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ALAN LOMAX

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The best of songs rise like a cry from the heart of the singer to arouse the sympathy of any culture member. This apparent simplicity is due to the subordination of all the expressive systems involved to some overriding cultural need —Alan Lomax, Folk Song Style & Culture

An early intimation of Cantometrics comes from a letter from Alan Lomax to William Russell proposing a method for explaining the history of jazz by classifying its different regional traits. Occupied with a series of LPs on world music he was compiling in Europe for Columbia Records and plagued by loneliness, lack of money, and the sense of being an outsider to the world of true scholarship, his letters to siblings and friends nonetheless attest to rapidly maturing ideas about musical style. "I want you to know about the idea that has gradually risen like a coral island out of the last three years of blind-mole-burrowing through the roaring, shrieking, pounding, tympanum-punching ocean of world music," he wrote to his friend Robin Roberts in 1954. "Music, musical style, changes least of all human cultural characteristics. [It] is associated with the first and earliest distributions of mankind across the world. Musical instruments have complicated this by introducing certain tonalities and tonal demands, but because [they] were first magical instruments for controlling nature, they only influenced the surface of the music but never really altered its basic content."

He continued: "I conceive of the motive represented by music as having a dynamic character, a formative character, such as the temperament of an artist, and as such would act, along with economic factors, as not only a classificatory element in culture, but also as a sign of the determining and formative element." Deeply opposed to philosophical absolutism, Lomax rejected the class of music theory expounded by Pythagoras, who speculated that pleasing harmonies vibrated throughout matter. "I am after an idea that will replace [this], that the basic patterns of music are part of the potentialities of tissue [the corporeal being]," he went on, " [that is] the sounds associated with the basic expressions of human feeling... A mixture of these types ...is related, I believe, with the song of some living creature — cicada, bird, animal — and represents the possibilities, the limits of the human auditory reaction pattern. Every human sound is classified by these limits, I believe. Therefore, human music is in harmony with the possibilities of tissue, not with the harmonies of matter."

Toward a Theory of Folk Song Style (See also [Concept of Style](#) in Project History)

As a young man building a corpus of folk songs for the Library of Congress in the 1930s, Lomax was struck by vivid contrasts in emotional tone and delivery that he heard in the singing of blacks and whites and in different regions of the country. He first sought for ways to explain this in the comparative musicology of Curt Sachs, whose NYU lectures he audited, and George Herzog, with whom he studied at Columbia in the late 1930s. Inspired also by a preceding generation of folklorists, and particularly by Melville Herskovits, he saw these New World musical configurations as regionally based historic traditions transplanted from Africa, the Caribbean, and the British Isles and recombining as catalyzing cultural forces in the Americas.

Herzog was one of the first to describe a culture's prevailing musical tendencies as "style," stipulating that "In order to characterize the music of an ethnic group, it is necessary to separate the strains that are obviously due to the intrusion of foreign elements or to the survival of old forms from those which make up the bulk of the musical lore. The latter will be more apt to range themselves readily into the picture of a prevalent style" (Herzog 1935).

We see such an approach both in Lomax's collecting and in the taxonomic method he applied to his own discovery of musical styles, which was also influenced by Curt Sachs' and Erich Hornbostel's classification of musical instruments (1914) and Sachs's history of dance (1937). But Lomax's earliest intellectual mentor had been Charles Seeger, in lieu of his father, who frowned on scientific inquiry in folklore. Seeger shared and indeed had been influenced by the Lomaxes' views on the importance of foregrounding American vernacular song, and he later worked out a theory of music as a language with its own grammar, phonemes, and families, which change with social

and economic conditions.

Alongside his father, the folklorist John A. Lomax, Lomax had learned the importance of songs accompanying physical labor and daily tasks, including those of mothering and teaching children, in the repertoires and lives of the folk. From the first recordings he made on a Texas farm in 1933, to the scenes he filmed of Delta elders in the 1970s reliving their days of plowing, chopping, and tie-tamping to song, he sought out and recorded work songs, noting the movement, effort, timing, breathing intervals, and emotion they entailed. Lomax theorized that these were intrinsically related to song, and later he and his colleagues tested for relationships between qualities of singing (and of dancing) and the physical experience, social organization, and nutritional yield of work and subsistence.

The initial impetus of Cantometrics was the empirical study of emotion in singing cross-culturally. From the beginning Lomax was fascinated by the personal histories and backgrounds of the singers and musicians he recorded. Lomax was a Texan with the attendant qualities of individualism, chivalry, and brash assertiveness — but with a devotion to psychoanalytic theory, folklore, and anthropology as deep as his aversion to football, institutional religion, and the pursuit of riches. The intense light and shadow of his own temperament, and consequently of his views, were no doubt magnified by the injustice and human suffering, the larger-than-life personalities, and the high drama and comedy to which he was exposed as a Southerner.

From these things doubtless arose Lomax's basic conception of folk song as the sonic symbolization of touchstone human emotions, shaped by culture. In his view the great folk artists most vividly and sensitively expressed recurrent motifs of human existence, including the sentiments that are produced by social and economic exclusion, longings for the forbidden and out of reach. "In doing biographies of a number of Negro singers, I've found out that the general emotional structure of the individual personality and the social ambiance seemed to be determinative of the quality of the music" (Lomax to Seeger 1955). Referencing his Delta fieldwork of the early forties, he wrote,

I felt that without knowing more about the inner emotional lives of the singers, the objective data on social aesthetics would be of slight value. Therefore I recorded long life histories of a singing sister in the Baptist Church a rural preacher, a wandering blues singer, and a convict. These Southern folk poets tell in the most vivid and moving way and in a style that approaches that of the great writers, why they sing and what they're singing about. They make clear the nature of the floodtide of emotion that spilled out of the South and spread across the whole world. (Lomax 1954b)

After 1950 Lomax's growing understanding of world music was enriched by his collaborations and friendships with colleagues abroad, among them Gilbert Rouget, Constantin Brailoiu, Jaap Kunst, Eduard Torner, Diego Carpitella, and Peter Kennedy. By age forty Lomax had familiarized himself with the widest range of music. It was said of him that he would simply hum the signature tune of a place to get people singing. He had worked closely with musicians in the field, in the studio, and on radio and concert stages, and zealously followed the work of fellow collectors. He spent both of his honeymoons in the Caribbean — on long recording trips. Spencer Howell, his guide on the island of Nevis in 1962, accurately foretold a swift end to Lomax's second marriage by observing the exhausting pace at which he worked.

During the post-War period Lomax moved to Europe, his professional horizons expanding to encompass European fieldwork and world music. His studies of natural history and ethology led him to envision a classification of world song by aesthetic patterns conceived in behavioral and psychological terms. He corresponded with Charles Seeger, whose theory of music as a language whose structure changes with social and economic pattern was a source of kindred ideas. Drawing upon the work of Freud, Marx, Propp, Mead, and Erikson (see [Concept of Style](#) in Project History), Lomax had also been thinking of the emotional qualities of singing in light of historical materialism and psychoanalysis — that is, as arising from the internalized experience of work, access to resources, and fundamental social relations, and manifested unconsciously in vocal delivery and other stylized aspects of performance. In Lomax's emerging synthesis, song and dance embody (make corporeal) and aestheticize psychosocial attitudes and tensions that arise in connection with strategic domains and passages of life. His fieldwork in Spain and Italy (1952–55), where he intuited links between vocal tension and socioeconomic and sexual restrictions, led to the first published statement of his theory of folk song style and culture, appearing in *Nuovi Argomenti*, a left-wing Italian journal edited by Alberto Moravia (Lomax 1955b).

One of the pillars of Lomax's work was the idea that there were families or clusters of style (traditions) that had emerged over the *longue durée* of human history. Lomax's research on black music in the American South and the Caribbean, his study of early New Orleans jazz music and its protagonists (Lomax 1949; Lomax 2005; Szwed 2005), and his immersion in the African field recordings of Gilbert Rouget, Hugh Tracey, and other pioneering Africanists prepared the way for what was to become a

coherent model of black musical style, its branches, its crossings, and its roots. At eighteen he had been mentored by his father in fieldwork in Texas, Louisiana, and Mississippi and by Zora Neale Hurston in Georgia, Florida, and Haiti at age twenty. He had collaborated with the sociologist Lewis Jones in the Delta, and later with Jacob D. Elder in the Lesser Antilles, and had been guided through the music of West-Central Africa by the French musicologist, Gilbert Rouget at the *Musée de l'Homme*. As early as the mid-1950s, he began to explore one of the main hypotheses of his research, supported by later analyses of both music and dance: that the hocketing, interlocking style of Pygmies from East-Central Africa and the Bushmen (San) people of the Kalahari Desert belonged to the world's most ancient musical family.

"Musical style changes least of all human cultural characteristics," he wrote in 1954. "[It] is associated with the first and earliest distributions of mankind across the world. Musical instruments have complicated this by introducing certain tonalities and tonal demands, but they only influenced the surface of the music but never really altered its basic content." Experience only strengthened his conviction in the potentialities of the oldest material, so that he could say years later,

I've fallen more and more in love —with what I call "the old level", the classical keel. I was taught to go out and ask the person to give me the oldest song, give me the song that your grandmother sang. I didn't know why I was doing that until there was a whole ocean of antiquities to study. And it has turned out that these antiquities could put time back in cultural terms in regions and areas, and produce a taxonomy of culture just with song. (Lomax 1988)

This he had predicted in the mid-1950s. "When we have described the musical styles of humanity and with their families and sub-families, we shall have the principal formative aesthetic currents of human history finally in our view" (1954a). From a hand-sorted sample of world music classified according to vocal qualities, ornamentation, organization (solo or choral), and tonal unity he derived a provisional map of the distribution of nine "grand families" of music, which he announced in a 1955 communiqué to Charles Seeger: Pigmy-Bushman (the oldest); Proto-Melanesian (Highland New Guinea, Central Formosa and Borneo, Melanesian forest, Andaman); Melanesian; Australian; Amerindian; Polynesian; Negro-African; Eurasian; and, "Submerged and isolated by this sea of strident, melancholy monody is an older family of singing style which is polyphonic, deep and liquid-voiced, and more expressive of pleasure. For want of a better name I'm presently calling this family Old European." He finds traces of this style group in the Atlantic Fringe, Central Europe and Northern Italy, central Sardinia and Corsica, northern Greece, parts of Yugoslavia, Southern Russia and the Caucasus, North Vietnam, and among the Ainu.

Here perhaps is the kernel of Lomax's idea, radical because it contains even if incompletely an utterly novel conception of the role of music, and more fundamentally of aesthetics, in shaping human existence.

Since every choice is at bottom an aesthetic and an emotional one, music might give us the cues to the real wellsprings of choice. Style changes only when the most important social and economic patterns change. It therefore stands for certain formative, aesthetic processes that operate in human society over long periods of time and in parallel with economic forces.

He continues:

If I am right in supposing that there are only a few song style families and that these correspond to fundamental emotional patterns, then it may be possible to conclude that certain aesthetic attitudes have endured as long as the styles by which they are symbolized. These aesthetic patterns would have been operative in all the societies in which they existed, shaping and forming the lives of the individuals much as purely economic, social or sexual factors have been shown to have done. (Lomax 1954b)

By this time Lomax was eager to communicate and work with others. Among those he shared his ideas with were M. Blin of Radiodiffusion Francaise; experimental composer Luciano Berio; Margaret Mead and Melville Herskovits; violinist John Crand; W. McNeil Lowry at the Ford Foundation; speech and hearing specialist Theodore D. Hanley at Purdue University; Columbia sociologist David L. Sills. Milton Singer wrote from the University of Chicago, "I think you have got a hold of something important" the relationship between folk music and ethos" should be possible to test over a wide area." I tried to apply your ideas [about music as language] in a functional study of American material," Lomax wrote to his old friend Charles Seeger, "and have been able to come to some general conclusions about American folk song and about the historical and social factors which provided the background for musical evolution in the United States." The next step is to describe the morphology of musical languages and the ultimate psychological and social forces which determine [it]. Since my own

talents, training, and abilities are limited, I want to work with other people on the problem and, most especially, you" (Lomax 1955).

He also considered specific experimental techniques and in 1956 applied to the Physiology Department of the Sorbonne and Psychology Department of the University of London to test vocal production using the Sonograph, and also the Polygraph "to determine with listeners whether subjects from varying cultures respond steeply to the various stylistic traits which I believe to be significant." [And] with live subjects to see whether observable differences in heart rate, respiratory rate, and dermal response are characteristic." "The rate of adrenal flow can be measured," he wrote to Seeger. "With X-rays the shape of the throat and the precise position of the larynx can now be photographed — actual measurements can be made to show which areas of the brain are in a state of excitement during singing. Here photographs of singers in action are all-important." (Lomax to Seeger 1955). He planned to gauge the psychological content of songs with analytic and psychiatric techniques and to measure the formal characteristics of music with the Melograph, an invention of Seeger's to record and compare the shape of melodies.

1959–1960 was a huge turning point for Lomax. Now back in the States, he studied with anthropologists and linguists who were looking at interaction through paralanguage, kinesis and neuropsychiatry and became part of their circle. He was in touch with musical anthropologist David McAllister, Irving Hallowell (archeologist and Native Americanist), nutritional anthropologist Marjorie Whiting, computational linguist Catherine McClellan and other pioneering figures whose work helped him to flesh out his ideas about the distributions, cultural connections, and antiquity of musical style. —I found a wonderful new American intellectual community." [My ideas], "which I had felt myself were somewhat outré, were part of a new development in locating pattern in the mass of data accumulated by American humanists." "Everyone was encouraging" (Lomax 1960). Through Margaret Mead, an old friend, he met and fell into instant rapport with Conrad Arensberg, who would be his co-theoretician and principal advisor for nearly thirty years.

The work of Arensberg, Raymond Birdwhistell, George Trager, Albert Schefflin, and others who were learning about culture by segregating, measuring and correlating interactions were the most basic and direct influences on Cantometrics the related studies of phonology, dance, speaking, and breathing in song undertaken by Lomax in the 1960s. Arensberg took on folk song style analysis as a case of his minimal sequence approach on the plane of large cultural patterning (Arensberg 1972; Lomax and Arensberg 1977: 3). It has been suggested that interaction research has not been popular since, except in business and marketing psychology, because like laboratory science it is an incredibly painstaking, tedious, time-consuming, and unglamorous method. It was, however, extremely fruitful. The discovery of an ordered universe of communication about personhood and culture, which is operative in terms of space, movement, timing, frequency, and interpersonal and group synchrony, and which flows beneath the verbal and the particular, was an extremely powerful one and still holds out great promise. Indeed, it is puzzling that later scholars have not attempted to apply it in any of their myriad studies of identity, to name one of many pregnant possibilities. Birdwhistell and W. S. Condon had observed that normally there is synchrony between discrete levels of interaction — between body movement and rate and tone of speech, for example — and Arensberg in particular was interested in applying this finding to Cantometrics, arguing that from this standpoint congruence could be shown to exist between the realms of song and society.

Birdwhistell had identified what he called a "systems maintaining framework" in the formalized, repetitive aspects of communication, which Lomax recognized as the equivalent of what he was calling folk song style. This has been explained earlier but it bears repeating because it situates Cantometrics (and the other studies) squarely in the fields of interactions and communications research. (For more on this see [Project History](#); also see Davis 2000.) In the fewest words, then, *Cantometrics may be described as the study of singing as normative expressive behavior, and folk song style as a "systems-maintaining framework" which models key patterns of co-action in everyday life.*

Cantometrics and Related Studies

The Cross-Cultural Survey of Expressive Style was installed at Columbia in 1962. As its name implies, it was an integrated, multidisciplinary effort from the outset, and embraced studies of dance and speech as well as several studies concerning singing and orchestration, including Cantometrics.

A memo from Lomax outlines the form the project would take, stating that he has "hit upon three ways of describing with a considerable degree of scientific control what goes on whenever a group of people come together to sing in any culture" (Lomax c. 1961): First, a multi-factorial coding system for the musical performance itself would produce profiles of musical cultures and clearly show the elements that come into play when two families of style cross; second, a linguistic study of the chain of vowels as they occur in the verses of folk songs based on the observation that each musical area favors one or two kinds of movement between sets of vowels; third, a study of vocal

qualities, which Lomax presumed would be characteristic of the big song families; and fourth, a thematic analysis of folk song texts. He proposed but would not fully realize a study of the kinesic patterns of singing through the use of film. Although the gestures and postures of singing were the focus of many of his photographs, the kinesic emphasis was shifted into a study of dance (*Choreometrics*). His interest in the physiological properties of singing was partially realized through studies of vocal qualities and of the breathing intervals in song (*Minutage*).

In 1960 Lomax and Edith Trager applied a phonological analysis (*Phonotactics*) to a small sample of folk songs from Europe and the United States. At the same time Lomax began to devise a set of scaled variables by which to describe and classify song in terms of style, working at first with theoretical musicologist Robert M. Abramson and then with Victor Grauer. He met Grauer, who was studying at Wesleyan with David McAllister, in 1961, and together the two greatly enlarged the musical sample and continued work on a coding system until it was basically finalized.

While this was in progress Conrad Arensberg worked with Lomax and other members of his staff to develop an ethnographic matrix within which to situate and interpret a classification of musical styles. This was derived from George P. Murdock's codified analysis of world cultures in the *Ethnographic Atlas* and from specialized studies based on the Atlas made by other cross-cultural anthropologists. Norman Berkowitz, Barbara Ayres, and Edwin Erikson derived cross-cultural samples from the pool of data, created and implemented a statistical design, and experimented with musical and societal variables. In weekly meetings Arensberg tendered advice on scientific method and ethnology. Jazz composer Roswell Rudd joined the team in the early sixties, as well, and worked on coding for many years. Lomax and Grauer worked together extremely well, but Grauer left *Cantometrics* in 1965 and did not return to it until after Lomax's death, though he was consultant to the project from time to time. Other scholars taking part in various capacities included John Andromedas, Andy Biskin, Roberto Escobar, Robert Garfias, Bess Hawes, Worth Long, Jeff Tilton, and Du Yaxiong. The performance style project as a whole was presented in a daylong session of the American Anthropological Society in 1966 and the proceedings published as *Folk Song Style & Culture* by the American Association for the Advancement of Science in 1968. Numerous articles preceded and followed this event. In the 1980s the *Cantometrics* dataset was increased to 5,400, twice its original size. From 1962 to 1985 *Cantometrics* resided at Columbia University, after which it moved to Hunter College, where its datasets were migrated from mainframe computer to PC format and became the basis for the Global Jukebox.

The Cantometrics Coding System

The first task in *Cantometrics* was to develop a set of variables based on qualities of music present to some degree everywhere and hence comparable across cultures. Because of his interest in vocal timbre, and because singing seems to be the more conservative form of musical expression, Lomax decided to concentrate on vocal music, with the exception of certain aspects of instrumental accompaniment. It was also possible to describe vocal music using fewer and less complex parameters than many kinds of instrumental music. The design of the coding system was preceded by a period of experimentation, during which various parameters were tested against recordings from a wide variety of cultures using applicable taxonomic concepts from musicology. Ideas for the rating scheme came from Bruno Nettl's survey of primitive music (1956).

Lomax noted that listening to the world's music all of a piece "made its own demands and it produced its own technique of analysis" (Lomax 1956-57). Stationed in front of a high fidelity playback system, with yellow pads at the ready, Lomax and Grauer recorded their impressions of Lomax's "pocket-sized" collection of world music. Lomax's stipulations about the process "that it be pleasurable to their imaginations, explainable in commonsense terms in relation to culture, and that it require no technical musical knowledge" were intended to ensure that the system they came up with "would not become an esoteric object in itself but would stay close to the level of listening and enjoying music of which all human beings are equally capable" (Lomax 1956-57).

They found that melodic, harmonic and rhythmic analysis distinguished little between music of whole cultures and put these aside, as Grauer explains, "for a behavior-oriented rating system which could do justice to the sort of large-scale stylistic patterns that seem to control the overall shape of the musical picture worldwide." Taking an observational approach, Lomax and Grauer looked for universal traits that consistently differentiated the principal known musical traditions. Only those that proved both readily codable and reasonably diagnostic in sorting clearly differentiated styles from one another were retained.

We chose audible markers which we generally agreed on and were easy to recognize and define and varied regularly in importance from one potential style family to another. We were not aiming to make complete descriptions or to find definitive units of measurement " [but] to portray the outlines of entire performance style traditions throughout the world so that they could

be dependably compared to each other and be tied to equally clear patterns of culture. (Lomax 1976: 2)

The psycholinguist Norman Markel of the University of Florida helped to develop scales for rating the vocal qualities of interest to Lomax and deemed in psychiatry to be indicative of tension — namely register, width, nasality, and rasp. Lomax and Grauer devised measures of musical organization and form, integration, rhythm, explicitness, embellishment, force, etc. These they formulated into a 37-line coding system.

IN PROGRESS:

More on methodology (see also Project History).

The Cantometric Sample

Geography of Song

Correlations

Selected References

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