6 - Some Characteristics of the Blues

Rural blues in the Deep South is not a completely homogeneous tradition. Enough time has elapsed since pre-blues traditions crystallized into something toward the end of the nineteenth century that could be called “blues” to allow for early processes of divergence analogous to how a language splits into dialects, and subsequent processes of convergence, i.e., mutual influences and borrowings among the formerly divergent styles.

In a comparative study of hand postures and thumbling patterns of blues guitarists—from Henry Thomas, born 1874, to Robert Belfour, born 1940—Andrew M. Cohen has come up with the following revised delineation of Blues Stylistic Regions.

1. Eastern: I use this word as the equivalent of the more commonly used Piedmont, the rolling detrital hills that constitute tobacco country south and east of the Appalachians. We can expect black folk-blues guitarists from Delaware to Florida, east of a line connecting Knoxville and Atlanta and extending north and south from there, to extend their right thumbs when they play, and most of them play bass strings with an alternating thumb. A large majority of the black guitar players in the region play with their thumbs extended, as do most white guitarists in the region. The central part of this region—the Virginias and the Carolinas—is the part of the country where blacks and whites have lived side by side the longest. This fact may also help to explain why there is relatively more shared textual material in this tobacco country than in cotton country...

2. Delta: The so-called Delta is not a delta at all but the lush swampy land, cleared of woods in the last century and a half, between the Yazoo and Mississippi Rivers from Memphis to Vicksburg. Not to be confused with the delta at the mouth of the Mississippi River below New Orleans, this patch of land is a part, but not all, of the hearth area of Mississippi’s blues culture. As a stylistic region the Delta is much larger, encompassing the states of Mississippi and Alabama and extending to eastern Arkansas, western Tennessee, and northeastern Louisiana. In this region thumb use shows little overt patterning; instead thumbed notes are struck as needed within melodic guitar figures. I call this “utility-thumb” playing.

3. Texas: Another stylistic area can be identified between (roughly) Houston and Dallas and over to Texarkana, Texas, and Shreveport, Louisiana. . . . Most of what the Texas and northwestern Louisiana players do melodically (that is, on the treble side of the guitar) they do in conjunction with a “dead thumb,” playing four beats to the measure on the same string. (Cohen 1992: 458–59)

From an Africanist perspective it appears that the Mississippi “Delta” (in Cohen’s extended geographical sense of the term) is the most important core area for the more African stylistic traits in the blues. Africanists such as myself and Moya Aliya Malamusi, revisiting the area in August 1997, have had difficulty detecting any significant “European” musical components in this style, aside from the use of Western factory-manufactured equipment. For us, this observation includes chordal structures and preferences. After a joint visit with David Evans to bluesman Robert Belfour’s present home in Memphis on August 1, 1997, Moya, himself a guitarist and one-string bass player—although rooted in a different tradition—made this comment: He said that what had struck him most was that at least in one of Belfour’s tunings, the open tuning he called “Spanish” (high to low: E–C♯–A–E–A–E), he would always let the fifth string vibrate unfretted. At the same time he would carry out elaborate fingerwork on the upper strings. As a result the fifth string functioned like a drone, like a constant reference tone permeating the tonal-harmonic process. Here Moya had hit at the nerve center of Belfour’s tonal-harmonic world, the world by implication shared with many others in the “Delta” or “Deep South” blues style, the presence of a virtual bourdon with a powerful central tonal gravity. Interrelated with this primary concept is the use of “riffs” (short repeated melodic-rhythmic figures) as a song’s underlying building blocks (cf. Belfour’s recordings on The Spirit Lives On, Hot Fox HF-CD-005).

It is, of course, natural for everyone to interpret a sound event in terms of the culture with which they are familiar. This is why Western-trained musicians will always detect European chord progressions in the blues, not only in those cases where their presence is obvious and intended, but also where there is evidently no such concept.

For certain, blues singers’ first language is English—whatever variant that
scheme using terminology that is as culturally neutral as possible, to cover in eleven paragraphs (a to k) a broad examination of the panorama of guitar-accompanied blues recorded throughout the twentieth century in the United States. For this purpose we have to split the tradition into single musical and literary traits, and interconnected trait clusters.

Blues shares with other African-American music many general characteristics inherited from one or another part of Africa, such as call-and-response organization, the "metronome sense," and so on. (See various summaries, e.g., Evans 1978, 1990; Kubik 1969, 1993; Kubik and Pinto 1994; Maulsby 1990; Oliver 1997; Ramsey 1957; Southern 1971; Waterman 1952, 1963.) These are not specifically discussed below.

Even in the absence to date of any large-scale systematic sampling of blues' stylistic characteristics, we can say with reasonable confidence that a large bulk of the blues tradition, as found especially in rural areas of the Deep South, displays combinations of any number, in any order, of the following traits:

(a) It is predominantly a solo singing tradition, with lyrics often standing in the first person. Related to this complex are the unaccompanied field hollers (cf. Courlander 1963: 80–88; James 1990. See also recordings in Botkin 1943; Stearns 1964; Lomax 1977; Evans 1978c). In Africa, I have repeatedly recorded parallels, for example among the Vute and Tikar of the Cameroon grassfield areas (cf. hollers and hunting shouts, recordings B 8662, in the Phonogrammarchiv Vienna, 1964/Kubik). Content and aesthetics of the blues' lyrics reveal many analogies to ideas and concepts in African cultures, including a "binary aesthetic terminology" (Evans 1978a; Thompson 1974, 1984), e.g., hot/cool, dirty/clean.

(b) Vocalists use a wavy intonation in many (though certainly not all) forms of the blues, with plenty of melisma, slurs, gliss tones, and timbre-melodic sequences that form the non-Western expressive repertoire of the blues. There is a particular concentration of the melismatic style in the rural Mississippi "Delta" and Texas regions, while it is less prominent elsewhere.

(c) In many blues there is a tendency toward, or predilection for, rather slow triple or swing tempos. Early in the twentieth century there was a general perception that blues was slow music, in contrast to nineteenth-century dance-related musical forms, and that it was associated with couple dancing, e.g., the "slow drag" (Evans 1982: 41–54). This is only a tentative generalization, and could well be nothing more than a repetition of early twentieth-century stereotypes. Certainly many blues pieces are fast, perhaps incorporating older patterns related to solo display dancing. There is a broad range of blues tempos, including slow...
pieces in a triple rhythm; but the average tempo, if there is such a thing, is undoubtedly slower than that of some nineteenth-century popular instrumental music played with fiddle, banjo, fife and drum, mouthbow, and so forth. But blues has shown enormous potential for tempo transformation.

(d) The relationship between the human voice and the melodic lines of instruments is mainly guided by the principle of unison or heterophony or a simple background drone/ostinato on the instrument. Also, in some cases the instrument drops out or plays only an occasional note behind the singing, coming back strong in the response. The latter is especially the case among Texas guitarists like Lightnin’ Hopkins and Blind Lemon Jefferson. Vocal and instrumental lines alternate in call-and-response form. Some other guitarists, however, seem to have created contrasting vocal melodies and guitar parts (cf. Evans’s discussion of Tommy Johnson’s “Big Road Blues,” Evans 1982: 268–77). In East Coast blues styles (cf. Cohen 1996) an alternating bass is often played with standard harmonic patterns—incidentally somewhat similar to some central African guitar styles (cf. videorecording, Kubik 1995). Western-type chords have been used variably in guitar and other accompaniments, but in defiance of these chords, vocal lines and melodic instrumental responses tend to pursue their own strategies, including the use of tones that cannot easily be accommodated within Western-style functional harmony. These have come to be called blue notes in the literature.

The simultaneous presence, even in some forms of New Orleans jazz blues, of virtually two different tonal systems—one serving as a reference grid for the “melodic” brass and reed instruments, the other for the chordal accompaniment (such as on a “vamping” banjo)—was already discussed in the late 1950s. Example 10 shows a passage by the clarinetist George Lewis in “Two Jim Blues,” played in the key of B-flat, virtually neglecting the banjo’s chord sequence. Blues guitarists also frequently perform this ubiquitous ragtime-derived chord sequence (A7–D7–G–C in relative notation) and sometimes insert it in the same place in the standard 12-bar scheme (measures 8–11), again without it necessarily being implied by the vocal line.

More recently, Thomas Brothers (1994: 490) has drawn attention to melodic anticipation of harmonic schemes in Louis Armstrong’s “Big Butter and Egg Man” (1926), where “Armstrong’s F chord comes a measure early, and as a result the phrase structure of the solo collides with the harmonic rhythm of the accompaniment.” Brothers points out that such behavior serves “an African conception of syntax that involves two levels, a fundamental and a supplemental, with the supplemental moving in and out of agreement with the fundamental.” These examples come from jazz, but comparable behavior is also found in the blues.

(e) Melodic lines in the blues’ vocal part are often pentatonic, even when there is an underlying Western-style diatonic chord sequence suggesting tonic, subdominant, and dominant steps. However, pitch intonation within the pentatonic scheme demonstrates a broad variation margin, leading to the fact that, for example, a note in a C-based blues that is intoned as a slightly flattened E in the first line, may appear as an E-flat in the second line (with an underlying subdominant chord), without losing its tonemic identity. (See David Evans’s “area” concept of blues notes, 1982: 24.) In many African musical cultures it has also been observed that two notes, even up to a semitone apart in repetition, are conceptualized by the singer as one and the same tone (example: “Syelinga ne nkumijili,” Mpy m3 chantefable song, in Kubik 1994a: 158–99, 206–7, and CD, item 21). This variability concept has been retained in many blues. This explains the auditory tolerance of microtonal deviations from the pentatonic pitch framework in patterns of ornamentation. Such deviations can veil, but do not eliminate, the pentatonic scaffolding.

(f) Instruments suitable for individual or small-group music, such as guitar, fiddle, mandolin, mouth-harmonica, and piano, have played an important role in the rural blues tradition. Percussion instruments—if used at all—are simply in construction and performance technique, and either follow European models or

---

**Example 10**

Passage from “Two Jim Blues” (transcription from Blue Note, LP 1206, 1st chorus, bars 8 to 11). Illustration retranscribed in key of C from Kubik (1995a:450).

---

**Some Characteristics of the Blues**
are utilitarian objects (e.g., the washboard) representing historical reinterpretations of African regional models (cf. Kubik 1959b; Courlander 1969: 204–20; Evans 1998b). Jug, kazoo, and other instruments sometimes used in early blues are played with the idea of motional and timbral-melodic patterns clearly inherited from specific African styles (cf. Kubik 1959b).

(g) Some Western factory-manufactured instruments are to be understood as “standing for” African instruments known in the remote past. For example, the central Sudanic algoita oboe (cf. Kubik 1989a: 84–85 for its use in the court music of the Fulbe Lamido of Touango, Nigeria) has found an extension in certain blues harmonica performance styles, and in modern jazz most typically in some of

John Coltrane’s timbre alternations and manipulation of overtones on the saxophone. The algoita (sometimes pronounced algoita) came to the west central Sudan from North Africa centuries ago via the Saharan trading network. Its piercing, shrill tone quality and wavy intonation are echoed in some African-American traditions. In connection with blues harmonica styles one must also point to the technique of “cupping” one’s ear, which is prominent in the west central Sudanic belt, especially among Fulbe singers in one of their oldest vocal styles, called dawol (see pictures of the technique and text by Veit Ermann in Kubik 1989a: 92–93). Characteristically this style is associated with cattle herding.

Blues harmonica has also incorporated elements of southeast and central African panpipes and whistle technique, especially the alternation of blowing and whooping (cf. Tracey 1970; Malamusi 1992, 1997 for descriptions of the technique in the lower Zambezi valley). Alternation between blowing and voice also marks the technique of single-note pipes such as 7ku, made by Mpy m5 girls in the Central African Republic from a green, hollow branch of the papaya tree (recordings 1986/Kubik, orig. tape no. 97 at the Museum für Völkerkunde, Berlin). Central African adolescent traditions, such as the making and playing of monochord zithers (as in Gabon, Congo, southern Cameroon, southeastern Nigeria, etc.) characteristically with a slider, have survived in adapted and modified versions in the “jitterbug,” “bo diddley,” etc. (Evans 1970; 1998b).
(b) Complex Guinea Coast-style polyrhythm, and especially polymeter, characteristic of some music in the Caribbean and South America, is absent in the blues.

(i) Asymmetric time-line patterns also do not occur in blues.

(j) Equally significant is the absence in the blues of heptatonic parallel harmony. Heptatonic parallelism is characteristic of much west African coastal singing, for instance among the Akan peoples of Ghana, the Baule of the Côte d’Ivoire, the Bini (Edo) and Ijexia/Ekiti Yoruba of Nigeria, and the Igbo and other southeastern Nigerian peoples. Parallelism does enter jazz- and pop-influenced blues in horn sections and in cases where blues are sung in duet (e.g., Brownie McGhee and Sonny Terry in a few examples) or by vocal groups (The Midnitghters, Five Royales, etc., and earlier groups from the 1920s). But this is a relatively minor
within forty miles of one another in northern Mississippi and all recorded since 1959—demonstrate these trends. Another trait, extreme vocal melisma, can be observed, for example, in Jessie Mae Hemphill’s singing (Evans 1998a).

Most of these artists display a tendency either to depart from the standard 12-bar blues chord sequence, or at least circumvent it in intriguing ways, for example by deleting the “major third” flavor from the tonic chord, which then sounds very close to the sort of central tonality found in Meigogué and other minstrels of the west central Sudan. Sometimes there are cyclic forms that are close to west African ostinato patterns, such as in the music for the kolo (bridge-harp of Guinée and neighboring areas; Charty 1994a) variously recorded by Gilbert Rouget in the 1950s. One track from Guinée published by Rouget displays a fabulous swing. It is particularly instructive for blues and jazz researchers investigating that phenomenon (cf. Rouget 1972, side A, track 4).

In all these cases it is, of course, difficult to determine to what extent such patterns represent a continuous tradition in Mississippi that might have been lingering in the memory of communities. Mississippi blues guitarists born in the 1890s and early 1900s (e.g., Charley Patton, Son House, and Skip James) sometimes used short cyclic forms, departing from the three-line formula. The local tradition seems also to be strongly influenced by riff-based fife and drum and perhaps even banjo music (cf. Evans 1978c; Lomax 1999). This suggests that in Mississippi it is probably essentially a continuous tradition. More recently, of course, some impact of Caribbean and even African influences through the mass media, or indirectly from blues-related styles like Rhythm and Blues, Soul, Funk, and so on that had absorbed these influences earlier, could have functioned as a reinforcement.

The vocal style of many blues singers using melisma, wavy intonation, and so forth is a heritage of that large region of West Africa that had been in contact with the Arabic-Islamic world of the Maghreb since the seventh and eighth centuries A.D. Cities such as Timbuktu and Gao grew up at the southern termini of the Saharan trade routes along the bend of the middle Niger River. Trade made possible the rise of powerful empires such as Mali and Songhai. In his “Cantometrics” scheme Alan Lomax (1968: 413) delineated those song style areas under the labels “Western Sudan (50)” and “Moslem Sudan (617).” These two song-style areas count among the strongest Arabic/Islamic influenced culture areas of Africa. The blues tradition, therefore, has incorporated the centu-

---

**Photo 20.** Sid Hemphill playing the quilla (panpipes) with Lucius Smith playing 3-string banjo, Senatobia, Mississippi, 1939. Sid Hemphill, born 1876, was grandfather of blues singer and guitarist Jessie Mae Hemphill. (Photo by Alan Lomax. Courtesy of Alan Lomax Collection)
ties-old impact of transculturation processes that took place between the Arab-Islamic world of North Africa and the autochthonous cultures of the Sudanic Belt. Many traits that have been considered unusual, strange, and difficult to interpret by earlier blues researchers can now be better understood as a thoroughly processed and transformed Arabic-Islamic stylistic component. What makes the blues different from African-American music in the Caribbean and in South America is, after all, its Arabic-Islamic stylistic ingredients.

These African song-style areas have their own history. Arabic-Islamic musical concepts were imposed on a local pentatonic stratum that had flourished perhaps for several thousand years in the pearl millet-growing savanna cultures of West Africa. The growing of millet was developed there between ca. 5,000 and 1,000 B.C. The Islamic influences spread across the region from the centers of trade and power, such as Timbuktu, and later the Hausa city states.

I am suggesting that many of the rural blues of the Deep South are stylistically an extension and merger of basically two broad accompanied song-style traditions in the west central Sudanic belt: (1) A strongly Arabic-Islamic song style, as found for example among the Hausa. It is characterized by melisma, wavy intonation, pitch instabilities within a pentatonic framework, and a declamatory voice production. All this behavior develops over a central reference tone, sometimes like a bourdon. (2) An ancient west central Sudanic stratum of pentatonic song composition, often associated with simple work rhythms in a regular meter, but with notable off-beat accents. This style reaches back perhaps thousands of years to the early West African sorghum agriculturalists, now scattered through the Sudanic Belt in remote savanna, often mountainous areas. This style has remained unaffected by the Arabic-Islamic musical intrusion which reached West Africa along the trans-Saharan trading routes, and subsequently spread from the early Islamic states, Mali (ca. 1230-1400 A.D.) and Songhai (ca. 1464-1600 A.D.) to the emerging Hausa city states and Fulɓe courts.

It is important to understand that across the west central Sudanic belt these two song-style traditions are contrastive. The Arabic-Islamic style from Mauritania to Lake Chad is urban in its genesis, is cosmopolitan, reflects social stratification, incorporates many bardic genres, and is accompanied with instruments that often (but not always) have a North African historical background. The “ancient Nigratic” style, on the other hand, is rural, is a part of the millet-agricultural life cycle, and, if accompanied at all, makes use of percussive devices that have a millenia-old history in the savanna. I became acutely aware of these contrasts during my research in northeastern Nigeria and the Adamawa plateau in Cameroon in 1963-1964. A comparison of Hausa and Fulɓe performances with those by villagers among the Chamba, Kutin, and Zanganyi illustrates these contrasts.

It is important to realize that the Arabic-Islamic song-style as perpetuated by Hausa itinerant musicians, Fulɓe and Hausa court music, and other traditions consists of a cluster of traits determining the presentation of a song, i.e., in a declamatory manner directed to some real or imaginary audience with whom the singer interacts with a lot of melodic ornamentation. It does not determine the type of scale used. Henry George Farmer (1955), in a letter to Hugh Tracey, made very clear that the Arabic-Islamic influence in the western and central Sudanic belt does not include transmission of the microtonal basis of Arabian art music. In the west central Sudanic historical scenario, the Arabic-Islamic way of declamatory articulation, raspy voices, and melisma was superimposed on local scales, mostly pentatonic, but in Senegal and parts of Mali and Guinea also heptatonic. Pentatonism, which is also found among the Berber people in the Sahel zone and the Sahara, is a deeply entrenched ancient presence in much of the area between Timbuktu, Lake Chad, and the Adamawa plateau. It is part of the “ancient Nigratic” song-style cluster.

Many people from small tribes in northern Nigeria and across the whole west African savanna were captured and eventually sent into slavery by their Hausa and Fulɓe overlords. Oral traditions about the slave trade were still alive in northeastern Nigeria as late as the mid-1960s, when I was doing my fieldwork. Blues, which in its genesis drew from a variety of vocal genres including work and cattle-herding songs transformed into field hollers, and string-accompanied minstrel traditions, owes its declamatory, melismatic articulation to the Arabic-Islamic song-style cluster, but its pentatonic scales ultimately to the “ancient Nigratic” song-style traditions. Blues that are closer in style to my recordings of the Hausa minstrel Meigogué perpetuate more of the former style, while blues that are closer to my recording of the Tikar woman’s grinding song perpetuate more of the latter. Sometimes the “ancient Nigratic” element in the blues would seem to be vestigial, overwhelmed, or more or less fully absorbed into the Arabic-Islamic stylistic legacy, but it is unmistakable particularly in many scalar patterns.
9 - The Blues Tonal System

Carl Gregor Herzog zu Mecklenburg and Waldemar Scheck (1963: 9) give an overview of the numerous theories by means of which Western musicians and musicologists from the 1920s to the 1960s tried to come to grips with a phenomenon in the blues that seemed to run contrary to all established harmonic rules of Western music: the “blue notes.” By this term normally two tones are understood, variously written as B♭ and E♭ in relation to the Western diatonic scale based on C. These two notes seem to be notoriously unstable and somewhat superimposed on the Western major scale like “aliens.”

In the literature blue notes have been described as “a microtonal lowering of the 3rd, 7th and (to a lesser extent) 5th scale degrees” (Robinson 1980: 812), and various theories for their origin have been proposed by such writers as by Winthrop Sargeant (1938), Ernest Borneman (1959), and Gunther Schuller (1968), all proceeding from the standpoint that the blue notes are “deviations” or “inflections” of the standard pitches (i.e., European diatonicism). More recently, Jeff Todd Titon (1977: 161, fig. 64) has suggested an “early downhome blues mode.”

However, we who have worked in African cultures with the most diverse tonal systems cannot help but see the “inflections” on the other side. This impression is reinforced if we experimentally remove the blues’ instrumental accompaniment, where it is based on tonic, subdominant, and dominant, or suppress its perception, and examine the singers’ vocal lines in isolation, as if they sang without any accompaniment. Titon’s (1977) transcriptions in relative notation (on C), omitting the guitar chords, are very useful in this context as a comparative database.

If we do this, it becomes clear that each vocal line is an integrated, patterned whole, without any particular tones having special status. In spite of their regular use for accompanying the blues and early forms of jazz, the three common Western chords appear to be the real “aliens,” although blues and jazz musicians have for two or three generations now internalized them. And yet, musicians in the Deep South and even in many urban areas have never seemed quite comfortable with these chords. Mississippi bluesman Skip James’s “Devil Got My Woman” (Paramount 13088, February 1931) is a testimony for a radically different approach, even in the early 1930s. More recently, these chords have often been replaced by bohun-like recurring tones (e.g., various songs recorded by Jessie Mae Hemphill, Fred McDowell, R. L. Burnside, Junior Kimbrough, and Robert Belfour).

Even at the height of these Western chords’ fashionable use, in the 1920s and 1930s when blues had come “to town” (cf. Mississippi Matilda’s “Hard Working Woman” discussed earlier), the dominant chord at least was circumvented in some performances. And in the early 1940s, in bebop and thereafter, jazz quickly got rid of the simple chords with substitution chords, clustered chords, the simultaneous sounding of major and minor thirds, and the tritone intervals or flattened fifth chord (C-E-F♯), by which a new tonal ambivalence was introduced while preserving tonality (i.e., a central tonal reference point) as such.

In my opinion, bebop brought jazz back closer to tonal concepts that even now prevail in certain African areas where so-called equiheptatonic tuning systems are found, notably in the Lower Zambezi valley (cf. a xylophone recording by Suze, double LP Opika Njimbo, Kubik and Malamusi 1989, item A 3), around Benin City, Nigeria, in southern Ghana, and in certain areas of the Côte d’Ivoire. The African distribution map of equiheptatonic tonal systems and associated nonmodal concepts of homophonic multipart singing involving “neutral thirds” includes many areas from which people were deported to the Americas (see my recordings from Angola, Mukanda na makisi, double LP, Kubik 1981; or Gilbert Rouget’s Pendo Kakou, Musée de l’Homme, Paris, LP record MC 30141, item I 1). Equiheptatonic concepts must therefore have reached the New World African-American cultures during their formative periods. But what has remained of them? In Colombia and Ecuador, Lower Zambezi-type xylophones imported with Mozambiquans have survived to the present day in communities of African descent. In Central America, Congo xylophones have migrated into Amerindian cultures. In all these instances equiheptatonic and other tunings were soon adapted to the Western tonal system. Everywhere, factory-manufactured musical
instruments tuned to the diatonic Western scale began within a few generations to erase from African-American musical cultures any concepts of equidistance. The same has happened from the mid-twentieth century on in African popular music, where the electric guitar has become a prominent and central instrument.

But equihaptonic concepts have survived unconsciously and do find expression in New World African-American music, albeit indirectly. One of the signs of their hidden presence is a certain ambiguity toward diatonicism running through the history of African-American music in the United States. In equihaptonic conceptualization, a major third and a minor third (in the Western tonal system) both fall within the margin of tolerance for deviations from the equihaptonic third of 342.8 cents, the “common” or “average” or “neutral” third. In heterophonic vocal styles these different thirds could be sung together or played together comfortably, since in the equihaptonic system they represent one and the same tone.

Some of this tonal ambiguity is found throughout jazz history and expressed in various ways on various instruments. It is almost certainly based on the retention and cultural transmission of auditory habits inherited from equihaptonic mental templates prevalent in the African regions mentioned. But there are other African traditions of tonality that also contradict the Western scale, generating resistance in African-American musicians to the simple European chords they encountered among English-speaking settlers, especially in church singing.

Therefore, unilinear explanations of the “blue notes” as neutral thirds resulting from the projection of an African equihaptonic scale upon the Western seven-note major scale seem to have led researchers astray. The idea of “neutral thirds” as such was launched by Erich Moritz von Hornbostel in relationship to Faj tonal-harmonic patterns in Gabon, Equatorial Guinea, and southern Cameroon (Hornbostel 1913: 331–53). It was later perpetuated with explicit reference to the blue notes by Arthur M. Jones (1951: 9–10), Alphonse M. Dautre (1955: V6, 1958: 78), and myself (Kubik 1961: 55–56). In my own early article, originally written in 1959 (before my first African field experience), I spoke of the coexistence of two different tonal systems in archaic jazz, and compared the “blues scale” to tempered equihaptonic scales as described by Hugh Tracey.

If the “origin” of the blue notes were to be found in African equihaptonic tonal systems, the lower blue note would stand at roughly 343 cents from the basic tonal reference note (C in relative notation), i.e., about halfway between E and E, while the higher blue note would stand at 1029 cents from the tonic, i.e., a tone somewhat higher than a Bb. For the lower blue note this estimate is fairly acceptable, but not for the higher one. To my knowledge, blues singers do not usually sharpen the Bb toward B over a tonic chord. They only do this over a dominant chord, in which case this is simply the lower blue note (the “blue” third) transposed upward by a fifth. While the lower blue note can fluctuate between Eb and E, or even gliss down to below a minor third, the higher blue note, in my experience, when sounded over a tonic chord, often flattens the Bb to a value below the tempered tone of 1,000 cents.

The blue notes cannot derive unilaterally from equihaptonic African tuning systems for yet another reason. Each tonal system has a sort of intrasystemic purpose. African equidistant scales are tempered scales that were developed on instruments such as xylophones and lamellaphones. The idea behind them is to guarantee the identity of melodic patterns, when they are transposed through any step and in any direction of such scales. Modality, i.e., major/minor distinctions, would prevent the maintenance of melodic identity in transpositions.

The blues, on the other hand, are clearly entrenched in a permeating tonal reference basis. Only in bebop have tonal concepts reached a degree of relativism such that they often come close to African equihaptonic ideas in spite of the Western tuning, and the perpetuation of a tonal center (albeit more vaguely conceived). Not by chance did the concept of the flatted fifth chord appear in bebop from 1940 on. The flatted fifth as such is often called “the third blue note.” As a pitch-line phenomenon it was already prominent in blues singing, especially by Bessie Smith and other vaudeville blues singers of the 1920s, often used as a starting note in descending phrases.
The generalizing concept of “neutral thirds” in connection with the hypothesis of an equiheptatonic scalar framework as the “origin” of the blue notes is also incompatible with theories attributing a pentatonic origin to the blues’ tonal system. In a paper called “Spatio-Motor Thinking in Playing Folk Blues Guitar,” John Baily and Peter Driver restated the pentatonic position of earlier writers as follows: “Many blues melodies use a pentatonic blues scale with blue notes. This scale could be configured as root, neutral third, fourth, fifth, and neutral seventh. The neutral intervals are so-called ‘blue notes,’ somewhere between a minor and major third and minor and major seventh” (Baily and Driver 1992: 64). This would mean that for some unexplained reason such pentatonic scales were composed of three stable intervals and two unstable intervals “somewhere between” fixed pitches.

From a more evolutionistic outlook, Alfons M. Dauer (1955: V.6, 1958: 78) characterized “the west African tonality” as a system of absolutely fixed “main tones” (German: Hauptton), i.e., root/octave, fifth, and fourth degrees, surrounded by diverse intermediate tones. He derived the notion of the blue notes from Guinea Coast heptatonic systems, in which he saw a step in an evolutionary sequence. Believing that “African tonality was primarily based on pentatonic principles,” Dauer held that coastal west Africans had “outgrown” pentatonism by tentatively adding two more notes, but still very unstable ones, in the two large gaps of the pentatonic scale. His model at least explains why (related to C) some more “stable” notes, such as D and A, also occur in the blues, and not only “root,” “fourth,” and “fifth” plus two more notes “somewhere between.”

Dauer’s idea was perhaps inspired by earlier evolutionistic ideas. One such pronouncement is by Annabel Morris Buchanan (1940) in her article on “a neutral mode” in Anglo-American folk music of the Appalachian mountains. In the tradition of anthropological theories of the early twentieth century, Buchanan projected a unilinear evolutionistic scheme upon her material, giving the diatonic scale the status of “completeness” (full) and “modernity.” “These pentatonic modes have been in process of evolution for many centuries. Gradually the gaps began to be filled, with intervening notes added hesitatingly, sometimes wavering in pitch, until our full modern diatonic scale was reached” (Buchanan 1940: 79).

Dauer (1955: V.6) also proposed another, less well known hypothesis about the “origin” of the blue notes. Citing examples from the Twi language in Ghana, he stated that the “special character of the west African melodic third,” which can appear either over the root or over the fifth degree, reflects the mid tones in speech patterns of west African tonal languages (notably the Kwa [I.A.4] family).

The literature on the blue notes and their possible origins is abundant. Many of the hypotheses are clearly off track, while some others contain worthwhile hints and, in a sense, a grain of truth. I will now try to outline some of my own thoughts, using as a basis my field experience in West Africa and elsewhere. In no way do I claim, of course, to have found a Rosetta Stone. But I believe the exercise will be valid in itself on methodological grounds.

As a research strategy, one can first proceed from the simple, but cognitively relevant, axiom that intraculturally (i.e., for the performers themselves) the blue notes have no reality as separate conceptual pitch units. This is supported by the fact that Deep South blues singers themselves never talk about “blue notes” unless they have had some exposure to the jazz literature, have had Western formal musical training, or are influenced by fans from outside their primary community and audiences. In other words, “blue notes,” or any other special type of note in relation to pitch, is not originally an intracultural concept. It seems the term was introduced by various jazz musicians and writers about jazz, who began to use it by the 1920s—perhaps even a bit earlier—in order to “explain” their music in Western terms (cf. Niles 1925).

Thus, the so-called blue notes are simply part of a blues singer’s total pitch repertoire. Their existence as differential cognitional units is only generated through comparison with an extrasystemic parameter: the European diatonic scale. Some notes in the blues singer’s repertoire of pitch patterns not coinciding with the Western scale are then called “blue.”

The whole concept of blue notes therefore introduces an artificial split in the blues singers’ pitch resources. Sounded against the notes of the Western scale, the blue notes may create tension, but here David Evans has warned that “from the point of view of the blues singer, of course, blue notes are not tension-producing per se but are rather a normal part of the blues scale” (1978b: 424).

Blues singers do, however, have concepts expressing microtonal pitch modifications. Lucid evidence is available, for example in Muddy Waters’ discussion of pitch shading in Robert Palmer’s book Deep Blues (1981: 102–4, 266). Muddy
used this term to describe his singing, which Palmer adopted as the title of his book. Generally, Deep South blues singers speak of “worrying” or “bending” the notes of the voice or on an instrument such as a guitar (cf. Ottenheimer 1987: 497). These worried or bent notes are usually the third and seventh (and sometimes the fifth) of the Western diatonic scale.

David Evans suggested that blues musicians proceed from an awareness of **flexible pitch areas**.

In fact, “neutral” probably would best represent an area between major and minor where notes can be sung, rather than any specific point between them. Blues singers often waver at the third or seventh or glide from a lower to a slightly higher pitch. The lower part of the third and seventh areas tends to serve as a leading tone respectively to the tonic and fifth below, the upper part as a leading tone to the fifth and tonic above. (Evans 1982: 24)

“Pitch area” is, no doubt, an intracultural concept (though not expressed this way by blues musicians); but “deviation,” i.e., from pitch units of the diatonic scale, is definitely not, at least not originally. Some blues musicians may have adopted the latter concept through acculturative processes, as they played such worried or bent notes on Western instruments (especially the piano). In such cases the worried notes might even be tension-producing. But this does not invalidate Evans’s earlier statement (1978b: 424).

Here another crucial question comes up. What exactly is included by the expression “worrying the notes,” for example, on a guitar by the use of certain finger techniques? Obviously, the term covers both the blue notes as an integral constituent of a non-Western blues scale, and various types of melisma (ornamentation). Some guitarists stretch the strings with their fingers. But which is a blue note and which is simply a “bent” note as an expression of a very melismatic style? Is Leroy Carr’s vocal slide from (relative) F to upward into G at the start of his “Prison Bound Blues” (Vocalion 1241. Recorded in Chicago, 20 December 1928, transcription in Titon 1977: 92) evidence for the presence of a “third blue note,” the flatted fifth, or is it simply an expression of his melismatic singing technique?

I have the impression that the concept of blue notes has been pushed too far in the recent literature. Traditionally, two blue notes, B♭ and B, were acknowledged. Then a third was added, F#. But now it seems that there is also a “blue

A” (cf. van der Merwe 1989: 119, 127–28). Almost any note that is off-pitch from the viewpoint of the Western scale is qualified by some authors as a blue note. That stretches the concept too far, and we may end up at a point where the principle of deviation becomes paramount, any audible “deviation” from notes of the diatonic scale being called “blue.”

There are several exceptional recordings by blues musicians using scalar patterns that suggest a radical departure from the diatonic scale. One is Mott Willis’s guitar solo of “Riverside Blues” (recorded at Crystal Springs, Mississippi, 2 September 1970 by David Evans, discussed and transcribed in Evans 1982: 213–14). Willis plays blue notes between the major second and minor third (i.e., fluctuating around 250 cents from the tonal basis) and between major sixth and minor seventh (i.e., fluctuating around 950 cents). One could speculate whether perhaps some “memory” of an equipentatonic scale from Africa might account for that. I would not categorically exclude that possibility, but equipentatonio scales are concentrated particularly in areas of Africa such as southern Uganda, from which no people were channeled into the Atlantic slave trade. An alternative assessment of Mott Willis’s tune might perhaps be based on the fact that the interval distance between his two blue notes and the standard ones is identical: about 700 cents. So could it be a mere transposition?

Whatever may be lurking behind these uncommon pitch patterns, it is best not to widen the original concept of “blue notes” to the bursting point. The blues, not being a unitary or in any way homogeneous tradition, allows for a great number of individual styles. Here, the concept of flexible pitch areas is a useful antidote to the tendency in some of the recent literature to read meanings into minute pitch oscillations associated with a musical style in which melisma and microtonal fluctuations are habitual characteristics.

The concept of flexible pitch areas is also prominent in African musical cultures. Accounting for it, I coined the term “elastic scales” with reference to some tonal systems in central Africa (cf. Kubik 1976b: 18). In Zande harp music (Central African Republic) there is notable variation of the top pitch of the Zande pentatonic scale, referred to as wili and represented as an E in my transcriptions (cf. Kubik 1994a: 40, 101–3). Two Azande harp players I recorded, Bernard Guinahbui and François Razia, who played harps tuned in unison, had on one particular occasion tuned those top notes at 734.5 and 711 Hertz respectively, which was 1334 − 1276 = 58 cents apart! And they found the resultant friction
comfortable (cf. Kubik 1994: 110, and item 6 “Limbyayo” on the accompanying CD). Flattening the E even beyond a quarter tone is common with Azande harp players. Consequently, the harp patterns and singing of a musician like Raymon Zoungakpio (item 8 on the CD accompanying my book) will strike analysts as very bluesy, at least in the tuning he used on that day. On another day he could well have tuned that particular note a bit sharper, and identified it as the same tuning. The Azande speak a L.A.6 (Adamawa-Eastern) language and are settled in the central African savanna. Their territory is cut by the borders of Congo-Zaire, Sudan, and Central African Republic.

Western categorizations tend to obscure the integrity of the blues singers’ pitch resources and patterns. It is therefore necessary to abstract the vocal lines from their accompaniment by instruments tuned to the Western scale, and to look at the vocal lines and their tonal systems in isolation. The question of what the blue notes actually “are” can be reformulated to discover from what sort of tonal system the majority of singers in the rural blues proceed, and where that system originally could have come from.

This has been one of the tantalizing questions in blues research. But there are clues. One is that most vocal parts in the blues are either clearly pentatonic or proceed from expanded tetra-, penta-, or hexatonic frameworks, sometimes spread across the range of more than an octave, with circumstantial pitch modifications in adjustment to instrumental accompaniment. Another is the fact that the vocal lines superimposed on a guitar harmonic cycle, when it is in the three common Western chords, often circumvent those chords, most regularly avoiding the dominant, while the subdominant seems to be more acceptable. Even quite generally, the dominant chord is the least used in the standard 12-bar harmonic pattern, being found only in measure 9, sometimes in measure 10 (though usually replaced by the subdominant chord), and sometimes as a “turnaround” at the end of measure 12 to signal the coming of the next cycle. When the dominant chord does occur, it is usually “pulled” toward the subdominant (from measures 9 to 10 in the standard 12-bar form) or toward the tonic (after the “turnaround” in measure 12). In some other instances, musicians substitute for the dominant chord, as in “Two Jim Blues” by George Lewis (see Example 10) and in many recordings by Blind Lemon Jefferson, where he played a VI, chord at the beginning of the third line of a blues structure, followed in the next measure by a IV (subdominant) chord.

However, although musicians tend to circumvent, avoid, or quit the dominant chord quickly, as if it lacked oxygen, the fifth degree of the blues’ tonal framework (up from the tonic) is a very important note, often “standing for” the dominant chord. A third clue is that all blues are based on awareness of a central tonality, a lingering basic tone to which virtually all vocal lines descend and regularly return, at least at the end of the third line. Shouldn’t these be sufficient leads for musical detective work?

But if the blues really has so much in common stylistically with some of the musical cultures of the west central Sudanic belt, as discussed earlier, we should, as a next step, look at the tonal systems used in that region. According to A. M. Jones’s “harmony map” (Jones 1959: 230) and the results of my own field work in some of these areas, particularly in northern Nigeria, northern and central Cameroon, the Central African Republic, and even the Republic of Sudan, most of this vast region from the Niger bend to Lake Chad, and beyond to the upper Nile River, is an area of pentatonic tonal systems. These are combined with unison singing (both in Arabic-Islamic and autochthonous styles), not excluding the occasional presence of rudimentary harmonic patterns in fourths, such as in the batal dance of the Chamba (northeastern Nigeria, rec. B 8599, Phonogrammarchiv Vienna/1963/Kubik). In western Nigeria, the pentatonic area extends as far south as the Òyó Yoruba; in Dahomey (Republique du Benin) and Togo it includes the Fô, in Cameroon some “grassfield” peoples such as the Bamum, Tikar, Vute, and so on.

In the region outlined, pentatonic tonal systems are in no way uniform; however, they appear in a variety of shapes, mostly anhemitonic, i.e., without semitones and made up of major seconds and minor thirds. Most of them alternate between these two interval types within the octave layout, while others—under the impact of ornamental, melismatic styles from old contacts with North Africa—add a microtonal dimension to the pentatonic framework.

In some musical cultures of the west central Sudanic belt we find the idea of two tonal centers—a principal, basic one and a secondary one. Coolen (1982: 77) observed that that was the minimum in the fjed of Senegambia. The two tonal centers can be a whole tone apart, as in the Yoruba chanteble song “Baba o’oda” (for transcription see Example 7), or they can form the interval of a fourth, with the secondary tonal center assuming a kind of subdominant flavor (e.g., the Tikar woman’s grinding song, transcription in Example 8).

Out of Africa

The Blues Tonal System
In the most western geographical Sudan (Senegambia, Mali, Guinea, etc.), we also often encounter heptatonic tuning systems with up to four shifts in the bichord progressions, such as, for example, in the music for bridge-harps (cf. Knight 1971, 1978; King 1972; recordings of kora player Sadjo Djolo from Guinea-Bissau, 18 May 1983, Orig. Tape A 175/Kachamba/Kubik, Museum für Völkerkunde, Berlin).

Contrasting with these musical cultures, some of the more eastern areas of the geographical Sudan display pentatonic traditions, often over a single tonal center that can be objectified as a persistent bourdon-like tone to which the musician and his voice constantly return (e.g., Meigogou, the Hausa gogo player—see above). This combination (of a pentatonic scale and bourdon-like center) contains for us important hints as to the remote history of the blues’ tonality, because the blues—if abstracted from the Western-style chord accompaniment—also displays it in many of its manifestations. There is much to suggest that some of the early blues were based on a continuous bourdon-like tonal center without any notion of change between tonal steps, without any so-called “root progressions” to use John Blacking’s term (Blacking 1959: 21). (See also transcriptions and videos compiled by Stefan Grossman, 1969, 1994.) Some early artists who sometimes performed pieces without progression between “degrees” were Charley Patton (Evans 1987b; Fahey 1970; Calt and Wardlow 1988), Robert Wilkins, Barbecue Bob, and Leadbelly.

For this reason I am reluctant to associate the remote origins of the blues with those stringed instrument traditions of the westernmost parts of Africa (Senegambia, etc.) where up to four tonality shifts can occur within a cycle. Some blues may have incorporated just one such shift, between the basic tonal center and a secondary center, a fifth downward (respectively, a fourth upward).

Tonal systems promoting the awareness of a basic tonal reference note are always indicative of a remote origin in the selective use of harmonics over a single fundamental. By contrast, where they include the idea of harmonic shift, tonal systems are often derived from the use of at least two fundamentals, such as are obtained on a mouthbow whose string is braced or stopped with a finger or stick (see my examples in an earlier chapter, figs. 10a, c, and e). This is the background to many of the harmonic structures found in the music of Gabon, Congo, Angola, and South Africa. There may also be retentions of this experience in some forms of the blues.

To understand harmonics-derived tonal systems—and they are abundant in Africa—it must be remembered that the notes of the natural harmonic series do not exactly correspond with the pitch values of the 12-note Western tempered scale. The B♭ of the natural harmonic series is 31 cents flat (969 cents), if compared with the tempered B♭ of 1,000 cents, and the E (386 cents) is 14 cents flat. The 11th partial at 551 cents is exactly halfway between a Western F and an F sharp. These are very audible differences (fig. 12).

![Figure 12. The natural harmonic series from partial 4 to 11.](image)

The inspiration for harmonics-based African tonal systems, however, need not necessarily come from instruments, such as experiments with the stretched string of a hunting bow (like that of the Bushmen of southern Africa). It can also come simply from the formants of human speech. It is vowel formation that provides the key to understanding human discovery of speech-derived harmonics. A vowel is a voiced sound in which the air passes freely through the mouth or (in nasization) through the nose. The difference between vowels is created by different shaping of the mouth as a resonance chamber, altered by movements of the tongue and shaping of the lips. Thus, each vowel has its own particular sound spectrum, it is defined as a difference in the selective reinforcement of harmonics; i.e., the vowel /a/ differs from /u/ by its harmonics, if sung to the same pitch. In Africa, not only multipart singing styles, but also unison singing can be based on scalar patterns generated by representations of speech-derived partials (harmonics) over a single fundamental.

Proceeding from this knowledge, I have developed a simple theory of the blues and about how scalar patterns from the west central Sudanic belt were perpetuated in the blues. First, the remote origin of these scales must be sought in speech. They do not derive from experimentation with instruments. Next, if such tonal systems are inspired by partials over a single fundamental, these
partials must fall into the comfortable middle range of the natural harmonic series. Both postulates have the advantage also of explaining the presence of a single tonic center in many of the Sudanic styles and in the blues, since all partials-based tones sung by the performer reinforce the idea of their fundamental, and thereby the tonic center. The C in a blues written in the key of C, therefore, represents the fundamental of a harmonics-derived scale.

Pentatonic scales can arise from a number of primary human experiences, such as the transference of the interval of a fifth (originally also inspired by harmonics) through acoustic space, leading to a F-C-G-D-A chain. But some scales simply arise from the melodic use of a selection of the harmonic series that incorporates intervals neither too disjunct nor too narrow. The ideal harmonics-based pentatonic system over a single fundamental incorporates tones representing partials 4 to 9. Characteristically, it extends beyond the scope of a single octave, with its lower component forming a tetradic pattern. From bottom to top the scale goes like this: C (0 cents)—E₄ (186 cents)—G (702 cents)—B♭ (969 cents)—C (1200 cents)—D (1200 + 204 cents) (see also fig. 12). This scale, if sung in descending order, sounds stunningly blues-like, though this is hardly the whole story.

Of course, there can be combinations of several of the basic scale-generating principles, because of age-old contacts between people. My theory then must also explain, in the present context, why pitch ambivalence occurs regularly at certain points of the blues scale. It is the lower blue note, between E and B♭, that seems to fluctuate the most, while the upper blue note (B♭), even if it is attained with a gliss, is intoned more firmly.

Something that is so trivial as to be hardly ever mentioned is the fact that men and women, boys and girls, mothers and children in a homogeneous community normally speak the same language. On different occasions they may, therefore, use the very same sentences with identical tonal inflections, but each at their own voice level. In many African cultures this idea is expressed in the designations given to the members of an instrumental set, or to playing areas on one and the same instrument, representing ranges of the human voice. These ranges are conceptualized as diverging by an interval of an octave (e.g., mother versus child; also sometimes mother versus father) or by a fourth or fifth (men versus women in general, boys versus girls, etc.). Azande musicians, for example, distinguish on their kpioningbo log xylophones a tonal range called ba-kpioningbo (father-

xylophone) from another, higher range, called na-kpioningbo (mother-xylophone). The two cheeks of their slit drums (guru) are called nina (mother) and buba (father) respectively (cf. Kubik 1994a: 106–8). In Fô culture of Dahomey and Togo, the Guinea-type double-bell consisting of a big bell and a small one attached to it, is called gakpãvi (ga = metal, pã = carry, vi = child), i.e., the metal carrying its child on the back, like a mother carrying her child (cf. Kubik 1989a). Yoruba musicians of southwestern Nigeria, Dahomey, and in the New World (Ortiz 1955; Pinto 1991: 181, 186, 207) cultivate the concept of a mother drum (yâ ilu) within their biiâ and dundun sets (the latter only in Africa, having not reached New World cultures until very recently, because they were introduced in Yoruba society only from the mid-nineteenth century on). Here the “mother” is not an oppositional category, but part of a hierarchical order of mother and “offspring.” Among the -Nsenga of Zambia, one row of notes on a kankoheai lamellophone represents boys, while another row represents girls. Each boy, says Marjorie Davidson (1970: 104), goes together with one girl. Characteristically, the sonic distance between the two is either a fourth or a fifth (cf. Kubik 1994a: 233–35). From the Mpyemö, settled in the southwestern corner of the Central African Republic, Maurice Djenda (1996: 13) reports the distinctions montumo (child drum) and nyango ntumo (mother drum) for two drums of different size and tuning that are played together, the first with a “small” voice like a child, the other with a “big” voice like its mother. From African-American cultures we have a formidable testimony as to the retention of such concepts in a statement by New Orleans jazz drummer Baby Dodds reporting about the early drumming lessons he took from Walter Brundy:

He used to play with Robichaux and was a very good drummer. He was a reading drummer and that’s what I wanted to learn—to read music. . . . Brundy taught me the fundamentals of reading music and I found out that everything I had been doing was wrong. He taught me that the right hand was “mammy” and the left “daddy,” and I soon learned how to get my two hands working differently. This was, of course, after I mastered having both hands do the same thing. (Dodds 1992: 7–8)

Oppositional pairs such as father/mother, boys/girls, male/female, men/women, and mother/child are regularly projected to express a dichotomy between higher and lower voice ranges. In some sub-Saharan musical cultures, sounds are even conceptualized as functional units within a larger set of consan-
guine or affinal family relationships (cf. Ngumu 1975–76 for xylophone terminology in southern Cameroon; and Malamusi 1992 for panpipe taxonomy in Mozambique).

For now I will cite and discuss only one more example. It comes from within the west central Sudanic belt, from an area understood as important for the remote background of the blues. In November 1963, at Kontcha in the Adamawa mountains on the northern Cameroon/northeastern Nigeria border, I recorded two Kutin musicians playing two double bells (tòt ijo) in interlocking style. The Kutin, like their neighbors, the Chamba and the mountain dwellers called Zanganyi, are millet agriculturalists within what has been called the Ancient Nigritic peoples (cf. Hirschberg 1988: 21). In the nineteenth century their homesteads were raided by slave traders, and they were also subjugated by the Fulbe under whose Lamido (ruler) they have lived to this day in a state of virtual serfdom. Each of the two players I recorded, Gonga Sarki Birgui and Hamadjam—observe their names in Fulfulde—held his iron double-bell by its stem-grip with the left hand, the bells’ orifices directed toward his stomach (cf. Kubik 1984: 86–87). In his right hand each held one stick to strike the bells in alternation.

The double-bells were both tuned at the interval of approximately a fourth. Tòt dën had the deeper voice, while tòt sèwà had the higher one. The task of the higher bells was to provide a basic alternating-pitch beat, while the lower ones were used to play interlocking variations. My measurements with a Korg WT-12 tuner ascertained only rough fourths for the sound intervals within each double-bell. But the musicians’ tuning idea was unambiguous. The higher tone of the tòt sèwà and the lower tone of the tòt dën were meant to form the interval of an octave (at 1,210 cents in my measurement), and each of them had a “companion”—a fourth up or down. Bells are difficult to tune, and the measuring apparatus is also confused by their rich overtone spectra. We do not know how old these bells were. But the original blacksmith’s intentions were clear, and we can therefore present the bells’ tunings as shown in Figure 13 (in relative notation).

Remarkably, this is the pitch skeleton of “stable” tones Alfons M. Dauer had postulated as underlying the pentatonic blues scale. It is also the tonal scaffolding of the Tikar woman’s grinding song (cf. transcription in Example 8, this volume). But there is more to it. The two musicians (cf. rec. B 8910 and 8920, Phonogrammarchiv Vienna/1963 Kubik) also created timbre melodies by modifying the distance of the bells’ orifices from their stomach. It is not easy to determine by ear which partials are thereby reinforced, nor would spectrograms be very conclusive. But even lower partials would give additional “shades” to each note.

Clearly the tuning of the two Kutin double-bells is not inspired by any intrinsic acoustic qualities of the bells themselves, but it is a projection of a tonal scaffolding associated in Kutin music with vocal ranges—i.e., the black-
smith tuned the bells so that the relationship between the central areas of adjoining voices, possibly male and female, would be reflected. Both ranges are conceptualized as identical, but each with a different tonal center. The tonal center of the voice represented by toŋ deni is written here as F, that of the toŋ senwa as C. The dependent tones derive from the third partials of the natural harmonic series, over fundamental F and fundamental C.

West central Sudanic concepts about gender (prior to Arabic influences) are based on analogy and internal identity. In music this is expressed by analogy between pitch ranges; for example, the tunings of the two Kutin double-bells are thought to be in identical intervals, but at different pitch levels. These pitch levels are not arbitrary, but a fifth apart, creating an octave frame between the highest and the lowest note of the four individual bells together.

Through overtone shading such a scaffolding can be expanded. If a scalar melody formed by three adjoining tones within the frame of a fourth, resulting in the descending melodic sequence C → B♭ → G, is sung by a woman, what will happen if a man wants to pick it up? As much as the lower Kutin double-bell is analogous to the higher one, so will a man imitate the melody at a lower level, according to the range of his voice; but he (like the woman) will also relate the pattern to the fundamental suggested by his own voice. That means that the melodic pattern will be composed of identical partials within his own voice portrait. Most comfortably, he might relate the pattern to a fundamental that is a fifth lower than that of the woman's voice, i.e., he might sing F → B♭ → C (descending) over a fundamental F, with the advantage that the two melodies will be connected in one common tone, C (which is the woman's fundamental), like the Cs on the two Kutin bells forming an octave.

Thus, if any scalar melody based on partials over a single fundamental is transposed, maintaining not only its interval structure but also its implicated reference to a root (fundamental), the most likely transposition will be a fifth down (fig. 14a and b). Once established, this pattern can also be inverted: a fourth up gives the same tonal relationship.

Much solo vocal music from the west central Sudan can be described as based on a pentatonic scalar framework combining two identical harmonics-based tritone sections a fifth apart (at different octaves), sharing in one note
and thereby reinforcing the upper section’s fundamental. Each section by itself also represents three speech-tone levels: high, mid, low. The upper section conforms to the voice level of a woman, the lower to that of a man (fig. 14a and b). The relationship can be reversed, “female” becoming male and “male” becoming female, resulting in a pattern in which the two scalar sections overlap: F—B♭—C—Bb—G. Each can also be expanded by one more step in the harmonic series to include a tone representing partial 9 (fig. 15).

Figure 15. Integration of the three-note scalar pattern in Fig. 14a-b and expansion to include a note representing partial 9:

<table>
<thead>
<tr>
<th>Cents: representing partial no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>204</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

“Female” range over fundamental C

<table>
<thead>
<tr>
<th>Cents: representing partial no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>204</td>
</tr>
<tr>
<td>9</td>
</tr>
</tbody>
</table>

“Male” range over fundamental F

How the early millet agriculturalists in the Sudanic belt could have arrived at oppositional pairs in association with pitch ranges is, of course, an intriguing question. Marcel Griaule (1954), Griaule and Dieterlen (1950), and more recently Junzo Kawada (1982, 1997) have given some thought to the sound universe of the west African savanna peoples, especially the Dogon and various Mand效-speaking groups, and how sound is related to mythology and to general cultural patterns. To follow this up in detail would go beyond the scope of this book. But pursuing our specific issues, we can now conclude that if in this broad Sudanic region any melodic patterns as shown in figure 14a appear in combination with a periodic return of the melodic lines to a sort of ground note or tonic C, then these three pitches cannot but represent a fundamental's eighth (at 1,200 cents), seventh (at 969 cents), and sixth (at 702 cents) partials. The Tikar woman’s grinding song (see Example 8) shows such a melodic pattern in several places, and from the blues tradition there is also no lack of examples (cf. Titon 1977—specifically p. 67, “Dead Drunk Blues” by Lilian Miller; p. 97 and Example 11 below, “Mean Conductor Blues” by Ed Bell; p. 122, “Fo’ Day Blues” by Peg Leg Howell; etc.). If, in addition, the three-note descending melodic pattern C—B♭—G (fig. 14a) also appears in transposition within the same song, as it does in some blues, we can assume that in such a case the system has begun to include a second fundamental functioning as a secondary tonal center (fig. 14b).

The reason for the vocal use of middle-range harmonics, rather than high-range partials (beyond partial 9), to form such melodic patterns is obviously connected with the sound spectrum of human speech and the tonality of the various languages spoken in west Africa. The good use of the set of three tones extrapolating the eighth, seventh, and sixth harmonics is that they are the minimal interval sizes accommodating speech-tone representation: high-mid-low in a tone language. As mentioned earlier, Dauer suspected as early as the 1950s that the “blue notes” conform with the mid-tones in speech patterns of West African tone languages (Dauer 1955: V.6). He had languages of the I.A.4 (Kwa) family in mind, but I.A.3 (Voltaic) and I.A.6 (Adamawa-Eastern) languages are also reasonable candidates.

While my illustrations (fig. 14a and b) suggest that some scalar patterns in the west central Sudan and in many blues are simply compounded of a three-note series (C—B♭—G) and its own transposition a fifth downward, each composed of three pitches, high, mid, and low as in a tone language, there are more subtleties to it. By singing the same pattern at different speech levels, the imaginary woman and her male partner in our scheme cannot avoid also becoming aware of the additional harmonics belonging to each fundamental. They swing along in the back of the mind, coloring the perception of the patterns actually sung. They include especially partials 5 and 9, besides 2, 3, and 4 up from the fundamental (fig. 16a and b).

Here we must remember again that the pitch values of harmonics-based tonal systems are (in part) very different from those of the 12-note Western tempered scale (cf. fig. 12 above). Therefore we cannot take the notes at their written face values; rather, we must observe their true pitch values expressed in cents. Once
we have stayed clear of this trap, we can make an experiment. We blend and integrate the two harmonics-based scales over fundamentals C and F as shown in figs. 16a and b, and the surprising result is a combined model that encompasses the melodic repertoire of the blues (fig. 17).

Where this scale conflicts with the European scale can be seen by comparing its cents values with those of the Western tempered scalar system: 0, 100, 200, ... up to 1,200 (octave). And since our merger model incorporates eight different pitch values (without being "octatonic"), the Western diatonic scale only seven, it is easy to reconstruct where they must have clashed. In culture contact, the 386- and 267-cents pitches were bound to mark off a pitch area assuming a vague quality of "thirdness" in response to the Western scale. The nearest values in the Western scale, i.e., major and minor third (at 400 and 300 cents), were reinterpreted in that sense. One might think that the 267-cents value would have been more easily absorbed by and equated with the D, the second degree of the Western scale. But that could not have taken place for audiopsychological reasons. In the integrated model the D represents first of all the ninth partial over fundamental C. Even if it is transposed an octave downward, it is already "engaged," because it is one of the four tones—C, F, G, and D—that link the Western and the blues scale by congruence. Their cents values are compatible. It is also important to understand that the E-386 and E-267 pitch values constitute a frame. They are marginal values. The blue note will fluctuate with more frequency in the middle area between these two borderline values. This corresponds with the listeners' auditory impression that this blue note tends to range between 300 and 370 cents. A blue note below the "minor third" (300 cents) is found in the blues, but it is rare. The fact that the 267-cents value is just 63 cents from an octave-transposed D (at 204 cents—see fig. 18) may also have contributed to the fact that at least over the tonic chord singers avoid that threshold.

From Figure 18, we can deduce that if our west central Sudanic integrative model is projected upon the Western diatonic scale, the two spots where the ear will perceive the greatest difference are at -131 cents in the upper area (B♭) and -14 to -133 cents (fluctuating between the two values) in the lower area. These are the blue notes, and these are the closest rational values we can get for defining them. All the other notes in the two scales are close enough to each other to give an impression of identity.

My hypothesis about the origin of the blue notes, therefore, postulates that many blues singers operate from a mental template (pitch memory) blending a pentatonic scale based on partials 4 to 9 with its own transposition a fifth lower. The resultant interference pattern functions as an overall framework for pitch perception in the blues, with a central tonal reference note (tonic) representing the fundamental of the basic scale (C).
and a secondary tonal center (F). This blues scale conflicts with the Western diatonic scale and its chords particularly in two places. It also conflicts with Western functional harmony in that the dominant chord is predictably the most difficult to accommodate in the blues, while the subdominant chord can be reinterpreted as a shift from the basic tonal center on C to the secondary tonal center on F.

In some parts of the eastern half of the west central Sudan and in the blues, vocalists proceed from an identical speech-based mental template that integrates two representations of the natural harmonic series (up to partial 9) at the distance of a fifth (702 cents) from each other (cf. the Kutin double-bell instrumentalization of the vocal ranges, shown in fig. 13). This can be compared to the blending of the voice ranges of a woman and a man, with the resultant interference pattern. It can also be visualized by two clock-faces turned against each other so that zero of one clock-face conforms with 702 on the other.

When such pitch memory is projected upon the Western diatonic scale, the two systems will be brought into alignment by the ear at points where they are congruent, the fundamental and the lower-partial derived degrees: fourth, fifth, and so on. Divergences will be perceived particularly in two places: at the B₉ of 969 cents, and the clustered E₉/E₉pitch area fluctuating between 386 and 267 cents. The higher so-called blue note (B₉ 969 cents) will not pose any particular problem of accommodation within the Western scale, because it is close enough to that scale's own tempered B flat of 1,000 cents. Although a long way from C (at 1,200 cents), the blue note B₉ of 969 cents could not, therefore, have created the need for a gap-filling intervening note during the process of encounter with the Western diatonic framework. But there is another, even more fundamental reason inhibiting pitch expansion. In all the scalar mental templates that we know from sub-Saharan Africa, the maximum number of notes within one octave is seven. This is one of the most resilient culture traits in the African and African-American culture worlds. New World reinterpretations of the Western diatonic or chromatic scales by people of African descent therefore

The number 0 indicates the system's two central reference points, C for the "female" series, F for the "male" series. From these tonal centers harmonics from partial 9 down to 4 are represented in counter clockwise order: 204 (partial 9), 0 (partial 8), 969 (partial 7), 702 (partial 6), 386 (partial 5) and 0 Cents (partial 4). The C-based series is represented by dots within the outer lane of the circular diagram, the F-based series by dots within the inner lane.
tend to restate the pentatonic, hexatonic, or heptatonic schemes of their former African home cultures. For example, in their encounter with the tempered Western scale incorporating twelve tones, the Africans in the New World reacted by reinforcing the African pitch area concept; e.g., two neighboring notes of the Western chromatic scale (as laid out, for example, on the piano) can at any time be compounded to form a pitch area, thereby preserving the pentatonic, hexatonic, or heptatonic scalar templates inherited from Africa. Pitches that are equated within one of these pitch areas can also be substituted for each other. Such practice began with the development of the so-called "barbershop" harmony and the banjo chord sequences accompanying New Orleans jazz blues, such as: C C E G / F F # F C A7 / D7 G7 C C. Characteristically, the wind instruments often neglect them (cf. clarinetist George Lewis's phrases in "Two Jim Blues," Example 10, with a melodic C over the A7 chord and a melodic F over D7). The simultaneous use of notes within a pitch area is not felt as "dissonant." The underlying aesthetics continued through jazz history, reaching its culmination in bebop. Substitution chords in jazz often exist by virtue of the pitch area concept, historically one of the most decisive reinterpretive auditory reactions by people of African descent to the Western tonal system.

Thus, while the 969 cents blue note finds reasonable accommodation within the Western tonal system by equating it with the Bb of the tempered scale (1,000 cents), the lower blue note tends to fluctuate (be "worried") considerably, because the Africa-derived mental template (figs. 18 and 19) allows for a 119-cents margin between two different pitch values perceived by the singers as variants of one and the same tone. This explains why the lower blue note can fluctuate anywhere between the two values indicated, and why singers express this ambiguity by crossing that distance using glissando, wavy intonation, and so forth.

My model explains the following cognitional characteristics of blues tonality and audience reactions:

1. the pitch positions of the two blue notes in relation to the stable notes, i.e., why the blue notes are in precisely the locations they are along the scale.
2. why in many blues accompanied with Western chords, the progression from tonic to subdominant is taken with ease, but the dominant is often avoided, circumscribed, or totally neglected.
3. why the blue notes diverge from Western pitch expectations.
4. why in the blues there is a powerful central reference tone, a tonic or key-note on which the last melodic text-line always ends. This trait is so universal that we find in Titon's (1977) transcriptions of forty-seven blues only two (nos. 9 and 43) that do not end on C (in relative notation). During the statement and repeated statement lines of the blues (i.e., the first two lines), the vocal parts may end somewhat more frequently on notes other than the tonic, especially on the third, fifth, or flat seventh—all parts of the tonic fundamental's overtone structure.

The scheme laid out in Figures 14–19 is theoretical, with the aim of reconstructing a possible evolutionary structure. At the moment I am inclined to assume that the final step (so far) in that sequence was taken not in the west central Sudan, but in the southern United States. That a pentatonic scalar framework based on partials 4 to 9 began to be transposed regularly a fifth down (or conversely a fourth up) in one and the same song can be understood as an African-American innovation. In the west central Sudanic belt there are songs showing tendencies toward transpositional drift, but the secondary tonal center (on F) remains ancillary.

Here it is important to realize that we are dealing with depth structures. A mental template determining a scalar framework is not a song melody. Although blues melodies, vocal and/or instrumental, are sometimes transposed in part, the presence of a strong central reference tone acts as a counterforce tending to prevent it. Characteristically, the closest manifestation in actual sound of the idea of scalar transposition in the blues is the ubiquitous piano boogie-woogie walking bass line. That is where the structure in one or the other modifications comes to the surface.

Structure implies convertibility. I have explained above in theoretical terms that in the west central Sudanic context a pentatonic scalar framework is transposed down a fifth, from a "female" voice range to a "male" voice range. I also said that the pattern can be inverted and seen as transposed up a fourth from a "male" range to a "female" range. For this reason it is not surprising that the actual impression given by most blues is of transposition up a fourth, when the harmonic framework moves from tonic to subdominant. And the boogie-woogie bass line also usually moves upward a fourth, suggesting "male" to "female," rather than "female" to "male."

My integrated scalar model may have existed as a mental template in areas of the west central Sudan in the eighteenth century, but the particular expressions it
assumed later are American. How and why this process occurred is open to speculation. One obvious possibility is that acquaintance with the Western concepts of tonic and subdominant and the use of Western instruments were the catalyst for this transposing idea. The African Americans’ reactions were selective. Scalar templates based on the awareness of two tonal centers a fifth apart (in inversion, a fourth), brought along from the west central Sudan and other parts of Africa, eventually prevailed under the new stimuli. The tonal universe of the ancestors of the Kutin, Tikar, and other peoples of the west central Sudan was reinterpreted in the southern United States as a tonic/subdominant contrastive pair.

In the blues, men and women rarely sing together, except in certain early professional vaudeville teams. Therefore, it became the task of the solo blues singer (irrespective of gender) to express both scalar ranges reminiscent of the west central Sudanic dichotomy. This could even be one reason why there are two statements of the same textual line in the AAB blues, the genre’s most common stanza form—the first statement at what might have represented the “female” scalar level, the second, repeated statement at the “male” level, or vice versa. Of course, it is very difficult to prove anything that is probably unconscious. But this would explain why certain tonal-melodic ideas inherited from the west central Sudan underwent the transformation they did in the southern United States. Conversely, no such development could have taken place in the west central Sudanic belt at the time in question, because any comparable acculturative stimulus was lacking.

There is ample evidence that the idea of melodic and/or scalar transposition as such by a fourth or fifth is common in Africa, and that it implies simultaneously the concepts of analogy and contrast. Harp tunings among the Azande can be transposed by a fourth downward, with some notes octave-displaced to retain the original pitch range in the transposition (cf. Kubik 1994a: 127–28). From further west there is more evidence. In some dé story songs I collected among the Òyò Yoruba of southwestern Nigeria, the melody of the chorus part alternates between two pitch levels that are a fifth apart, without any changes of text. In one song, “Ol’ékó d’èhin” (Hoe seller go back), the chorus reacted to a change in the final tone of the leader’s phrase by transposing its own phrase a fifth upward (cf. transcription in Kubik 1989b: 144–45). Other examples from my unpublished collection include the songs “Olómùròrò,” “Jojoloro,” “Onit-

“Awé ma gbọna,” and “Olu sin ma sin!” In all these cases, identical chorus text-lines within one and the same song were melodically transposed a fifth upward.

An ancient distribution area of such ideas seems to expand all across the west central Sudan, even as far as the Great Lakes Region of East Africa. From Buganda (Uganda) we have intracultural evidence for the existence of a concept of two analogous scales thought to stand a fourth apart. The tonal system in the ancient kingdom of Buganda was equipotential, i.e., it had a standard interval of ca. 240 cents and fourths of 480 cents. Joseph Kyagambiddwa (1955: 20) informed us that in Buganda’s court music this tonal framework was thought to embrace two oppositional ranges: olutaamba olwa wa náisi (the lower scale) and olutaamba olwa wa ngulu (the higher scale). A song would stand in one or the other. The two levels were a Kiganda fourth (i.e., ca. 480 cents) apart.

We do not know whether Kyagambiddwa’s contrastive pair represents any remote historical influence upon Buganda from Nilotic musical cultures, but further east, among the peoples living in the vicinity of the Luo of Kenya (speakers of a II.E.1 Eastern Sudanic language), this seems to be the case; also among the -Luhya and -Kuria who speak Bantu languages.
10 - The "Flatted Fifth"

There are many unusual scalar patterns in the blues, and some could perpetuate tonal concepts found in regions of Africa outside the west central Sudanic belt. One of the issues to be accounted for in any study of the origin of the blue notes is the so-called "flatted fifth" (cf. Schuller 1968: 51-52). It was only recognized as a blue note in the 1940s, but there is no doubt that it existed in some of the "early downhome blues" (cf. Niles 1949).

The flatted fifth is not part of my merger model. Does it represent a different strand in the blues tradition? After all, the two other blue notes are characteristic of the melodic repertoire in almost any blues that has been recorded, while the flatted fifth appears sporadically, e.g., in Bessie Smith, Ed Bell, John Lee Hooker, and others. It could even be that it became more common in the blues during the 1940s, after it had assumed a prominent position in bebop, a development which could have reflected back to blues singers such as John Lee Hooker.

Nevertheless, the flatted fifth, especially when used as a starting note in descending phrases (such as by Bessie Smith), or resolved downward in various other contexts, is to be considered a distinctive pitch value. Its melodic position within the singer's scalar pattern (disregarding the instrumental accompaniment) probably contains the clue for its genesis. The flatted fifth in the blues most often occurs as part of a descending phrase. In an ascending phrase sometimes the same singer would intonate a perfect fourth. This can be observed, for example, in Blind Lemon Jefferson's "See that My Grave Is Kept Clean." To me this suggests that the flatted fifth must be part of a descending scalar framework, blues scale, or whatever one might call it, while the movement upward from the basic tonal center to a perfect fourth is of a totally different nature, namely a progression between tonal levels and not between scalar steps. This would confirm what I have
1. That same train, same engineer;
   That same train, same engineer;
   Took my woman 'way, Lord, left me standin' here.
2. My stroller caught a passenger, I caught the mamlish blinds.
   My stroller caught a passenger, I caught the mamlish blinds.
   Hey, you can't quit me; ain't no need of tryin'.
3. Hey, Mister Conductor, let a broke man ride your blinds.
   Hey, Mister Conductor, let a broke man ride your blinds.
   "You better buy your ticket; know this train ain't mine."
4. I just want to blind it far as Hagerstown.
   Yeah, I just want to blind it far as Hagerstown.
   When she blow for the crossing, I'm gon' ease it down.
5. I pray to the Lord that Southern train would wreck.
   I pray to the Lord that Southern train would wreck.
   Yes, it kill that fireman, break that engineer's neck.
6. I'm standin' here looking up at the risin' sun.
   I'm standin' here looking up at the risin' sun.
   [If] Some train don't run, gon' be some walkin' done.

passenger—a passenger train.

mamlish—an intensifying adjective of unknown etymology, having a meaning somewhat like "doggone."

blinds—the front of a railroad freight car; used in stanza 4 as a verb for hoboing.

Hagerstown—a town in western Maryland and important railroad junction, far from Bell's Alabama home.

Southern—name of a railroad line.

Contrary to its name, the flattened fifth is not a flat fifth. It is an independent component of scalar patterns found in the blues. In the blues, G and the pitch area embracing ± F# are separate tones. This is obvious, for example, in the vocal part of Alabama bluesman Ed Bell's "Mean Conductor Blues."

The overall melodic vocal patterns in "Mean Conductor Blues" are pentatonic. Most striking is the fact that the intonation of the F# actually oscillates between this pitch value and F. From this behavior I conclude that F# and F are the same and the same tone in this singer's scalar panel. There is no need to distinguish gradations of a scale degree as separate notes.

From Ed Bell's "Mean Conductor Blues" I extract the pentatonic scalar pattern shown in Figure 20. Confirmation that this is indeed an independent scalar pattern comes from the fact that it remains unaffected by the guitar accompaniment. Although the melodic order of the notes is changed, as a scalar pattern it is maintained throughout the three text-lines of this blues.

Figure 20. Pentatonic scalar pattern in Ed Bell's "Mean Conductor Blues":

![Pentatonic Scalar Pattern](image)

Ed Bell's guitar accompaniment in "Mean Conductor Blues" is a repeated cycle involving the tones C, E, F, G, and even D and A (absent in the vocal part). It contains no blue notes, and—characteristically—no changes into subdominant or dominant modes. Bell's riff-based guitar playing is merely a convenient sound background to a vocal melodic line that is virtually unrelated to it, except that both are connected by the keynote C.

What exactly is the tonal framework combining voice and guitar? Certainly, it is no merger scale. The clue to its structure lies in the oscillating quality of the F#/F compound; the singer seems to aim at a value between the two. Such a value exists in African music. Tolia Nikiprowetzky (n.d.: 20) notates a flattened fifth in some Mauritanian modes that are based on Arabic antecedents. However, he does not explain its systemic function and exact cents values. In another area of millennium-old contacts between African and Arabic/Islamic cultures,

Out of Africa

148

The "Flattened Fifth"

149
northern Mozambique—off Kilwa Kisiwani and Mozambique Island—the flatted fifth also occurs as a melodic interval, for example in takare fiddle music. Interestingly, it appears in conjunction with another Asian import: the bourdon. This style is also shared by music played on the sawa flat-bar zither, and it has radiated into other instrumental realms. In 1962, when researching xylophone traditions in northern Mozambique, I was startled by mangwilo log xylophone pieces all based on a persistent bourdon produced by two players sitting opposite each other and interlocking the same note with one of their hands. With the other they threw in chordal patterns, which to my surprise could be in any combination of notes on the xylophone, all sounding consonant. There was clearly one fundamental for the whole sound panorama. I then came to the conclusion that “the notes of the Mangwilo come very close to the location of some of the remotest upper partials of the natural harmonic series.” I identified the six notes of one mangwilo I recorded as possibly representing partials 8, 9, 10, 11, 13, and 15 (Kubik 1965: 39). I have since restudied xylophone traditions in the area, reconfirming my analysis that their tunings are indeed based on the selective use of higher partials, although I now have doubts about the 13th and 15th. The 11th partial is definitely aimed at, and also represented in vocal music. Old-time songs of the Wakis fishermen at Lake Nyasa in Tanzania include harmonic patterns incorporating a pitch that represents the 11th partial (recordings Kubik “Uyile” by two Kisi girls, B 4851, April 1960, and malimba lamellophone played by Laurenti, B 7420, 1962/Hilkegest/Kubik, Phonogrammarchiv Vienna).

The 11th partial of the natural harmonic series is at 551 cents, just halfway between F and F♯ of the Western tempered scale. Seen from this angle, the five notes of Ed Bell’s vocal scale in “Mean Conductor Blues” can be explained as representing the sector of the natural harmonic series shown in Figure 21.

The implications—theoretical, typological and historical—of these findings are enormous. One consequence is that in those blues where the melodic flatted fifth is an integral part of the scale used, it must form a pitch area together with F, the fourth degree of the Western scale. But in this case, when F♯ and F are one and the same tone, the F is often barred from assuming other functions. “Mean Conductor Blues” can serve as a good example. In the second and third lines there is no change to subdominant and dominant in the guitar accompaniment. The logic is that blues with an F/F♯ compounded tone will tend to be more rigorously related to a continuous tonic through all twelve measures.

The typology of the blues includes several regional strands (Cohen 1996). One can also isolate different strands on the basis of the tonal system used. Preliminary work on this question has led me to suggest two such strands:

1. Blues based on a mental template integrating two simple pentatonic scales at the distance of a fifth, formed from representations of partials 4 to 9 (cf. figs. 18 and 19). This type embraces a subdominant tonality with the step from tonic to subdominant taken easily, while the dominant chord is largely circumvented. There are two fundamentals, C and F.

2. Blues based on a mental template defined by the constituent use of higher partials over a single fundamental. This blues scale seems to be based on the selective use of the harmonic series from the 6th to the 11th partial. If partial 9 (D) is omitted, a pentatonic character of the blues is retained, as shown in Figure 20.

I will not now expand this typology by adding other possible strands. They may or may not exist. There is probably no unitary theory to “explain” the “flatted fifth.” Its origins might be traceable to multiple African sources, and consequently, it may function in the blues in various ways. In some blues it can be understood as a tone representing partial 11 transposed an octave downward. In others it may reflect a memory of Arabic/Islamic modes as they survive today in the west African sahel zone, notably in Mauritania (cf. Nikiprowetzky n.d.: 20, especially the pentatonic mode in line 5). In still other blues, as David Evans has suggested, the flatted fifth could be a blue third on top of a blue third. More functions are conceivable, and they are not mutually exclusive.