with the classification. The complete Sachs-Hornbostel classification scheme is included in Appendix III. For a more detailed explanation of the Sachs-Hornbostel classification, and the numbering system they used, see *Classification of Musical Instruments* (Hornbostel & Sachs 1961).

## References

- Hornbostel, E. M. V., & Sachs, C. (1961). Classification of Musical Instruments: Translated from the Original German by Anthony Baines and Klaus P. Wachsmann. *The Galpin Society Journal*, 14, 3. doi: 10.2307/842168
- Lomax, A. (1960-79) *Alan Lomax Collection, Manuscripts, Performance style, writings, unpublished, World Song Style Handbook: A Summary of Cantometrics, (includes section on Parlametrics), (late 1960s, early 1970s?) Manuscript*. [Manuscript/Mixed Material] Retrieved from the Library of Congress, <https://www.loc.gov/item/afc2004004.ms390354/>.
- Lomax, A. (1968). *Folk song style and culture*. E.E. Erickson (Ed.). New Brunswick, NJ: Transaction Books.

## The Bibliographic Instruments and Ensembles Study Coding Sheets

Two separate types of coding sheets comprise the instruments and ensembles dataset. The first is for coding individual instruments, and the second is for coding ensembles.

### Coding Sheet for Individual Instruments

<b>Special Info (Lines 1-2)</b>
---------------------------------

#### Line 1. INSTRUMENT SETS, CHORDOPHONES, AND AEROPHONES

Specify on this line any of the following special information about the instrument being coded.

Instruments that come in sets, like metallophones or xylophones for example, are coded as a single instrument. If you are coding an instrument set of this type, specify the size of the set and whether the instrument is tuned or untuned. If you are coding a plucked, struck, or bowed chordophone, specify the method of string activation on this line. If you are coding an aerophone, specify whether it is vertical (air is blown down into the mouthpiece or opening of the tube, as in a recorder) or transverse (air is blown horizontally across the mouthpiece or opening, as in a Western concert flute).

#### 0. Not applicable or unknown

1. A small, untuned set (2-3 instruments)
2. A medium, untuned set (4-5 instruments)
3. A large, untuned set (6 plus instruments)
4. A small, tuned set
5. A medium, tuned set
6. A large, tuned set

- 7. Plucked chordophone**
- 8. Struck chordophone**
- 9. Bowed chordophone**
- 10. Vertical aerophone**
- 11. Transverse aerophone**

#### Line 2. MEMBRANOPHONES & IDIOPHONES

If you are coding a membranophone or idiophone, specify here the method by which the membrane or instrument is activated.

- 0. Not applicable or unknown**
  - 1. Played with both hands**
  - 2. Played with one hand**
  - 3. Played with one plain stick**
  - 4. Played with two plain sticks**
  - 5. Played with one padded stick**
  - 6. Played with two padded sticks**
  - 7. Played with a thong**
  - 8. Played with a bundle of twigs or metal brushes**
  - 9. Any other**

#### Line 3. LENGTH

Code for the length of the largest dimension of the instrument.

**0. Unknown**

- 1. 6 inches or less**
- 2. Over 6 inches - 1 foot**
- 3. Over 1 foot - 1 ½ feet**
- 4. Over 1 ½ feet - 2 feet**
- 5. Over 2 feet - 2 ½ feet**
- 6. Over 2 ½ feet - 3 feet**
- 7. Over 3 feet - 4 feet**
- 8. Over 4 feet - 6 feet**
- 9. More than 6 feet**

**Line 4. GENDER OF THE PERFORMER**

Code the situation that typically applies in the culture in which the instrument is played (the culture named at the top of the coding sheet). If, for example, you think that the instrument is always played by men, but you are not sure, code **3 (Usually played by men)**.

**0. Unknown**

- 1. Taboo for women**
- 2. Always played by men**
- 3. Usually played by men**
- 4. Played by either men or women**
- 5. Usually played by women**
- 6. Always played by women**
- 7. Taboo for men**



- 8. Usually played by children (male and female)**
- 9. Usually played by boys**
- 10. Usually played by girls**

**Line 5. IMPORTANCE OF THE INSTRUMENT IN THE CULTURE**

Code a judgment of the relative importance of the instrument in the culture that it belongs to.

- 0. Unknown**
- 1. Common**
- 2. Fairly common**
- 3. Rare**
- 4. Rare but important**

**Line 6. TIME DEPTH**

Code the category that best describes the time of the instrument's origin in the particular culture named. If the instrument is part of an archaeological collection, code **5, 6, 7, 8, or 9**.

- 0. Unknown**
- 1. Traditional in the culture, little or nothing known about the date**
- 2. Traditional but known to be archaic**
- 3. Recently acquired but rare**
- 4. Recently acquired and widely used**
- 5. Archaeological: very recent to 1000 AD**
- 6. Archaeological: 1000 AD to 1 AD**

**7. Archaeological: 1 AD to 1000 BC**

**8. Archaeological: 1000 BC to 3000 BC**

**9. Archaeological: prior to 3000 BC**

<b>Function (Lines 7-10)</b>
------------------------------

An instrument may be used for several functions. After coding the number of functions the instrument has in the culture, code for the specific functions in order of judged importance. If a single functional context of an instrument has several aspects, code all these functions in order of importance. For example, a dance that is essentially a curing rite is coded **2 (Curing)** on Line 8 (Most Important Function) and **10 (Dance)** on Line 9 (Second Most Important Function), and coded **2 (2 Functions)** on Line 7 (Number of Functions) .

**Line 7. NUMBER OF FUNCTIONS**

Code for the number of functions the instrument has in the culture.

**0. Unknown**

**1. 1 function**

**2. 2 functions**

**3. 3 functions**

**4. More than 3 functions**

**Line 8. MOST IMPORTANT FUNCTION**

**0. Unknown**

1. **Ritual.** Magic or religion, but not 2 (Curing), 3 (Rites of Passage), 4 (Courtship), 5 (Marriage), 6 (Funerary), 9 (War), 12 (Calendrical), 13 (Dramatic), or 17 (Rain-making).
2. **Curing**
3. **Rites of passage** (to adolescence only)
4. **Courtship**
5. **Marriage.** Includes betrothal, gift exchange, divorce, etc.
6. **Funerary**
7. **Work**
8. **Signalling** (other than war)
9. **War.** Includes preparation for war, marching, etc.
10. **Dance**
11. **Merrymaking**
12. **Calendrical merrymaking**
13. **Dramatic**
14. **Royalty**
15. **Self entertainment**
16. **Passive listening.** Includes concerts, contemplation, occupational, meditation, entertainment, etc., not specifically listed above.
17. **Rain-making**
18. **Food-gathering**
19. **Beggars' instruments**
20. **Merchants, pedlars**
21. **Toy**
22. **Bardic accompaniment**

#### Line 9. SECOND MOST IMPORTANT FUNCTION

See categories for Line 8.

#### Line 10. THIRD MOST IMPORTANT FUNCTION

See categories for Line 8.

#### Line 11. SYMBOLISM

Code for the symbolic meaning of the instrument as explicitly understood by members of the culture. Note the specific symbolic association in the comments section at the top of the coding sheet.

##### **0. Unknown/no info**

##### **1. Animal**

##### **2. Totem animal**

##### **3. The voice of the dead**

##### **4. Any other supernatural manifestation** (spirits, gods, etc.)

##### **5. Male**

##### **6. Female**

##### **7. Hermaphroditic.** Both sexes represented on same instrument.

##### **8. Sexual.** Known to symbolize the phallus, vagina, etc.

##### **9. Instrument has no known symbolic meaning**

#### Line 12. TYPICAL BODY POSITION

Code here the principal body stance of the player. If several are known to be common, code **9 (General)**. If one is more common than others, code this one. If two related body stances are about equally frequent, code the one judged to be most typical. Code **6 (Sitting)** if the player is sitting on the ground, on a mat, or on a very low bench. Code **7 (Sitting in a chair)** if the player is sitting at or about chair height on a bench, box, chair, or other support. If other positions are found, such as riding, etc., code **0 (Unknown)**.

**0. Unknown**

**1. Standing**

**2. Dancing**

**3. Leaning**

**4. Kneeling**

**5. Squatting**

**6. Sitting**

**7. Sitting in a chair**

**8. Lying down**

**9. General**

**Line 13. SUPPORT OF INSTRUMENT**

Code for the mechanism that supports the instrument while it is being played.

**0. Unknown**

**1. Suspended from a frame, etc., or held by anyone but the performer.**

2. **Hung from the body of the performer.** Does not apply when coder can state a specific part of the body; e.g. code knee rattles as **13 (Held on knee).**
3. **Held on the performer's head**
4. **Held by the performer's mouth.** Code mouth bows here, so it can be seen that the oral cavity is a resonator. Code jew's harps here.
5. **Held on the performer's neck, under chin, etc.**
6. **Held in the hands**
7. **Held on the shoulder, or mainly by the arms**
8. **Held on the chest**
9. **Held on the belly**
10. **Held against the pelvis**
11. **Held in the lap**
12. **Held on the thigh**
13. **Held on the knee**
14. **Held on the leg or foot**
15. **Resting on the ground**
16. **Resting on a stand**
17. **Other**

#### Line 14. LEVEL OF RESONATOR

Code for the level or height of the instrument's resonator in relation to the body of the performer. In aerophones, the "resonator" is the principal orifice of the instrument; in membranophones and idiophones, it is the center of the beaten surface of the instrument; in chordophones, it is the belly or main body of the instrument.

**0. Unknown**

**1. Above head**

**2. Head and neck**

**3. Shoulder**

**4. Chest**

**5. Belly**

**6. Hips**

**7. Pelvis**

**8. Thigh**

**9. Leg**

**10. Foot and ankle**

**11. Underfoot**

**12. General**

## Coding Sheet for Ensembles

### Line 1. TIME DEPTH

Code the category that best describes the time of the ensemble's origin in the particular culture named. If the instruments are part of an archaeological collection, code **5, 6, 7, 8, or 9**.

#### **0. Unknown**

- 1. Traditional in the culture, little or nothing known about the date**
- 2. Traditional but known to be archaic**
- 3. Recently acquired but rare**
- 4. Recently acquired and widely used**
- 5. Archaeological: very recent to 1000 AD**
- 6. Archaeological: 1000 AD to 1 AD**
- 7. Archaeological: 1 AD to 1000 BC**
- 8. Archaeological: 1000 BC to 3000 BC**
- 9. Archaeological: prior to 3000 BC**

### Line 2. IMPORTANCE OF THE ENSEMBLE IN THE CULTURE

Code a judgment of the relative importance of the ensemble in the culture that it belongs to.

#### **0. Unknown**

- 1. Common**
- 2. Fairly common**
- 3. Rare**
- 4. Rare but important**



Line 3. GENDER COMPOSITION OF THE ENSEMBLE

Code the situation that typically applies in the culture that the ensemble belongs to.

**0. Unknown**

**1. All male**

**2. Largely male**

**3. About half and half**

**4. Largely female**

**5. All female**

**6. All children**

**7. Any combination of the sexes is typical and equally acceptable**

Line 4. FEMALE LEADERSHIP

Code depending on how typical it is for the ensemble to be led by a woman. If the ensemble is only one instrument, code **0 (Unknown)**.

**0. Unknown**

**1. Always led by a female**

**2. Usually led by a female**

**3. Sometimes led by a female**

**4. Rarely led by a female**

**5. Never led by a female**

### **Function (Lines 5-8)**

An ensemble may have several functions. After coding the number of functions the ensemble has in the culture, code for the specific functions in order of judged importance. If a single functional context of an ensemble has several aspects, code all these functions in order of importance. For example, a dance that is essentially a curing rite is coded **2 (Curing)** on Line 6 (Most Important Function) and **10 (Dance)** on Line 7 (Second Most Important Function), and coded **2 (2 Functions)** on Line 5 (Number of Functions) .

#### **Line 5. NUMBER OF FUNCTIONS**

Code for the number of functions the ensemble has in the culture.

##### **0. Unknown**

- 1. 1 function**
- 2. 2 functions**
- 3. 3 functions**
- 4. More than 3 functions**

#### **Line 6. MOST IMPORTANT FUNCTION**

##### **0. Unknown**

- 1. Ritual.** Magic or religion, but not **2 (Curing)**, **3 (Rites of Passage)**, **4 (Courtship)**, **5 (Marriage)**, **6 (Funerary)**, **9 (War)**, **12 (Calendrical)**, **13 (Dramatic)**, or **17 (Rain-making)**.
- 2. Curing**

3. **Rites of passage** (to adolescence only)
4. **Courtship**
5. **Marriage.** Includes betrothal, gift exchange, divorce, etc.
6. **Funerary**
7. **Work**
8. **Signalling** (other than war)
9. **War.** Includes preparation for war, marching, etc.
10. **Dance**
11. **Merrymaking**
12. **Calendrical merrymaking**
13. **Dramatic**
14. **Royalty**
15. **Self entertainment**
16. **Passive listening.** Includes concerts, contemplation, occupational, meditation, entertainment, etc., not specifically listed above.
17. **Rain-making**
18. **Food-gathering**
19. **Beggars' instruments**
20. **Merchants, pedlars**
21. **Toy**
22. **Bardic accompaniment**

Line 7. SECOND MOST IMPORTANT FUNCTION

See categories for Line 6.

Line 8. THIRD MOST IMPORTANT FUNCTION

See categories for Line 6.

**Voices (Lines 9-10)**

These lines deal with the situation and relationship of the ensemble accompanying vocalists.

Line 9. PRESENCE OF VOICES

Code depending on how often the ensemble accompanies vocalists.

**0. Unknown**

- 1. Always accompanies voices**
- 2. Usually accompanies voices**
- 3. Sometimes accompanies voices**
- 4. Never accompanies voices**

Line 10. ACCOMPANYING RELATIONSHIP OF THE ENSEMBLE

Code for the typical relationship between the ensemble and the vocalists that it accompanies.

**0. Ensemble never accompanies voices**

- 1. No information on number of voices accompanied**
- 2. Usually accompanies solo voice**
- 3. Usually accompanies duets**

- 4. Usually accompanies choruses of 3-5**
- 5. Usually accompanies choruses of 6 or more**
- 6. Can accompany any combination of the above equally often**

**Line 11. NUMBER OF INSTRUMENTS**

Code for the exact or approximate number of individual instruments in the ensemble. Each instrument is counted separately, even instruments of the same type (e.g. every violin in an orchestra is counted separately). If the number of instruments is entirely unknown, enter **0**.

**0. Unknown**

- 1. 1 instrument**
- 2. 2 instruments**
- 3. 3 instruments**
- 4. 4 instruments**
- 5. 5 instruments**
- 6. 6 instruments**
- 7. 7 instruments**
- 8. 8 instruments**
- 9. 9 instruments**
- 10. 10 instruments**
- 11. 11 instruments**
- 12. 12 instruments**
- 13. 13-20 instruments**
- 14. 21-30 instruments**

**15. 31-40 instruments**

**16. 41- 50 instruments**

**17. 51-60 instruments**

**18. 61-70 instruments**

**19. 71-80 instruments**

**20. 81-90 instruments**

**21. 91-98 instruments**

**22. 99 plus instruments**

**Line 12. TOTAL NUMBER OF INSTRUMENT TYPES**

Code for the number of instrument *types* in the ensemble, using the same categories as Line 11.

All individual instruments of the same type are counted as one. If the number of instrument types is entirely unknown, enter **0**. It may be helpful to skip this line and fill out the bottom portion of the coding sheet listing each instrument by name first. Then, make a sum of the items on that list and code for that number on Line 12.

**Bottom section of the coding sheet. INSTRUMENT NAMES, ID NUMBERS, AND  
QUANTITIES**

In this portion of the coding sheet, write out **i) the name of each instrument type in the ensemble, ii) each instrument's corresponding coding ID from the individual instruments coding sheet** (assuming that it has been coded as an individual instrument-- if not leave blank), and **iii) the quantity of that instrument** that are present in the ensemble. Continue until you have listed all of the instruments.

## Findings

### Cluster Profiles

A geographical factor analysis, comparing the instrumental rosters of 57 areas, produced a highly coherent picture of regional instrumental traditions. The ten regions of instrument types are, with one or two qualifications, geographically homogeneous and continuous. This regional taxonomy mirrors the historical distributions of culture, known to anthropology, and it closely matches the taxonomies created by other data on expressive behavior.

#### **Factor 1. Gatherers and Others**

By linking African Gatherers to California Gatherers and the tribal peoples of the Indian subcontinent, this factor suggests the early intercontinental spread of African Gatherer performance tradition, which has emerged again and again in this study.

The African Gatherer roster includes all the basic instrument types (except for drums) in their most primordial forms--untuned and tuned idiophones (clapping and the mbira); winds (a long straight horn and whistle flutes); strings (the musical bow and the pleuriarch, a primitive lyre). The drum, a heavier and bulkier object, is not a favorite instrument among these nomadic gatherers. Anthropologist Colin Turnbull writes that the Mbuti, an African Gatherer people, commonly play drums when they visit their Bantu neighbors, but infrequently in their forest home. The Jul'hoansi (another African Gatherer group) are not drummers, nor are the Australians, the Andamanese, or the California Indians.

In fact the California Indian roster is amazingly similar to that of the African Gatherers, and in the Tribal Indian case we find a similar assemblage-- of simple chordophones, aerophones, and idiophones, although with drums present as well. Village Indian instrumentation is, of course, close akin to that of Tribal India since these two traditions are in fact so closely intertwined. Though more filled out, its roster contains the musical bow, along with more sophisticated chordophones and drums. Village India also forms a subcluster with Upper Nile, as it does in respect to dance and song style, and this strong affiliation possibly explains the presence of Upper Nile in this factor.

#### **Factor 2. Sibero-Amerindian**

Factor 2 links all the culture areas of North America to Siberia, their region of origin, tying both to South America. The hunter expressive tradition, in which the frame drum, the rattle, and the flute are the principal instruments, characterize this familiar culture horizon.

#### **Factor 3. Middle America**

Factor 3 clusters together the instrumental rosters of the cultures of Mexico and Central Mexico, linking this set to Factor 4 (South American States).

#### **Factor 4. South American States**



Factor 4 includes the areas of the Caribbean and Andean kingdoms, with their enlarged roster of musical instruments, including polyphonic orchestras of horns and panpipes, panpipes and strings, and drums.

#### **Factor 5. Early Oceanic**

Factor 5 weakly links together the two areal traditions whose combination gave rise to the more recent Polynesian mix--the very African patterns of Melanesia and the proto-Malay cultures of Formosa, whence came the Austronesian settlers of the Indonesian archipelago.

#### **Factor 6. Oceanic**

Factor 6 is a grab-bag of elements from the whole region, based on the common attachment of Oceanic and Southeast Asian cultures--another of the many indications of the Southeast Asian origins of the traditions of this zone, including Polynesia, itself. Drums are comparatively scarce in Oceanic traditions, a fact that is probably responsible for keeping New Guinea, where deep drums are of prime importance, out of this factor.

#### **Factor 7. Sub-Saharan Africa**

Factor 7 is distinguished from all earlier sets by its mix of many types of deep drums with simple chordophones (musical bows, for example), winds, and both untuned and tuned idiophones. Again, as in every other expressive direction, Sub-Saharan Africa shows itself to be the most unified zone of human culture. Afro-American instrumentation, though strongly African in

character, becomes a class by itself because mechanically complex European winds, strings, and xylophones are common and certain African standbys (musical bows, mbiras, lyres, etc.) are rarities in America.

#### **Factor 8. Circum-Mediterranean**

This factor encompasses the powerful Circum-Mediterranean plow and dairying tradition, dominating cultures from Central Asia to southern Spain, emphasizing the use of many sophisticated types of stringed and wind instruments and occasionally employing simple idiophones and drums. This pattern persists in modern European orchestras, the prime modern innovation being the introduction of convoluted horns, key operated winds, and mechanical zithers.

#### **Factor 9. Old High Culture**

Factor 9 is the Old High Culture pattern with flutes, reeds, zithers, lutes, tuned idiophones, and drums.

#### **Factor 10. Southeast Asia**

Factor 10 is the Southeast Asian set with strings, small winds, a great variety of tuned and untuned idiophones and drums.

Factors 8, 9, and 10 are linked into a macro-factor because all have many types of instruments that are capable of precise tuning and fine-grained and exact tonal articulation.

### Overview of Findings

Broadly speaking, analysis of the original bibliographic Instruments and Ensembles dataset yielded three major conclusions, which are supported and supplemented by the study of Personnel & Orchestras that Lomax et al conducted as part of Cantometrics.

- 1) First, throughout history and in most traditions, performing on instruments has been a virtual masculine monopoly.
- 2) Second, the taxonomies of instruments and ensembles closely match those for song style and for other cultural factors, indicating a consonance between these three fields.
- 3) And third, the development and refinement of instruments and orchestration (and the comparatively waning importance of vocal music) goes hand in hand with increasing socioeconomic sophistication.

Cross-culturally, it was found that men are three times as likely as women to play instruments in public.<sup>4</sup> See the table below for the gender ratios of specific instrument classes.

Instrument Class	Male: female ratio
Chordophones	4:1
Small aerophones	5:1
Large aerophones	10:1
Slit drum	5:1
Deep drums	4:1
Rattles & other simple idiophones (sticks,	3:1

---

<sup>4</sup> Stamping and clapping, which are often associated with women, were included in this survey.

rasps, etc.)	
--------------	--

There are some regional exceptions. In Amazonia men play flutes only twice as frequently as women, and in Sub-Saharan Africa the same remark may be made about the frame or horn drum. Indeed, the tambourine is the only instrument type without a significant male differential frequency: European women play the tambourine somewhat more frequently than men. Perhaps this is because tambourine playing resembles clapping, in which women match or outdo men. In the traditions of the African hunter-gatherers, dance is accompanied by orchestras of palms and voices, in which women take the leading roles. The data from this study also shows that women make more palm music than men among Australian Gatherers, Melanesians, Polynesians, and almost match men in this activity in Sub-Saharan Africa and Old High Culture.

Lomax speculated as to the reasons for this highly gendered distribution of instrumentalists cross-culturally. Mainly, he argued that male dominance in the field of musical instruments can be explained as one part of an ancient pattern of male-female role differentiation, wherein musical instruments are symbols of masculinity and femininity (often in the form of sexual organs), and their performance is an enactment of sexual dynamics between men and women. The sexual symbolism of musical instruments and performances is widely supported by folklore and ethnographic accounts. Following Sachs' organological application of Freudian theory, Lomax suggested several specific explanations for the differing gender roles in these sexually symbolic performances. Male sexual frustration— perhaps due to social norms or rules restricting courtship, masturbation, sex, or nudity— could be sublimated via sexually evocative manipulation of instruments that resemble sexual organs. On the other hand, female

participation in such suggestive acts would be inappropriate in cultures with strong sanctions against female expression of sexuality. In many societies in which women generally do not play instruments, the exceptions to this rule are to be found amongst sex workers.

The findings regarding gender relate to another main conclusion of the Instruments and Ensembles study: the correlation between instrumental/orchestral complexity and socioeconomic complexity. Instruments that require more technological sophistication to produce, and allow for more fine-grained musical articulation, were found more prominently in cultures with the technological capabilities, organized political structures, and stratification of labor necessary for such complex production. The most characteristic idiophone in each major culture group, organized from the simplest to most complex idiophone, provides an elegant demonstration of this, as the associated culture groups also ascend in socioeconomic complexity.

**African Gatherer.....Clapping**

**Siberia.....Stamping**

**Aboriginal Australian.....Claveles**

**American Indians.....Rattles**

**Mexico.....Scrapers**

**Polynesia.....Slit Drums**

**Malaysia.....Gongs**

**East Asia.....Bells & Xylophones**

Orchestral complexity— defined by the number of different instrument types in an orchestra— was also found to be correlated with socioeconomic development and centralized political authority. Furthermore, the social function of instrumental music changed with increasing social complexity: simpler social economies featured instrumental music in ritual settings, while in more developed ones the settings for instrumental music grew increasingly secular, from social merriment to public displays of state power and wealth. As the domains of food production, manufacturing and specialized craftsmanship (especially metal-working), and politics are male-dominated in many of these complex social economies — and instrumental music increasingly tied to these activities — Lomax believed it followed that instrumentalism would be male-dominated as well, and noted that the exceptions to this were often in developed societies where women participated in the labor force. In short, Lomax argued that, generally, the rise of complex instruments and orchestration accompanies the rise of masculine authority and the loss of feminine autonomy.

Singing amongst women is more common, cross-culturally, than playing instruments, although men were still found to be twice as likely as women to sing publicly. However, Lomax and his staff found that, in a global comparison of orchestras, those that accompanied vocalists rather than performing purely instrumental music, were far more characteristic of pre-agricultural societies such as the African Gatherers and the tribal Circum-Pacific than of more complex socio-economies. This further supports the relationship between socioeconomic complexity, instrumental music, and male-dominance.

### Specific Findings by Instrument Type

In addition to these general conclusions, correlations were found between the prominence of specific instruments and other musical and sociocultural factors.

### **Clapping**

- Common in warm climates.
- Predicts a performance style marked by maximum participation and integration (groupy) in both musical and conversational performance, in which women play an important part.
- Usually involves a sizeable number of performers in both the orchestra and the singing group.
- The dances accompanied by clapping involve torso articulation.
- Female leadership is fairly likely.
- Predicts and is predicted by a child rearing system in which males are not trained to be achievers.

### **Rattles**

- Indicator of a simple economy (non-intensive agriculture, organized in small communities, labor is not divided by gender).
- Associated with cultures who place married couples with the bride's family, and are fairly likely to be matrilineal.
- Performance style tends towards simplicity. The rattle provides the only accompaniment to songs with wide intervals, much textual repetition of nonsense refrains by solo singers, and to dances that involve few body parts in brief, straight, movements.

### **Hand and frame drums**

- Associated with simple, small-scale societies, with a masculine orientation.
- Labor is divided by gender (males predominate in food production).
- Women seldom lead songs.
- The songs accompanied by hand and frame drums are usually simple (often three-phrase) strophic forms, and are usually sung in unison with much slurring of the text and in a guttural voice.

### **Tuned idiophones** (Xylophones, mbiras, etc.)

- Indicators of complex communities organized in at least minimal states.
- Found in orchestras with numerous instrumental types, including deep drums.
- Accompanied dances entail three-dimensional movement, irregular leg rhythms, and unemphatic accents.

### **Deep drums**

- Occur where metal tools are likely to be available.
- Often used to call high gods to rituals, and to announce the presence of people of high caste.
- Predict organized, sizeable communities that are fairly likely to be based in patrilineal clan organization.
- Severe childhood discipline, early weaning.
- Organization of dance and song around regular rhythms.

### **Large aerophones** (horns, trumpets, oboes, clarinets, convoluted wind instruments)

- Strongly predict complex social order (large communities based on intensive agriculture, cattle herds, and metallurgy are organized into sizeable states with centralized systems of government).
- Found in complex orchestras that generally accompany textually and formally elaborate songs which involve the use of narrow intervals-- all three indicators of the stratified society.
- Weakly predict low feminine autonomy.

#### **Horns**

- Strongly predicts aggressive performance style, typical of males (forceful singing, loud volume).
- Predicts regular meter in the orchestra.

#### **Oboe**

- Predicts low feminine autonomy.



## **Lutes**

- Strongly predicts and is predicted by intensive plow agriculture, advanced pastoralism, large complex settlements, and high stratification (large states, highly centralized government, non-hereditary succession to leadership, rigid social layering).
- Accompany information-packed songs with narrow intervals, little repetition, precise enunciation, and many phrases.
- Solo virtuosos dominate the communication space.
- Predicts dances which handle space in a highly differentiated and varied manner, with curved or three-dimensional gestures, involving many body parts including the hand and fingers, and a space-encompassing choreography made possible by active lower leg movement.
- Predicts uninterrupted stretches of speech and long spoken phrases in conversation, which is correlated with central control of the community and work team.
- Women are likely to be severely sanctioned for pre-marital sexual acts.
- Males dominate in food production and politics; low feminine autonomy.
- Lute-accompanied singers characteristically sing in an upper register, with narrowed or pinched vocal tone and with small intervals between notes.

*Comments: Both bowed lutes and plucked lutes are indicators of these conditions, but there are some differences between their patterns, which may reflect the fact that although both instruments are known all over Afro-Asia, the plucked lute is more prevalent in West Asia and the bowed lute is more common in the Far Orient.*

### **Bowed lutes (fiddle type)**

- Highly associated with social layering.
- Strongly predicts a high degree of ornamentation (embellishment, melisma, glissando), and of narrow intervals. Also predicts elaborate melodic forms.
- Predicts masculine dominance of productivity.
- Predicts narrowed and noisy singing voice.

### **Plucked lutes (guitar type)**

- Strongly predict large communities and more powerful states.

- Strongly predict the presence of active high gods.
- Weakly predict restrictive sexual systems and low autonomy for women.
- Dance and song styles associated with plucked lutes are somewhat more energetic and rhythmically regular than with bowed lutes; melodies are less elaborate. Plucked lutes also predict a more strongly differentiated system of movement in dance than do bowed lutes.

## **Zithers**

- Feminine song leaders may be expected.
- Multi-dimensional dance style

*Comments: While the lute family is probably of West Asian origin, the zither family flourished in the East, particularly Southeast Asia, and spread to Africa, being particularly frequent in Madagascar and East Africa. More recently, the zither family became extremely important in Europe, as it encompasses various sorts of keyboard instruments, from the clavichord to the piano. Because of this distribution, zithers are not so strongly associated with exclusive male dominance and highly developed political systems as the lute family. Singing is also not as markedly tense-voiced and exclusive.*

## *Glossary / Terminology*

**Embellishment**, ornamental additions to the main melody of a song that are usually more rapid and ephemeral than the melodic part.

**Glissando**, the effect created when the voice slides smoothly from one tone to another, passing through all intermediate pitch levels.

**Groupy**, Alan Lomax's term for gross synchrony of behavior in a culture; denotes a high level of social coordination within a community.

**Lamella**, a thin, plate-like structure

**Melisma**, the singing of a single syllable of text over two or more basic notes of the melody; the syllable is stretched out over several different articulated pitches.

**Reed**, a thin strip of material that vibrates to produce a sound.

**Resonator**, an apparatus that increases the resonance of a sound, especially a hollow part of a musical instrument. (Lexico)

**Soundboard**, a thin sheet of wood over which the strings of an instrument are positioned to increase the sound produced. (Lexico)

## Appendix I - Coding Sheet for Individual Instruments

Coding ID		Instrument Name											
Sachs-Hornbostel Number										S-H Suffix			
Culture Name		Culture Number								Area			
Bibliographic Info:													
Coder Name, Date, Comments:													
1	Special Info	Instrument sets: Chordo- and Aerophones	0. N/a, unknown	1. Small, untuned		2. Med. untuned		3. Large, untuned		4. Small, tuned	5. Med. tuned	6. Large, tuned	
2		Membrano- Idiophones	0. N/a, unknown	1. Both hands	2. One hand	3. One pl stick	4. Two pl sticks	5. One pad stick	6. Two pad sticks	7. Thong	8. Twigs/brushes	9. Other	
3	Length		0. Unknown	1. ≤ 6"	2. > 6" - 1'	3. > 1' - 1.5'	4. > 1.5' - 2'	5. > 2' - 2.5'	6. > 2.5' - 3'	7. > 3' - 4'	8. > 4' - 6'	9. > 6'	
4	Gender		0. Unknown			1. Taboo women		2. Always men		3. Usually men		4. Either	
5	Importance		5. Usually women			6. Always women		7. Taboo men	8. Usually children		9. Usually boys	10. Usually girls	
6	Time Depth		0. Unknown			1. Common		2. Fairly common		3. Rare		4. Rare but important	
7			5. 1000 CE - recent			6. 1 - 1000 CE		7. 1000 BCE - 1 CE		8. 3000 - 1000 BCE		9. Prior to 3000 BCE	
8	Function	Number of Functions	0. Unknown			1. One			2. Two			3. Three	4. More than three
9		Function 1	0. Unknown	1. Ritual	2. Curing	3. Rites	4. Courtship	5. Marriage	6. Funerary	7. Work	8. Signaling		
10			9. War	10. Dance	11. Merrymaking		12. Calendrical merrymaking		13. Dramatic	14. Royal	15. Self-entertainment		
11			16. Passive listening	17. Rain	18. Food-gathering		19. Beggar		20. Merchant	21. Toy	22. Bardic		
12		Function 2	0. Unknown	1. Ritual	2. Curing	3. Rites	4. Courtship	5. Marriage	6. Funerary	7. Work	8. Signaling		
13			9. War	10. Dance	11. Merrymaking		12. Calendrical merrymaking		13. Dramatic	14. Royal	15. Self-entertainment		
14			16. Passive listening	17. Rain	18. Food-gathering		19. Beggar		20. Merchant	21. Toy	22. Bardic		
15		Function 3	0. Unknown	1. Ritual	2. Curing	3. Rites	4. Courtship	5. Marriage	6. Funerary	7. Work	8. Signaling		
16			9. War	10. Dance	11. Merrymaking		12. Calendrical merrymaking		13. Dramatic	14. Royal	15. Self-entertainment		
17	16. Passive listening		17. Rain	18. Food-gathering		19. Beggar		20. Merchant	21. Toy	22. Bardic			
18	Symbolism		0. Unknown	1. Animal	2. Totem	3. Dead	4. Supernatural	5. Male	6. Female	7. Herm.	8. Sexual	9. None	
19	Position		0. Unknown	1. Standing	2. Dancing	3. Leaning	4. Kneeling	5. Squatting	6. Sitting	7. Sitting (chair)	8. Lying	9. General	
20	Support		0. Unknown	1. Frame	2. Hung body	3. Head	4. Mouth	5. Neck	6. Hands	7. Shoulder	8. Chest	9. Belly	
21			10. Pelvis	11. Lap	12. Thigh	13. Knee	14. Leg/foot	15. Ground	16. Stand	17. Other			
22	Level		0. Unknown	1. Above head	2. Head	3. Shoulder	4. Chest		5. Belly		6. Hips		
23			7. Pelvis	8. Thigh	9. Leg		10. Foot		11. Underfoot		12. General		

## Appendix II - Coding Sheet for Ensembles

Coding ID		Ensemble Name (if known)									
Culture Name		Culture Number					Area				
Bibliographic Info:											
Coder Name, Date, Comments:											
1	Time Depth	0. Unknown		1. Traditional		2. Trad. archaic		3. Recent, rare		4. Recent, widely used	
2	Importance	5. 1000 CE - present		6. 1 - 1000 CE		7. 1000 BCE - 1 CE		8. 3000 - 1000 BCE		9. Prior to 3000 BCE	
3	Gender	0. Unknown		1. All male		2. Largely male		3. Half/half		4. Largely female	
4	Leadership	0. Unknown		1. Always female		2. Usually		3. Sometimes		4. Rarely	
5	Number of Functions	0. Unknown		1. One		2. Two		3. Three		4. More than three	
6	Function 1	0. Unknown		1. Ritual		2. Curing		3. Rites		4. Courtship	
7	Function 2	9. War		10. Dance		11. Merrymaking		12. Calendrical merrymaking		13. Dramatic	
8	Function 3	16. Passive listening		17. Rain		18. Food-gathering		19. Beggar		20. Merchant	
9	Presence	0. Unknown		1. Always		2. Usually		3. Sometimes		4. Never	
10	Relationship	0. Never		1. No info		2. Solo		3. Duet		4. Chorus 3-5	
11	Number of Instruments	0. Unknown		1. 1		2. 2		3. 3		4. 4	
12	Number of Instrument Types	9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	
		0. Unknown		1. 1		2. 2		3. 3		4. 4	
		9. 9		10. 10		11. 11		12. 12		13. 13-20	
		16. 41-50		17. 51-60		18. 61-70		19. 71-80		20. 81-90	

## Appendix III - The Sachs-Hornbostel Classification System

<b>1</b>	<b>IDIOPHONES</b>	The substance of the instrument itself, owing to its solidity and elasticity, yields the sounds, without requiring stretched membranes or strings
<b>11</b>	<b>Struck idiophones</b>	The instrument is made to vibrate by being struck upon
<b>111</b>	<b>Idiophones struck directly</b>	The player himself executes the movement of striking; whether by mechanical intermediate devices, beaters, keyboards, or by pulling ropes, etc., is immaterial; it is definitive that the player can apply clearly defined individual strokes and that the instrument itself is equipped for this kind of percussion
<b>111.1</b>	<b>Concussion idiophones or clappers</b>	Two or more complementary sonorous parts are struck against each other
<b>111.11</b>	<b>Concussion sticks or stick clappers</b>	<i>Annarn, India, Marshall Is.</i>
<b>111.12</b>	<b>Concussion plaques or plaque clappers</b>	<i>China, India</i>
<b>111.13</b>	<b>Concussion troughs or trough clappers</b>	<i>Burma</i>
<b>111.14</b>	<b>Concussion vessels or vessel clappers</b>	Even a slight hollow in the surface of a board counts as a vessel
<b>111.141</b>	<b>Castanets</b>	Vessel clappers, either natural, or artificially hollowed out
<b>111.142</b>	<b>Cymbals</b>	Vessel clappers with everted rim
<b>111.2</b>	<b>Percussion idiophones</b>	The instrument is struck either with a non-sonorous object (hand, stick, striker) or against a non-sonorous object (human body, the ground)
<b>111.21</b>	<b>Percussion sticks</b>	
<b>111.211</b>	<b>(Individual) percussion sticks</b>	<i>Japan, Annam, Balkans; also the triangle</i>
<b>111.212</b>	<b>Sets of percussion sticks</b>	Several percussion sticks of different pitch are combined to form a single instrument <i>All xylophones, as long as their sounding components are not in two different planes [nicht biplan]</i>
<b>111.22</b>	<b>Percussion plaques</b>	
<b>111.221</b>	<b>(Individual) percussion plaques</b>	<i>In the oriental Christian Church</i>
<b>111.222</b>	<b>Sets of percussion plaques</b>	<i>Lithophone (China), and most metallophones</i>
<b>111.23</b>	<b>Percussion tubes</b>	

111.231	<b>(Individual) percussion tubes</b>	<i>Slit drum, tubular bell</i>
111.232	<b>Sets of percussion tubes</b>	<i>Tubaphon, tubular xylophone</i>
111.24	<b>Percussion vessels</b>	
111.241	<b>Gongs</b> The vibration is strongest near the vertex	
111.241.1	<b>(Individual) gongs</b>	<i>S. and E. Asia; including the so-called metal drums, or rather kettle-gongs</i>
111.242.11	<b>Sets of gongs</b> [ <i>gong chimes</i> ]	<i>S.E. Asia</i>
111.242	<b>Bells</b> The vibration is weakest near the vertex	
111.242.1	<b>(Individual) Bells</b>	
111.242.2	<b>Resting bells</b> The cup is placed on the palm of the hand or on a cushion; its mouth faces upwards	<i>China, Indo-China, Japan</i>
111.242.12	<b>Suspended bells</b> The bell is suspended from the apex	
111.242.121	<b>Suspended bells struck from the outside.</b> No striker is attached inside the bell, there being a separate beater	
111.242.122	<b>Clapper bells</b> A striker (clapper) is attached inside the bell	
111.242.2	<b>Sets of bells</b> [ <i>chimes</i> ] (subdivided as 111.242.1)	
112	<b>Indirectly struck idiophones</b> The player himself does not go through the movement of striking; percussion results indirectly through some other movement by the player. The intention of the instrument is to yield clusters of sounds or noises, and not to let individual strokes be perceived	
112.2	<b>Shaken idiophones or rattles</b> The player executes a shaking motion	
112.11	<b>Suspension rattles</b> Perforated idiophones are mounted together, and shaken to strike against each other	
112.111	<b>Strung rattles</b> Rattling objects are strung in rows on a cord	<i>Necklaces with rows of shells</i>
112.112	<b>Stick rattles</b> Rattling objects are strung on a bar (or ring)	<i>Sistrum with rings</i>
112.12	<b>Frame rattles</b> Rattling objects are attached to a carrier against which they strike	
112.121	<b>Pendant rattles</b> Rattling objects are hung from a frame	<i>Dancing shield with rattling rings</i>
112.122	<b>Sliding rattles</b> Non-sonorous objects slide to and fro in the slots of the sonorous object so that the latter is made to vibrate; or sonorous objects slide to and fro in	

the slots of a non-sonorous object, to be set in vibration by the impacts  
*Anklung, sistrum with rods (recent)*

**112.13 Vessel rattles** Rattling objects enclosed in a vessel strike against each other or against the walls of the vessel, or usually against both, nb The Benue gourd rattles with handle, in which the rattling objects, instead of being enclosed, are knotted into a net slipped over the outer surface, count as a variety of vessel rattle  
*Fruit shells with seeds, 'pellet bells' enclosing loose percussion pellets*

**112.2 Scraped idiophones** The player causes a scraping movement directly or indirectly: a non-sonorous object moves along the notched surface of a sonorous object, to be alternately lifted off the teeth and flicked against them; or an elastic sonorous object moves along the surface of a notched non-sonorous object to cause a series of impacts. This group must not be confused with that of friction idiophones

**112.21 Scraped sticks** A notched stick is scraped with a little stick

**112.211 Scraped sticks without resonator**

*S. America. India (notched musical bow), Congo*

**112.212 Scraped sticks with resonator** *Usumbara, E. Asia (tiger)*

**112.22 Scraped tubes** *S. India*

**112.23 Scraped vessels** The corrugated surface of a vessel is scraped

*S. America, Congo region*

**112.24 Scraped wheels or cog rattles** A cog wheel, whose axle serves as the handle, and a tongue fixed in a frame which is free to turn on the handle; when whirled, the tongue strikes the teeth of the wheel one after another  
*Europe, India*

**112.3 Split idiophones** Instruments in the shape of two springy arms connected at one end and touching at the other: the arms are forced apart by a little stick, to jingle or vibrate on recoil  
*China (huan t'u), Malacca, Persia (qasik), Balkans*

**12 Plucked idiophones** Lamellae, i.e. elastic plaques, fixed at one end, are flexed and then released to return to their position of rest

**121 In the form of a frame** The lamella vibrates within a frame or hoop

**121.1 Clack idiophones** (cricri) The lamella is carved in the surface of a fruit shell, which serves as resonator  
*Melanesia*

**121.2 Guimbardes** (Jews' harps) The lamella is mounted in a rod- or plaque-shaped frame and depends on the player's mouth cavity for resonance

**121.21 Idioglot guimbardes** The lamella is carved in the frame itself, its base remaining joined to the frame  
*India, Indonesia, Melanesia*

**121.22 Heteroglot guimbardes** A lamella is attached to a frame



121.221	<b>(Single) heteroglot guimbardes</b>	<i>Europe, India, China</i>
121.222	<b>Sets of heteroglot guimbardes</b> Several heteroglot guimbardes of different pitches are combined to form a single instrument	<i>Aura</i>
122	<b>In board- or comb-form</b> The lamellae are tied to a board or cut out from a board like the teeth of a comb	
122.1	<b>With laced-on lamellae</b>	
122.11	<b>Without resonator</b>	<i>All sansas on a plain board</i>
122.12	<b>With resonator</b>	<i>All sansas with a box or bowl below the board</i>
122.2	<b>With cut-out lamellae</b> (musical boxes) Pins on a cylinder pluck the lamellae	<i>Europe</i>
13	<b>Friction Idiophones</b> The instrument is made to vibrate by friction	
131	<b>Friction sticks</b>	
131.1	<b>(Individual) friction sticks</b>	<i>Unknown</i>
131.2	<b>Sets of friction sticks</b>	
131.21	<b>With direct friction</b> The sticks themselves are rubbed	<i>Nail fiddle, nail piano, Stockspiele</i>
131.22	<b>With indirect friction</b> The sticks are connected with others which are rubbed and, by transmitting their longitudinal vibration, stimulate transverse vibration in the former	<i>Chladni's euphon</i>
132	<b>Friction plaques</b>	
132.1	<b>(Individual) friction plaques</b>	<i>Unknown</i>
132.2	<b>Sets of friction plaques</b> [livika]	<i>New Ireland</i>
133	<b>Friction vessels</b>	
133.1	<b>(Individual) friction vessels</b>	<i>Brazil (tortoise shell)</i>
133.2	<b>Sets of friction vessels</b>	<i>Verillon (glass harmonica)</i>
14	<b>Blown idiophones</b> The instrument is made to vibrate by being blown upon	
141	<b>Blown sticks</b>	
141.1	<b>(Individual) blown sticks</b>	<i>Unknown</i>
141.2	<b>Sets of blown sticks</b>	<i>Aeolsklavier</i>
142	<b>Blown plaques</b>	
142.1	<b>(Individual) blown plaques</b>	<i>Unknown</i>
142.2	<b>Sets of blown plaques</b>	<i>Piano chanteur</i>

Suffixes for use with any division of this class (idiophones):

**-8 with keyboard**

**-9 mechanically driven**

<b>2</b>	<b>MEMBRANOPHONES</b>	The sound is excited by tightly-stretched membranes
<b>21</b>	<b>Struck drums</b>	The membranes are struck
<b>211</b>	<b>Drums struck directly</b>	The player himself executes the movement of striking; this includes striking by any intermediate devices, such as beaters, keyboards, etc.; drums that are shaken are excluded
<b>211.1</b>	<b>Kettle drums</b> (timpani)	The body is bowl- or dish-shaped
<b>211.11</b>	<b>(Separate) kettle drums</b>	<i>European timpani</i>
<b>211.12</b>	<b>Sets of kettle drums</b>	<i>W. Asian permanently joined pairs of kettle drums</i>
<b>211.2</b>	<b>Tubular drums</b>	The body is tubular
<b>211.21</b>	<b>Cylindrical drums</b>	The diameter is the same at the middle and the ends; whether or not the ends taper or have projecting disks, is immaterial
<b>211.211</b>	<b>Single-skin cylindrical drums</b>	The drum has only one usable membrane. In some African drums a second skin forms part of the lacing device and is not used for beating, and hence does not count as a membrane in the present sense
<b>211.211.1</b>	<b>Open cylindrical drums</b>	The end opposite from the membrane is open <i>Malacca</i>
<b>211.211.2</b>	<b>Closed cylindrical drums</b>	The end opposite from the membrane is closed <i>West Indies</i>
<b>211.212.1</b>	<b>Double-skin cylindrical drums</b>	The drum has two usable membranes
<b>211.212.1</b>	<b>(Individual) cylindrical drums</b>	<i>Europe (side drum)</i>
<b>211.212.2</b>	<b>Sets of cylindrical drums</b>	
<b>211.22*</b>	<b>Barrel-shaped drums</b>	The diameter is larger at the middle than at the ends; the body is curvilinear <i>Asia, Africa, Ancient Mexico</i>
<b>211.23</b>	<b>Double-conical drums</b>	The diameter is larger at the middle than at the ends; the body is rectilinear with angular profile <i>India (mrdanga, banya, pakhavaja)</i>
<b>211.24*</b>	<b>Hourglass-shaped drum</b>	The diameter is smaller at the middle than at the ends <i>Asia, Melanesia, E. Africa</i>

- 211.25\***      **Conical drums** The diameters at the ends differ considerably ; minor departures from conicity, inevitably met, are disregarded here *India*
- 211.26\***      **Goblet-shaped drums** The body consists of a main section which is either cup-shaped or cylindrical, and a slender stem; borderline cases of this basic design like those occurring notably in Indonesia, do not affect the identification, so long as a cylindrical form is not in fact reached *Darabuka*
- 211.3**        **Frame drums** The depth of the body does not exceed the radius of the membrane. N.B. The European side-drum, even in its most shallow form, is a development from the long cylindrical drum and hence is not included among frame drums
- 211.31**      **Frame drums (without handle)**
- 211.311**     **Single-skin frame drums** *Tambourine*
- 211.312**     **Double-skin frame drums** *N. Africa*
- 211.32**      **Frame drum with handle** A stick is attached to the frame in line with its diameter
- 211.321**     **Single-skin frame drums with handle** *Eskimo*
- 211.322**     **Double-skin frame drums with handle** *Tibet*
- 212**        **Rattle drums** (sub-divisions as for drums struck directly, 211) The drum is shaken; percussion is by impact of pendant or enclosed pellets, or similar objects *India, Tibet*
- 22**         **Plucked drums** A string is knotted below the centre of the membrane; when the string is plucked, its vibrations are transmitted to the membrane *India (gopi yantra, anandalahari)*
- 23**         **Friction drums** The membrane is made to vibrate by friction
- 231**         **Friction drums with stick** A stick in contact with the membrane is either itself rubbed, or is employed to rub the membrane
- 231.1**        **With inserted stick** The stick passes through a hole in the membrane
- 231.11**      **Friction drums with fixed stick** The stick cannot be moved; the stick alone is subjected to friction by rubbing *Africa*
- 231.12**      **Friction drums with semi-fixed stick** The stick is movable to a sufficient extent to rub the membrane when it is itself rubbed by the hand *Africa*
- 231.13**      **Friction drums with free stick** The stick can be moved freely; it is not itself rubbed, but is employed to rub the membrane *Venezuela*

\*To be sub-divided like 211.21.

- 231.2      **With tied stick** The stick is tied to the membrane in an upright position    *Europe*
- 232      **Friction drum with cord** A cord, attached to the membrane, is rubbed
- 232.1      **Stationary friction drum with cord** The drum is held stationary  
*Europe, Africa*
- 232.11      **Single-skin stationary drums with friction-cord**
- 232.12      **Double-skin stationary drums with friction-cord**
- 232.2      **Friction drum with whirling stick** The drum is whirled on a cord which rubs on a [resined] notch in the holding stick.  
*Waldteufel [cardboard buzzer] (Europe, India, E. Africa)*
- 233      **Hand friction drums** The membrane is rubbed by the hand
- 24      **Singing membranes (Kazoos)** The membrane is made to vibrate by speaking or singing into it; the membrane does not yield a note of its own but merely modifies the voice  
*Europe, W. Africa*
- 241      **Free kazoos** The membrane is incited directly, without the wind first passing through a chamber  
*Comb-and-paper*
- 242      **Tube- or vessel-kazoos** The membrane is placed inside a tube or box  
*Africa; while also, E. Asian flutes with a lateral hole sealed by a membrane, exhibit an adulteration with the principle of the tube kazoo*

Suffixes for use with any division of this class (membranophones):

- 6 with membrane glued to drum
- 7 with membrane nailed to drum
- 8 with membrane laced to drum
- 81 **Cord-(ribbon-) bracing** The cords are stretched from membrane to membrane or arranged in the form of a net, without employing any of the devices described below
- 811 **Without special devices for stretching** *Everywhere*
- 812 **With tension ligature** Cross ribbons or cords are tied round the middle of the lacing to increase its tension *Ceylon*
- 813 **With tension loops** The cords are laced in a zigzag; every pair of strings is caught together with a small ring or loop *India*
- 814 **With wedge-bracing** Wedges are inserted between the wall of the drum and the cords of the lacing; by adjusting the position of the wedges it is possible to control the tension *India, Indonesia, Africa*
- 82 **Cord-and-hide bracing** The cords are laced at the lower end to a non-sonorous piece of hide *Africa*
- 83 **Cord-and-board bracing** The cords are laced to an auxiliary board at the lower end  
*Sumatra*

- 84 **Cord-and-flange bracing** The cords are laced at the lower end to a flange carved from the solid *Africa*
- 85 **Cord-and-belt bracing** The cords are laced at the lower end to a belt of different material *India*
- 86 **Cord-and-peg bracing** The cords are laced at the lower end to pegs stuck into the wall of the drum *Africa*
- N.B. -82 to -86 are sub-divided as -81 above
- 9 **With membrane lapped on** A ring is slipped over the edge of the membrane
- 91 **With membrane lapped on by ring of cord** *Africa*
- 92 **With membrane lapped on by a hoop**
- 921 **Without mechanism** *European drum*
- 922 **With mechanism**
- 9221 **Without pedal** *Machine timpani*
- 9222 **With pedals** *Pedal timpani*

- 3                    **CHORDOPHONES** One or more strings are stretched between fixed points
- 31                  **Simple chordophones or zithers** The instrument consists solely of a string bearer, or of a string bearer with a resonator which is not integral and can be detached without destroying the sound-producing apparatus
- 311                **Bar zithers** The string bearer is bar-shaped; it may be a board placed edgewise
- 311.1             **Musical bows** The string bearer is flexible (and curved)
- 311.11            **Idiochord musical bows** The string is cut from the bark of the cane, remaining attached at each end
- 311.111          **Mono-idiochord musical bows** The bow has one idiochord string only *New Guinea (Sepik R.), Togo*
- 311.12            **Poly-idiochord musical bows or harp-bows** The bow has several idiochord strings which pass over a toothed stick or bridge *W. Africa (Fan)*
- 311.12            **Heterocbord musical bows** The string is of separate material from the bearer
- 311.121          **Mono-beterocbord musical bows** The bow has one hetero-chord string only
- 311.121.1        **Without resonator** N.B. If a separate, unattached resonator is used, the specimen belongs to 311.121.21. The human mouth is not to be taken into account as a resonator
- 311.121.11      **Without tuning noose** *Africa (ganza, samuius, to)*
- 311.121.12      **With tuning noose** A fibre noose is passed round the string, dividing it into two sections *South-equatorial Africa (n'kungo, uta)*
- 311.121.2        **With resonator**
- 311.121.21      **With independent resonator** *Borneo (busoi)*

<b>311.121.22</b>	<b>With resonator attached</b>	
<b>311.121.221</b>	<b>Without tuning noose</b>	<i>S. Africa (hade, thomo)</i>
<b>311.121.222</b>	<b>With tuning noose</b>	<i>S. Africa, Madagascar (gubo, hungo, bobre)</i>
<b>311.122</b>	<b>Poly-heterochord musical bows</b>	The bow has several hetero-chord strings
<b>311.122.1</b>	<b>Without tuning noose</b>	<i>Oceania (kalove)</i>
<b>311.122.2</b>	<b>With tuning noose</b>	<i>Oceania (pagolo)</i>
<b>311.2</b>	<b>Stick zithers</b>	The string carrier is rigid
<b>311.21</b>	<b>Musical bow cum stick</b>	The string bearer has one flexible, curved end. N.B. Stick zithers with both ends flexible and curved, like the Basuto bow, are counted as musical bows <i>India</i>
<b>311.22</b>	<b>(True) stick zithers</b>	N.B. Round sticks which happen to be hollow by chance do not belong on this account to the tube zithers, but are round-bar zithers; however, instruments in which a tubular cavity is employed as a true resonator, like the modern Mexican <i>harpa</i> , are tube zithers
<b>311.221</b>	<b>With one resonator gourd</b>	<i>India (tuila), Celebes (suleppe)</i>
<b>311.222</b>	<b>With several resonator gourds</b>	<i>India (vina)</i>
<b>312</b>	<b>Tube zithers</b>	The string bearer is a vaulted surface
<b>312.1</b>	<b>Whole-tube zithers</b>	The string carrier is a complete tube
<b>312.11</b>	<b>Idiochord (true) tube zithers</b>	<i>Africa and Indonesia (gonra, togo, valiha)</i>
<b>312.12</b>	<b>Heterochord (true) tube zithers</b>	
<b>312.121</b>	<b>Without extra resonator</b>	<i>S.E. Asia (alligator)</i>
<b>312.122</b>	<b>With extra resonator</b>	An internode length of bamboo is placed inside a palm leaf tied in the shape of a bowl <i>Timor</i>
<b>312.2</b>	<b>Half-tube zithers</b>	The strings are stretched along the convex surface of a gutter
<b>312.21</b>	<b>Idiochord half-tube zithers</b>	<i>Flores</i>
<b>312.22</b>	<b>Heterochord half-tube zithers</b>	<i>E. Asia (k'in, koto)</i>
<b>313</b>	<b>Raft zithers</b>	The string bearer is composed of canes tied together in the manner of a raft
<b>313.1</b>	<b>Idiochord raft zithers</b>	<i>India, Upper Guinea, Central Congo</i>
<b>313.2</b>	<b>Heterochord raft zithers</b>	<i>N. Nyasa region</i>
<b>314</b>	<b>Board zithers</b>	The string bearer is a board; the ground too is to be counted as such

- 314.1 True board zithers** The plane of the strings is parallel with that of the string bearer
- 314.11 Without resonator** *Borneo*
- 314.12 With resonator**
- 314.121 With resonator bowl** The resonator is a fruit shell or similar object, or an artificially carved equivalent *Nyasa region*
- 314.122 With resonator box (box zither)** The resonator is made from slats  
*Zither, Hackbrett, pianoforte*
- 314.2 Board zither variations** The plane of the strings is at right angles to the string bearer
- 314.21 Ground zithers** The ground is the string bearer; there is only one string  
*Malacca, Madagascar*
- 314.22 Harp zithers** A board serves as string bearer; there are several strings and a notched bridge *Borneo*
- 315 Trough zithers** The strings are stretched across the mouth of a trough  
*Tanganyika*
- 315.1 Without resonator**
- 315.2 With resonator** The trough has a gourd or a similar object attached to it
- 316 Frame zithers** The strings are stretched across an open frame
- 316.1 Without resonator** *Perhaps amongst medieval psalteries*
- 316.2 With resonator** *W. Africa, amongst the Kru (kani)*
- 32 Composite chordophones** A string bearer and a resonator are organically united and cannot be separated without destroying the instrument
- 321 Lutes** The plane of the strings runs parallel with the sound-table
- 321.1 Bow lutes** [*pluriarc*] Each string has its own flexible carrier  
*Africa (akam, kalangu, wambi)*
- 321.2 Yoke lutes or lyres** The strings are attached to a yoke which lies in the same plane as the sound-table and consists of two arms and a cross-bar
- 321.21 Bowl lyres** A natural or carved-out bowl serves as the resonator  
*Lyra, E. African lyre*
- 321.22 Box lyres** A built-up wooden box serves as the resonator *Cithara, crwth*
- 321.3 Handle lutes** The string bearer is a plain handle. Subsidiary necks, as e.g. in the Indian *prasarini vina* are disregarded, as are also lutes with strings distributed

over several necks, like the *harpolyre*, and those like the Lyre-guitars, in which the yoke is merely ornamental

- 321.31     **Spike lutes** The handle passes diametrically through the resonator
- 321.311     **Spike bowl lutes** The resonator consists of a natural or carved-out bowl  
*Persia, India, Indonesia*
- 321.312     **Spike box lutes or spike guitars** The resonator is built up from wood  
*Egypt (rebab)*
- 321.313     **Spike tube lutes** The handle passes diametrically through the walls of a tube  
*China, Indochina*
- 321.32     **Necked lutes** The handle is attached to or carved from the resonator, like a neck
- 321.321     **Necked bowl lutes** *Mandoline, theorbo, balalaika*
- 321.322     **Necked box lutes or necked guitars** N.B. Lutes whose body is built up in the shape of a bowl are classified as bowl lutes *Violin, viol, guitar*
- 322     **Harps** The plane of the strings lies at right angles to the sound-table; a line joining the lower ends of the strings would point towards the neck
- 322.1     **Open harps** The harp has no pillar
- 322.11     **Arched harps** The neck curves away from the resonator *Burma and Africa*
- 322.12     **Angular harps** The neck makes a sharp angle with the resonator  
*Assyria, Ancient Egypt, Ancient Korea*
- 322.2     **Frame harps** The harp has a pillar
- 322.21     **Without tuning action** *All medieval harps*
- 322.211     **Diatonic frame harps**
- 322.212     **Chromatic frame harps**
- 322.212.1     **With the strings in one plane** *Most of the older chromatic harps*
- 322.212.2     **With the strings in two planes crossing one another**  
*The Lyon chromatic harp*
- 322.22     **With tuning action** The strings can be shortened by mechanical action
- 322.221     **With manual action** The tuning can be altered by hand-levers  
*Hook harp, dital harp, harpinella*
- 322.222     **With pedal action** The tuning can be altered by pedals
- 323     **Harp lutes** The plane of the strings lies at right angles to the sound-table; a line joining the lower ends of the strings would be perpendicular to the neck.  
Notched bridge *W. Africa (kasso, etc)*



Suffixes for use with any division of this class (chordophones):

- 4 sounded by hammers or beaters
- 5 sounded with the bare fingers
- 6 sounded by plectrum
- 7 sounded by bowing
- 71 with a bow
- 72 by a wheel
- 73 by a ribbon [*Band*]
- 8 with keyboard
- 9 with mechanical drive

- |         |  |   |
|---------|--|---|
| 4       | <b>AEROPHONES</b>                                  | The air itself is the vibrator in the primary sense   |
| 41      | <b>Free aerophones</b>                             | The vibrating air is not confined by the instrument   |
| 411     | <b>Displacement free aerophones</b>                | The air-stream meets a sharp edge, or a sharp edge is moved through the air. In either case, according to more recent views, a periodic displacement of air occurs to alternate flanks of the edge<br><i>Whip, sword-blade</i>  |
| 412     | <b>Interruptive free aerophones</b>                | The air-stream is interrupted periodically  |
| 412.1   | <b>Idiophonic interruptive aerophones or reeds</b> | The air-stream is directed against a lamella, setting it in periodic vibration to interrupt the stream intermittently. In this group also belong reeds with a 'cover', i.e. a tube in which the air vibrates only in a secondary sense, not producing the sound but simply adding roundness and timbre to the sound made by the reed's vibration; generally recognizable by the absence of fingerholes<br><i>Organ reed stops</i> |
| 412.11  | <b>Concussion reeds</b>                            | Two lamellae make a gap which closes periodically during their vibration<br><i>A split grass-blade</i>  |
| 412.12  | <b>Percussion reeds</b>                            | A single lamella strikes against a frame  |
| 412.121 | <b>Individual percussion reeds</b>                 | <i>Brit. Columbia</i>   |
| 412.122 | <b>Sets of percussion reeds</b>                    | <i>The earlier reed stops of organs</i>   |
| 412.13  | <b>Free reeds</b>                                  | The lamella vibrates through a closely-fitting slot   |
| 412.131 | <b>(Individual) free reeds</b>                     | <i>Single-note motor horn</i>   |
| 412.132 | <b>Sets of free reeds</b>                          | N.B. In instruments like the Chinese <i>sheng</i> the fingerholes do not serve to modify the pitch and are therefore not equivalent to the fingerholes of other pipes<br><i>Reed organ, mouthorgan, accordion</i>   |

- 412.14 Ribbon reeds** The air-stream is directed against the edge of a stretched band or ribbon. The acoustics of this process has not yet been studied  
*Brit. Columbia*
- 412.2 Non-idiophonic interruptive instruments** The interruptive agent is not a reed
- 412.21 Rotating aerophones** The interruptive agent rotates in its own plane *Sirens*
- 412.22 Whirling aerophones** The interruptive agent turns on its axis  
*Bull-roarer, whirring disc, ventilating fan*
- 413 Plosive aerophones** The air is made to vibrate by a single density stimulus condensation shock  
*Pop guns*
- 42 Wind instruments proper** The vibrating air is confined within the instrument itself
- 421 Edge instruments or flutes** A narrow stream of air is directed against an edge
- 421.1 Flutes without duct** The player himself creates a ribbon-shaped stream of air with his lips
- 421.11 End blown flutes** The player blows against the sharp rim at the upper open end of a tube
- 421.111 (Single) end-blown flutes**
- 421.111.1 Open single end-blown flutes** The lower end of the flute is open
- 421.111.11 Without fingerholes** *Bengal*
- 421.111.12 With fingerholes** *Almost world-wide*
- 421.111.2 Stopped single end-blown flutes** The lower end of the flute is closed
- 421.111.21 Without fingerholes** *The bore of a key*
- 421.111.22 With fingerholes** *Especially New Guinea*
- 421.112 Sets of end-blown flutes or panpipes** Several end-blown flutes of different pitch are combined to form a single instrument
- 421.112 Open panpipes**
- 421.112.11 Open (raft) panpipes** The pipes are tied together in the form of a board, or they are made by drilling tubes in a board *China*
- 421.112.12 Open bundle (pan-) pipes** The pipes are tied together in a round bundle  
*Solomon Is., New Britain, New Ireland, Admiralty Is.*
- 421.112.2 Stopped panpipes** *Europe, S. America*
- 421.112.3 Mixed open and stopped panpipes** *Solomon Is., S. America*

<b>421.12</b>	<b>Side-blown flutes</b>	The player blows against the sharp rim of a hole in the side of the tube	
<b>421.121</b>	<b>(Single) side-blown flutes</b>		
<b>421.121.1</b>	<b>Open side-blown flutes</b>		
<b>421.121.11</b>	<b>Without fingerholes</b>		<i>S.W. Timor</i>
<b>421.121.12</b>	<b>With fingerholes</b>		<i>European flute</i>
<b>421.121.2</b>	<b>Partly-stopped side-blown flutes</b>	The lower end of the tube is a natural node of the pipe pierced by a small hole	<i>N. W. Borneo</i>
<b>421.121.3</b>	<b>Stopped side-blown flutes</b>		
<b>421.121.31</b>	<b>Without fingerholes</b>		
<b>421.121.311</b>	<b>With fixed stopped lower end</b>		<i>Apparently non-existent</i>
<b>421.121.312</b>	<b>With adjustable stopped lower end</b>	(piston flutes)	<i>Malacca, New Guinea</i>
<b>421.121.32</b>	<b>With fingerholes</b>		<i>E. Bengal, Malacca</i>
<b>421.122</b>	<b>Sets of side-blown flutes</b>		
<b>421.122.1</b>	<b>Sets of open side-blown flutes</b>		<i>Chamber flute orum</i>
<b>421.122.2</b>	<b>Sets of stopped side-blown flutes</b>		<i>N. W. Brazil (among the Siusi)</i>
<b>421.13</b>	<b>Vessel flutes (without distinct beak)</b>	The body of the pipe is not tubular but vessel-shaped	<i>Brazil (Karaja), Lower Congo (Bafioté)</i>
<b>421.2</b>	<b>Flutes with duct or duct flutes</b>	A narrow duct directs the air- stream against the sharp edge of a lateral orifice	
<b>421.21</b>	<b>Flutes with external duct</b>	The duct is outside the wall of the flute; this group includes flutes with the duct chamfered in the wall under a ring-like sleeve and other similar arrangements	
<b>421.211</b>	<b>(Single) flutes with external duct</b>		
<b>421.211.1</b>	<b>Open flutes with external duct</b>		
<b>421.211.11</b>	<b>Without fingerholes</b>		<i>China, Borneo</i>
<b>421.211.12</b>	<b>With fingerholes</b>		<i>Indonesia</i>
<b>421.211.2</b>	<b>Partly-stopped flutes with external duct</b>		<i>Malacca</i>
<b>421.211.3</b>	<b>Stopped flutes with external duct</b>		
<b>421.212</b>	<b>Sets of flutes with external duct</b>		<i>Tibet</i>
<b>421.22</b>	<b>Flutes with internal duct</b>	The duct is inside the tube. This group includes flutes with the duct formed by an internal baffle (natural node, block of resin) and an exterior tied-on cover (cane, wood, hide)	

421.211	(Single) flutes with internal duct	
421.221.1	Open flutes with internal duct	
421.221.11	Without fingerholes	<i>European signalling whistle</i>
421.221.12	With fingerholes	<i>Recorder</i>
421.221.2	Partly-stopped flute with internal duct	<i>India and Indonesia</i>
421.221.3	Stopped flutes with internal duct	
421.221.31	Without fingerholes	
421.221.311	With fixed stopped lower end	<i>European signalling whistle</i>
421.221.312	With adjustable stopped lower end	<i>Piston pipes [swannee whistle]</i>
421.221.4	Vessel flutes with duct	
421.221.41	Without fingerholes	<i>Zoomorphic pottery whistles (Europe, Asia)</i>
421.221.42	With fingerholes	<i>Ocarina</i>
421.222	Sets of flutes with internal duct	
421.222.1	Sets of open flutes with internal duct	
421.222.11	Without fingerholes	<i>Open flue stops of the organ</i>
421.222.12	With fingerholes	<i>Double flageolet</i>
421.222.2	Sets of partly-stopped flutes with internal duct	<i>Rohrflöte stops of the organ</i>
421.222.3	Sets of stopped flutes with internal duct	<i>Stopped flue stops of the organ</i>
422	<b>Reedpipes</b> The air-stream has, through means of two lamellae placed at the head of the instrument, intermittent access to the column of air which is to be made to vibrate	
422.1	<b>Oboes</b> The pipe has a [double] reed of concussion lamellae (usually a flattened stem)	
422.11	(Single) oboes	
422.111	With cylindrical bore	
422.111.1	Without fingerholes	<i>Brit. Columbia</i>
411.111.2	With fingerholes	<i>Aulos, crumhorn</i>
422.112	With conical bore	<i>European oboe</i>
422.12	Sets of oboes	
422.121	With cylindrical bore	<i>Double aulos</i>
422.122	With conical bore	<i>India</i>

422.2	<b>Clarinets</b> The pipe has a [single] ‘reed’ consisting of a percussion lamella	
422.21	<b>(Single) clarinets</b>	
422.211	<b>With cylindrical bore</b>	
422.211.1	<b>Without fingerholes</b>	<i>Brit. Columbia</i>
422.211.2	<b>With fingerholes</b>	<i>European clarinet</i>
422.212	<b>With conical bore</b>	<i>Saxophone</i>
422.22	<b>Sets of clarinets</b>	<i>Egypt (zummara)</i>
422.3	<b>Reedpipes with free reeds</b> The reed vibrates through [at] a closely- fitted frame. There must be fingerholes, otherwise the instrument belongs to the free reeds	
412.13		<i>S.E. Asia</i>
422.31	<b>Single pipes with free reed</b>	
422.32	<b>Double pipes with free reeds</b>	
423	<b>Trumpets</b> The air-stream passes through the player’s vibrating lips, so gaining intermittent access to the air column which is to be made to vibrate	
423.1	<b>Natural trumpets</b> Without extra devices to alter pitch	
423.11	<b>Conches</b> A conch shell serves as trumpet	
423.111	<b>End-blown</b>	
423.111.1	<b>Without mouthpiece</b>	<i>India</i>
423.111.2	<b>With mouthpiece</b>	<i>Japan (rappakai)</i>
423.112	<b>Side-blown</b>	<i>Oceania</i>
423.12	<b>Tubular trumpets</b>	
423.121	<b>End-blown trumpets</b> The mouth-hole faces the axis of the trumpet	
423.121.1	<b>End-blown straight trumpets</b> The tube is neither curved nor folded	
423.121.11	<b>Without mouthpiece</b>	<i>Some alphorns</i>
423.121.12	<b>With mouthpiece</b>	<i>Almost world-wide</i>
423.121.2	<b>End-blown horns</b> The tube is curved or folded	
423.121.21	<b>Without mouthpiece</b>	<i>Asia</i>
423.121.22	<b>With mouthpiece</b>	<i>Lurs</i>
423.122	<b>Side-blown trumpets</b> The embouchure is in the side of the tube	
423.122.1	<b>Side-blown straight trumpets</b>	<i>S. America</i>
423.122.1	<b>Side-blown horns</b>	<i>Africa</i>

<b>423.2</b>	<b>Chromatic trumpets</b>	With extra devices to modify the pitch	
<b>423.21</b>	<b>Trumpets with fingerholes</b>		<i>Cornetti, key bugles</i>
<b>423.22</b>	<b>Slide trumpets</b>	The tube can be lengthened by extending a telescopic section of the instrument	<i>European trombone</i>
<b>423.23</b>	<b>Trumpets with valves</b>	The tube is lengthened or shortened by connecting or disconnecting auxiliary lengths of tube	<i>Europe</i>
<b>423.231</b>	<b>Valve bugles</b>	The tube is conical throughout	
<b>423.232</b>	<b>Valve horns</b>	The tube is predominantly conical	
<b>423.233</b>	<b>Valve trumpets</b>	The tube is predominantly cylindrical	

Suffixes for use with any division of this class (aerophones):

- 6 with air reservoir
- 61 with rigid air reservoir
- 62 with flexible air reservoir
- 7 with fingerhole stopping
- 71 with keys
- 72 with *Bandmechanik* [presumably a perforated roll or ribbon]
- 8 with keyboard
- 9 with mechanical drive

#### Appendix IV - Bibliography of the original Instruments and Ensembles sample

- Abbott, W. L. (1892). *Descriptive catalogue of the Abbott collection of ethnological objects from Kilima-njaro, East Africa*. Washington: U.S. Government Publishing Office.
- Ajisafe, A. K. (1924). *The Laws and Customs of the Yoruba People*. London: George Routledge & Sons, Ltd.
- Alexandru, T. (1959). [Liner notes]. *Anthology Of Rumanian Folk Music Vol. II*. Bucharest: Electrerecord.
- Ames, D. (1955). [Liner notes]. *Wolof Music of Senegal and the Gambia*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/wolof-music-of-senegal-and-the-gambia/world/album/smithsonian>
- Ammar, H. (1954). *Growing Up in an Egyptian Village*. New York: Grove Press.
- Anderson, J. (1934). Maori music, with its Polynesian background. *Memoirs of the Polynesian Society*, 10.
- Apel, W. (1960). *Harvard Dictionary of Music*. Cambridge: Harvard University Press
- Armstrong, J. M & Mitraux, A. (1948). The Goajiro. In J. H. Steward (Ed.), *Handbook of South American Indians Vol IV: The Circum-Caribbean Tribes*. Washington, D.C.: Smithsonian Institution.
- Ayrout, H. H. (1945). *The Fellaheen*. Cairo: R. Schindler.
- Baines, A. (1960). Bagpipes. *Occasional Papers on Technology*, 9. Oxford: Oxford University Press.
- Barrett, S. A. (1925). *The Cayapa Indians of Ecuador (Vol. 40, Indian Notes and Monographs)*. New York: Museum of the American Indian, Heye Foundation.
- Beliaev, V. (1927). Turkomangan Music. *Pro Musica*, 5.
- Bell, C. (1928). *The People of Tibet*. Oxford: Clarendon Press.
- Bennett, W. C., & Zingg, R. M. (1935). *The Tarahumara, an Indian tribe of northern Mexico*. Chicago: Univ. Chicago Press.
- Bhavnain, E. (1962). [Liner notes]. *Folk Music of Kashmir*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/folk-music-of-kashmir/world/album/smithsonian>

- Birket-Smith, K. (1945). *Ethnographical Collections from the Northwest Passage. Report of the Fifth Thule Expedition 1921-29*, 6(2). Copenhagen: Gyldendalske Boghandel.
- Blackman, W. S. (1927). *The Fellahin of Upper Egypt: their religious, social and industrial life to-day, with special reference to survivals from ancient times*. London: Harrap.
- Blackwood, B. (1935). *Both Sides of the Buka Passage: An ethnographic study of Social, Sexual and Economic Questions in the Northwestern Solomon Islands*. Oxford: Clarendon Press.
- Bogoras-Tan, V.G. (1909). The Chukchee: Material Culture, Parts 1-3. *Memoirs of the American Museum of Natural History*, 2. New York: Museum of Natural History.
- Bolinder, G. (1957). *Indians on Horseback*. London: Dennis Dobson.
- Boots, J. L. (1940). Korean Musical Instruments. *Transactions of the Korean Branch of the Royal Asiatic Society*, 30, 1-32.
- Boulton, L. & Cowell, H. (1955). [Liner notes]. *The Eskimos of Hudson Bay and Alaska*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/the-eskimos-of-hudson-bay-and-alaska/american-indian/music/album/smithsonian>
- Buck, P. H. (1930). Samoan Material Culture. *B. P. Bishop Museum Bulletin*, 75.
- Bukofzer, M. (1947). *Music in the Baroque Era*. New York: W. W. Norton & Co.
- Bunzel, R. (1932). Introduction to Zuni Ceremonialism. *U.S. Bureau of American ethnology. Forty-seventh annual report*. Washington, D.C.: U.S. Government Publishing Office.
- Byhan, A. (1926). The Caucasian Peoples. *Illustrierte Volkerkunde*, 2(2).
- Calame-Griaule, G. & Calame, B. (1956). [Liner notes]. *Scènes de la vie des Dogon. Les Trésors de l'Art Musical Populaire*. Paris: Résonances. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Etnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH\\_E\\_1965\\_011\\_001/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_E_1965_011_001/)
- Chottin, A. (1939). *Tableau de la musique marocaine*. Paris: P. Geuthner.
- Clarke, J. D. (1944). Three Yoruba Fertility Ceremonies. *Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 74, 91-96.
- Coleman, F. (1957). [Liner notes]. *Songs and Dances of Brittany*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/conan-family/songs-and-dances-of-brittany/world/music/album/smithsonian>



- Collaer, P. & Vander Linden, A. (1960). *Atlas Historique de la Musique*. Brussels: Les Editions et Ateliers d'Art Graphique Elsevier.
- Combe, G. A. (1926). *A Tibetan on Tibet*. London: T. Fisher Unwin Ltd.
- Condominas, G. (1957). *Nous Avons Mange La Foret*. Paris: Mercure de France.
- Conklin, H. & Maceda, J. (1953). [Liner notes]. *Hanunóo Music from the Philippines*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/hanunoo-music-from-the-philippines/world/album/smithsonian>
- Conzemius, E. (1932). *Ethnographical Survey of the Miskito & Sumu Indians of Honduras and Nicaragua*. Washington, D.C: Smithsonian Institution.
- Coon, C. S. (1931). Tribes of the Rif. *Harvard African Studies*, 9. Cambridge: Peabody Museum.
- Cooper, J. M. (1946). The Araucanians. In J. H. Steward (Ed.), *Handbook of South American Indians Vol II: The Andean Civilizations*. Washington, D.C.: Smithsonian Institution.
- Coulet, G. (1926). *L'organisation matérielle du theatre populaire chez les Annamites*. Ho Chi Minh City: Imprimerie Commerciale C. Ardin. (See also translation: *The material organization of the popular theater among the Annamese*. (1954). L. Greene, trans. New Haven: HRAF).
- Courlander, H. (1944). Notes from an Abyssinian Diary. *Musical Quarterly*, 30(3), 345–355.
- Courlander, H. (1951). [Liner notes]. *Folk Music of Ethiopia*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/folk-music-of-ethiopia/islamica-world/album/smithsonian>
- Courlander, H. (1960). *The Drum and the Hoe: Life and Lore of the Haitian People*. Berkeley and Los Angeles: University of California Press.
- Crocker, W. (1964). [Recording notes]. *William H. Crocker Recordings of the Canela*. In William Henry Crocker Papers, Sound Recordings, National Anthropological Archives, Smithsonian Institution.
- d'Azevedo, W. (1964). [Recording notes]. *Washo, Paiute, and Shoshone Songs*. Warren L. d'Azevedo Collection. In Alan Lomax Collection, American Folklife Center, Library of Congress.
- Danielou, A. (1952). A Catalogue of recorded classical and traditional Indian music. *Archives of recorded music*, 6. Paris: UNESCO.
- Danielou, A. (1953). [Liner notes]. *Laos*. Musical Anthology of the Orient series. UNESCO Collection of Traditional Music of the World. Bärenreiter-Musicaphon.

- Danielou, A. (1960). [Liner notes]. *Iran II: Classical Modal Music*. Musical Anthology of the Orient series. Bärenreiter-Musicaphon.
- Das, S. (1902). *Journey to Lhasa and Central Tibet*. Ed. W. W. Rockhill. London: John Murray.
- Densmore, F. (1918). *Teton Sioux Music*. Washington, D.C.: U.S. Government Publishing Office.
- Densmore, F. (1922). *Northern Ute music*. Bureau of American Ethnology Bulletin. 75, 1-213.
- Densmore, F. (1926). Music of the Tule Indians of Panama. *Smithsonian Miscellaneous Collections*, 77(11).
- Densmore, F. (1929). *Papago Music*. Washington, D.C.: U.S. Government Publishing Office.
- Densmore, F. (1932). Yuman and Yaqui music. *Bureau of American Ethnology Bulletin*, 110, 1-216.
- Densmore, F. (1936). Cheyenne and Arapaho Music. *Southwest Museum Papers*, 10.
- Densmore, F. (1938). Music of Santo Domingo Pueblo, New Mexico. *Southwest Museum Papers*, 12.
- Di Dio, F. (1958). [Liner notes]. *Les Dogon : les chants de la vie, le rituel funéraire*. Paris: Radio France Outre Mer. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Ethnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH\\_E\\_1958\\_001\\_001/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_E_1958_001_001/)
- Dickson, H. R. P. (1949). *The Arab of the Desert: A Glimpse into Badawin Life in Kuwait and Sa'udi Arabia*. London: George Allen & Unwin.
- Donner, K. (1926). *Among the Samoyed in Siberia*. Stuttgart: Strecker und Schroder.
- Donostia, J. A. (1952). Instrumentos musicales de pueblo Vasco. *Anuario Musical del Instituto Espanol de Musicologia*, 7.
- Dorgeles, R. (1925). *Sur la route mandarine*. Paris: Albin Michel.
- Eckardt, A. (1930). *Koreanische Musik*. Tokyo: Deutsche Gesellschaft für Natur- u. Völkerkunde Ostasiens.
- Elkin, A. P. & Jones, T. (1957). Arnhem Land Music. *Oceania Monographs #9*. Sydney: The University of Sydney & Australasian Medical Publishing Co. Inc.
- Elwin, V. (1947). *The Muria and their Ghetul*. London: Oxford University Press
- Evans, I. (1922). *Among Primitive Peoples in Borneo: A Description of the Lives, Habits and Customs of the Piratical Head-Hunters of North Borneo*. London: Seeley, Service and Co.
- Evans, I. (1923). *Religion, Folklore and Custom in North Borneo and the Malay Peninsula*. Cambridge: Cambridge University Press.

- Evans, I. (1937). *The Negritos of Malaya*. Cambridge: Cambridge University Press
- Evans, I. (1953). *The Religion of the Tempasuk Dusuns of North Borneo*. Cambridge: Cambridge University Press.
- Fejos, P. (1943). Ethnography of the Yagua. *Viking Fund Publications in Anthropology*, 1. New York: The Viking Fund.
- Fenton, W. (1942). [Liner notes]. *Songs from the Iroquois Longhouse*. Archive of Folk Song, Library of Congress. Retrieved from [https://www.loc.gov/folklife/LP/Iroquois\\_L6\\_opt.pdf](https://www.loc.gov/folklife/LP/Iroquois_L6_opt.pdf)
- Firth, R. (1940). The Work of the Gods in Tikopia. *Monographs on social anthropology*, 1-2. London: London school of economics and political science.
- Fischer, H. (1958). Schallgerate in Ozeanien : Bau und Spieltechnik, Verbreitung und Funktion. *Sammlung musikwissenschaftlicher Abhandlungen*, 36. Strasbourg: Editions P.H. Heitz.
- Fletcher, A. & La Flesche, F. (1911). *The Omaha Tribes*. Washington: 27th Annual report of the Bureau of American Ethnology.
- Gaisseau, P., Fichtet, J. & Saulnier, T. (1955). [Liner notes]. *Guinée : musique Toma*. Département d'ethnomusicologie, CNRS, Musée de l'Homme, Paris. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Etnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH\\_E\\_1955\\_009\\_001/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_E_1955_009_001/)
- Garfield, V. E., Wingert, P. & Barbeau, M. (1951). The Tsimshian: Their Arts and Music. *Publications of the American Ethnological Society*, 18. New York: J.J. Augustin.
- Gillard, E. T. & Gilliard, M. (1963). [Recording notes]. *New Guinea - Abelam tapes*. In Anthony Forge papers. MSS 411. Special Collections & Archives, UC San Diego Library.
- Gladwin, T. & Sarason, S. B. (1953). Truk: Man in Paradise. *Viking Fund Publications in Anthropology*, 20. New York: Wenner-Gren Foundation.
- Goddard, P. (1903-04). Life and Culture of the Hupa. *University of California Publications in American Archaeology & Ethnology* 1(1). Berkeley: University of California Press.
- Goodenough, W. H. (1951). *Property, Kin and Community on Truk*. New Haven: Yale University Press.
- Gorella, J. (1951). [Liner notes]. *Folk Music of Pakistan*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/folk-music-of-pakistan/central-asia-islamica-world/album/smithsonian>
- Graca, F. L. & Giacomatti, M. (1962). *Anthology of Portuguese Music, Vol. 1: Tras-Os-Montes*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian

Center for Folklife and Cultural Heritage. Retrieved from  
<https://folkways.si.edu/anthology-of-portuguese-music-vol-1-tras-os-montes-and-vol-2-algarve/world/album/smithsonian>

- Greenberg, J. H. (1946). The Influence of Islam on a Sudanese Religion. *Monographs of the American Ethnological Society*, 10. New York: J.J. Augustin.
- Grigson, W. (1938). *The Maria Gonds of Bastar*. London: Oxford University Press
- Grodekov, N. I. (1889). *The Kazakhs and Kirgiz of the Syr-Darya Oblast, Vol. 1: Juridical Life*. Tashkent: The Typolithography of S. I. Lakhtin.
- Grout, D. J. (1960). *A History of Western Music*. New York: W. W. Norton & Co.
- Gutierrez de Pineda, V. (1948). Organizacion social en la Guajira. *Revista Del Instituto Etnologico Nacional*, 3(2).
- Gutmann, B. (1926). Chagga Law. *Arbeiten fur Entwicklungspsychologie*, 7. Munich: C. H. Beck.
- Haddon, A.C., Rivers, W. H. R., Seligman, C. G., Myers, C. S., McDougall, W., Ray, S. H., & Wilkin, A. (1908). *Report of the Cambridge Anthropological Expedition to the Torres Straits, Vol. V: Sociology, Magic and Religion of the Western Islanders*. Cambridge: Cambridge University Press
- Haddon, A.C., Rivers, W. H. R., Seligman, C. G., Myers, C. S., McDougall, W., Ray, S. H., & Wilkin, A. (1908). *Report of the Cambridge Anthropological Expedition to the Torres Straits, Vol. VI: Sociology, Magic and Religion of the Eastern Islanders*. Cambridge: Cambridge University Press
- Haddon, A.C., Rivers, W. H. R., Seligman, C. G., Myers, C. S., McDougall, W., Ray, S. H., & Wilkin, A. (1912). *Report of the Cambridge Anthropological Expedition to the Torres Straits, Vol. IV: Arts & Crafts*. Cambridge: Cambridge University Press
- Handy, E. S. C. (1923). The Native Culture in the Marquesas. *B. P. Bishop Museum Bulletin*, 9.
- Handy, E. S. C. & Winne, J. L. (1925). Music in the Marquesas Islands. *B. P. Bishop Museum Bulletin*, 17.
- Hanzeli, V. E., & Indiana University. (1955). *The Hungarians*. Subcontractor's monograph, HRAF-5: Indiana University Graduate Program in Uralic and Asian Studies. New Haven: Human Relations Area Files.
- Hassan, M. & Shuaibu, M. (1952). *A Chronicle of Abuja*. (F. Heath, trans.) Ibadan: Ibadan University Press.
- Hawes, C. H. (1903). *In the Uttermost East*. London: Harper.

- Hermanns, M. (1948). *The A Mdo Pa Greater Tibetans: The Socio-economic basis of the Pastoral Cultures of Inner Asia*. Freiburg: Philosophische Fakultät der Universität Freiburg in der Schweiz
- Hickmann, H. (1956). *45 siècles de musique dans l'Égypte ancienne : à travers la sculpture, la peinture, l'instrument*. Paris: La Revue Musicale, Richard-Masse, Editeurs.
- Hoàng-Yên. (1919). La musique a Hué, Dòn-Nguyet et Dòn-Tranh. *Bulletin des Amis du Vieux Hué*, 6, 233-387. Hanoi-Haiphong: Imprimerie d'Extreme-Orient. (See also translation: The music of Hué, Don-Nguyet and Don-Tranh. (1953). K. Botsford, trans. New Haven: HRAF).
- Holliday, F. & Holliday, G. (1960). [Liner notes]. *Tuareg Music of the Southern Sahara*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/tuareg-music-of-the-southern-sahara>
- Hopkins, T. & Hopkins, E. (1962-63). [Liner notes]. *Hopkins Recordings from Uganda 1962-1963*. In Alan Lomax Collection, American Folklife Center, Library of Congress.
- Ivens, W. G. (1927). *Melanesians of the South-East Solomon Islands*. London: Kegan Paul, Trench, Trubner.
- Izikowitz, K. G. (1935). *Musical and other sound instruments of the south American Indians: A comparative ethnographical study*. Göteborg: Elanders Boktryckeri.
- Jain, S. K. (1965). Wooden Musical Instruments of the Gonds of Central India. *Ethnomusicology*, 9(1), 39-42. doi:10.2307/850416
- Jenks, A. (1905). The Bontoc Igorot. *Ethnological Survey Publications*, 1.
- Jochelson, W. (1933). The Yakut. *Anthropological Papers of the American Museum of Natural History*, 33. New York: American Museum of Natural History.
- Johnson, S. (1921). *The History of the Yoruba from the Earliest Times to the Beginning of the British Protectorate*. (O. Johnson, Ed.). London: George Routledge & Sons, Ltd.
- Károlyi, A. F. (1939). *Hungarian Pageant: Life, Customs and Art of the Hungarian Peasantry*. Budapest: Dr. George Vajna & Co.
- Karsten, R. (1935). *The head-hunters of western Amazonas: The life and culture of the Jibaro Indians of eastern Ecuador*. Helsinki: Centraltryckeriet.
- Karsten, R. (1955). *The Religion of the Samek: Ancient Beliefs and Cults of the Scandinavian and Finnish Lapps*. Leiden: E.J. Brill.
- Karutz, R. (1925). *Atlas der Völkerkunde, Vol. II: Die Völker Europas*. Stuttgart: Franckh'sche Verlagsbuchhandlung.

- Kawaguchi, E. (1909). *Three Years in Tibet*. Chennai: The Theosophist Office.
- Keiler, B. (1962). [Liner notes]. *Instruments and Music of Indians of Bolivia* [LP]. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/instruments-and-music-of-indians-of-bolivia/american-indian-world/album/smithsonian>
- Kirby, P. (1953). *The Musical Instruments of the Native Races of South Africa*. Johannesburg: Witwatersrand University Press.
- Knosp, G. (1912). Rapport sur une mission officielle d'étude musicale en Indochine. *Bulletin de l'Ecole française d'Extrême-Orient*, 12, 18-21.
- Kodály, Z. (1960). *Folk Music of Hungary*. London: Barrie and Rockliff
- Kovani, J. (Ed.) (1963). *Catalogue of the Exhibition of Folk Instruments in the Area Center for Folk Art at Straznice*. (M. Vizdom, Trans.)
- Kreinovich, E. A. (1935). Okhota na belckhu uriliakov clerevini Puir. *Sovetskaia etnografiia*, 2. Moscow: Akademiia Nauk SSSR.
- Kremenliev, B. (1952). *Bulgarian-Macedonian Folk Music*. Berkeley and Los Angeles: University of California Press.
- Krieger, H.W. (1926). Material culture of the people of southeastern Panama, based on specimens in the United States National Museum. *Bulletin of the United States National Museum*, 134, 1-141.
- Kroeber, A. L. (1953). Handbook of Indians of California. *Bureau of American Ethnology Bulletin* 78. Berkeley: California Book Company.
- Kunst, J. (1949). *Music in Java, Vol. 1 and 2*. The Hague: Nijhoff.
- Lang, P. H. (1941). *Music in Western Civilization*. New York: W. W. Norton & Co.
- Laoye, H. H. (1954). Yoruba Drums. *Nigeria Magazine*, 45. Lagos: Government of Nigeria.
- Lavignac, A. (1922). *Encyclopédie de la musique et dictionnaire du Conservatoire, Part 1, Vol. 5*. Paris: C. Delagrave.
- Layard, J. (1942). *Stone Men of Malekula*. London: Chatto and Windus
- Levchine, A. (1840). *Description of the Kirghiz-Kazak*. Paris: L'Imprimerie Royale.
- Levy, J. (1961). [Liner notes]. *Music from South India: Kerala*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural

Heritage. Retrieved from  
<https://folkways.si.edu/music-from-south-india-kerala/world/album/smithsonian>

Lightfoot, L. (1960). [Liner notes]. *Ritual Music of Manipur (India)*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from  
<https://folkways.si.edu/ritual-music-of-manipur-india/world/album/smithsonian>

Linton, R. (1923). The Material Culture of the Marquesas Islands. *Memoirs of the B. P. Bishop Museum*, 8(5).

Linton, R. (1933). The Tanala, a hill tribe of Madagascar. *Anthropological series* 22(317). Chicago: Field Museum of Natural History.

Lloyd, A. L. (1954). [Liner notes]. *Columbia World Library Of Folk And Primitive Music Vol. XVII: Bulgaria*. Retrieved from  
<https://www.discogs.com/Alan-Lomax-A-L-Lloyd-Bulgaria/release/3459962>

Loeb, E. M. (1926). Pomo Folkways. *University of California Publications in American Archaeology & Ethnology* 19(2), 149-405. Berkeley: University of California Press.

Lomax, A. (1951). [Liner notes]. *Columbia World Library Of Folk And Primitive Music Vol. I: Ireland*. Columbia Records. In Alan Lomax Collection, American Folklife Center, Library of Congress.

Lomax, A. (1952). [Liner notes]. *Songs And Dances Of Spain Volume 1: Cities Of Andalusia*. Westminster. In Alan Lomax Collection, American Folklife Center, Library of Congress.

Lomax, A. (1952). [Liner notes]. *Songs And Dances Of Spain Volume 10: Castille*. Westminster. In Alan Lomax Collection, American Folklife Center, Library of Congress.

Lomax, A. (1952). [Liner notes]. *Songs And Dances Of Spain Volume 8: Galicia*. Westminster. In Alan Lomax Collection, American Folklife Center, Library of Congress.

Lomax, A. (1955). [Liner notes]. *Columbia World Library Of Folk And Primitive Music Vol. XIII: Spain*. In Alan Lomax Collection, American Folklife Center, Library of Congress.

MacDonald, D. (1929). *The Land of the Lama*. London: Seeley, Service and Co.

Maceda, J. (1961). [Recording notes]. *Iban of Borneo*. Jose Maceda Collection, University of the Philippines Center for Ethnomusicology.

Malm, W. (1959). *Japanese Music and Musical Instruments*. Rutland and Tokyo: Charles E. Tuttle.

Mandelbaum, D. (1940). The Plains Cree. *Anthropological Papers of the American Museum of Natural History* 37(2). New York: American Museum of Natural History.



- Marcel-Dubois, C. (1939). Instruments de musique et cris chantés dans les rues de Paris. Paris: *Bulletin de la Fédération folklorique d'Ile de France*, 47-50.
- Marcel-Dubois, C. & Lomax, A. (1954). [Liner notes]. *Columbia World Library Of Folk And Primitive Music Vol. IV: France*. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Ethnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH\\_E\\_1955\\_016\\_004/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_E_1955_016_004/)
- Marcuse, S. (1964). *Musical Instruments: A Comprehensive Dictionary*. New York: Doubleday & Co.
- Marlens, W. S. (1956). [Liner notes]. *Songs and Dances of Puerto Rico*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/songs-and-dances-of-puerto-rico/caribbean-latin-world/music/album/smithsonian>
- Marshall, D.S. (1950). *Cuna Folk: a conceptual scheme involving the dynamic factors of culture as applied to the Cuna Indians*. Unpublished manuscript, Department of Anthropology, Harvard University.
- Marshall, H. (1922). The Karen People of Burma: A Study in Anthropology and Ethnology. *Ohio State University Bulletin* 26(13).
- Mazel, J. (1955). [Liner notes]. *Féerie Sud-Marocaine*. France: Philips. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Ethnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH\\_E\\_1957\\_004\\_001/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_E_1957_004_001/)
- Mazel, J. (1960). [Liner notes]. *Grand Haouach De Telouet*. France: Philips. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Ethnomusicologie.
- McCallister, R. (March 1965). Interview by Alan Lomax. [Unpublished]
- McKim, F. (1947). San Blas: An account of the Cuna Indians of Panama: The Forbidden Land. *Ethnologiska Studier*, 15.
- McLeod, N. (1957). *The social context of music in a Polynesian community*. [Unpublished master's thesis]. University of London.
- McLeod, N. (1962-66). [Recording notes]. *Madagascar*. [Previously unpublished]. Norma McLeod Collection. In Alan Lomax Collection, American Folklife Center, Library of Congress.
- McPhee, C. (1949). The Five-Tone Gamelan Music of Bali. *Musical Quarterly*, 35(2), 250-281.
- Merriam, A. P. & Merriam, B. (1962). [Liner notes]. *Ekonda Tribal Music Of The Congo*. Washington Records.
- Merriam, A. P. & Merriam, B. W. (1950). Flathead Indian music: report on field research, summer 1950.



- Messing, S. D. (1957). *The Highland-Plateau Amhara of Ethiopia*. [Doctoral dissertation, University of Pennsylvania].
- Meyer, H. (1916). *The Barundi: an ethnological study of German East Africa*. Leipzig: Ott Spamer.
- Minn, E. K., & Indiana University. (1955). *The Lapps*. Subcontractor's monograph, HRAF-3, #6: Indiana University Graduate Program in Uralic and Asian Studies. New Haven: Human Relations Area Files.
- Mirambel, A. (1939). Un instrument de musique populaire en Grèce: Le μπουζούκι (bouzouki). *Revue De Musicologie*, 20(69), 19-23. doi:10.2307/926585
- Morris, J. (1938). *Living with Lepchas: A book about the Sikkim Himalayas*. London: William Heinemann, Ltd.
- Moser, B. (1960-1). [Recording notes] *Motilon recordings*. Moser-Tayler Anglo-Colombian Expedition, Brian Moser & Donald Tayler Colombia Collection. In Sound Archive of the British Library, London. Retrieved from <https://sounds.bl.uk/World-and-traditional-music/Moser-Tayler-Colombia>
- Musil, A. (1928). The Manners and Customs of the Rwala Bedouins. *Oriental Explorations and Studies*, 6. New York: American Geographical Society.
- Nettl, B. (1960). *Cheremis Musical Styles*. Bloomington: Indiana University Press.
- Ngô-Quy-Son. (1942). De quelques interdits chez les Annamites du Tonkin. *Institut Indochinois por l'étude de l'Homme, Bulletins et Travaux pour 1940*, 3(2), 31-37. (See also translation: A Few Taboos among the Annamites of Tonkin. (1951). C. Messner, trans. New Haven: HRAF).
- Nguyễn-văn-Khoan. (1930). Essai sur le Đình et le culte du génie tutélaire des villages au Tonkin. *Bulletin de l'Ecole française d'Extrême-Orient*, 30, 107-139.
- Nimuendaju, C. (1952). The Tukuna. *University of California Publications in American Archaeology and Ethnology*, 45. Berkeley: University of California Press.
- Nordenskiöld, A. E. (1882). *The Voyage of the Vega Around Asia and Europe*. New York: Macmillian & Co.
- Pagés, G. (1933). Un Royaume hamite au Centre de l'Afrique: au Ruanda sur les Bords du Lac Kivu (Congo Belge) [A Hamitic kingdom in the center of Africa: in Ruanda on the shores of Lake Kivu (Belgian Congo)]. *Mémoires de Institut Royal Colonial Belge: Collection in-80*, 1. Brussels: Libraire Falk fils, Georges van Campenhout, Successeur.
- Parkinson, R. (1899). On the ethnography of the Northwestern Solomon Islands. *Abhandlungen und Berichte des Königl. Zoologischen und Anthropologisch-Ethnographischen Museums zu Dresden*, 7(6).

- Pasquier, P. (1907). *L'Annam d'autrefois, Essai sur la constitution de l'Annam avant l'intervention française*. Paris: Société d'Éditions.
- Peristeres, S. (1955). [Liner notes]. *Folk Music of Greece*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/folk-music-of-greece/world/album/smithsonian>
- Petrullo, V. (1939). The Yaruros of the Capanaparo River, Venezuela. *Bureau of American Ethnology Bulletin*, 123(11), 161-290.
- Radcliffe-Brown, A. R. (1922). *The Andaman Islanders: A study in Social Anthropology*. Cambridge: Cambridge University Press
- Rattray, R. S. (1927). *Religion and Art in Ashanti*. Oxford: Clarendon Press.
- Raum, O. F. (1940). *Chaga Childhood: A Description of Indigenous Education in an East African Tribe*. London: Oxford University Press for the International Institute of African Languages and Cultures.
- Reese, G. (1954). *Music in the Renaissance*. New York: W. W. Norton & Co.
- Richards, A. (1939). *Land, Labor, and Diet in Northern Rhodesia: An economic study of the Bemba tribe*. Oxford: Oxford University Press.
- Rivers, W. H. R. (1906). *The Todas*. New York: Macmillan & Co.
- Robequain, C. (1929). *Le Thanh Hoà: étude géographique d'une province annamite*. Thesis for Doctor of Letters from the University of Grenoble. Paris and Brussels: Les Éditions G. Van Oest.
- Roberts, H. H. (1926). Ancient Hawaiian Music. *B. P. Bishop Museum Bulletin*, 29.
- Roberts, J. M. (1956). *Zuni Daily Life*. Laboratory of Anthropology, University of Nebraska, Lincoln.
- Rockhill, W. W. (1895). *Notes on the Ethnology of Tibet*. Report of the U.S. National Museum. Washington, D.C.: Smithsonian Institution.
- Roth, G. K. (1953). *The Fijian Way of Life*. London: Oxford University Press
- Rouget, G. (1952). [Liner notes]. *Musique d'Afrique occidentale: Malinké et Baoulé*. Paris: Vogue Contrepoint. In Sound Archives of the CNRS & the Musée de l'Homme, Centre de Recherche en Ethnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH\\_I\\_1970\\_055/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_I_1970_055/)
- Rouget, G. (1957). [Liner notes]. *Pondo Kakou - Musique de société secrète*. Département d'ethnomusicologie, CNRS, Musée de l'Homme, Paris. In Sound Archives of the CNRS &

- the Musée de l'Homme, Centre de Recherche en Etnomusicologie. Retrieved from [https://archives.crem-cnrs.fr/archives/collections/CNRSMH E 1957 014 001/](https://archives.crem-cnrs.fr/archives/collections/CNRSMH_E_1957_014_001/)
- Sachs, C. (1938). *Les Instruments de Musique de Madagascar*. Université de Paris: *Travaux et Mémoires de l'Institut d'Ethnologie*, 28.
- Sachs, C. (1940). *The History of Musical Instruments*. New York: W. W. Norton & Co.
- Sachs, C. (1943). *The Rise of Music in the Ancient World, East and West*. New York: W. W. Norton & Co.
- Sandvik, O. M. (1954). [Liner notes]. *Songs and Dances of Norway*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/songs-and-dances-of-norway/world/music/album/smithsonian>
- Schwartz, T. (1953). [Recording notes]. *Manus tape*. Ted Schwartz Collection, AIE Tapes #53. T.53.1. In Alan Lomax Collection, American Folklife Center, Library of Congress.
- Seeland, N. (1882). Die Ghiliaken: Eine ethnograposche Skizze. *Russische revue*, 21. St. Petersburg: Verlag der Kaiserlichen Hofbuchhandlung H. Schmitzdorff (Carl Röttger).
- Shen, T. & Liu, S. (1953). *Tibet and the Tibetans*. Palo Alto: Stanford University Press.
- Sheridan, R. (1958). [Liner notes]. *Music Of New Guinea, The Australian Trust Territory: An Introduction*. Wattle Archive Series.
- Singh, W. W. (1950). [Liner notes]. *Folk Music of India*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/folk-music-of-india/world/album/smithsonian>
- Slaski, J. (1950). Peoples of the Lower Luapula Valley. *Ethnographic Survey of Africa: East Central Africa, pt. 2*. London: International African Institute.
- Smith, M. G. (1955). *The Economy of Hausa Communities of Zaria*. London: H. M. Stationery Office for the Colonial Office.
- Staal, J. (1923). The Dusuns of North Borneo. Their Social Life. *Anthropos*, 18/19(4/6), 958-977.
- Stannus, H. (1910). Notes on Some Tribes of British Central Africa. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland*, 40, 285-335. doi:10.2307/2843261
- Stevenson, M.C. (1904). The Zuni Indians: Their mythology, esoteric fraternity and ceremonies. *U.S. Bureau of American ethnology. Twenty-third annual report. 1901-1902*. Washington, D.C.: U.S. Government Publishing Office.

- Stevenson, R. (1959). Ancient Peruvian Instruments. *The Galpin Society Journal*, 12, 17.  
doi:10.2307/841943
- Stout, D.B. (1947). San Blas Cuna Acculturation: An Introduction. *Viking Fund Publications in Anthropology*, 9. New York: The Viking Fund.
- Thomas, E. M. (1959). *The Harmless People*. New York: A. A. Knopf
- Thomas, G. (1932). Customs and Beliefs of the Natives of Buka. *Oceania*, 2. Melbourne: The Australian National Research Council.
- Thurrow, D. (1956). [Liner notes]. *The Baoule of the Ivory Coast*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/the-baoule-of-the-ivory-coast/world/music/album/smithsonian>
- Titiev, M. (1951). *Araucanian culture in transition (Vol. 15, Occasional Contributions)*. Ann Arbor, MI: University of Michigan Press.
- Tracey, H. (1948). *Chopi Musicians: Their music, poetry, and instruments*. Oxford: Oxford University Press.
- Tracey, H. (1957). [Liner notes]. *The Sounds of Africa, TR14*. In The Hugh Tracey Acetate and Vinyl Collections, The International Library of African Music, Rhodes University.
- Tracey, H. (1957). [Liner notes]. *The Sounds of Africa, TR19*. In The Hugh Tracey Acetate and Vinyl Collections, The International Library of African Music, Rhodes University.
- Tracey, H. (1957). [Liner notes]. *The Sounds of Africa, TR21*. In The Hugh Tracey Acetate and Vinyl Collections, The International Library of African Music, Rhodes University.
- Tracey, H. (1957). [Liner notes]. *The Sounds of Africa, TR34*. In The Hugh Tracey Acetate and Vinyl Collections, The International Library of African Music, Rhodes University.
- Tracey, H. (1965). [Liner notes] *The Sounds of Africa, TR204*. In The Hugh Tracey Acetate and Vinyl Collections, The International Library of African Music, Rhodes University.
- Tracey, H. (1965). [Liner notes] *The Sounds of Africa, TR205*. In The Hugh Tracey Acetate and Vinyl Collections, The International Library of African Music, Rhodes University.
- Tschopik, H. (1954). [Liner notes]. *Music from Mato Grosso*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/music-from-mato-grosso/american-indian-latin-world/album/smithsonian>

- Tschopik, H. (1950). [Liner notes]. *Music of Peru* [LP]. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/music-of-peru/a/latin-world/album/smithsonian>
- Tsybikov, G. (1919). *A Buddhist Pilgrim to the Holy Places of Tibet: from diaries kept 1899-1902*. St Petersburg: Russian Geographical Society.
- Turbull, C. (1961). *The Forest People*. New York: Simon & Schuster.
- Turner, T.S. (1961). [Recording notes]. *Terrence S. Turner Recordings of N. Kayapò*. [Previously unpublished]. In Alan Lomax Collection, American Folklife Center, Library of Congress.
- Turney-High, H. (1941). Ethnography of the Kutenai. *Memoirs of the American Anthropological Association* 56. Menasha: American Anthropological Association.
- Van Aalst, J. A. (1884). *Chinese Music*. Imperial Maritime Customs Special Series 6. Shanghai: Statistical Dept. of the Inspectorate General of Customs.
- Van Hest, P. (1959). [Liner notes]. *The Topoke People of the Congo*. Folkways Records. In Ralph Rinzler Folklife Archives and Collections, Smithsonian Center for Folklife and Cultural Heritage. Retrieved from <https://folkways.si.edu/the-topoke-people-of-the-congo/world/music/album/smithsonian>
- Vayda, C. L. (1963). [Recording notes]. *Maring tapes*. Cherry Lowman Vayda collection. In Alan Lomax Collection, American Folklife Center, Library of Congress.
- Vertkov, K., Blagodatov, G., Yazovitskaya, E. (1963). *Atlas Muzikalnich Instrumentov Narodov CCCP* [*Atlas of the Musical Instruments of the Peoples of the USSR*]. (J. Wilbur, Trans.) Moscow: State Publishers Music.
- Viski, K. (1932). *Hungarian Peasant Customs*. Budapest: Dr. George Vajna & Co.
- Viski, K. (1938). *The Handbook of Hungarian Philology*. (J. Melich & G. Nemeth, Ed.) Budapest: Hungarian Academy of Sciences.
- Wafer, L. (1934). A New Voyage and Description of the Isthmus of America. *The Hakluyt Society Series*, 2(73).
- Walsh, E. H. C. (1907). The Coinage of Tibet. *Memoirs of the Asiatic Society of Bengal*, 2.
- Westermann, D. (1912). *The Shilluk People: Their language and folklore*. Philadelphia: The Board of Foreign Missions of the United Presbyterian Church of North America.

