

ONE NATION UNDER A GROOVE

—— From the History of the conveyers of the Music and Technology ——

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SUMMARY

1. Every musical style has a life cycle of its own, and their roles in the society and compartmentalization in terms of other styles dramatically differ according to which stage they are in, even if they were the musical style called by the same name.

2. It is useful to organize the rise and fall of the music according to the periodical life cycle.
 - (a) 3-4-year-cycle booms, and modes rotating in 10-year cycle (not included in this paper)
 - (b) the musical style's generation shift occurring approximately every 30 years
 - (c) rise and fall of music's integration principle and various matrices of music that last for over a 100 years **[matrix(ces) of music: a mold in which a musical style is produced]**
3. The march of popular music in the US (1850-1970) was identical with the currents of non-Protestant new immigrants and liberalism.
4. The growth of the turntable music lead by DJs since 1970 can be explained perspectively from the following two points of view.
 - (b) New-generation style of English-speaking popular music
 - *Ragtime → Jazz → Rock'n'roll → **Hiphop/Dance Music** → (?)
 - (c) Musical culture that reflects the rise of new social powers
 - *classical music → popular music → **(pan-African-Asian-Hispanic people's music)**
5. A close attention to the fundamental structure of the harmony supporting the theme would lead us to assume that both classical and popular musics belong to the same category of music (=homophony). Homophony is a musical style unique to the modern times that has prevailed throughout the world together with the nation-state system.
6. In order to understand the dynamic evolution and true nature of the musical culture, it is necessary to relativize Eurocentrical view of history and the notion of music that presumes bar lines and harmony.



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I intro

—150-year-cycle theory—

At the turn of the 19th century a theory prevailed in Europe, stating that major changes occur every 150 years in the music. It is a somewhat opportune argument, with an intention of setting year 1900 as the starting point of the contemporary music, but is nonetheless convenient when we were to briefly organize the facts in the back of our mind (table 1).

(table 1)

1900 -	contemporary music	atonal music (?)
1750 - 1900	modern music	functional harmony, equal temperament, printed music, piano
1600 - 1750	Baroque music	basso continuo, well temperament, bar lines, opera, chamber music
1450 - 1600	Renaissance music	perfect cadence, 'sweet' major 3rd note, just and meantone temperament
1300 - 1450	Ars Nova	mensural notation, acceptance of duple rhythms and hemiola
1150 - 1300	Notre Dame in Paris	organum, Arab-Andalusian influence, troubere, triplet rhythms
1000 - 1150	Guido d' Arezzo	solmization (ut, re, mi, fa, sol, la), transverse line for notation, sequentia
0850 - 1000	Gregorian chant	first polyphony, oldest noted music, Cluny abbey

* there might be numerous errors and objections especially for the times prior to Baroque period.

According to this theory, Baroque period begins in 1600 with the oldest existing opera "Euridice" and ends in 1750 with the decease of Johann Sebastian Bach. It is followed by the 'modern period' that will end in 1900, with its music ruled by tonality and functional harmony.

On the premise that such period division were valid, what would the following 150 years (1900-2050) mean for the music?

Arnold Schoenberg (1874-1951)



In 1899, "Verklaerte Nacht" by Arnold Schoenberg and Scott Joplin's masterpiece "Maple Leaf Rag" were released.

By the 1980s, the atonal music using twelve-tone technique have stalled for the most part. Today the basic repertoire still sticks with works dating back over a 100 years and we see the early music (Baroque and Renaissance) being more popular than contemporary works. Now, it is obvious that the so-called 'classical music' style no more has its power to lead the present-day music scene. (In fact, contemporary music has been revived in an unexpected form, but it is outside the context of serious music).

Eventually, whether one likes it or not, it was the people's music of the United States that exerted the most influential power over the period of Pax Americana. The last 100 years were, at the least, an era of English-speaking, rhythm-emphasized popular music, with African Americans as its leading conveyers and recording technologies as the premise.

My purpose of this paper is to develop a perspective over this musical culture (American popular music), showing it in two periods - before and after the year 1970.

Although there is a way of conceiving popular music (for example jazz, rock'n'roll and disco) as something positioned below the serious music, I would like to move as much as possible away from such 'high/low artistic value,' or the conventional framework of 'folk/artistic/popular' music. And I will look at the shifts and changes of various elements of music, underlying technologies, forms of distribution, and the world view that is the cultural background of the music.

Such point of view will enable us to perceive music as a direct reflection of trends and movements of the time, and to further anticipate the changes of society. It might as well provide us with some hint regarding the still unclear whereabouts of the 21st century.

II Don't Be Cruel

—People's music of the 20th century—



'How I Won the War,' (Rolling Stone Magazine, the 1st issue Nov9,1967)

The leading music-industry paper 'Billboard', and an influential rock magazine 'Rolling Stone' define the years between 1955 and 1985 to be the Rock'n'roll period. (and always saying 'Rock will never die.')

That is, beginning with 'Rock Around the Clock' and ending with 'We Are the World.' According to the said papers, the previous 30 years represent the jazz period, and the subsequent years the period of dance music, including reggae/hip-hop, house/techno and booty music (table 2).

(table2) alternation of generations in music style

• 1986 -	dance music	* Video, MTV, CD, Sampler, digital recording
• 1955 - 1985	rock'n'roll	* TV, Vinyl (LP/EP/12"), tape recording
• 1924 - 1954	jazz	* radio, talkie, microphone, SP (electricity-recording)
• 1896 - 1920	ragtime	* player piano, sheet music, SP (acousical recording)

Now, there exists a dualism - an element peculiar to popular music in the US that adds complexity to the musical environment: the separation of the 'scene' of actual music creation and the 'mainstream' music world. When a musical innovation occurs inside a harbor town or an urban ghetto, it is not reflected immediately by the mainstream culture but becomes generalized after a long latency period.

As a matter of fact, a major generation shift in the mainstream popular music is most often preceded by a crucial change within the actual scene by up to 15-20 years. (table 3)

(table3) preceding innovation

• 1970 -	turntable culture, electronic instruments, distortion+feedback sound	* Napster
• 1940 -	Be-Bop and Jump Blues, small combo, back beat, electric instruments	* BMI
• 1910 -	Jazz and Blues, ludwig kick pedal, singing with the guitar	* ASCAP
• 1880 -	syncopation, vaudeville, New Orleans Creole to ruin	* Tin Pan Alley

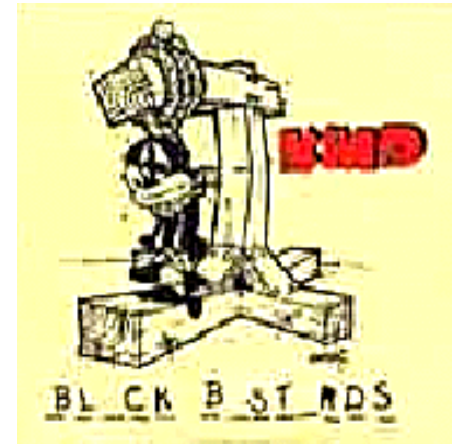
* (1850 -) new kind of popular entertainment; cafe, music hall in Europe, minstrel show and Stephen Foster (1826-1864) in USA

Thus, new-born musical styles and innovations do not spread in a smooth manner.

They are retained for a long period of time, while heading from the actual scene to the center of media. Such phenomenon is characteristic of popular music in North America. This timelag is artificially created through the use of racial barrier.

A community tolerant of the birth and growth of creative musical cultures is looked upon as the bottom heap, an area along the social periphery that tend to be judged dangerous than reality. In fact, newly-born musical movements are much too 'hot' for external capitals or journalists to manage.

Because out there, illegal pleasures defying social rules of the times such as gambling, alcohol, drugs or diverse sexual activities including prostitution and homosexuality, along with the controversial style of expression and the 'vulgar dance music for second-class citizen,' are on the loose. And all of them are directly mirrored onto the music itself. This makes external capitals and journalism hard to introduce such musical culture as it is, in real time.



"BL _CK B _ST _RDS" (KMD, 1994; reissued in 2001)

cancelled by the label, due to the controversial album cover based on hangman (children's game).

Let us then follow the life cycle of the musical culture that is born within such local community, makes an explosive entry into the mainstream music scene after a while, and is finally distributed all over the US and eventually to the whole world.

When a particular music style is molded, it is usual that there is as yet no proper technology to go with. Early pioneers have no other choice than to force themselves to express this new sensation by means of conventional instrumental ensemble and media.

In later years when the history of music is compiled, it is often told as if the development of musical instruments has given birth to novel musical styles, but it is indeed not so in reality. A new instrument would be nothing but a sound toy, a curiosity if it had appeared in a place where the sense of living lacks freshness that only this new instrument would be able to express. The truth is that an instrument has experienced the process of being once outdated and thrown away then picked up from the dustbin, and wait till someone discovers a usage that goes beyond the developers' intentions.

Musicians endowed with sensibilities looking onto the next generation remodel on their own not only instruments but also old musical formats. Such adaptations become native once again. Sometimes the merits of the refined, preceding style are somehow put to sacrifice. The pioneers rarely impress the audience, as they seldom attribute cultural significance to the music nor display outstanding techniques. Their presentation of their own innovation is naked and naive, indistinguishable among the dashes of humour, eros, obscenity or violence. As a result, they are often considered as rude, vulgar novelty artists.



Louis Jordan (1908 - 1975)

However, after a while once a style achieves social recognition and commercial success, music itself turns into an institution. A tendency follows to exclude everything that does not fit into the established taste. Since much effort was done to achieve recognition for this musical style, dangerous elements that might overthrow it radically are looked upon as unwanted weeds and subject to being depressurized.

Crusade for Disco Music, DISCO DEMOLITION NIGHT (1979)



Originally, an emergent musical style has been organized through integration of various matrices of music that the preceding styles could not assimilate. Its sensibility was essentially flexible and open to unknown musical explorations, but comes to be replaced by rigid standards all too soon. And in the end, success itself levels off the grounds for success. **[matrix(ces) of music: a component that generates musical effects]**

When a musical style can no longer efficiently assimilate innovations that are generated spontaneously, or new ensembles that comes constantly, musicians who are not bound by convention separate from the group of musicians who managed to find their places within the convention, causing a major breakup. This is partly why adjoining musical genres in terms of time period have contrasting characteristics in many ways.

New style on its way of replacing an outdated one has no apparent system of rules and aesthetics at the time of transition. Not withstanding, popularity among the general populace is on the point of ebullition. Musicians that have quickly adopted the new matrix are sometimes criticized as selling out.

Now what is bothersome here is the excess of music promotion, which involves a number of people with purposes other than music that is more than appropriate. Most of them are attracted to other things but the music, such as business opportunities, political use of music, or glamour of show-business. Not capable of judging music by their own sensibility, they need signs and symbols other than music itself.

Music has naturally a side that was derived from religion and philosophy. The presence of a dogma that 'music is a fine thing' might be unnecessarily tormenting those who cannot feel the effect of a matrix. In fact, some matrices of music are hardly perceptible to the common without extreme sensibility, or have rather spiteful structure that exclude loud outsiders in order to heighten the 'in' crowd's status.

On the other hand, the music industry would try to sell musical products to those who are incapable of enjoy the essence of its musical style and are not in need of such music, and sometimes transforms the context of the matrices of music so that it fits their business strategies. As a result, a feeling of being unfulfilled remains how much one spends money to consume musical packages and concerts. And this is exactly what the music industry wants.

matrix(ces) of music

In music, especially folk and popular music, a matrix (van der Merwe 1989) is an element of variations which does not change. The term was derived from use in musical writings and from Arthur Koestler's "The Act of Creation", who defines creativity as the bisociation of two sets of ideas or matrices. Musical matrices may be combined in any number, usually more than two, and may be, and must be for analysis, broken down into smaller ones. They may be intended by the composer and perceived by the listener, or they may not, and they may be purposefully ambiguous. (ibid, p.94-96)

The simplest examples given by van der Merwe are fixed notes, definite intervals, and regular beats, while the most complex given are the Baroque fugue, Classical tonality, and Romantic chromaticism. The following examples are some matrices which are part of "Pop Goes the Weasel":

- * major mode
- * 6/8 time
- * four-bar phrasing
- * regular beat
- * rhyming tune structure
- * ending both halves of the tune with the same figure
- * melodic climax
- * perfect cadence
- * three primary triads implied

Co-ordinated matrices may possess "bound-upness" or "at-oddness" (Morris, R.O.), depending on the degree to which they are connected to each other or go their separate ways, respectively, and are more or less easy to reconcile. The matrices of the larger matrix known as sonata rondo form are more bound up than the matrices of rondo form, while African and Indian music feature more rhythmic at-oddness than European music's coinciding beats, and European harmony features more at-oddness (between the melody and bass) than the preceding organum. At-oddness is a matter of degree, and almost all at odd matrices are partially bound up. (ibid)

In this way, a musical genre is redefined in the mainstream and enters temporarily into a stabilized state as a form of art to be appreciated in which many masterpieces are created. It is just right form the industry because by then listeners have lost their ability to chose musical works on their own and feedback their evaluations to the scene. Simultaneously, the scene arrives at its zenith. Contrary to its thrilling appearance, it is now a sure merchandize, by no means a threat to the mainstream values.

After it hits a peak, the following downfall is inevitable. There, virtuosos and nostalgia and avangarde enter the scene one after another, filling the need for ornamental music.

Wizards



First, perfectioners of virtuoso appear, making their greatest contribution to making the music worth being listened to, who are immediately deified as wizards. However, they are supported by a massive yet elusive and ambiguous pop scene rather than the real dance community.

Next come the authentic ones, symbol of academic-oriented musical appreciation. The revision of roots through 'masterpiece series' back catalogue would recur periodically, but the most meaningful are the first one or two, and the rest becomes routine work. Reproductionism essentially includes criticisms over present conditions, but is used improperly for the excuse for not accepting any new style of music.

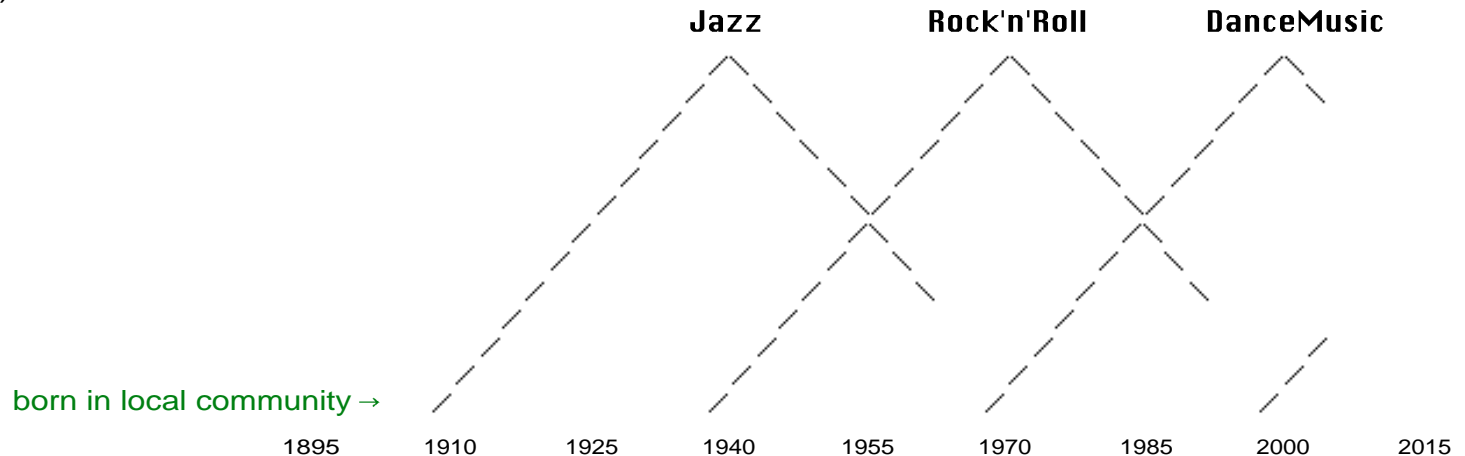
It is not long before a group of intruders make its appearance, devoted to precisely destroy the existing aesthetic norms and musical frameworks, as a form of repulsion to thus situation.

Because they overthrow not only commercialism but also dance beats and the common touch, they cannot change the course of music. But many of them excel in technique, and represent the best part of those who have chosen to stick with the old style.

Nevertheless, by the time the momentum of mainstream music itself, the original subject of repulsion begins to decline, the challenge becomes autotelic, rebellion changes into a rebellious pose.

The life of a music genre is about 60 years, from its birth to the successive occurrence of new styles and techniques while it retains its faculty to renew itself, after which it is sucked to the bones by every possible means such as the forced fusion with the next-generation style, the commonplace 'roots revisited,' and integration as academic courses offered in music schools.

(figure 1)



It is now evident that the continuous rise and fall of the popular music owe partly to the inner necessity of the musical style itself or the progress of technology, and mostly to social factors that surround the music, that are:

Firstly, manners and customs of the mass society that uses the freshness of marginal culture as moderately poisonous stimulants, that fill in the gap present within a mass society torn between the 'proper' way of living and people's feeling of deficiency about their living;

Secondly, the constant cycle of commercialization and consumption of music style by the music industry. That is, they fixate the original matrices of music slightly out of focus in order to make the essence of musical styles into an easier formula to deal with, and also promote model changes on a cyclic schedule;

Thirdly, the fact that not only the mainstream pop scene (an artificially created place of consumption), but also the underground communities to be the center of their own musical cultures for continuous support, are something unstable, lacking durability.

What is Underground?

It is not easy to define the underground.

Frank Zappa's quote "The mainstream comes to you, but you have to go to the underground." gives us an idea. The definition of underground culture I use, is, culture that has not reached the mainstream but that has gained popularity amongst a small and loyal audience.

During the 1960s the term underground acquired a new meaning in that it referred to members of the so-called counterculture, those people who did not generally conform to the mainstream of human experience such as hippies.

An alternate usage of the term "underground" is in reference to something that is illegal or so controversial that it would be dangerous for it to be publicized. Or it's so controversial (as in, offensive to societal norms) that it will never be mainstream.

Some authors/artists use this as a badge of pride.

<http://www.jahsonic.com/>

In this paper I am using the terms such as 'scene' and 'marginal' in a sense close to 'underground.' Yet mainstream is neither a desert in terms of musical innovation. And marginal areas were originally commonplace communities. They are given the status of periphery just because a certain area has emerged calling itself a core in the intension of accomplishing egocentric rules. Their underground living is only a matter of circumstances.

The realities of the mainstream of communications and entertainment industry are full of problems, you know. But for the time being, I would like to go on on the assumption that there are great music and dreadful music among both the underground and mainstream.

III Oh Suzanna

—— Leading conveyers of popular music in North America (1) before 1970 ——

Let us now take a quick look at the history of immigration in North America (table 4).

(table 4)

17th century	Native Whites (persecuted for religious reasons, wealthy refugees from revolutions, apprentices) *1654, Sephardim's arrival at New Amsterdam (Jewis from South Europe and Netherlands) *1670s, immigration to South Carolina from Barbados, foundation of Charleston, Gullah language
1710s - 1848	a. Scotch-Irish immigrants (the Presbyterian, 1714-1740 and 1760-1775) b. peak of slave trade (1730-1775) c. calenda from Haiti (1790-1805)* French Planters (white and mulatto), domestic slaves d. southwest territory (Louisiana,1803/ Texas,1836/ California,1848)
after 1850s	European immigrant (Catholic-Irish, Italian, Greek, middle-class Jewish group from Germany) *after1880, Ashkenazim (Jewish group from Eastern-Europe) *1924 Immigration Act which shut the door to Asian and European
after 1970s	Mexican, Caribbean, Asian immigrant *after 2000s: Hispanic exceeds African to become the biggest minority

Negro-imitator (Stage Negro)

The impersonation act is one of the basic matrices of the urban entertainment for commoners. The first Negro-imitator in London had appeared on Charles Dibdin's ballad opera "The Padlock" (1768). And the English blackface comedian Charles Mathews came to America to perform in 1822, .

<http://www.ocf.berkeley.edu/~www/truth/racism.shtml>



"I Jump Jim Crow" (Thomas "Daddy" Rice 1808 - 1860)

Although it was a prototype of American popular music that embody the vitality of Jacksonian democracy, "Jim Crow" was considered as the byword for racial segregation in the late 19th century.

Ireland's Great Famine in 1840s has triggered new immigrants from Eastern/Southern Europe and Ireland to rush into North America during the latter half of 19th century. And of the variety of music cultures that they have carried from their home countries, it was the popular music of Irish immigrants such as jig and ballad that has later become the foundation of popular music.

Now, if we were to take the 120 years from the late 19th century to the 1960s as a sample, we may assume that the mainstream popular music in the US is a hybrid culture based on the energetic music style that is Irish in nature, adapted mainly by African Americans, and bred into a hybrid culture among various ethnic groups including Italian and Jewish.



'coon' shouter who also sung the patriot song, Billy Murray (1877-1954)

Minstrel shows, Foster's plantation songs. Negro-jig, cakewalk, ragtime, vaudeville and musical plays. blues and jazz. hillbilly, country, gospel, doowop and R&B, early Motown sound, rock'n'roll up to the Beatles - there is no exaggeration in stating that everything falls into the above-mentioned classification.

The ambiguity between tonic and related key (for example C and Am) or the cozy pentatonic melody, the feeling of tap dance in which the dancer does barely move the upper body, or the two-beat with inner structure resembling to six-eight time are all such characteristic examples. It is said that Celtic British music and musical culture of West African-origin were surprisingly easy to blend because of the presence of the Arabo-Andalucian music tradition passed on by the Moors and a common cultural base tracing back to the former Ibero-Celtic culture between the two.

During this period, those in-charge of whiskey and minstrel businesses were mainly Irish immigrants, and many African American talents were exhibited through music and dance.

Now, let me introduce Edward Harrigan and Tony Hart's musical comedy "The Mulligan Guard Ball (1879)."



The Setup: Popular neighborhood leader Dan Mulligan (Edward Harrigan) is throwing a ball for the younger members of his cronies, The Mulligan Guard. He does not know that the owner of the ballroom has booked a ball for the Mulligan's arch enemies, the all-Negro Skidmore Guards, into the same room on the same evening. ... But soon after peace is restored, while both groups dance and sing, the floor above the main floor breaks and the Skidmores fall down through the ceiling...

http://www.pioneergirl.com/index.htm?song_skidmore.htm&Bot_Frame

<http://social.chass.ncsu.edu/jouvert/v4i1/onkey.htm>

In the years following the Civil War, a number of pseudo-military clubs were formed by ethnic groups which weren't allowed membership in the official militia. The Mulligan and Skidmore Guards were spoofs on such organizations, and their drills were subject matter for songs and skits.

The Mulligans were Irishmen; the Skidmores were African Americans, and the two were in constant competition. This series featuring working-class Americans as the main character began in 1873 and dominated the New York stage from 1879 until Hart's death in 1891, and is also said to have influenced George M. Cohen who later establishes the foundation of American musicals.

The tradition enjoys a long life, in which ethnic groups in New York organize such complementary groups, involve themselves in conflicts, and enjoy their own music and dance.

American popular music of late 19th century was still under the strong influence of British music hall. With the arrival of 1910s, the situation reverses around Hollywood and jazz as major axes, and America becomes in turn the exporter of musical culture.



"Tin Pan Alley" (New York, ca.1900)

The thirty years from the late 19th to early 20th centuries constituted a period of the most intensified racial segregation, an abyss for all non-Anglo-Americans. The 'Jim Crow' law providing the separate-but-equal principle was legislated in 1896, but even in such times, African Americans had considerable intentions to assimilate themselves into the white mainstream culture. This ambivalence was indeed the motive power of creating various musical styles.

As a result, music that has achieved coast-to-coast success in the US rehashed Asian-African musical elements in a way that blue notes, syncopation and backbeat would shake the entire framework of western music but never smash it away. It is the very reason why this music was able to become a symbol of 20th century.

Music of new era such as jazz, blues and gospel were mostly structured by early 20th century, and conveyed to various cities in the north or the West Coast along the tides of population drift that accompanied the post-WWI motorization and industrialization.

They were first introduced to the public in forms of sheet music and piano roll, to later explode on the stage of musical plays. Soon the drum part was left out for the sake of SP records. Shorter versions arranged to be longer than 2 and a half minutes were recorded for Race Labels. Such music came to be presented in the original form in the 1940s with the spread of tape recording.

Systematic collection, clever packaging and massive promotion of community music that grew naturally and spread their roots all over the US were performed by Jews and White Liberals who have quickly become aware of its potentials as products.

The Ashkenazy had arrived in this country during the 1880s to find refuge from the pogrom (massacre of Jews) ravaging in Eastern Europe and Russia. Unlike the Sephardim from Southern Europe and Netherlands, or German middle-class Jews, they were mostly underprivileged, economically and educationally.

This ethnic group have embraced a number of individuals endowed with talents in musical entertainment. They fought their way among the communication and entertainment business. Not only they have performed their part as WASP's on the screen, they have also succeeded in commercializing the vibrant music of African Americans into entertainment for the general public.

First as composers and performers of musical plays and later as independent label owners, concert promoters and managers of superstars, they have built brilliant careers of their own.



"The World's Greatest Entertainer," Al Jolson (1885 - 1950)

On the other hand, the folksong revival that had started in the 1940s within the liberal social tendency after the New Deal, has expanded the extent of folklife culture to develop into college folk, calypso folk-rock, blues revisited, singer-songwriter, punk, and world music, up to the bedroom recording folkie who makes use of sampling in the 1990s. Although their music were far from being danceable, it has appealed to the sense of guilt for racial discrimination and to the instinct of self-protection, playing a role that has defined the musical views among students and enlightened intellectuals.

The concept of 'folklore untainted by civilization' itself being a fiction created by the Western European romanticism early in 19th century, young, music-loving, educated reformist patriots have adapted such folk concept for the situations in the new continent, and applied it to the culture of the people of the 20th century.

folk music by intellectual liberals, The Weavers (formed in 1948)



It is generally said that liberalism has its origin in the French Revolution of 1789. But as a matter of fact, those who were on the forefront of labour or civil rights movements in the US were mostly

- 1) Catholic-Irish workers,
- 2) Hebrew intellectuals, and
- 3) African American protestant moderates.

A close-knit solidarity has lasted from the formation of NACCP (1909-) until the era of Rev. M. L. King and J. F. Kennedy. These people were looked upon as non-American, second-class citizen and often targeted for K. K. K. attacks, but played, at the same time, the leading role in the North American popular music.

IV Apache

—— Leading conveyers of popular music in North America (2) 1970 and on ——

However, this flow has once again begun to make a large shift in 1970s. The trigger was the amendment of US immigration laws in 1965 which provided relaxation of immigration bars for the first time in 40 years. As a result, immigrants from Mexico, Caribbean islands, Asia and Africa have exploded.

A quick summary of African music in North America prior to this would be: a musical culture among Africans and their decedents who were deprived of their drums by the Slavery Laws (note 1) and accepted Christianity (Protestantism) as a substitute.



Blockhouses at Fort d'Estrées on Gorée Island, off the coast of Senegal

They had to absorb and digest different musical cultures that they had encountered in the new continent to integrate them with their own feelings in order to create a new their African American culture. At the point when their drums were taken away, what was left in their hands were the the musical culture of the savannah and its symbol, the gourd banjo.

African American children playing singing games (Eatonville, Florida, 1935)



Compared to the musical culture of southern areas of African continent, the multi-layered aspect of the polytheistic rhythm was somewhat already lost among the dry region on the south border of Sahara desert. Paradoxically though, this fact might have allowed the Mande-Wolof tradition of music to survive under the harsh situations in North America. The consequent 'Slave Songs' and 'Black Music' rarely make use of raw polymetry and polyrhythm inducing religious catharsis. In most cases, they were processed as comparatively safer syncopation and irregular time.

On the other hand in South America, another type of slave management methods were in practice, which allowed the drum culture (Yoruban-Dahomeyan-Bantu group of geneology) of the rain forest to escape devastation to some extent. The fusion of African dance beat and Western music therefore has worn a different complexion compared to that in North America. (note 2)

The long-believed 'African dance beat vs. European harmony' diagram as the basic structure of popular music may now be too general and rough. Discretion would be required when connecting the African continent or the European local culture with music in North/South America

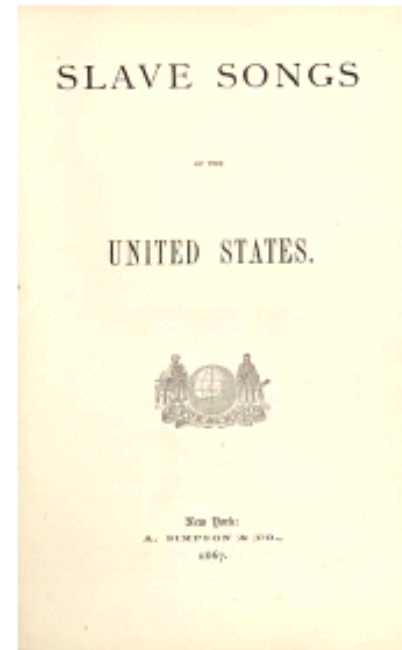
But at any rate there is no doubt that a type of musical culture that differ from jazz, blues and gospel music so far has been introduced in the US at that time.

Black Music ?

The term "Black Music" sometimes misleads who think about popular music and dance culture, because the actuality of the music have changed radically, several times in these 380 years. Now I'll try to sketch the basic features of music cultures carried or created by African American people, in every 120 years.

- 1) 1620-1740 African tradition before their conversion to Christianity
 - 2) 1740-1860 Slave Song (Negro Spirituals)
 - 3) 1860-1980 Black Music (Jig, Jazz, Blues, Gospel)
 - 4) 1980- Electronic Groove (restration of Chica and Calenda)
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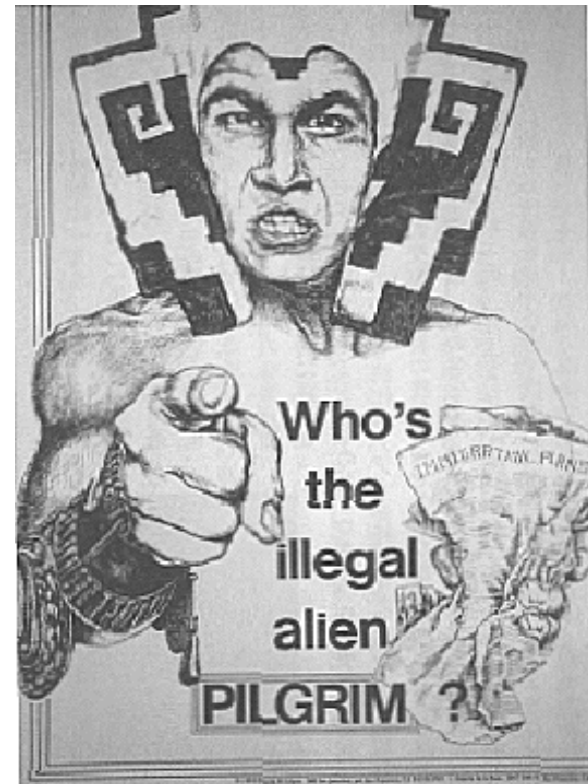
Slave Songs of the United States (Published 1867)



Immigrants from the 'South,' regardless of legal/illegal or the skin color, have rapidly increased in the latter half of 20th century.

Behind such movement was the augmentation of development aid that OECD member countries have poured onto Asian, African, Latin-American countries after WWII. As revealed by the borrowing binge (1982) however, economical policies lead by World Bank and IMF would yield profits exclusively to third-world elites, banks of the 'north' and multinational corporations, while aggravating impoverishment of countries ranked as 'developing,' and increasing flow of narcotics and migration into the donor nations.

The product of thus new global framework itself -- that is the very nature of musical styles such as New York garage, Bronx hip-hop, Chicago house, Detroit techno, Miami bass music and Reggaeton.



Who's the illegal alien, PILGRIM ? (Yolanda M. Lopez, 1981)

The finest Samba singer from Brazil, succeeded as comedienne in USA.
Carmen Miranda (1909-1955)



The vogue of various types of Latin music that made its big time in North American mainstream beginning with habanera, tango, ballroom rumba (son), samba, mambo, calypso, bossa nova up to boogaloo, may be considered as a precursor of such phenomenon, but they were eventually consumed as a stereotyped tropical boom in the mainstream pop scene of the time and their influence was limited. (note 3)

On the other hand African Americans themselves have begun their attempt to break down the limits of the Civil Rights movement and Old Liberalism that were originally led by whites and Christian leaders respectively. Their trial-and-errors have started to take shape and mirrored onto music in 1968.

Now aware of new political consciousness and sense of living, African Americans in many cases chose alternative religions such as the Islam and santeria, because it has become clear that after all, in spite of being a 'melting pot', the New World meant nothing more than a one-way integration into the White Protestant male society sense of values.

According to E. D. Baltzell who made the term "WASP" popular in his 1964 book, "The Protestant Establishment: Aristocracy & Caste in America", European Protestant elites had been feeling a growing sense of crisis from late 1950s to early 1960s, because of the swell of civil rights movement within the country and the rise of Hispanic and Asian population, but also the independence of Asian-African nations, the birth of Castro regime and the spread of anti-US movements among the West Indies.

To deal with this, they rushed into inviting white ethnic people (non-Protestant new immigrants from Europe such as Catholic-Irish and Italians) over to their side. What was born as a result was J. F. Kennedy regime itself. And the past damages by slave trade and racial discrimination were in a way credited, transformed into a kind of vested interests.

Also unfortunately, an 'anti-Jew' feeling has spread among African residents in Northern cities in the latter half of 1960s, Islamic leaders being the instigators.

Since their acceptance of Christianity in the heat of the great awakening of early 18th century, for many African Americans, 'Jews' were the subject of romantic admiration as the people of Old Testament who have been prisoned and wandered for the promised land. Those who came to the South during the civil rights movement were mainly intellectuals and students filled with a sense of special mission.

One can imagine the disillusionment reaction when they came in touch with the real Jewish Americans in urban ghettos where they have settled, as retail shop owners and landlords of low-rent apartments. A disappointment with the neighbors, whereas it ought to have been cast over another subject.

By that time, many Jewish scholars and critics have began advocating new conservatism out of disappointment with the democrats' popularity-seeking policies characterized by affirmative action and with liberalism itself.

(In other words, they were divided up!)

Thus, American society's self image has made a great shift from melting-pot to salad-bowl. Consequently, the leading conveyers of music were now replaced by gays, Latino(na), Asians, and natives of Caribbean Islands among the African Americans.

And, there is also the restitution of the low-frequency sound of drums to be emphasised here.



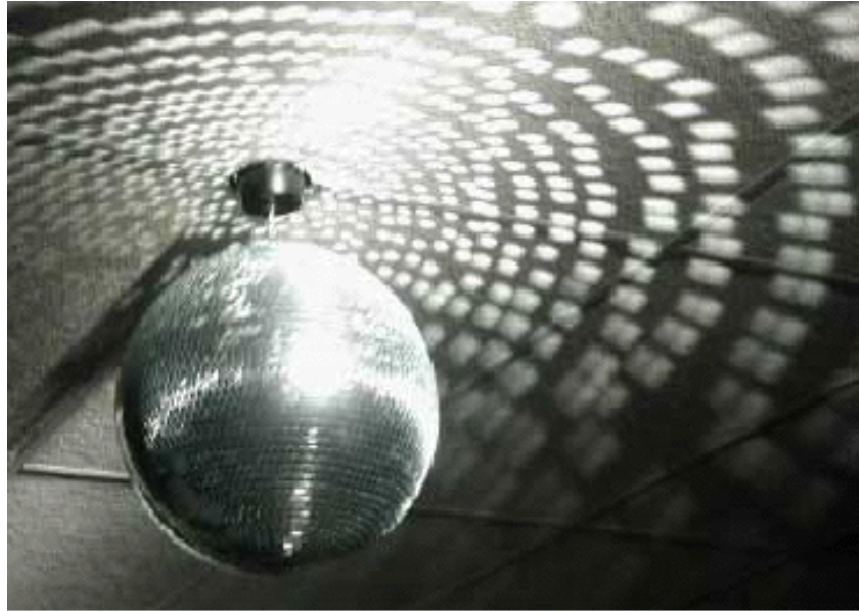
The Dum Du sound of drums is where God is.

In other words, as widely seen among rituals with witch-art elements, one of the most important function of music by nature is to drive people into a mild state of trance to bring catharsis, using low-frequency impact sounds of membranophones. Therefore the acoustic emphasis on the bass typical of the present-day discos and clubs is most likely to be the the attempt of recapturing the sonic culture seen in religious meetings such as the Cuban Santeria or the Northeast Brazilian Candomble, through electrically driven audio technologies (note 4).

Meanwhile, music cannot fully accomplish this function in an acoustic environment lacking lower frequency (less than 80Hz) bass sound. For this reason living-room listeners have been exposed to an ever-present potential frustration throughout the 20th century.

During the 1920s, the newly developed microphone has increased the expressiveness of SP records and radio broadcast. They have succeeded in turning people's concern from the music and the lyrics to the performance and the singing. People at that time have acknowledged this change as the shift from the sheet music era into the band era, but the performance on the radio and SP records were but fictions based on this period's recording technology.

A fact that would explain why the subsequent popular music has fallen into a somewhat bigoted supremacy of singing, may be an excessive adaptation to the recording/playback system of the time with its yet narrow frequency range unable to express the lower frequency range.



Such circumstances push some of us to conclude that American popular music has reached its zenith in the 1950s, and has been on constant decay since 1970s.

It is true that by the time 1980s is over , blues worship has lost substance, and gospel and soul music no longer provided excitement that was once so wonderful. But this feeling of stagnation might be a result of perceiving music within a framework that has no longer been appropriate in expressing the real-time senses of living.

We cannot ignore the fact that a musical culture based on new technologies and distinct views of the world, and organized along a different matrix of music is actually gathering an overwhelming support among the public.

It leaves us to decide whether or not we can see it as music.

V The Boy Is Mine

——Duality of the music in the latter half of 'contemporary'——

The thirty years between 1970 and 2000 represent a period in which jazz and rock music have done with their historical roles and gradually lost momentum, while pan-Afro-Asian-Hispanic music including reggae, hip-hop, house and techno has risen, armed with technologies based on Japanese electric appliances. (chapter III, figure 1)



defacto standard, Technics SL-1200

But this phenomenon cannot be explained by the generation shift described in chapter II or the rotation of modes which accompanies the music industry, because it has proved to be by nature a response to the irreversible transition of world structure such as the demographic shift in a global scale, relocation of international division of labour, or informatization.

Dance Floor (Paradise Garage, 1976-1987)

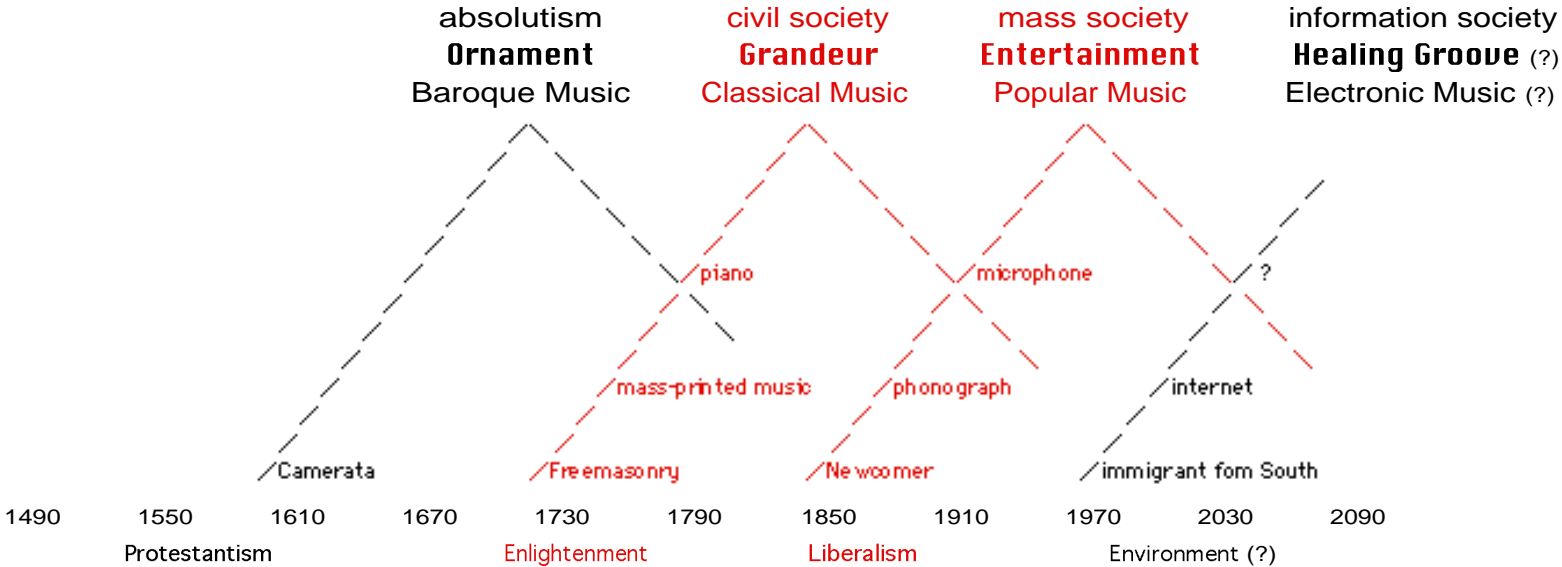


The swell of this music that has in the beginning been underestimated as a fake soul or latin music, is still in its active phase of ups and downs, after acquiring a solid position within the mainstream. Each style of music is called in a variety of names, but there is no appropriate appellation to represent the totality of these styles.

The names of musical styles often transform themselves until they come to the end stage of its life cycle. They are quite confusing: a style may change its name in a few years time whereas the style itself has virtually remained the same, or on the contrary, styles differing in musical categories may be classified under a single name.

At this point of time, the totality of the new music called 'dance music' or 'club music' is not yet ready to be acknowledged properly as a musical culture succeeding to classic and popular music, nor to be given an appropriate name (figure 2).

(figure 2) musical culture within the Modern World-System's core



food for thought

- └ColdWar┐ ... Rock'n Roll
- (modern architecture) └Modernism┐ Bands (Paul Whiteman to P-Funk)
- (poetry, painting, mathematics) └→ Modern Arts ? Equal Tuning, Nigro Imitator
- └→ Industrial Revolution, Nation State Homophony
- └→→ Cartesian World View (Newton's Absolute Time Axis) Bar Line, Chord Progression
- └→→ Modern World-System (Atlantic trade exchange, Capitalism) Major Scale, Perfect Cadence

When we actually experience the variety of music that are sold by the lump in mass retailers under the category of 'CLUB/DANCE,' we can observe there two facets that are woven ambivalently.

- The vanguard of the future music to come/ active listening led by DJs/ use of the new matrix and the electronics effectively/ primitive yet/ something that is basically different from the established entertainment music.
- A new model of popular music/ performer-centric/ assumption of passive listening/ use of the matrices of music as a superficial flavor/ there can be a quality production.



"The Boy Is Mine" (Brandy & Monica, 1998)

However, if we were to keep our eye on the musical structure or the courses of distribution, it is relatively easy to distinguish between the two. At parties and raves that are the 'scene' of dance culture, music's format of circulation is mainly in 12-inch vinyls.

On the other hand, dance music for home listeners consisting of CD albums (not mixed) or video clips is in a sense quite accomplished in quality. But these are musical merchandise, a new musical culture packaged in conventional popular music format. There is a clever compromise arranged between the new music and the existing formats in which the former is presented under a variety of wrappings.

For instance, R&B (pop song with hip-hop flavor -- the most selling musical merchandise) uses classic breakbeats, sampled loops or drum machines, but when it comes to video clips or live performances for sales promotion, female singers are always accompanied by drummers for better impressiveness as a 'show.'

Eventually, inside the mainstream music scene, the recognition of what the real 'living' music is, would be given a long time from the present point of time. Until then, the passive listeners out of touch with the scene, are bound to be hustled into purchasing another ersatz diluted with water.

VI Funky President

——Summary of musical culture of the latter half of 'contemporary'——

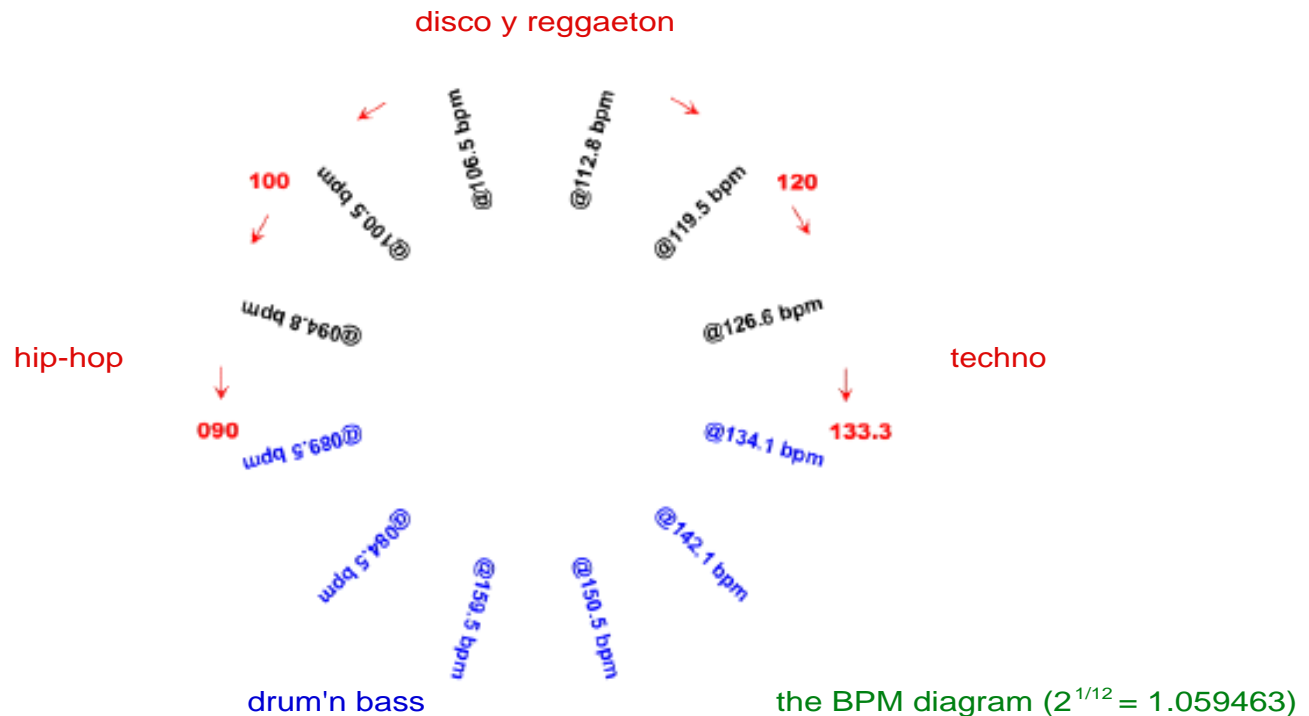


Ultimate Breaks & Beats (SBR 513, 1986)

Let us now take a look at the musical culture lead by the DJs and formed after 1970s.

To begin with, we must acknowledge the presence of TWO major water veins flowing within this musical scene: namely, a weed-smelling music with hip-hop or reggae tempo created around immigrants from the English Carribean islands such as Jamaica and Barbados, and the dance music on "four to the floor" kick that the gay people and non-English-speaking people have created by digesting Afro-Carribean music, New Wave Rock, German synthesizer music and progressive rock, based on the soul music from Detroit and Philadelphia.

Both music have started out as the disco music 'which makes a difference,' and were integrated in their initial stage around BPM110 (note 5). Their distinction became obvious as the focus of record making shifts from recording and processing the performances of live bands to the total usage of drum machines and sequencers. [BPM: beats per minute]



Club DJs generally play non-stop, in such a manner that the dance beat and the story-telling in a musical sense, shall never be interrupted. And this is the most important task of deejaying.

Therefore, the DJs adjust their turntables' rotation speed in an extraordinarily meticulous way, which is the reason why they prefer songs whose tempo remains constant. Pitch control range of turntables are in general 8% max. As a result, the BPM virtually functions as musical genres.

If we were to take a next look at the harmonic structure of the individual compositions, we find that cases come in an infinite variety. On one hand are minimalistic tracks in total lack of harmonic elements or collages in which tonality has fallen apart, and on the other is a no small number of songs with chord progression and refrains that are same as the conventional pop music.

But there exists a major tendency to discard dramatic structure using dominant motions (such as ii-V7-I) or the change in key: the chord would, at the best, shift or go in cycles of two or four bars. This phenomenon accompanies the fact that the base of musical composition has made a transition from pianos and guitars to sampled loops. Also, tonality shows a continuing tendency to deviate toward the 4th looking from tonic (note 6).

Furthermore, an elaborate observation of dance classics and ultimate breaks would reveal that sampled loops and bass lines that are cherished and picked up as favourites have something in common in terms of movement of notes. An expression of this unique taste for tonal organization moderate enough to maintain harmonic framework, may be defined as the famous 'funky' feeling.

Once described as 'jumping up and down just like a clown' melodies, this matrix (of funky-ness) which became the essence of music such as boogie woogie, be bop or funky jazz, is regarded as the Americanized matrix of music that has been derived from the balafon widely spread among the African continent (note 7).

Ibn Battuta reports the existence of the balafon at the court of Mansa Musa (1352)



A Bambaran musician who is a native of Mali himself, has once told me enthusiastically: James (Brown)' music is a translation of Bambaran xylophone music by replacing the instruments with modern ones such as electric bass, guitar or organ (note 8).

Speaking of funk music, let us dig further into the relationship between this unique musical style and the instrumental ensemble.

I think I'd do it, Arzel Hill a.k.a. Z.Z. Hill (1935-1984)



The first time people have mentioned the 'death of rock'n'roll' was 1959.

When the twist dance appeared immediately after, jitterbug was quickly looked upon as an oldie's dance. Maybe the time has expired for the contrabass that have been supporting the bottom part of swing jazz, tex-mex conjunto and early rock'n'roll, and was ideal for lindy-hop dance and jitterbug. Also, modern blues was no longer able to occupy the top position of the R&B chart since 1966.

* In 1967, Jimi Hendrix came out with his new matrix of music called 'heavy sound.' A distorted guitar with feedback could produce the complex sound texture that is bound up with 'the edge of chaos.'

And just as trading places with the slapped contrabass, came the electric bass and funk music.

Funk music was originally formed as an evolution of musical styles such as jazz, doo-wop, jump blues and gospel, with hints from 1960s soul dance (the twist, the mashed potato and the boogaloo). This musical style has reached its peak from the end of 1960s till the first half of 1970s, and bass guitar players become heroes instead of guitarists. It became the original soundtrack of the 'hot summer' (urban riots by African Americans, and the revival of lynching by southern racists).

Later, funk was shaken to its foundations by the disco (1976-1979) and the electro (1982-1983), and came to be dissolved in a progressive manner. [electric bass → synth-bass]

A difference between dancing with clogs on and dacing barefoot: whereas jazz dancing have had a Celtic type of bodily sensation with knees and down, funk music was more fit for Caribbean dancing characterized by heavy motion of the waist, arms and the upper body. In other words it had involved a structure just right for the application of electronics, with elements such as a tighter constant tempo, repetitive, clear and powerful sixteen-beat, ultra-low bass sound, or simplified harmony. It is precisely for this reason that the development of affordably-priced electronic instruments in the 1980s has decreased the number of members of dance-oriented vocal and instrumental groups or worse, pushed them to break up. Little by littel, bass guitars were replaced by synth-bass. The rivalry between drummers and breakbeats also came to a distinct end in the course of 1990s.

Such chain of events makes it obvious that in real time, funk music that has once been a novel mutant of soul music was in fact the prototype of the later turntable culture. It was only because at that point of time, an appropriate electronics technology had yet to be established, and the band ensemble using electric amplification was adopted despite the fact that it was a musical production tool of the former generation (table 6).

(table 6) evolution of musical ensemble

		*artist name
2000 -	softwares	
1980 -	hardware electronic instruments (syntheszyzer, drum-machine, sampler)	* (abstract noun)
1960 -	band (electric bass guitar, distorted guitar, power drumming, electric piano and keyboards)	* the ... s
1940 -	combo (contrabass, hollow-body electric guitar, traditional drumming, piano, horns)	* ... 5, ... 3, etc
1920 -	string band, big band orchestra	*...and his orchestra

*Software instruments might not show their true power as long as they are emulating hardware gears.

From the modern ages on, division of labour into composition, performance and listening has progressed among every musical genres. Of all years, the 60 years from the 1920s to 1970s were when performance or singing were the most dominant element in music. Under such circumstances, the players themselves that are the frontmen of showbusiness had believed that they were the very protagonists of music and that the audience had better quietly listen to them. It is easy to imagine that they have rather been skeptic about the unexpected restoration of listening activity.

Although in reality it was an unpredictable recovery of the act of listening, it was difficult for the listeners too, to get rid of the old habit of listening mainly to the performance.

On the other hand, those who were able to judge for themselves the music itself in function of the times, free from conventional images of music and from fixed ideas of show business, have seen how organic and danceable this 'computrized' music was.

I would like to repeat once again that funk music had to bear a duality within the historical constraint. And those who have had the insight into this music's real nature, introduced appropriate instrumental systems into musical production, and supported its further development were club DJs who were playing in gay clubs or community parties in urban ghettos.

The early dance tracks (especially those made during the 1980s) had produced with primitive sequencers and low-spec drum machines. So they sometimes appear to be arid and inorganic when they are played on consumer audio equipment. But once a good DJ mixes them on the turntables, a subtle fluctuation is added and the music starts to groove powerfully.



James Brown "Reality" (1974)

'Reality finds him at an artistic impasse ...' The evaluation as album was not good in those days (and now). Later, hip hop producers discovered the first 2 beats at intro part of "Funky President (People It's Bad)," and it become the most frequently-sampled breakbeats.

VII Acid Tracks

—— Music and digital technology ——

bass synthesizer with step sequencer, TB-303 (released in 1982)



There already existed tentative attempts of experiments on turntables as early as in 1969, but in the 1970s people began to make drum loops using magnetic tape cut-and-paste techniques, play long mixes (disco), and use tape echo machines (Jamaican dub music) to list a few.

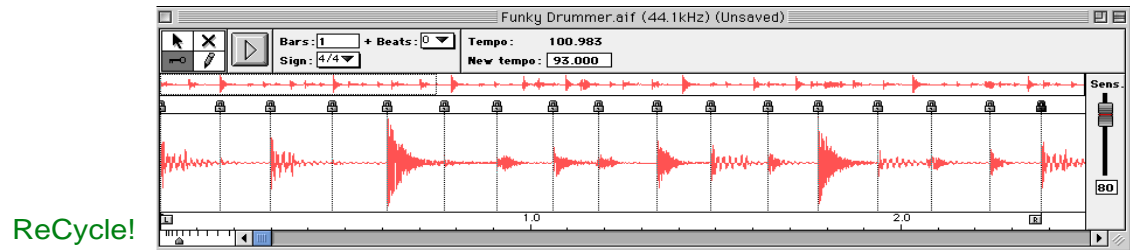
However, digital technology as epitomized by samplers and hard-disk recording has exerted a decisive impact on such DJ-like methods, and has changed the meaning of performance within the very act of musical production. The processing technique of pre-recorded material, especially the degree of accuracy and freedom in editing along the time axis have rapidly increased to eventually outweigh the live performance.

DJ Walter Gibbons who has been active from the 70s till 80s has made remarks as follows: 'with the powers of a musician, we can go even further than where the drum machines can take us.'

At that time, his words were utter reality. Drum machines and sequencers at their earlier stage of development had limits in terms of resolution and accuracy, and MIDI, put together in 1983, had weaknesses as a standard. A skilled musician was therefore superior to primitive hardware that was the electronic instruments, in that he/she had better control over the sound and the eventual expression. (note. 9)

Let us now look at how things have changed in two decades.

The first half of 1990s marks the emergence of application softwares providing efficient analysis of the content of recorded materials. It became possible to convert the fluctuation of a favorite groove in a performance - whether it may be one's own play or a commercial sound source - into an accurate set of numerical values, and to apply this onto different phrases or instruments (timbres) without losing its musical qualities.



In jam sessions where there are no conductors nor electric clicks, due to the difference of distance between the players, their instruments, microphones and monitor speakers, each member plays a few to several dozen msec behind the time axis, although we only become aware of this in a huge venue. The system of musical production that has originally organized score-less group improvisation performance consisting of jazz combo, studio musicians or live bands has been based on this much backhandedness and mutual misunderstanding, that had been after all the source of a magical charm. (note 10)

But the above-mentioned 'groove quantize' has advanced by leaps and bounds the analysis on the timing of sound emission and nuances in dynamics of human performance. The image of MIDI programming as being 'jerky and machine-like' was completely changed.

It is said that at one time in the field of metal or wood processing, skills of expert turners and craftsmen had been replaced by NC machines. As a result, a small number of skilled workmen who know to do things computers could not has remained, and a large number of non-skilled workmen has emerged. The same situation occurred in 1990 in the field of musical production. Musicians are being divided into two groups: those chosen few regarded as cultural assets owing to their absolute musical skills that no sampling nor groove analysis may rival; and all the others who have alas been alienated from their own play, in other words who do have no idea what they are doing amid the whole music culture.

The end of the 1990s gives rise to the 'modeling' of vacuum valves and electric circuits, and eventually of musical instruments themselves, on PC due to CPU's faster processing. Some of these modeling softwares have outdistanced the real hardware. And at lesser cost. The warm, rich sound of analogue instruments were originally acquired by taking advantage of the nonlinearity (distortion) characteristic of petrochemical products such as recording tapes or condensers. It is inevitable that with today's environmental problems worsening, digitalization of musical production is bound to progress.

Due to the radical improvement in the specifications of hardware and DSP (digital signal processing) technologies, we can no longer find significance in perceiving the movements of music within bipolar frameworks such as 'digital' vs. 'analogue' or 'programmed sequence' vs. 'live play.'

The reasons being firstly the overall judgement of expression and value has made the superiority clear; secondly, from the moment of reversal of positions on, what had been considered the merits of analogue methods and live performance that were on the side of being chased having lost their meaning, and what were considered as demerits, such as 'distortion', 'noise' or 'wobble' having turned into flavors that are all the more precious; and lastly, many of what had been considered as characteristics pertaining to digital methods having revealed themselves as being eventually mere properties of accuracy and specs.

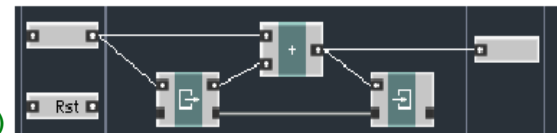
modeling of the theater with mathematical methods, altiverb (2002)



From what I have seen and experienced, I have a feeling that a great shift has occurred in the middle of the 1990s. Phenomenons of reversal or crossover were seen everywhere: sound creators who once were digital-oriented were all of a sudden into live sound or visual audio, or on other cases band-oriented artists who have been creating music insisting on vintage equipment and live instruments began to incorporate hard-disk recording system not only into the recording process but also into songwriting.

It is a result of the personal computer having changed from a status symbol for differentiation into an ordinary home appliance.

low level design, Native Instruments Reaktor Core Technology (2005)



Also, we cannot overlook the fact that musical equipment used by music producers in the ghettos or in the bedrooms for the last 30 years has mostly been Japan-made products, with relatively low price and stable quality.



sampler drum machine, AKAI MPC-3000 (1986)

They were able to tap the full potential of the instruments and recording equipment that even their developers have not expected.

It is the same old game: making use of what appears to be the weakness of a product. For instance, sampling machines were originally developed to replace real musical instruments, but hip-hop and dance music trackmakers went into the copyright-infringing act of sampling phrases from commercial records rather than using expensive soundbanks especially prepared for this purpose. Moreover, they had their own aesthetic feelings for the distinct deterioration in sound quality due to the limits in the equipment specs.

They would change impromptu in real time the parameters that were supposed to be held constant once their setting was fixed, such as the faders and volumes of mixers, equalizers, mute buttons, channel divider, filters of synthesizers or speed of tape echo machines, just if they were playing musical instruments, to add extra accents on the dance beat.

It was only natural that they liberate their everyday back-spins and scratches for rewinding and tempo adjusting out of the headphones, to end up creating musical spaces with a touch of difference from commercial discotheques.

Electrical noise has been present, along with the usage of minimalist methods, tape collage or synthesizers, within the field of contemporary fine-art music for a long time as part of tentative plans. However, the true importance is in the feeling of listening it, not as an avant-garde experimental music, but as dance music with popular appeal.



first DJ who mixed two records, Francis Grasso (1948- 2001)

The individuality of a DJ is expressed through not only the choice of tracks, ability of story-telling or MC's but also in mixing several sound sources, active equalizing and mixing techniques making full use of turntable noise. Tracks created by some other people are freely reworked as a material.

It is why a musical work is changing from an art that expresses certain ideas and is provided from above, into a material subject to exchange within horizontal, equal alliances. The notion of copyrighted works and intellectual property show unconventional properties.

Thus, in this newly-born musical culture, music itself, as it exists in the human society, is also undergoing major transitions, some of them being hard to accept for regular music lovers. But here, we will not go further into the DJ type of picturing music, and just list its characteristics in comparison with the music based on reproduction of score and live performance .

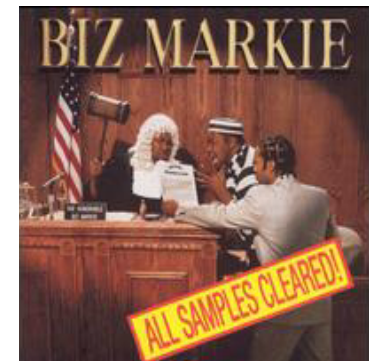
Use and alteration of sound sources do not require permission of the rightholder is not necessary nor it is charged under current US copyright laws as long as it has to do with analogue radio broadcast or DJ performance in clubs, which with no doubt consists the legal infrastructure of remixing culture.



Bastard pop, "The ghost that feed Nine Inch Nails (2005)"

<http://en.wikipedia.org/wiki/Mashups>

On the other hand, problems arise when sound sources are fixated and put on sale, and when they are digitally distributed through mp3s. The Biz Markie vs.. Gilbert O'Sullivan incident has brought the sale of tracks using samples from previously released tunes to the surface as social issues. But since old sources recover their commercial value by being sampled, compromise was made from the copyright holders' side to establish rules for charging. Now, there are law firms specializing in this area.



"All Samples Cleared!" (Biz Markie, 1993)

VIII Eroica

——'Arabesque (maqam)' and 'Emotion (homophony)'——



European Home Music Parlor (late 19th Century)

The 150-year-cycle theory mentioned at the opening of this paper has also involved a 'Bildungsroman' of European art music, in which the polyphonic music that is essentially medieval and modal, experiences the Baroque era that is the trial-and-error period, to finally discard counterpoint and grow into the homophony that is a tonal music with versatile harmony.

Let us then turn back to the history of major 3rd interval that is the foundation of modern harmony and tonality, and think about the musical style that we now see as a regular music.

The first sprout of the sense of tonality in Western European music was in Renaissance music during the first half of 15th century, at the same time as the emergence of capitalist economic zone based on Atlantic trade exchange -- what is called the Modern World-System by Immanuel Wallerstein. It was triggered by the discovery of the 'sweet' major 3rd interval which is more than 20 cents lower than before, and the major break throughout the European world of the new style of choir music that took advantage of it, as the representative music of the new era. (table 8)

(table 8) major 3rd intervals in European music

			frequency ratio
post Romantic Era	logarithmic equal temperament	400.0 cent	1.2599 : 1
15-18th century	just tuning, meantone tuning ...etc	386.3 cent	5 : 4 =1.2500 : 1
The Middle Ages	Pythagorean tuning	407.8 cent	81 : 64 =1.2656 : 1

* A cent is a measure of frequency, with each semitone in the Western equal-interval (equi-dodecatonic) scale equal to 100 cents.

The major 3rd interval in prior Pythagorean tuning that was prevalent in medieval European music or in the Chinese traditional pentatonic scale by legendary Ling Lun in 27th century BC (?), can be obtained by repeating 4 times the up-&-down manipulation of having perfect 5th interval through use of the 3 : 2 ratio. When we put out simultaneously two sounds of major 3rd interval obtained by this tuning, the slight difference in overtone emits an unpleasant 'wolf tone (boom)', for which reason major 3rd interval was severely excluded from medieval music as a tone of discord that disturbs the numerical harmony.

Meanwhile, because the Renaissance church polyphony has used to be sung a cappella, its pitch was naturally rendered to create a simple integer ratio of 5:4, emitting a unique 'sweet and sour sound' in the place of uncomfortable wolf.

In early 15th century, it is said that music of England using 3rd or 6th notes on heavy dosages drew the attention of some intellectuals as the music of the new era (note 11). But the person who has contributed in the remarkable progress of this musical style which also meant the return to the times before Schola era, and pulled together a style of composition which makes use of the innovative major 3rd interval for the first time was the composer Guillaume Dufay from Flanders.



Guillaume Dufay (c.1400-1474)

In comparison with the musical scene south of Paris that tended to be traditionally intellectual and was in a sense congealed during this period, the emergent England and Flanders areas had spirits that value practice and improvisation rather than theory. Dufay himself used to sing at the cathedral in his pursuit of the sound of polyphony. This is the very reason why he was willing to accept an audacious reform (singing with slightly out-of-tune notes!!) that betrays Boetius' musical theory, an absolute authority that ranks with Schola philosophy as one of the Liberal Arts (note 12).

When human voices at major or minor 3rd interval collide within an artificial space with much reverb, the mixture of overtones of the outcome contained latent breakthrough for major key and possibilities of the chord. The music created by the Flanders school was epoch-making, predicting the later functional harmony by polishing this matrix from rough stone and further formulating the perfect cadence.

According to Ginji Yamane (Japanese critic),

'fundamentally, this intricate tapestry of voices was an expression of the living sentiment of the emerging citizens', but 'it is essentially within the Middle Ages (of musical culture), and there are elements showing that people would not give themselves to emotions from the bottom of their souls, and assume that appreciation of art consists of things pertaining to formality and intellectual passtime (ornamentations and improvisations).'

The modern resonant (ie. that makes good harmony) just 3rd tone matrix has, by late 15th century, been integrated with perfect 5th, then theorized as the just temperament. Further in 1523 the meantone temperament, an even more practically improved version, was devised by Pietro Aaron in Italy (note 13).

Then in 17th century, Baroque music replaces the Renaissance church music and develops mainly among the Court and the theater. Although it is said that the church has originally despised musical instruments as being pagan, a cappella polyphonic music began to decline from 1600 with the derogation of Catholic Church, leaving way for the restitution of instrumental music. This time a variety of tuning method was experimented on keyboard instruments, but somehow they have sticked to the tendency of tuning the major 3rd interval roughly just (386 cents). It is around the same time that bar lines have appeared on the score, and the method of abbreviating the chords in numbers for better convenience for improvisation has become popular (basso continuo).

However in late 18th century (Western modern era), what is expected in music changes from the root.

Instead of harpsichords with bright, light sounds that do not disturb the conversation apt for the Court and salons, the pianoforte has become the star instrument of the era of the nation-state, with its dynamic expressions that sound favorable in theaters despite its boxy timbre.

In 19th century both the equal-temperament and the resonant well-temperament were used for a while, but since the 1850s, the equal-temperament of 12 degrees has been adopted everywhere: compatible with the new types of American-made pianos and practical for unrestrained modulation adapted to functional harmony, and the resonant major 3rd interval was discarded (note 14). The equal temperament finally achieved universal acceptance by the end of 19th century.

In the musical education in Japan, the rise and fall of the German-austrian art music was repeatedly told as the only legitimate history of music, starting with J.S.Bach (not so much recognized in his time but deified later), Haydn, Mozart and Beethoven at the top, passing to Romantic music, Wagner and Mahler, to finally fall down with Schoenberg.

Just as all histories are, it is evident that such history of music in some way or other has connoted certain political intensions. And as a result, there was this image that since 1750 with Bach's decease, the entire world was filled with music characterized by equal temperament and functional harmony.

However, it was contrary to the fact.

Even nowadays, textbooks of world history tell us that the Islamic spirit never ceased to decline since 1700 at the latest. But the truth is, the golden era of Ottoman music has flourished during the reign of the music-loving Selim III (1789-1807); the 19th century corresponds to the classical period of Carnatic music in Southern India; it is said that Chinese music of the Ming and Qing dynasties has been enjoying great popularity in Japan, comparable that of other domestic/foreign music, until the opening of Sino-japanese war (1894).

On the other hand, the United States, having succeeded its revolution for independence, was having a hard time achieving the process of national unity because of the division of various powers. Here alike, the major role in the people's music were the banjo and the fiddle that are advantageous in modal plays (note 15).

After all, modernisation was nothing more than the process of a principle of tonality based on chord matrix shoving other musical elements aside to become a world standard. And the global-scale progress of compulsory adhesion to homophony style to reorganize every types of music within the framework of major key/minor key is something that is surprisingly new.

For this very reason, supporters of Western European art music had to constantly maintain such argument that 'music of the East and the Middle Ages are mere intellectual passtime. They are yet arabesques of sound witout the notion of harmony. Whereas in symphonies we find spirituality and emotion, making it an art that is universal to the human kind.'

Ludwig van Beethoven (1770-1827)



In reality, Maqam music of the modern Asia was a literally universal music system that has spread all over the world before homophony. There, a framework of 4th interval called tetrachord was built in line with string instruments equipped with drone, within which the melody behaved in extreme sophistication. It may be described as experiencing a cosmic-scale development. However, the contrasting technique of functional harmony centered around the layering of 3rd interval had the power to annihilate the modal freedom that is Asian music's life itself.

An Indian musician who has listened to Beethoven and Mozart in early 19th century has described their music as being 'very pretty. but so plain and simple' and 'shallow.' He might be slightly underestimating Europe, but such must have been their honest impressions.

On the other hand, Europeans were building up self-confidence after fighting the Ottoman army off their seige in Vienna (1683). Somewhere about the birth of Enlightenment and modern Freemason movement, by the first half of 18th century, the modern harmonic theory of Rameau was compiled, and J.S.Bach in his later years was already regarded as being old-fashioned. A sensibility has grown that would estimate not only the counterpoint but also the modal matrix itself as 'relics of the past' that would eventually be exploited by the harmony. Eastern musical culture based on Maqam came to be constrained within the category of folk/ethnic music, despite the fact that it was a classic art in full maturity.

Herewith harmony was used as a powerful weapon by the emergent Western European modern in the process of conquering its Asian complex.

Jean-Jacques Rousseau (1712-1778)



Now, if we were to take distance from the position of assuming that music as it ought to be or the notion of music in the modern Western European civil society is the only absolute thing in the world, it is clear that for mankind, music was originally a drug-like pleasure inseparable from the religious catharsis (healing culture), as well as an intellectual game of competence of song writing techniques and musical instruments' potentials, by means of improvisation and ornament based on certain rules. And the musicians themselves, the audience and outfielders such as the intellectuals and political powers have all been projecting onto this music something extra about spirituality such as a community's unity, symbol of sovereignty, gadget of social life, identity of the minority, or symbol of counterculture. That is all there is.

Which is by no means not bad at all, for such ideas would be wonderful spices that better complement the music, as long as we do not lose the balance and spoil the intrinsic joy of music (note 16).

Not only the widely-known Ethos theory from ancient Greece or the Confucian moral music, but also the people in Africa and Asia have assumed profound spirituality in music. There certainly was a truth of that time. Even in European music there probably were fewer cases of its physiological pleasures, improvisation and entertainment being sacrificed until the attack on Bastille.

However with the invention of the metronome in 1816, composers have started writing detailed tempo assignments in the score that strongly tied down the players. Composition and performance began to separate from one another. Musical scores were no longer memos for improvisation nor hints for performance, but a text to be reproduced word for word. The 1830s marks the entrance of star conductors whose speciality is their dramatic actions. Many a time, change in volume that may be described as childish rather than dynamic was prized (note 17).

By the latter half of 19th century 'grandeur' itself has become the *raison d'être* of the civilized music. Listeners would be expected to keep quiet and concentrate on the music during a performance. The custom of bearing and forbearing the deluge of the sound that aims the limit of understanding, and applauding in relief after the ending, is a common scene that can be also be seen in popular music after 1980 when the star system became complete. The performers giving sign for the end of penance by slowing down the tempo just before the ending, have almost become a matrix of its own. Interestingly enough, Arnold Schoenberg makes heavy use of *ritardando* (gradually slower).

I would like to add here, just in case, that I do not intend to insist on saying that 'classical music is an anachronistic music that is no longer worth listening to.' Predetermined harmony and perfect cadence are matrices of music that is clear and simple for everyone to understand. And the music of Beethoven, Berlioz, Wagner or Mahler was certainly an extraordinary spectacle in its own way.

However, it is also true that when we look at the entirety of history of mankind and music, their works are extremely peculiar as a music, having dismissed melody's self-indulgent chitchats, delicate colorings, minimalism brought forth through repetition and subtle changes, social roles as healing culture, natural physicalities and practicability as dance music (note 18).

And its oddity was just right for the unusual sensitivity to the times of the French revolution and the years that follow.

The disappointment to the '1790s style' (note 19) began as early as in the 1810s, and differentiation among the light-hearted, accessible popular style (light classic) and the high-brow, serious music has progressed in rapid manner.

It was then that the Romanticist musicians who remained within the 'authentic' art music world have, in order to cope with the rationality and classicism that the supporters of the old systems bring forward, invented the 'local folk songs' and the 'geniuses.' (Folk music in reality has consisted mainly of popular tunes by professional nomad entertainers, and of art music with sophisticated theoretical grounding being re-indigenized.)

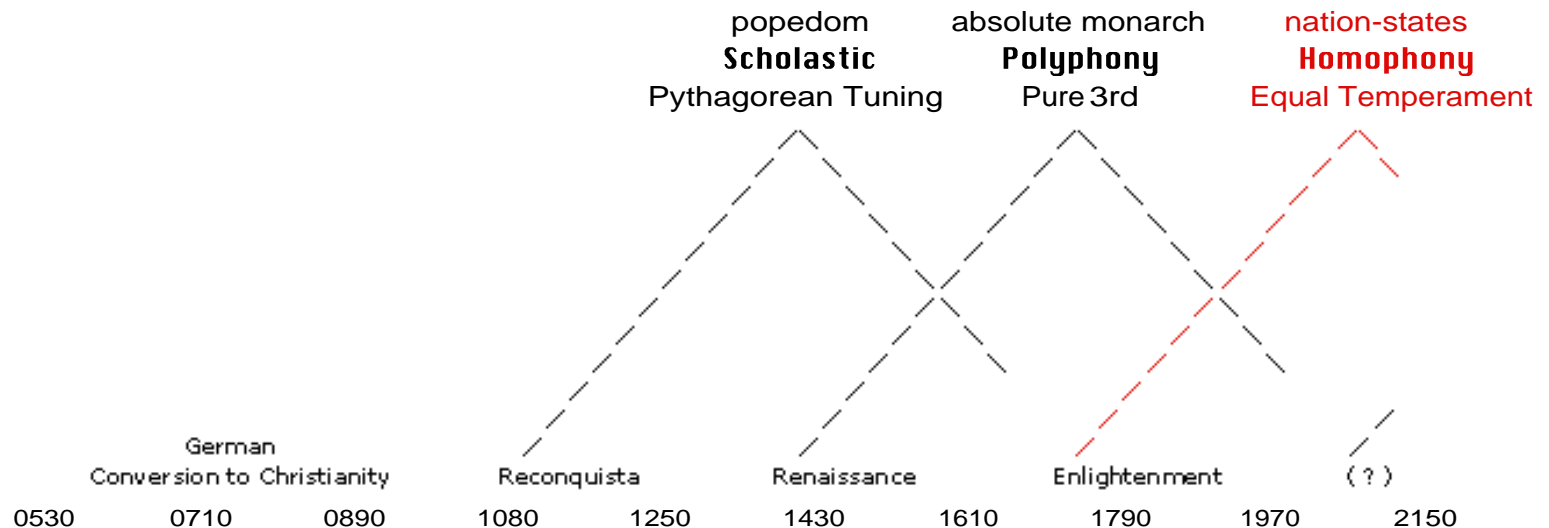
Soon, following the rise and fall of the revolutions in 1848, the conservative swing of the West European citizen class became clear to everyone's eyes. Taking this as an opportunity, socialist movement lead by workers was organized, and a massive restructuring occurred within music's social framework in response to it. This is the birth of the cafe and the music hall -- 'the place' for mass entertainment (note 20).

However, those were the times when a powerful centripetal force was needed among not only the Europe and the US but all nation-states on their way of formation, so music was thoroughly used, whether high-end or low-end (note 21).

The melody was especially easy for people to share, even between strangers, for it has threw away both modality and polymetry, transforming itself to premise on harmony and bar lines at all times. No wonder why it succeeded in becoming an ideal bond when a diverse human population were organized into a nation. What should not be left out here is the fact that the so-called classical music but also the popular music as well were based on the same kind of homophony with a single theme supported by the harmony (note 22).

In this way, the unique, heart-wrenching psychological effect and the spiritual euphoria seasoned with boyish heroism that are common to both musical styles, were mixed with the loving feeling toward home country and neighbors that every human has, to be organized as a national-patriotic feeling.

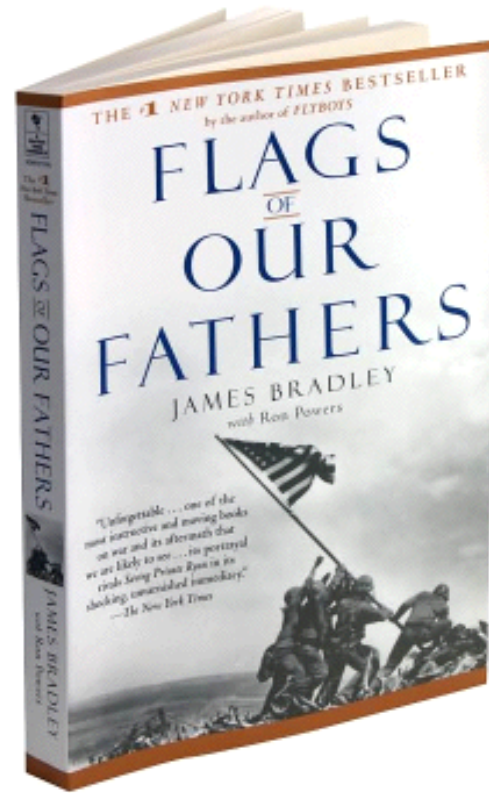
(figure 3)



under the flag of ...



ready or not here we come
gettin' down on the one which we believe in
"One Nation Under A Groove"
Funkadelic (1978)



the most famous war photograph, and effective propaganda
"Flags of Our Fathers"
James Bradley, Ron Powers (2001)

IX One Nation Under A Groove

—The third runners of the modern times—

Now is the time when Asian-African matters are about to recover their original life forces. This is not a wishful thinking that is all-too-common to reformist idealists, but is today's reality.

"The World" map



Such ideas as exclusive Western-Eurocentricity, linear social evolutionism, or all-round rationalist view of humanity, that were once considered as essential frameworks of modernity, are now losing persuasiveness and are definitely on their way of decline. All because they are too naive as ideas and it became obvious that they would never come into effect in global scales, neither permanently nor universally.

What is more, we now see the truth gradually emerging: not only the socialism who has been snapped with a straight 'NO', but also the progressivism and the liberalism are all nothing but transitional guidelines.

Thus, when the directivity of an epoch changes drastically, the uncertain, confused global situation is apt to be taken as a regression toward the Medieval times or as a leap toward the post-modern ages. Sometimes we see statements that presume that it represents an all-out death of modernity. But it appears to me that such arguments are too hasty and unrealistic as perception.

It is feasible that the Western type of democracy (predicated on some kind of slavery by nature), systemized science (assimilated into politics and economics), and market-based economy (established on Washington consensus), would NOT be supported forever as they are.

But for the time being, it appears as if the people who are leading off with criticizing them and holds responsible for protest performances in mainstream media, are those who belong to a group that has already fully enjoyed their advantage. It is more likely that what is happening for real is a slight correction from excessive emphasis on Europe and US and Protestant-centrism along the process of the modern era's maturity.

Underground Resistance, Michael Anthony Banks a.k.a Mad Mike



Not only the nowadays better-known three major inventions of the Renaissance era - gun powder (China), typographical printing (Korea) and magnetic compass (China), but also scientific/rational thinking, humanism (Islam), use of fossil fuel, division of labor in industrial production, plebeian culture of the city, university education as an open opportunity for improvement of social status (all from Beisong 960-1125 and Nansong 1127-1279), credit economy (Jin 1127-1279), Organum that was the prototype of the harmony (Arabo-Andalusia), all up until the just 3rd interval, all originated in Asia.

The world's first equal-temperament of 12 degrees had been designed by Chinese music theoretician in 1584 (Ming), and there is no doubt that 17th century chamber music and opera had got their hints from the musical culture of modern Asia.

What is even more surprising, the concept of infinity that is the base of differential and integral calculus and often stands for God in the scientism and in contemporary philosophy, is now believed to find its root among the mathematical culture of South Asia.

* Important discoveries such as planetary theory later adopted by Tycho Brahe, the Newton-Gauss interpolation formula, the series expansion of the cosine and sine functions, the formula for the sum of an infinite series for example a series notation for Pi (the circular constant), were all achieved by Kerala mathematicians.

Then, why could the Western Europe manage to come out as the sole winner by remodeling the entire society into a shape that would adapt to the new era, in a timely fashion?

We will leave the future history books to give the ultimate answer to this question, but there is no doubt in saying that the prosperity of Europe and US which has lasted through 19th and 20th centuries following the industrial revolution, was an irregular, temporary success achieved by sacrificing the global environment and a large number of people around the world.

Therefore, if Western Europeans' or their followers' version of modern world were defective in any way, the first thing we have to do is to pull it back to its solid and original life cycle. Whether or not we abandon above-listed items such as technology, culture (including matrices of music), social system and even ideology, is to be considered after that.

* In my personal opinion, the first modernity had emerged in China (Beisong 960), and this modernity has been recognized at that time, as the increasing force of Turk which had been superseding Persia's.

where is the top of the world map?

Moroccan geographer, Muhammad al-Idrisi



oriented with south at the top, al-Idrisi's world map (1192)



east at the top, European T-O map

During the Medieval period, European maps were dominated by religious views. They were classical "T-O" map with Jerusalem at center and east toward the top. The convention (north at the top) came, when European navigators started using the magnetic compass and the North Star.

<http://www.flourish.org/upsidedownmap/>

There is also a nonnegligible possibility that periodization such as 'Antiquity/ Middle Ages/ Modern Times' might be thrown away prior to the closing of the modern times. And it is a problem of definition of the word 'modern times', whether now is the beginning of the end of the modern times or not.

The expiration dates of each elements that constitute modernity, would slightly differ.

However, when we review the paths of modern world of the last 200 years on the supposition that Westernization and modernization were distinguishable subjects, we can assume that modernization which the late European citizen class (that was, without irony, much enterprising and 'grand' up until 1813) gave up along the way -- and true modernization which the old liberal coalition in the US (Irish workers, Jewish reformists and African moderates) failed to achieve during the hot summer of 1968, is now under the propulsive hands of Asians, Africans and Latinos (as) who are also the descendants of Native Americans.



9.11

As we look into this modernization that would certainly progress further (definitely during the first quarter of the 21st century) in a global scale, the risk is no small, of a leading group causing the outbreak of massive destruction that would outweigh offensive war, environmental pollution, or racial discrimination, regardless of who will stand at the head of the pack.

Even within the context of the latest music scene, there exist arguments alarming that sampling techniques might be the equivalent to a breakdown of folkloric cultural grounds using digital technology, that are, in a way, telling the truth. It is also true that European art music and English-speaking popular music have used the piano, equal temperament, score transcription and recording technology as their weapon to trample upon the traditions of homegrown songs and dances that have existed in local communities throughout the world, and diminish the diversity of musical culture. Moreover, there is doubt about the value of what was newly produced -- is it better than what was destroyed in the above manner, or not?

But, it is also certain that the newcomers' music based on new technology sounds more alive and attractive for those living today, than the sophisticated style representing the rigid past, even if the new style is rather frivolous or barbaric as yet.

mp3 player, iPod (2001)



X outro

For the majority of the world, modern times have meant nothing other than a compulsory entry into the Western World-System, and contemporary times have meant a process of decentralization (or reconfiguration of center). And I found it was also true in the realm of music.

This paper is my attempt of picturing the feelings of people who are living in the contemporary times - how their world views are reflected onto music. Especially, I considered along the two axes, the transitions of the melodics and the sense of harmonic tonality.

thx 4 ur patience to read through this pdf,
and feel free to contact me.

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