

MUSIC



BOAZ ADHENGU

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Turning forty is a major landmark. Going through four whole decades means a person has collected enough life experience. It adds immense insight about how to make the most of the coming years. At forty, I have lived through my shares of misfortune, fortune, lucky breaks and heartaches; and this is a golden chance to live life with open eyes. With enough maturity gained along life's journey and enough optimism to enjoy the small moments, I believe the '40s' is when I will begin to live. And so, I dedicate this book to my fortieth birthday! Just like it sounds, 2020 and so 40! All the glory is to God for enabling me achieve this much.



And to all those born in the 1980 it's now 20 years of a new millennia!

PREFACE

Am deeply perturbed when conversations around concert corridors still remain about chances of music residencies abroad; am actually confused on the state of music in Africa and actually admire how West Africa continuously owns the entire African culture by simply accepting our mysticisms. Kenya still survives its illusions of developing a unique genre, yet we have vocalists who always claim to have made it. Who is the judge of that? I guess we still sing for the western audience and when our music is accepted abroad, we assume we have made it locally; yet the crowd is always confused not to perceive the truth without the trends that influence our cultural developments. Am confident to suggest that Kenya has to reinvent its musical poetry and look at the role of songs as opposed to language; the relevance of communicating our identity which is contrary to the lost delusion of searching for fame.

Some would rather tempt to claim that am overtly writing yet my artistry is not even vocalised; which wouldn't be absurd. As an African am amateurish and my musical composition would tangle to represent self-modules of taste and appreciation that are beyond the aesthetics which may quantify music as divine. All in all, my artistic learning transcends into the spirit of culture; to acknowledge that am a product of many temporal constructions yet illiteracy is just another alphabetic vocabulary am not curious to discuss. Music is about abilities but facts must be squarely defended using liberal methods of biological discussion.

Most musical artists just sing because they can structure conjectures to relate with sound and produce melodies that are definitive of their current time; yet these same self-proclaimed musicians still can't define music beyond their creativity. There is need to understand the roots of such artistry we engage as trending and only then can we be at a position to perfect whatever avenues are necessary for better results.

In my tours for *vocation* and leisure, I have met distinguished musical artists whom I consider cultural cousins. Their inspiration through dialogue has often left me potent with hope let alone an ignition towards discovering how wonderful my Africanity impacts the globe. Meeting Sona Jobarteh and conversing on traditional pedagogies gave me not only courage to read music but also to learn a few instruments that am familiar with; consequently, dancing with Fatoumata Diawara and attempting to copy her majestic guitar tunes that resonate the African language only made me attentive and indeed I agree when she told me, Kings are made and not born, that the power of music in Africa is to reinvent back our

Kingdom. Am truly honoured that my eyebrows bring fizzy nobility, and so, yes, may I rise to be that philosopher king that you see in potential.

I must say, venturing into art and knowing my status as a creative or a product of aesthetics; am reminded of the Kenyan artists whose music has made me curious; particularly, my friends Dennis Mosiere a.k.a Masese of the *Obukano* and Emma Jalamo who have been elements towards my jovial appreciation of our own music. May I also mention Tetu Shani, the self-taught guitarist who attempts to tune the Americas to obey the negritude songs of Kenya in his melodious music; indeed, music is older than linguistics just as songs predates languages.

The areas of the brain that are activated by emotional music are similar to those associated with such strongly rewarding activities and stimuli as games, drugs, food and sex; it is for this reason that the musicians in Kenya must shape their perceptions about music to realise that it is a vocal print for the emotions and only then will we express its essence.

This book is a culmination not of long-term research but an itchy urge to contribute towards the quest for perfection and noise reduction in this genre dubbed *Kenyan* music. Much thanks to my mentor Prof. Otto Kinne, whose ideas about ecological ethics have shaped the scientific digest hitherto capable of publicly refuting even the complex theories from a political perspective. Indeed, man is a political animal but mostly so, biology is only expressed through the political conjectures that strive to maintain its factuality. It is therefore no surprise that am able to discuss evolution of music but relate the biology of mankind in this quest of resonating music as a key element to African livelihood.

We begin by understanding the origin of language because only through communication can we have relevance in debating music; thus, chapter one discusses the evolution of language and this is done in less biological tones. We proceed to temper music and verbal developments in humans within the understanding that no fossil records exist as referential evidence for sound, hence music is widely a speculative subject that bases its understanding on the present or immediate past. As such, oral traditions and the primitive psyche have always played very important roles in creative development of different societies where brutality has since been tamed and sex became a consented phenomenon. With that understanding, chapter three discusses how colonialism perverted the world through deconstruction of the music dialect by the ethnologists who mediated as agents of change. That Africa was a deeply religious

community united not only through songs but in spirit of enchantments; and to be able to civilise such a primitive people, the mutated African in the name of *colonialist* had to reconstruct African music and in so doing, create a different melody that facilitated his entry both physically and psychologically. The whole notion of divide and rule, but this time, deconstructing the African songs and using the alphabet to reconstruct notations that brought a whole new tune; similar yet superior from the savage. Chapter four looks at the role of performance in music; discussing the essence of audio-visual innovations and the impacts of performance in enhancement of emotional interpretation of songs by the audiences which creates a tripartite relationship between the composer, performer and the audience themselves. All these acknowledging that the world is changing and technology is here to stay.

It is my intention that this book will develop into better editions, this being the first attempt in that paradigm. Am therefore looking forward to comments and deeper insights on how the subsequent editions of this book can construct a more meaningful understanding of whatever we have started. Kindly contact me through my social pages or Instagram @adhengobueuz which is my standardized handle or if you wish “#ASHTAG#”

CHAPTER I

Evolution of Language

Before science, there was religion and before such supernatural cognition, there was the primitive persona. History has it that man once lived in a state of nature, where life was brutish, nasty and short. It was the art of survival for the fittest and displacement or migration was the persistent norm. In attempt to understand the misfortunes of humanity, the supernatural causalities provided immediate answers and from these directives, man became organised and less profane. Yet, his culture of being a hunter and gatherer might as well intrigue curiosity for science; the exploration of many different game meats; experiential know from understanding what was edible or poisonous. Nevertheless, the dichotomy between science and religion has continued as a minor debate with more consolations that all discoveries man has made of this universe is according to God's plans. Everything is designed to be realised at gradually and different timings.

Since Darwin's theory of evolution, questions about the origin of language have generated a rapidly growing scientific literature, stretched across a number of disciplines though much of it directed at specialist audiences. The diversity of perspectives – from linguistics, anthropology, speech science, genetics, neuroscience, and evolutionary biology – can be bewildering. Like all scientific hypotheses, they are proposals to be interrogated, knocked down, and rebuilt, not beliefs to be defended. The idea of evolution since its inception has been considered intellectually distasteful and politically dangerous by many; threatening the whole idea of stable order and of the *rightness* of traditional social systems. Yet without the concept of evolution, the fact that the wings of a bat and the legs of a cat should have precisely the same skeletal structure, right down to details of cartilages, nerves, and muscles, seems arbitrary. But from an evolutionary viewpoint, these similarities make perfect sense; bats and cats descended from a common mammalian

ancestor, who had a five-digit forelimb with that structure, which was thus inherited by its descendants. While it is hard to understand why an omnipotent creator would be constrained in this way, it makes intuitive sense that organisms should be similar if they are related by descent.

Nevertheless, by 1831, evolution was a well-known idea, familiar to the young Charles Darwin as he set out on his famous voyage of discovery on the *Beagle*, but a core mystery remained: What force drove the close fit between the form of organisms and their way of life? The near-perfect correspondence between biological form and function seemed to demand some *intelligent designer*, an invisible, guiding hand overseeing this process of evolution.

Nineteenth-century Biblical scholars held that the earth was only about 6,000 years old, and while this might be enough time to turn a wolf into a *chihuahua*, it seemed inadequate to change a cat into a bat. But as Darwin entrenched his theories of evolution, a revolution in the science of geology had occurred, based on increased understanding of European sedimentary rocks and the fossils found within them, and most practicing geologists agreed that the earth's age must be measured in millions or billions of years, not in thousands. Darwin was well-schooled in the new geology, and so his imagination had already been opened to the idea that vast expanses of time were required to explain geological features such as mountain ranges or islands.

Many religions provide an account of the origin of language. According to the Judeo-Christian tradition, God gave to Adam in the *Garden of Eden* dominion over all the animals, and Adam's first exercise of this dominion consisted in naming them. The fact that there are now many languages rather than just one is explained in the story of the *Tower of Babel*: that linguistic diversity is a punishment for human arrogance. So long as this sort of account was generally accepted, the origin of language was not a puzzle. But when secular explanations for natural phenomena began to be sought to supplement or replace religious

ones, it was inevitable that a scientific explanation was to be sought for the origin of language too.

The distinction between communication and language is thus central to the study of language evolution. But this is a distinction and not a dichotomy; language is indeed one of the forms of communication available to us humans. But humans would be immeasurably poorer if we lacked laughter, crying, gesture, and music, and during its evolution, language co-existed and co-evolved with these other systems.

Animals have their own rich suite of communication systems, distinct from language. But there is no reason to let our appreciation of these other systems lead us to foist the term *language* upon them inappropriately, or to blind us to the remarkable, and apparently unique, qualities of language per se. Language, more than anything else, is what makes us human. More problematic is the fact that understanding language evolution requires new insights in multiple, independent disciplines which lack a shared framework of terminology, problems, and approaches; thus, we are constantly exploring the best understanding that doesn't attempt to handicap other explanations from other disciplines, be it biology or neurology. For example, a complete understanding of language surely requires a clear understanding of *meaning* – but the nature of meaning is one of the most perennially controversial issues in philosophy and linguistics.

The unique power of language to represent and share unbounded thoughts is critical to all human societies, and has played a central role in the rise of our species in the last million years from a minor and peripheral member of the sub-Saharan African ecological community to the dominant species on the planet today. Humans are perennially fascinated by animal behaviour; hunters, pastoralists, and pet owners have long sought to understand how and why animals behave. Thus, in so doing, the co-existence beyond survival has brought civilisation to the world.

While the science of animal behaviour got its start with Aristotle, the evolution of behaviour has a shorter history, and remains a difficult topic. Because behaviour, like language, doesn't fossilize; we have no clear fossil record for most behaviours (fossil footprints being an interesting exception). More importantly, there is an extra level of indirection between the genetic bases of behaviour and the behaviour itself: genes build brains, and brains then underwrite behaviours. Nevertheless, development is relevant to the evolution of any biological trait, but becomes especially crucial in discussions of the nervous system, because the development of the brain and behaviour is so richly intertwined with experience. We will visit this discussion as we unfold the evolution of language and the melodious cognition of language into music.

There are four basic aspects of language that have been traditionally studied since evolutionary curiosity brought branches like psychology and philosophy into play, these aspects have been identified as phonology, syntax, semantics, and pragmatics. Phonology is the study of the sounds of a language; Syntax is the grammar of a language—that is, how we put words in order and how we change words (for example, play becomes played when we talk about the past) so they make sense to our listeners. Semantics is the meanings of words. Pragmatics is how we use language. For example, you probably speak in different ways to your professor, to your friends, and certainly to a 2-year-old. In each case, you are using language in a different way. When children develop the ability to communicate with language, they are developing all four of these areas. They must understand and form the sounds of the language they are learning. They must learn what words mean and how to put them together so that they make sense, and they must learn when and how to use language to accommodate to their listeners and to accomplish their goals.

Historical linguistics dominated the study of language since before the conclusion of Darwin's voyage, and was itself dominated by phonology and phonetics. Although the study of semantic changes and word etymology was fascinating, changes

in word meaning tended to be highly idiosyncratic. Syntax was barely even discussed. This began to change around 1900, when the diversity of the world's languages had become clear, and the many different ways languages have of structuring sentences became fully apparent. Linguists became increasingly interested in objective methods that could be applied algorithmically to languages to discover their structure. The dream was of a generalized discovery procedure that could first uncover the phonemic repertoire of the language, enabling a writing system that could then generate a dictionary, and then finally lead to a complete grammar describing the rules for combining words. The design of such algorithmic discovery procedures reached their apogee in the 1950s. But one question remains clear, what role was the anthropologist to do during this historical dominance? In my view, they should have attempted to broaden science to be able to accommodate history, not only by pre-empting theories of truth but by examining evidence and testing them against time. Anthropology could look at the human skull and create imaginary connotations about how the entire brain system functioned; yet this could lead to better neurological expressions which bring meaning to the core of language.

The vocal apparatus (tongue, lips, and larynx) of early humans would tell us much if we could examine it directly; but, being soft tissue, it does not survive, and for information about it we have to rely on what we can glean from bones, particularly skulls. Alongside such evidence we have tools and other artefacts, as well as traces of human habitation such as discarded animal bones; but, again, what is available to us is skewed by the fact that stone survives better than bone and much better than materials such as wood or hide. In view of this, the only relatively firm dates which anthropology can provide are two terminuses, one after which we can be sure that language in its fully modern form did exist and one before which we can be sure that it did not. For the long period in between, the anthropological evidence is tantalizing but frustratingly equivocal; there are no uncontroversial counterparts in the fossil record for specific stages in linguistic evolution. Anthropology being concerned not only with human culture but

also with humans as organisms in a biological sense, including their evolutionary development.

Language is not only a cultural phenomenon but also the most salient distinguishing characteristic of modern homo sapiens as a species. The question of how and why humans acquired language therefore interests both cultural and biological anthropologists.

Language remains to be mysterious; at the same time both physical and mental, and the two modes must meet somewhere. Yet in a sense, the establishment of this relationship is both pointless and obscure. Pointless, because mere humans cannot fathom the true depths of such a relationship, and obscure, because thought is impossible to measure scientifically or even to illustrate by any adequate metaphor or model. Indeed, the use of language cannot begin to be understood until some connection is made between processes of thought and processes of speech.

From their very first cries, human beings communicate with the world around them. Infants communicate through sounds (crying and cooing) and through body language (pointing and other gestures). However, sometime between 8 and 18 months of age, a major developmental milestone occurs when infants begin to use words to speak. Words are symbolic representations; that is, when a child says “*table*,” we understand that he is referring to a specific thing, and we don’t have to see that object. The word represents the object.

Consequently, language can be defined as a system of symbols that is used to communicate. Although language is used to communicate with others, we may also talk to ourselves and use words in our thinking. The words we use may influence the way we think about and understand our experiences. Language is essential to the human experience.

We communicate our ideas, feelings, and needs with language, and we use language to understand the world.

CHAPTER 2

Origin of Music

It is widely asserted in literature dealing with music psychology and anthropology that all cultures and societies have music; but definitions of what constitutes music are few and far between. It is perhaps indicative of a sense that musical knowledge is somewhat intuitive that none of these authors consider it necessary to define the term. In studies of music cognition and psychology, music tends either to be dealt with holistically in terms of (Western) composed pieces or, in contrast, as components of music, such as discrete pitches or transitions; neither requires a definition of music to be specified.

Developmental studies are also generally concerned with the emergence of elements of music perception and production, or of production and perception of Western music, again bypassing the necessity of defining the entity as a whole. Much of the problem stems from the difficulty of identifying universality in different cultural conceptions of music. Indeed, the trend in ethnomusicology between the 1940s and 1970s was to frown upon attempts to identify musical universals, a pursuit seen as devaluing of the cultural diversity of behaviour. This view has gradually been replaced by an increasing interest in definitive features of music.

From the perspective of cognitive science, music ranks among the most bizarre and fascinating features of human culture. Music is apparently universal, being found in every known human culture, past and present. It is incorporated into a vast array of cultural events, including weddings and funerals, religious services, dances, and sporting events, as well as solitary listening sessions. It can make people feel happy or sad, so much so that music is central to modern advertising campaigns. Despite this central role in human culture, the origins and adaptive function of music remain virtually a complete mystery.

Music is a human universal, and although difficult to define, precisely because of its magnificent cultural variability, it involves a generative system, pumping out an endless set of *meaningless* structures, formed by hierarchically combining a small set of primitives (typically notes, but more generally tonal nuclei and syllable sequences in song, and acoustic events in instrumental music). From this understanding, it is important to connect the transformative elements identified as behavioural changes within the sequential development of humanity as a species or Godly creation, if you wish. To examine a broad diversity of possible alternative explanations from a variety of cultural sources is to reduce the chance of a narrow and limited interpretation or explanation of evidence of behaviour constrained by the limits of personal experience. Our perception and experience of the world is intrinsically tied up in all circumstances, with our previous knowledge and experience, to which we relate, in analogical ways, our current experiences, in order to understand them.

Theories about the evolution of music abound. Many have suggested that music might be a biological adaptation, with functions ranging from courtship to social cohesion in group activities such as religion and war. Still others have suggested that music is not an adaptation but rather a side effect of properties of the auditory system that evolved for other purposes. These hypotheses need not be mutually exclusive; it may well turn out that some aspects of music are the result of general purpose auditory mechanisms, and others the result of music-specific adaptations. In any case, at present there is relatively little evidence to distinguish the various hypotheses.

All animals have the ability to produce sounds, and most of these sounds have meanings, at least to their ears. Surely, this is true also of the earliest hominids. If a mother emits sounds to soothe a baby, and if such sound inflects somewhat in pitch, however vaguely, is this song? An ethnomusicologist, those who study the music of exotic peoples, would probably say “yes,” while trying to analyze and record the pitches concerned. A biologist would also regard mother–infant vocalizations as prototypical of music.

Nevertheless, it is well accepted in anthropology that when people are working, or moving together, their movements fall into a rhythm; that people may grunt and make other noises into that rhythm. The grunts may move into something that verges on or morphs into song; the other noises may be claps or beating pairs of objects together (concussive) or beating one object on another (percussive). Such objects can only be *idiophonic*, such as sticks, stones, and other solid objects that require no additional features to help them make a sound, in the classificatory system for instruments.

To better understand these origins of music, it is only logical to examine it from an existing functionality where its purpose and use might help shed some reason. Mostly so, through looking at the uses of music within societies which hunt and gather, it may also be possible to identify potential selective benefits to be had from the use of music within such a social organisation.

In the plains of central North America, some of the best documentations relates to the *Sioux* and the *Blackfoot* tribes. These tribes both lived in areas of relatively high humidity, producing rolling grasslands as their major habitat, the *Blackfoot* in the northern plains, and the *Sioux* in the east. These plains environment may in fact be more reminiscent of the habitat occupied by ancestral hunter-gatherers in Africa than those habitats that are home to hunter-gatherers in Africa today. This is because hunter-gatherers in Africa today occupy areas either of very low rainfall (e.g. the Kung San of the Kalahari desert) or of very high rainfall (e.g. the rainforest-dwelling Pygmies), with all of the temperate grassland now occupied by settled agriculturalists. The *Blackfoot* were traditionally nomadic hunters of antelope and bison (buffalo) and, until the introduction of horses by Europeans in the eighteenth century, hunted and travelled on foot.

Interestingly, they used a hunting method which was also used by Middle and Upper Palaeolithic hunters, both Neanderthal and modern humans. The men would drive a herd of the animals into a

v-shaped drive leading over a cliff edge or ditch until the animals fell to their deaths, ready to be collected and processed. Particularly relevant is the use of song in this procedure amongst the *Blackfoot*. The herd was initially enticed towards the drive area by a young man singing a spiritually potent song in the manner of a bleating calf. The *Blackfoot* and *Sioux* would be today called the plain Indians (or red Indians) of the Americas. It may seem that the music is rather simplistic, but amongst the Plains Indians the value of the music is not measured in terms of its complexity. Instead, it is its ability to integrate ceremonial and social events; to integrate society in general and represent it to outsiders, and to evoke supernatural influence that is important.

The *Mbuti* community of central Africa is also of interest. These communities are nomadic, and tend to move on every month or two, following their quarry. The communities are egalitarian and cooperative, with no formalised hierarchy, although individuals may be acknowledged as experts in particular skills. Ownership of personal possessions is minimal, largely as a product of the nomadic lifestyle, and they do not make any use of metal or earthenware in manufacturing their tools and containers, which tend to be made of wood or bark. Subsistence from hunting accounts for about two-thirds of their diet. The other third is made up of foraged plants, fungi and animals, such as wild yam, leaves, nuts, snails, tortoises, weevils, beetles and caterpillars. This activity is predominantly carried out by women, whereas the men collect honey and do most of the hunting of large game. The game is mainly elephants, antelope, river hogs, gorillas, monkeys and chimpanzees. Monkeys are hunted with bows and poisoned darts; large game is hunted with broad-bladed spears. During the dry season, when many *Mbuti* communities band together, communal hunting often occurs, with all the men, women and children getting together to “beat” duiker into rings of nets.

Notably, the music of these hunter-gatherers communities is largely non-instrumental, with melody being carried by vocalisation alone and much of the percussion being provided by clapping, slapping and foot-stamping. Instrumentation, when it is

used, is almost exclusively percussive, and is constructed from readily occurring natural resources with relatively little modification.

In anyway, *palaeolithic* objects which could be musical instruments fall into three main types. The most prolific are those that are thought to be flutes or pipes. Secondly, there are pierced phalanges, often interpreted as *phalangeal whistles*. A third type is the bullroarer. These were the first instruments of music as made and used by humanity; commonly so, is the traditional similarity of hunter-gatherer societies in using these objects for livelihood enhancements and transcendental spiritualism.

There is an important distinction to be made between flutes and pipes and phalangeal whistles. Flutes and pipes consist of a hollowed bone, which may or may not have been perforated along its length. A pipe with no perforations would produce a single tone, and each perforation made in the tube would allow an additional tone to be made by covering or uncovering the holes, effectively varying the length, and thus wavelength, of the resonating column of air inside. The closest modern approximation is a recorder or flute. Phalangeal whistles, on the other hand, consist of a single pierced phalanx, usually punctured with only one hole. A tone is produced by blowing across the top of this hole, in much the same way as one would if producing a tone by blowing over the top of a wine bottle. This would produce a high-pitched sound, due to the small internal volume of the phalanx.

A bullroarer, though not widely studied, consists of a flat perforated piece of wood or bone on the end of a cord, which creates a whirring sound when spun in a circular motion, and is, or has been, used in a great diversity of global cultures, in both spiritual and functional contexts. For example, amongst some Australian Aborigines it is used to imitate the spirits occurring in the natural sounds of nature, and Malayans use it to scare animals away from plantations.

The evolution of the physiology necessary for vocalisations has received much attention in the last thirty or so years. In particular, since interest in language evolution has blossomed which bring biology to be a sub-discipline of art. How is this possible?

The acoustic energy of vocal sound is generated by the larynx, which modulates the airflow in the throat (supralaryngeal tract). This sound is then adjusted by the action of the tongue, lips, teeth and palate in the oral cavity. Unfortunately, the vast majority of the physiology responsible for vocal production (for example, the tongue, larynx and supralaryngeal tract) consists of cartilaginous and soft tissue that is not preserved in the fossil record. It is therefore difficult to scientifically factulise the development of musical abilities in humans; the best resource remains general analysis of the people's cultures and the instruments so used. Only then can timely assumptions be made to best connect upon origins. Nevertheless, the evolutionary development of conscious control over action has allowed the development of play-acting, precise imitation, gesture and body language. It also allowed, through the ability to imitate action, and to rehearse and understand skills, the refinement of many skills, such as throwing, cutting, making stone tools, and the ability to pass such information and skills on, i.e. pedagogy and practice. This increase in the brain capability of the hominid allowed the making of intentional, modulated vocal sounds; that is, voluntary control over vocal prosody including deliberately raising and lowering the voice, and producing imitations of emotional sounds.

Human symbolic communication builds on our primate legacy, a foundation of affective communication established in the preverbal period. On the contrary a look at the wild animals, these nonhuman primate vocalisations signal the presence of different predators, provide information about the group's location and movement, facilitate friendly interactions, and lead to reconciliation between individuals who have recently exchanged aggression. The communicative element of sound is adequately visible but we as humans have evolved to perfect it into art, mostly so, developed it into a systemic language overtly due to

our capabilities of imagination and memory. Notably, there appear to be three main systems of memory in animals commonly classified as procedural, episodic and semantic; with modern humans apparently being the only creatures to possess a semantic memory system.

Procedural memory is concerned with the learning of sequences in different actions, such as catching an object in flight. It preserves the general principles for action, rather than the specifics of a given situation. This type of memory system is possessed by most animals. In contrast, episodic memory seems to be unique to birds and mammals, and appears to be more evolved in higher primates than in other species, in its subtlety. Episodic memory contrasts with procedural memory in that it is concerned with particular episodes in the life of the organism, specific events and their associated stimuli. Episodic and procedural memories appear to use separate neural systems and to have evolved separately, as one can be damaged without detriment to the other. It is this system which is the foundation, and constraint, of higher primate cognition and social systems.

Semantic memory is possessed solely by humans, and is concerned with symbolism, analogical associations and mental manipulations, and *knowledge* in the form of facts and propositions. Note that humans retain, and use, all three systems, but the concern is which of them constitutes the defining mode of cognition for their culture and in this case, music.

As singing and speech make use of the same physiological mechanisms for their production and perception (namely, the vocal chords and ear) one might expect that the two are closely linked, in evolutionary terms and in terms of the neurological mechanisms they use. Neurologically the parallels between music and language function are more complicated. An important distinction to note while discussing music and language is the difference between the terms “vocal” and “verbal”, and “speech” and “language”; verbal necessarily implies linguistic lexical content, whereas vocal does not, encompassing non-lexical

utterances too. It is more logical to infer that the evolution of music precedes language and this will be seen as we expound on uses of music or language to human processes. I desist into the need to analyse the developmental theories twined between music and language due to the complexity of the vocabularies involved, which might not be of interest to the lay reader. This could have been the scientific interrogation of neurological components that sum up the brain functionalities; the unpleasant digest of specific brain hemispheres brings a complicated twist which is beyond the interest of this book. But if we were to follow the findings of science as popularly seen, the right hemisphere appears to be responsible for processing and production, in both melody and speech vocalisation, of prosodic melody, pitch control, tonality of singing, timbre processing and voice recognition. The left hemisphere appears to be implicated in production and processing of semantic verbal meaning and syntactic sequence, as well as rhythmic and analytical function. Conclusively, music and language are reciprocal specializations of a dual-natured referential emotive communicative precursor, whereby music emphasizes sound as emotive meaning and language emphasizes sound as referential meaning.

At birth, the larynx occupies the top of the throat in humans, as in other mammals, with the same important benefit with regard to feeding and breathing. However, as the child grows up, particularly after the first year of life, the larynx descends towards its adult position. This process is only completed during adolescence. It seems likely that both language and music grew out of non-verbal vocal emotive utterances, expressing an emotional state, which were initially made to increase the efficiency of physical grooming activities, and which gradually came to be used in broader spheres of behaviour. Exactly these utterances could also be used to accompany rhythmic percussion and dance, thus increasing the emotive response and social bonding experienced as a consequence of the activity. The origin of music is mostly a behavioural inquiry and only possible if we use whatever observations we have to deduce the processes of such past experientialism that have only been perfected in time.

CHAPTER 3

Biological Songology

The difficulties in tracing the evolutionary facts of music has left the world still grappling with the analytics; the anthropological persistence has only resulted to more scientific apologetism dubbed the *biology of music*. In this arena, neurological vocabularies have been emphasized towards a more elaborate connection on how the human brain captures sound and turns it to music. That Music as sound appeals to the ear, but the making and appreciation of music involves the entire body through the somatosensory and motor systems of the performer and the active audience.

Further alert, in this biology of music; we emphasize that music involves not just the auditory system but the somatosensory and motor systems as well, reflecting strong associations between music and dance, the rhythmic tapping, stepping, clapping and chanting that accompany and indeed produce music. It is inevitable that musical experience involves the motor cortex, basal ganglia and cerebellum in the production of song and dance, based in the genesis and maintenance of rhythmic spatiotemporal patterns of neural activity in widely distributed areas of the brain. To better understand this, it's easier if we are knowledgeable of such biological vocabularies and this has further been bettered in definitions of aesthetics, mostly so, the scientific study of art appreciation. It is a matter of common sense, that aesthetics only begins when we start to critically analyse our art, whether its music, dance, painting or a piece of architecture. As such, enough with these complex terms that are beyond the scope of this book for music is a product and biological precepts will only complicate our artistic appetites towards exploring and making use of tonal or symbolic melodies that are partly our emotional self. Let's therefore put a question tag as to what are spatiotemporal patters in our neural life. What is noise?

Whereas art and aesthetics are both creative processes, they differ in their directions of change in complexity. The artist begins with a high degree of complexity steeped in chaos, but is constrained by the physical medium in which the work is done and by the discipline of the academy. The critic begins in a rigid academic milieu and has his or her mind opened by a work of art into a higher degree of complexity, over the edge of order into chaos, which is not otherwise accessible. Artist and critic interact reciprocally to construct the dynamics through which art and aesthetics come into being. For both, the experience of beauty is achieved through a sense of closure within their fields of intentionality, which are developed, maintained, and evolved by the neurodynamics within their brains. It is therefore reasonable to suppose that musical skills played a major role early in the evolution of human intellect, because they made possible the formation of human societies as a prerequisite for the transmission of acquired knowledge across generations. Mostly so, that music and dance originated through biological evolution of brain chemistry, which interacted with the cultural evolution of behaviour. This led to the development of the chemical and behavioural technology for inducing altered states of consciousness.

Music is regarded in biological terms as originating in the brain, so that most explanations concentrate on the ways in which brains process information. Recent studies of the nonlinear dynamics of the primary sensory cortices have shown that the patterns that are constructed by chaotic nonlinear dynamics in cortical neuropil replace stimulus driven activity. These findings support the concept that knowledge in brains is entirely constructed within them and without direct transfer of information from outside. As knowledge increases by learning, brains of individuals grow progressively apart. The separation results from the uniqueness of the knowledge that is constructed within each brain. The resulting condition of isolation is known among philosophers as *epistemological solipsism*. This view is reinforced by the tenets of aesthetics, which emphasize the deeply personal experiences of individuals, not as active listeners but as passive recipients of

beauty in music and other arts. Neither conventional neuroscience nor aesthetics can explain the deep emotional power of music to move humans to action. Solipsism indeed.

Having spoken the language of science, the semantics of music still remain undefined. Perhaps, in a more elaborate sentence, what could we factualise music to be? As in, what is music?

Music is the art of arranging and combining tones or sounds in order and often together to make a complete unit which has beauty of form and which is intended to communicate some emotion. It is a complex of activities, ideas and objects that are patterned into culturally meaningful sounds recognised to exist on a level different from secular communication. Simply put, it is that wanted sound; the art of organizing tones in a coherent sequence so as to produce a unified and continuous composition.

Making music has been an activity of human beings (both as individuals and with others) for thousands of years. Written texts, pictorial representations, and folklore sources provide evidence that people from all over the globe and from the beginnings of recorded history have created and performed music for religious rituals, civil ceremonies, social functions, storytelling, and self-expression. Thus, from the perspective of a musician, anything that is capable of producing sound is a potential instrument for musical exploitation.

What we perceive as sound are vibrations (sound waves) traveling through a medium (usually air) that are captured by the ear and converted into electrochemical signals that are sent to the brain to be processed. These vibrations of sound will have all elemental properties attributed to any wave, and these attributes are the four definitive characteristics that define any and all sounds. They are the frequency, amplitude, wave form and duration, or in musical terms, pitch, dynamic, timbre (tone colour), and duration.

In this diagram, I attempt to match the musical conjecture to the scientific term that describes such an element of a wave:

Element	Musical Term	Definition
Frequency	Pitch	How high or low
Amplitude	Dynamic	How loud or soft
Wave form	Timbre	Unique tone colour of each instrument
Duration	Duration	How long or short

The frequency, or pitch, is the element of sound that we are best able to hear. We are mesmerized when a singer reaches a particularly high note at the climax of a song, just as we are when a dancer makes a spectacularly difficult leap. We feel very low notes (low pitches) in a physical way as well, sometimes expressing dark or somber sentiments as in music by rural folk singers like Fautomata Diawara, and other times as the rhythmic propulsion of low-frequency pulsations in electronically amplified dance music. For us Africans, can we say *loketo sukus*?

Every sound event has its unique duration, which we perceive as being either short or long, depending on the context. Several durations, one after another, create the rhythm of a piece. The three syllables of the name “*Adhengo*” can be pronounced at evenly spaced intervals (*a-dhe-ngo*), or the first syllable can be stretched out, producing one long and two shorter durations (*aaaa-dhe-ngo*)—two different speech rhythms. In both vocal and instrumental music, rhythm is generated by the onset of new sounds, whether the progression from one word or syllable to the next in a song, the succession of pitches of an *Orutu* melody, the striking of a drum, or the strumming of chords on a guitar.

A succession of musical tones perceived as constituting a meaningful whole is called a melody. By its very nature, melody cannot be separated from rhythm. A musical tone will therefore have two fundamental qualities, pitch and duration, and both of these enter into the succession of pitch plus duration that constitutes a melody. Conversely, music may employ pitch material but not have a melody, as is the case with some percussion music. Attributes of melody include its compass, that

is, whether it spans a wide or narrow range of pitches, and whether its movement is predominantly conjunct (moving by step and therefore smooth in contour) or disjunct (leaping to non-adjunct tones and therefore jagged in contour). Melodies may occur without additional parts (monophony), in combination with other melodies (polyphony), or supported by harmonies (homophony). Consequently, melodies may be designed like sentences, falling into clauses, or phrases. Indeed, in composing vocal music, composers generally design melodies to parallel the structure and syntax of the text they are setting. The termination of a musical phrase is called a cadence. A full cadence functions like a period, punctuating the end of a complete musical thought. A half cadence is analogous to a comma, marking a pause or intermediate point of rest within a phrase. For those conversant with the song “Father Abraham” we notice short and long sentences; and this expresses the term cadence. Just a musical specific term but we know it nevertheless.

In music, the relationships between pitches are generally more important than the absolute values of the pitches that are used. A melody will be recognized effortlessly even if it is transposed up or down by a fixed amount, a manipulation that alters the absolute pitch but preserves the relative pitch distances.

Like any fabric, music has a texture, which may be dense or transparent, thick or thin, heavy or light. Musical texture also refers to how many different layers of sound are heard at once, to whether these layers have a primarily melodic or an accompaniment function, and to how the layers relate to each other. A texture of a single, unaccompanied melodic line is called monophony from the Greek word “*monos*” (single, alone) and “*phone*” (sound). Monophony becomes heterophony when spontaneous variations of two or more performers produce different versions of the same melody at the same time. The simultaneous combination of two or more melodies is classified as polyphony and of two or more simultaneous rhythmic lines as polyrhythm. Another principal textural category is homophony, signifying one dominant melody with accompaniment.

To the African life is a never ending process and its perpetuation is the goal of all activities and aspirations. The living person has the innate wish to exist for ever; but since death is an unavoidable limit situation, he prolongs his existence as a living person in his descendants fully knowing that he is created for reproduction; he is put into the world in order to perpetuate himself; in order to leave living heirs behind him thereby averting the worst evil that can befall a man, an evil so terrible that it tantamount to a curse. For the Africans therefore; the world neither evolved from any known stuff nor was it as a result of any cataclysm or concatenation of already existing things but it was made in time. Consequently, it is generally believed all over Africa that the universe was created and as such, music did not originate, it was experienced as part of the living, a ritual and connection axiom that conjoined the two worlds; that of the spirit and this of life.

The formation of a social group, such as a tribe, has its dark sides, one of which is the formation of a boundary, with the exclusion of nonself from the self that constitutes the unity. Those individuals who do not *belong* become enemies, who are to be walled off, expelled, and possibly destroyed, if they are perceived as menacing the welfare of the group. The process is similar to sexual jealousy, which manifests the exclusionary nature of the pair bond. This persistence of savage and asocial behaviour appears to have led to the development of larger social structures, governments, academies and universities, by means of which to channel and control the destructive side effects of orgiastic bonding. Thereby, shamans, priests and church bureaucracies regulated the time, place and manner of ceremonies with respect to stars and seasons. Chiefs, kings and armies imposed constraints on tribes for the sake of peace and the general welfare. With this twist away from evolution, lets delve into the African system and interrogate to know its musicality.

The consequences of analogous existential experiences of life in an isolated and difficult environment has slowly produced a unified African world distinct from and comparable with Western and Asian worlds. African music is one of the cultural

characteristics that define the African to be who he is as a distinct cultural being in the world, for it binds Africans together and gives them common characteristics.

Among traditional East African communities music making is closely related with and recognized as a social activity that fosters and reinforces communal unity. It is evident that besides songs and dances, music instruments certainly play a vital role in many events as well.

Within the kingdoms of East Africa, musical instruments among others served as symbols of status and authority. Thus, through the patronage of such leaders, musicians got the opportunity to develop their artistic skills to perfection by not only practising musical instruments, but also by performing court music on every occasion. Mostly so, once a society had decided on its set of moral codes, it is usually the artist's sacred mandate to act as the watchdog of those codes. It is equally the artists' prerogative to act as heralds for changing of those codes that have outlived their usefulness. The artist defined time in Africa, a concept that the colonialists found to be primitive and backward; for time in Africa brought to the fore a connection between the ancestral spirits and the living beings; time was seen as an event.

African music has had functions for social control, social integration, signalling, for dissemination of information, for inspiring, for entertainment, as means of recreation, for encouragement, for solicitation of supernatural assistance, for reparation and thanksgiving. Others teach good morals underlining the necessity of virtuous living and denouncing wrong deeds. One thing about African music is that it is never devoid of any values; it extols, exonerates or justifies some good qualities, condemn or blame the bad. In some cases it makes value judgments, stipulates or pinpoints moral evil and injustices in various regions of the continental Africa.

The traditional music of East Africa has gone through many changes caused by historical, political, economic and socio-

cultural evolutions that have been taking place since early periods up to the present day without interruption. This has greatly shaped its musical landscape to become what it is today. Notably, external and internal migrations, the Islamic expansion in the 7th century A.D. and the European colonisation in the 19th century are some of the major factors that should be taken into closer consideration when tracing back East Africa's music history.

There are, however, very good reasons why anthropologists and psychologists have been wary of applying an evolutionary perspective to human behaviours and culture. The genetic determinism and racist stereotyping that the evolutionary thinking of the first half of the twentieth century appeared to sanction led to some of the worst barbarities in recorded history. This was later amplified by the linguistic development bastardly known as the historical alphabet. And this greatly aided colonisation and racial differentiation within the continental Europe and consequently, racial dominance towards Africa. With the development of the alphabet, music was *nolonger* an event for the oral whims but rather a subject of ethnological interest; a tool, to be precise, for cultivating cultural deconstruction in a genocidal pattern.

Music and language have been seen to have a common point of origin, that is, the song. Subsequently, the evolution of language and the development of the alphabet brought a different twist in communication. Pictorial imagination was enhanced and from these aesthetical developments, music would follow the same fate into notations. It could be argued that with the incorporation of notation into music, the emergence of instrumentals would play a key role during the colonial period as not all ethnologists could historically dissect into understanding the norms of the savage. Hence, divide and rule tactics as postulated in governance also came handy to separate tunes from the songs of Africa and reinvent different tastes that could enhance cultural deconstruction of the continent. Music marks the moment of encounter, for it stands out as the form of communication that is at once most familiar and most incomprehensible. Even more than language, music is the key to understanding and to the power that will turn

initial encounter into prolonged dominance. From music there accrues a potential to articulate colonial power, and that potential was never lost on those most eager to colonize and missionize the worlds of the others whom they had encountered. Music represented culture in two ways, as a form of expression common to humanity, and as one of the most extreme manifestations of difference. Music writing itself seemed an inscriptive means endowed with *nonsemantic*, mysterious, even transcendent significance. It was now conceivable in this period of colonial manifestation (to a degree that it had not been before) that the work as embodied in music writing, divorced from its contexts of production, performance, and reception, could become the avatar of the transcendent spaces absolute music could attain and inhabit.

Jesuit missionaries, charged with the obligation to convert, frequently found music to be their most effective weapon, transcribing and recomposing music from the cultures they encountered into a new global language that would allow them to sing salvation. New practices of inscription and transcription, therefore, were crucial to the acts of possession that transformed colonial encounter into forms of domination, for they allowed the colonizer to map unknown cultural terrains by expanding music's cartographic power.

Song, at once envisaged as the earliest and most immediate of utterances—the form in which language first emerged—and as a passionate but modulated art of the present day, song was endowed with expressive features that were both primitive and modern, brutally direct and delicately metaphorical, barbarously non-European and of consummate refinement. The central position of song in writings offering generalized theories of the origins of language and society tended to unite rather than distinguish European and non-European musical experiences.

Most global cultures, as we have discussed earlier, used songs and acoustical music to accompany their daily process of life. Music in this preverbal form was vital to the cultural grooming of a people and it is this music that carried with it the cultural codes of

a region. It was only logical that for the colonial ethnologists to be able to propagate their civilisation agenda, the only open avenue was to deconstruct the African tunes; and in so doing, they interfered with the spiritual meaning of certain songs. The secular ascendance and introduction of profane devoid fear of religious persecution made the African more gullible and ready to dance to the tunes of the white man. This was the origin of colonisation.

Nevertheless, it is not easy to talk about music and culture together, much less define them in ways that draw them together. Definitions of music that we might extract from widely used dictionaries neither include the word culture nor refer to any intrinsic or extrinsic property of the arranging of sounds in time or a *musical composition* that has anything to do with culture. Definitions of culture, it goes without saying, also do not refer to music in any explicit way. Music and culture, broadly or narrowly defined, are not convenient discursive fits. Culture allows for the domestication and possession of music, but it also allows for forms of domination.

Music is well fitted to do cultural work, but the more we engage it in cultural work, the more its ontology as an aesthetic object is sullied. This is because when modes of beauty are applied to music; the aesthetic segmentations are what give rise to musicology which differentiates its specifics from general anthropology or history that gathers around art. Music thus develops into a self-sufficient art dispensing with words.

Music is a human behaviour that has arisen not because of its adaptive value but because other adaptive human capacities enable it and allow its perpetuation. Any attempt to find general attributes in music must acknowledge the embodied nature of music, the indivisibility of movement and sound in characterizing music across histories and societies. Racism grows from the impulse to witness music in nature, one of the original uses of culture in the interpretation of music.

Nature in two forms, human biology and the human transformation of natural landscapes, could explain not only cultural difference but also cultural dominance. The boundary between terminology that is racial and language that is racist is at best blurred and often entirely indistinguishable. Even as ethnomusicologists at the end of the twentieth century increasingly questioned the reliance on racialized and racist stereotypes in the study of the music of Africa and the African diaspora, there remained resistance to abandoning biological and natural explanations for music's distinctiveness. Thus, from a materialist perspective, underlying human behaviours are minds, and underlying minds are embodied human brains. Underlying embodied human brains are human biologies, and underlying human biologies are the processes of evolution.

Music as a culturally situated, minded human behaviour—music as a material phenomenon—thus stand in some to-be-determined relationship to human evolution. And in this, evolution might as well be inclusive of understandings within the spiritual developments and other transcendentals that corporeal the human.

Musicalism

Science, technology, and industry have a profound impact on society, and it is quite natural that many aspects of musical culture, including the meaning of music, undergo changes concurrently with these developments. Several stages in the development of our society have been characterized by particular infrastructures, and musical culture has, in its turn, been largely influenced by these infrastructural activities. In origin, music almost certainly had a cultural-evolutionary function displaying reproductive fitness and fostering group identification. Later on, it shaped the affective framework for joint labour, popular entertainment and religious services. Music still has these functions today, but additional layers of meaning have been added.

In the industrial era, music became a commodity in the hands of concert organizers and the printing industry, paving the path for more attention to the abstract functionalities of music, and for listening to music as an art form, with particular attention to meanings intrinsic to the music itself, apart from its functional purposes. The distribution and consumption of sheet music and recorded music by the end of the nineteenth century enhanced the conditions for the materialization of music as an audio phenomenon and for the mass commercialization of the associated commodities. In our post-industrial age, the interactions between culture, commerce, industry, and research have evolved to a point where music is a commodity associated with technology in a multi-media-embedded environment. We live in an era during which electronic delivery, human-machine interaction, and data-mining exert profound influences on music and its meaning. The listener has become an active consumer, choosing parts of the music he wants to hear, making music with fragments from other music. The multi-media-embedded environment offers many new challenges and opportunities for music composition, performance,

recording, distribution, and consumption. All these contexts call for musical content processing applications as an integrated part of the way in which people, through technology, engage with music.

Towards this, the information society offers a number of challenging opportunities for musicology. One such opportunity is the development of a well-founded theory to transform musical signals into musical content and meaningful entities. This endeavour grew out of ancient interests in acoustics and musical practice. Initially, these disciplines developed as separate research areas, but gradually musicology became engaged with bridging the gap between acoustics and practice on the basis of information processing psychology and related computational modelling. This implied a broadening of the initial orientation in cultural and intuitive-speculative orientation, towards the inclusion of empirical-experimental, computational-modelling and biology.

Contrary to this, the epistemological and methodological basis for musicology is grounded in intuition, evidence-based research, information processing technology, biology and, above all, their interdisciplinary integration. The central idea is that musical universals are grounded in nature and biological evolution, and that musical content and meaning, as phenomenon, emerges within a cultural context. All these and more, we have covered in the preceding chapters. We must however not forget that music enables us to go beyond the description of technical and economic intermediaries as mere transformers of the musical relationship into commodities, and to do a positive analysis of all the human and material intermediaries of the *performance* and *consumption* of art, from gestures and bodies to stages and media.

Technology reveals the *musicalization* of our taste for the music: the formation of a specific competence, increasingly well-defined and self-sufficient, that makes us appreciate the works according to a regime of connoisseurship—a format that we stop seeing as we come to belong to it most naturally and intimately. Nothing is more modern than an historical approach to an old repertoire. This

is what creates music genres hence seen as jazz, rock, rap, blues, soul et.cetera. The truth of music is not in music itself, nor in any reconstituted collective; it is in the present performance you can give here and now.

Musical discourse does not have its own terms; on the contrary, the terms of musical discourse are precisely those that metaphorically link sound to other domains of experience. The language we use to construct music is language that already embodies metaphorical links to other domains of culture and experience. We see music through other elements of life and as such, it blends well with our ecological understanding of the self.

Thus, in many societies, as ethnomusicologists have told us, the functions of music could be described in almost exclusively social terms. Music was used in games and for dancing; to organize work and war; in ceremonies and rituals; to mark the moments of birth, marriage, and death; to celebrate harvest and coronation; and to articulate religious beliefs and traditional practices. People might have enjoyed music individually, but its purpose was not to make them feel good. And as a *technology of self*, music has become crucial to the ways in which people organize memory, identity and their autonomy. People are more likely to use music to accompany chores than pleasures, tasks done as duties rather than enjoyed for their own sake. Music therefore affords emotional catharsis, persuasion, structural listening, the accumulation of cultural capital, synchronized working, group solidarity, seduction, and dancing.

We must however not be ignorant of the preferential truth; that different genres of music will also appeal to different audiences which implies that not all music is pleasant to everyone. In this regard, we have amateurs to the musical world; those people who are still grappling with how to explain the taste gathered by listening to such musicals that are not accustomed to them. In a broader art world, they could be equated to beginners or explorers and in so doing, they develop their own meanings for music.

Music armatures are those persons who are still struggling to appreciate the genre tastes; and they have often been seen as important components of social development. Far from being the cultural dope at whose expense the sociology of culture built its critical fortune, the amateur (in the broad sense of art lover) is a virtuoso of experimentation, be it aesthetic, technical, social, mental, or corporeal. She is the model of an inventive and reflexive actor, tightly bound to a collective, continuously forced to put into question the determinants of what she likes. She is as self-aware about pieces and products as about the social determinants and mimetic biases of her preferences; about the training of her body and soul as about her ability to like music, the technical devices of appreciation and the necessary conditions of a good feeling, the support of a collective and the vocabulary progressively designed to perform and intensify her pleasure. In this regard, taste is not only an activity; it's also an event, oversensitive to the problematic relationship between—as these armatures nicely say—a combination of circumstances. Nevertheless, music lovers, fully aware that tastes are relative, historical, and the supports of various social rites, display them as arbitrary, socially determined signs.

In this era of the millennia, our personal musical likes and dislikes are publicly confirmed, and deejays and presenters have a particularly important role in treating music as a form of social communication. To better understand this, let's look at the way in which music is used in step aerobics classes. An aerobics class typically uses a carefully planned sequence of musical materials that takes the participants through a specific pattern of physical activities: warm-up, pre-core, core, cool down, and floor exercises. Considerable care is taken in assembling these tapes, since getting the music right can have a dramatic effect on the success of an aerobics class. In this case the music affords different kinds of physical movement with varying degrees of physical exertion, pace, and stamina. To the women in these classes, the primary affordance of the music is a pattern of physical engagement, arising out of a socially defined context (an exercise class), the properties of the music (tempo, texture,

dynamic shape), and the women's particular focus (an exercise motivator and regulator). Here, the conditioned taste for the particular music has been crafted to communicate its necessity in physical movements thereby arousing some artificial taste to the amateur athlete who habitually appreciates the tune when she connects the rhythm with her exercise. The deejay in this case has blended a better mix that the trainer (or presenter if you like) can innovatively use to design dance.

Creativity in music, however, cannot be placed at the mercy of anthropologists or historians. In fact, there are long-standing debates about how historians do what they claim to do. That they center on the philosophical, methodological, and even ethical assumptions that underpin the business of being an historian. Histories are as much about the time of their making as they are about the past; and as such, it is handicapped towards predictable changes that have been viewed as gestaltic. Music is a living process that is dynamic and uncertain; thus, its impossibility to become a subject of history due to its innovative progress has only left room for documentation. Music still plays an important part in many people's lives. This is the case for all of the world's cultures, and has been so since the early development of mankind as a social species; that many of our daily activities are accompanied by music in both social and work settings.

However, despite music's many uses and its pervasiveness in our society, there is no consensus as to its origins and evolution. While some scholars view music as an evolutionary by-product of language, others point out the important roles music has played throughout the ages in our history and still plays in our current society, particularly music as an instrument to promote social cohesion. In a broader perspective, musical behaviour involves the ability to recognize and sing along with tunes, to enjoy melodies and to respond rhythmically by, for instance, dancing or clapping along. In fact, most of the time music is listened to, it is heard as background during other activities.

With the development of mobile sound carriers since the late 1970s from Walkman's to mp3-players and smart phones today, it is now possible to listen to music at any moment of the day, and music is therefore more salient in our daily lives than ever before. The emergence of new digital media is having a profound effect on how we communicate; how we make meaning and perceive the world. The centuries-long dominance of writing is giving way to a new dominance of the image, which in recent years has led to an increased interest in exploring principles of visual meaning-making, literacy and learning through visual means.

Anthropologists insist that for hundreds of years, musicians, artists and thinkers have imagined an art form in which sound and light are united; and within such curiosities, different musical tones have always found themselves being associated with different colours like blue, red, black or dark et.cetera. This must have been the origin of audio-visual.

With the rise of abstract painting many artists turned to music as a source of inspiration. The most famous of these artists is probably Wassily Kandinsky who was greatly inspired by music and named many of his abstract paintings according to composition or improvisation. Relating the painted images to the musical inspirations that facilitated him creating such works.

Now, let's look at the concept of live music performance. Why do people often prefer the experience of a live concert when they could enjoy errorless high quality recordings of the same performances in a pleasant listening environment? One explanation is that the visual component of the live music performance contributes significantly to the appreciation of music performance. From the perspective of musical communication approaches, successful transmission of musical meaning lies in the acoustical communication brought about by performers and composers. This includes body language and facial expressions.

Consequently, performers dominate many aspects of our musical culture today. Concert attendance and recording sales, for

example, often reflect listeners' preferences for performers and abilities to distinguish among performances. Although public consumption of music tends to highlight performance differences, there are also strong commonalities across performances that reflect cognitive functions of grouping, unit identification, thematic abstraction, elaboration, and hierarchical nesting. Thus, music performance is based on both individualistic aspects that differentiate performers and normative aspects shared by performers. Musical experience enhances both performers' use of expression to emphasize interpretations and listeners' ability to identify interpretations and expressive aspects of performance. Common forms of music performance in the Western tonal tradition have included sight-reading (performing unfamiliar music from notation), performing well-learned (prepared) music from memory or from notation, improvising, and playing by ear (performing music from aural presentation). Music performance is often viewed as part of a system of communication in which composers code musical ideas in notation, performers recode from the notation to acoustical signal, and listeners recode from the acoustical signal to ideas. Simply put, the right kind of music at the right time can, in a thoroughly tangible way, make anyone tearful, content, scared, delighted, reflective, cheerful or ready to shake their ass.

We must however note that the ability to perform music is widespread in the general population (e.g. singing), but few individuals develop a high level of musical proficiency. Skilled musicianship typically requires decades of regular practice, estimated at 10,000 hours. Skilled performers will employ a large number of expressive strategies that often take decades to master effectively. Whereas a musical score (or in other words, how music performs in a billboard chart) provides detailed information about pitch and rhythmic structure, it provides little guidance to performers about the expressive nuances that are needed to bring music to life, including the expressive use of timing, intensity, intonation, and articulation. Successful performance requires exceptional motor skills and an extensive knowledge of musical structure and performance traditions.

Live music is music as a social event, an aspect of a social situation—play, display, celebration, begging. It is an organic, a living aspect of public life, whatever its technical or aesthetic qualities. Performance can therefore not lose meaning when music scoring is put as a subject of measure. Live music transcends our humanity into different layers of existence; it is our essence. But due to the difficulties in cultivating public taste at the time of live performances, a new genre of pre-performed emotions is taking shape. The ability to create videos makes the artistic essence of music more elaborate and somehow genuine.

With this availability of digital technologies for manipulating and assembling sound and image, more and more practitioners are beginning to experiment with the composition of audio-visual works. While conceived of for hundreds of years it has only been with the advent of recording technology that it's seen as possible to create audio-visual works exploring interactions that are not limited mechanically.

In music videos different illumination settings and colours are usually desired artistic effects that influence the emotional appreciation of the audience thereby helping the composer achieve a desired effect. Thus, when image, dialogue, sound effects and music combine into multimodal texts, a *chemical reaction* seems to take place. The communicational act takes place on several levels and through many simultaneous channels or modes, but our experience is perceived as being one. Since such experiences often are interpreted as being of primarily visual nature the effect is that what we see is to a large extent determined by what we hear. Our emotional abilities are enhance when both visual and audio components of communication are related in the creation of meaning. Music becomes well appreciated when its audio and visual components work concurrently.

The combined congruent presentation of emotional auditory and visual stimuli automatically arouses strong feelings and emotional experiences in listeners. Therefore, there exists various ways through which music can elicit emotion in listeners and these can

all be active at the same time. The most tested experiences include: (1) association/memory (music may have been associated with an emotional memory experienced in the past); (2) empathic responses (acoustic features in music may reflect emotional responses, for instance, certain sounds may be perceived as laughter and arouse happiness); (3) and cognitive evaluation (acoustic features are interpreted to have concrete meaning which in turn evokes emotion).

With the urge for live performances and the acoustic influence of music to other creative genres, it is film that has been seen as an emergent result that celebrates advanced audio-visual integration.

One of the main uses of music in film has been to evoke emotion in viewers. Just as the music will affect how we see things, the visuals will also determine how we hear the music.

In conclusion, live performance has delighted, amazed and confounded audiences ever since its inception and it continues to do so. Film came into being as part of a new mass visual culture in the late nineteenth century and went on to become the pre-eminent art form of the twentieth century. As such, its strengths have always been in its intermediality and intertextuality, breaking down false divisions between high and low culture. This status also provides film with the potential to mutate and cross over into the new media frameworks opened up by the digital turn.

Film as a preferred alternative to live performance, continues to provide audiences and the individual spectator with incomparable opportunities to experience imaginatively the lives of others, which can only affect and enrich us, making us more rounded individuals by such encounters. Thus, the study of music, just like any other subject of art and humanities research, has always began with a desire to understand the human condition.

For centuries, literature has provided the source material for reflection on what it means to be human and while this literature continues to enlighten us, for some time now, film has provided a

visual alternative. Film not only offers a narrative similar to literature, it also provides an audio-visual feast for the senses, and in the quick-fix, fast-paced, technicolour whirl of the twenty-first century, it is this feast which best mirrors our experience of modern life. When we sit down to watch a film, the sensual experience – sight and sound – is familiar; but the cerebral one, the story itself, can take us anywhere. In this sense, film is both an old friend and a new adventure. It is also through film that we have a unique means of preserving the historic past, as well as looking forward, towards an uncertain future. This being a specific topic beyond the scope of this book will need more space, not only to apprehend the basics but to understand how its better improves our cultural enlightenment agenda.

History will therefore not delve into oral traditions of music but rather look onto film to better document the advances made not only in language but music. The preservation of the primitive songs is gaining leverage as spoken word poetry takes its agenda. Music therefore continues to linger and develop it will!



There is no room here to discuss definitions of musical structure or text, but it should be clear that, given a particular cultural and historical context, the musician's job is to come up with the right sounds to produce at particular pitches with particular timbres in particular rhythms in particular frameworks of tempo, metre, periodicity, musical narrative, acoustic space, etc. In short, musicians, composers, singers and recording engineers spend a great deal of time and energy working with all the parameters of expression at their disposal in an effort to make their music communicate one thing and not another. Boaz Adhengo has brought musicology to better appetites of enhancing African creativity by insisting that music must always appeal to emotions and only then is its relevance and essence appreciated. The African person is deeply emotional and perfection will only be achieved by examining the affectionate gains that music brings to his livelihood. Nevertheless, digital technology has made audio-visuals a core ingredient. All these and more have been discussed in four chapters of this book.

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