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Orientation and Gestalt Formation: How We Make Sense of the Music We Hear

by
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Requirements for the Bachelor of Communication

in the
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Approval

Name:	Nivedan Kaushal
Degree:	Bachelor of Communication
Title:	Orientation and Gestalt Formation: How We Make Sense of the Music We Hear

Examining Committee:	**Faculty Supervisor:** Kym Stewart
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Ethics Statement

Nivedan Kaushal has obtained, for the research described in this work, Human Research Ethics approval from Capilano University Office of Research Ethics.

A copy of the approval letter is attached.

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February 28, 2020

Nivedan Kaushal, Student
School of Communication
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Dear Nivedan Kaushal,

The Capilano University Research Ethics Board (REB) has reviewed your revised application for Ethical Review for the project *"The West and visual culture: How music notation changed the way we listen."*

I am pleased to relay that your application is approved.

For your records:

REB Protocol ID: 2020-003-CAPF-KAUSHAL
Date of Approval: February 28, 2020
Expiry Date: February 27, 2021

We wish you the very best with your project.

Sincerely,
Capilano University Research Ethics Board

Chris Turner, PhD
Research Ethics Officer
Capilano University Research Ethics Board

Copy to:
Dr. Kimberley Stewart
Faculty Supervisor

Capilano University Research Ethics Board   *2055 Purcell Way, North Vancouver, BC, V7J 3H5 | reb@capilanou.ca*

Abstract

In this paper, I show that our ability to understand a piece of music as a gestalt, a cohesive cognitive unit separate yet emerging from the summation of its constituent parts, is shaped at large by enculturated patterns of music cognition and expression. I do this by examining West African and Western music-culture's respective dispositions towards orality or literacy which are evident in their pedagogies. Juxtaposing these pedagogies makes clear the kinds of oral and literate means of transmission and thinking by which individuals of these music-cultures form orientations, the point from which one "feels" a music structure's rhythmic and phrasal attributes, and, ultimately, gestalts. When individuals encounter a different mode of cognition and expression, one that has not been culturally prescribed to them, gestalt formation can become impeded due to an incongruity of orientation between music structures resulting in their inadequate integration. I use my own experiences as examples to explain my claims.

Keywords: orientation; gestalt; music cognition; music expression; pedagogy; orality; literacy; West Africa; drum and dance music

Acknowledgements

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Glossary

Congruence   Refers to when individuals understand and retain a
temporal relationship between two or more music
structures regardless of one's orientation to any particular
structure.

Gestalt   A cognitive unit that arises when parts are integrated into
an independent, unified whole.

Orientation   An individual's formation of a relative spatial perspective
to a music structure when it is heard or played; the point
from which one "feels" a music structure's rhythmic
attributes (metre; beat) and phrasal attributes (where it is
thought to begin and end; its shape and contour).

Introduction

As a devoted percussionist, my life was profoundly changed when I first stepped onto the stage. Playing in numerous ensembles as a teenager sparked intrigue with how people of all cultures engage in making music. This spark quickly turned into a burning passion when I met ethnomusicology professor Kofi Gbolonyo. Attending his weekly workshops at Capilano University on the musical practices of West Africa, especially those of drum and dance music, kindled a deep fascination with how social and cultural factors influence the way music is perceived. During the very first workshop I participated in, I immediately realized that, as a product of North American musical traditions, I am reliant on Western methods to make sense of West African music — methods that Dr. Gbolonyo, himself a born and raised Ewe musician of Ghana, minimally uses to teach. This led me to question myself: Why do I require a "beat one?" How does Western music-culture's dependence on notation affect my ability to understand music? Why do I hear a rhythm one way over another? The list goes on.

The thread which connects these questions is one of recognition, that modes of expression and thinking prevalent in a society shape the process by which individuals form music gestalts, cognitive units that arise when parts are integrated into an independent, unified whole (Rollinger, 2019). In this paper, I show that our ability to cognize a piece of music as a gestalt is contingent upon not only experience or familiarization, but enculturated patterns of music transmission and cognition, patterns best observed in the pedagogy of a music-culture. When individuals encounter a different pattern, one that has not been culturally prescribed to them, gestalt formation can become impeded due to an incongruity of orientation between music structures resulting in inadequate integration. The extra-musical factors pertinent to my work are those which directly influence how individuals form these orientations, though there is

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only room in this paper to show how examining a music-culture's disposition towards

orality or literacy can elucidate how individuals form orientations and gestalts using the

expressive and cognitive means most common in their music-culture. I acknowledge the

role aesthetics play in orientation selection and integration, though do not address the

matter in detail, before concluding. I turn to the West and West Africa out of personal

experience to demonstrate my claims. All figures are my own creation unless otherwise

noted, and serve as explanatory anchors which I hope will ground readers who may not

be versed in the theoretical components of my work.

Defining Orientation and Congruence

By using the term "orientation," I am not referring to orientations of musicality. In

other words, I am not concerned with how cultural beliefs regarding what music is, its

function in day-to-day life, and so on, have shaped the attitudes people bring to a

listening context.[1] Instead, I am using "orientation" here exclusively in a geometric

sense, referring to an individual's formation of a relative spatial perspective to a music

structure when it is heard or played.[2] Structures can be simple, like an ostinato played

on one instrument, or complex, such as a resultant rhythm arising from the integration of

two or more interlocking simple structures. Irrespective of the kind of music structure in

question, individuals can form vastly different orientations when hearing or performing

the same structure in the absence of or unfamiliarity with relevant context like what is

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[1] See Chernoff (1991) for a discussion on how the "African approach to rhythm" (p. 1093) reflects an orientation of musicality different to that of other cultures.

[2] Willie Anku (1992a, 1992b) uses the term "orientation" somewhat similarly to me. The key difference, however, is that his usage concerns the way a music structure temporally relates with another, while mine concerns the way one perceives a structure and subsequently aligns oneself to it.

considered correct by native performers or the composer (if there is one), sheet music if the structure is notated, or an external conductor.

Orientation can be understood using an analogy to Louis Albert Necker's famous optical illusion, the *Necker Cube* (see Figure 1). The illusion's intrigue lies in its ambiguity; the cube can equally be perceived to have the lower-left or upper-right square as its front side. Similarly, music structures can also be heard ambiguously because, to continue the
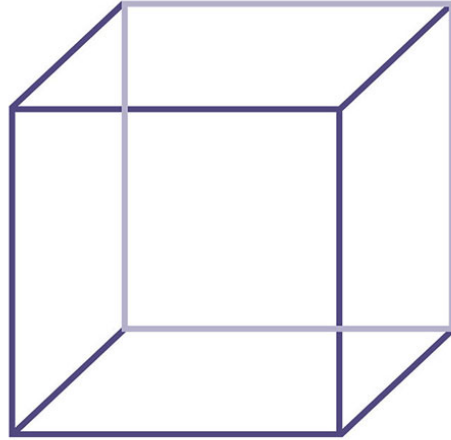

Figure 1 — The Necker Cube

geometry metaphor, there are three dimensions to orientation: the metre by which the structure is grouped, the specific subdivisions of the metre where the beat is perceived, and which beat is deemed the first of its metric cycle.[3]

To illustrate how drastically orientations to the same structure can differ, I will compare my own orientation to the first part of a two-part bell pattern found in *Adowa*, a drum and dance piece of the Akan people of Ghana, to that of native performers. Figure 2-a shows the pattern in its neutral state with its durational values.[4] Akan musicians group the pattern in a compound metre with the beat placed on durational value 3, 6, 9, and 12; value 3 marks the beginning of the pattern's metric cycle (see Figure 2-b). My orientation could not be further from that of the Akan (see Figure 2-c). My mind groups the pattern using a simple triple metre with the beat placed on durational value 1, 5, and

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[3] The dimensions of orientation I present are limited in application because they pertain only to metrical music. My work falls short in this regard since I am addressing two culture areas where metre dominates, the West and West Africa, but I urge others to theorize about orientation in both metred and unmetred circumstances.

[4] Much of Figure 2 is based off Willie Anku's detailed transcription and analysis of *Adowa* (see Anku, 1992a).

9. For me, value 1 is the first beat of the metric cycle. In layman's terms, then, orientation is simply from which point one "feels" a structure's rhythmic attributes (metre; beat) and phrasal attributes (where it is thought to begin and end; its shape and contour). People will inevitably form different orientations to an unfamiliar structure given the sheer number of possibilities.[5] Furthermore, like anything in the domain of relative perception, orientation can shift with familiarization, practice, the addition of musical or extra-musical context, among numerous other factors. In my own experience, however, it can be immensely difficult to consciously shift orientations once one is established. I am fully aware of the Akan orientation to the first bell part of *Adowa* yet struggle to perceive it as such.

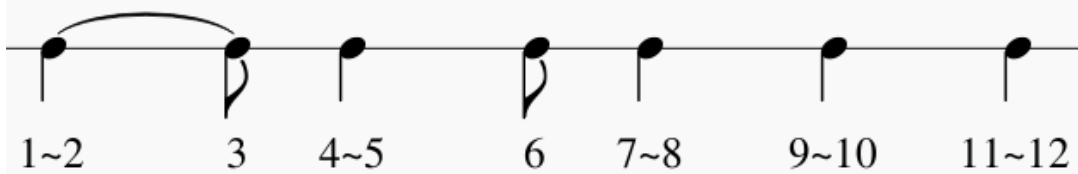Figure 2-a — Adowa Bell Pattern (uninterpreted)

1~2   3   4~5   6   7~8   9~10   11~12

Figure 2-b — Adowa Bell Pattern (Akan orientation)

1~2   3   4~5   6   7~8   9~10   11~12   1~2
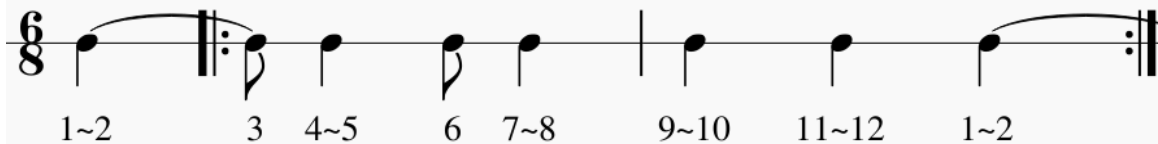
Figure 2-c — Adowa Bell Pattern (My orientation)

1~2   3   4~5   6   7~8   9~10   11~12

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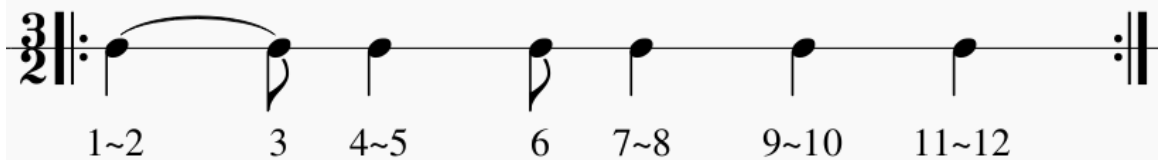
[5] Some may wonder why I refrain from using the word "interpretation" in place of "orientation." Aren't the unique orientations individuals can form to a structure merely the way they interpret it? This is certainly true, though I rebuttal that "interpretation" in Western musical circles does not denote spatiality and carries a connotation of conformity and rebellion. After all, "interpretation" is used in reference to a musician's choice to either observe what a composer has indicated on a score or implement their own ideas as to how a piece should sound which may be in opposition to the composer's intent.

How is it, then, that individuals can orient themselves differently to a structure, yet agree on its alignment with another structure, whose orientation can also differ between people, within the same piece of music? This is possible because orientations, which are evidently spatial in nature, need not be shared between people in order to perceive a *temporal* relationship between structures of a given piece. I use the term "congruence" to refer to when an individual perceives such a temporal relationship. No matter what one's orientations are for two or more structures within a piece, so long as the temporal relationship between the structures is understood and retained within the mind, the orientations are deemed congruent; I take for granted the assumption that only congruent orientations can be integrated and unified into a gestalt. It is important to emphasize that even if a gestalt has formed, it may not be "right." Integration may have occurred from a set of congruent orientations that, as mentioned earlier, is considered incorrect by native performers or the composer of the music in question.

Take *Kpanlogo*, a drum and dance piece of the Ga people of Ghana in which the clave pattern is played on the bell. Native performers perceive the clave as 3-2 yet orient themselves to one of *Kpanlogo's* three supporting drum patterns, shown in red in Figure 3-a, such that one could say it is in a 2-3 relationship to the bell.[6] I also perceive the bell as 3-2, though my orientation to the same drum pattern, shown in blue, is neither clearly in a 3-2 or 2-3 relationship with the clave (Figure 3-b). Nevertheless, both I and native performers perceive congruence between the two structures despite different orientations to the drum pattern, allowing us to integrate them.

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[6] The drum pattern in Figure 3 can differ greatly in performance settings due to improvisation. I have transcribed and presented here what was taught to me by Dr. Gbolonyo, the pattern's "essence" waiting to be elaborated during performance.

Figure 3-a — Kpanlogo Support Drum (Native orientation)

Clave Orientation   Supporting Drum Orientation

Figure 3-b — Kpanlogo Support Drum (My orientation)

Clave Orientation   Supporting Drum Orientation

Oral-Literate Dispositions and Their Impact on Orientation and Gestalt Formation

The way one forms orientations to an unfamiliar music structure is greatly affected by how it was transmitted (cultural mode of expression) and whether the transmission corresponded to the individual's usual method of learning (cultural mode of thinking); a conflict between expression and thinking can lead to a conflict of congruence, therefore, integration. The differing expressive and cognitive patterns I allude to result from two social phenomena whose fragility and fluidity cannot be overemphasized: orality and literacy. To reduce these concepts to a mere binary, as is often done, is to negate the continuum on which societies reside (Egan, 1987, p. 446). Doing so also emphasizes materiality within music-cultures — fixating on *whether* a culture notates their music, is, by extension, privileging the presence of sheet music

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itself — over how literate or oral practices have shaped consciousness in culture areas. It is more fruitful, then, to acknowledge that music-cultures simply have a *disposition* towards one side of the oral-literate spectrum, and that, at large, a culture's members will still employ the same cognitive and expressive modes in accordance with their disposition, regardless of an individual's level of fluency in literate or oral traditions (Egan, 1987).

Since I began extensively playing West African drum and dance music in January 2019, I have continually experienced a lack of gestalt due to incongruent orientations, and erroneous gestalts due to congruent but incorrect orientations, due to a clash between my upbringing in a Western, literate music-culture and my encounter with the oral practices of West African music. The pursuit of hearing parts "correctly" is what blossomed my love for African music at large. In the cases where I have resolved my orientation and congruence conflicts, it was through translating Dr. Gbolonyo's teachings, as well as the instruction of other West African music performers and scholars I've since met, into parts discernible to me through transcription, compartmentalization, and analysis. As many orality-literacy academics would argue, my methods reflect a literate, rather than oral temperament (Goody, 1987; Lord, 1960; Ong, 1982).

Scholars who have studied the transition from orality to literacy within societies have recognized that with it comes significant noetic reorganization (Bowring, 2019). In oral cultures, where all that can be recalled is only what can be remembered, verbatim memorization is often too cumbersome when tasked to store and recall a plethora of information. Instead, recollection, expression, and performance in strictly oral contexts is dependent on the expansion of formulaic material (Lord, 1960; Ong, 1982), a notion especially evident in West African master drumming. Willie Anku (1992a, 1992b) showed

that master drumming is characterized by the manipulation, interpolation, and repetition of orally transmitted thematic material. This reflects Walter Ong's (1982) broader claim that oral thinking "tends to perpetuate stable formulas and thought patterns that are added to one another, and are not interrelated, or dismantled and contemplated" (Bowring, 2019, p. 226) because the limitations of human memory coupled with the ephemerality of sound imposes a reality grounded in everyday, lived experience, not abstract thought.

The ramifications on consciousness of internalizing and, subsequently, normalizing writing are immense. As writing becomes at the disposal of a culture, a groundwork is laid for new patterns of thought and expression to find footing. Notation, lingual or musical alike, preserves utterances or musical structures, which exist only in the aural domain, by rendering them in a visual form coded and decoded by specific operations (Ong, 1982). Because texts concretize what would otherwise be fleeting, they bestow a culture with the ability to systematically reassess and improve material by dividing it into constituent parts for analysis, dramatically lessening reliance on formulaic expansion and leading to the invention of logical subordination (Bowring, 2019, p. 226). Texts consequently become divorced from direct, lived experience, encouraging objective, abstract, linear thought.

The influence of experiential, aggregative modes of cognition and expression, as well analytical, divisive modes on orientation and gestalt formation is perhaps best observed in the pedagogies of West African and Western music-culture respectively. For generations, West African music transmission has relied entirely on oral means: "[it] depended very largely on the opportunities created in a community for learning through participation, through imitation and slow absorption rather than institutional methods" (Nketia cited in Wiggins & Nketia, 2005, p. 74). Colonialism and globalization, to greatly

simplify the matter, have diminished the extent of communal musical participation and prevalence of traditional music in its original contexts within the increasingly urbanized societies of West Africa (Wiggins & Nketia, 2005, p. 73).[7] The expected emphasis on aggregative experience given the music-culture's oral disposition is nevertheless readily observed in its pedagogy. For instance, music structures are expressed as units subject to elaboration whose orientations are not explicitly stated in relation to their constituent elements like the underlying metre or even accompanying structures (Gbolonyo, personal communication, March 13, 2020). Instead, these units, once understood "on their own terms" with individual orientations, are added together. When individuals struggle to combine structures, to form congruence between orientations and eventually a gestalt, no advice is offered other than to "feel the bell" (Locke, 2017, p. 82; Gbolonyo, personal communication, March 13, 2020), the omnipresent ostinato of a given drum and dance piece which, with much debate, is thought to glue parts together as both a structural and phrasal referent (Agawu, 2006, p. 3).

Dr. Gbolonyo offers a rudimentary, yet insightful metaphor to elucidate the way music gestalts are conceptualized within a West African mode of thinking.

> Let us say that we are preparing soup. Each ingredient you put in has its own flavour but depending on how you mix each of these ingredients, the soup will have its *own* taste. If you subtract one of the ingredients, the soup of course will lose its character, but the flavour of the subtracted ingredient itself does not change. The fact that this soup has a unique, recognizable taste does not take away from the individual flavours of the chilli pepper, the onion, the salt, all the ingredients you put in. (personal communication, March 13, 2020)

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[7] For an extensive critique of colonial discourses surrounding African music, see Agawu (2003).

The soup is a piece of music unified in the mind as a gestalt, while combining the unique flavours of each ingredient is the development of congruence between music structures which have their own orientations.

On the other end of the oral-literate spectrum is Western music-culture. While some medievalists have addressed the rise of music notation and its influence on cognition from a historical musicological perspective (Boynton, 2003; Jeffery, 1992; Levy, 1998; Treitler, 2003), there is currently a lack of substantial work studying the connection between music notation's visuality and its effect on the present-day Western musician's cognitive and expressive proclivities (Lawson, 2010, para. 24). If the introduction and eventual omnipresence of written word has penetrated so deeply into the literate mind as to fundamentally reorder oral-aural processes, then by analogy, the ubiquity of music notation, at least in Western institutional settings, has greatly impacted the methods by which orientations and gestalts are formed by Western musicians. Even when learning or teaching entirely "by ear" — thoughts of those who boast that reading music is superfluous come to mind — Western musical pedagogy rarely escapes the grasp of visually-driven noetic reshuffling; the cognitive and expressive tendencies notation has brought about arguably have not been compromised but *enforced* via the oral-aural interface because "a new medium typically does not displace or replace another as much as it complicates its operation" (Lawson, 2010, para. 3).

The West African, orally grounded approach to forming orientations and gestalts is opposed by the analytical, divisive methods observed in the pedagogy of Western music-culture. For example, I have noticed that music structures are expressed through explicit reference of their constituent elements, especially their metrical components, and related in the mind by stating the orientation of all structures in a given piece to a single referential point (the "beat one") regardless of whether notation is employed.

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Orientations are also mediated through techniques like counting and conducting, or stated plainly (being told, for instance, that "the first beat is a pickup."). When individuals struggle to form congruence between structures and subsequently develop a gestalt, they are often instructed to count aloud as to become aware of the beat one, or, if they are skilled with notation, to transcribe the structures as to reveal their formal attributes. They may also be told to pay attention to the conductor if one is present. Such techniques are used to internalize and "feel" the music,[8] and may or may not be derived from notation itself. Nevertheless, these methods operate as means of logical, sequential subordination, reflecting a literate disposition.

Acknowledging the Influence of Aesthetics

Thus far I have focused exclusively on oral-literate dispositions; the way they have been mirrored in the conceptualization and expression of music structures in West Africa and the West; and how these culture zones' pedagogies, so infused in the collective musical consciousness of its peoples, impact orientation and gestalt development. Given the stark differences between West African and Western musical pedagogy regarding how music structures are understood and related, it is apparent that my encounter with elements of West African pedagogy via Dr. Gbolonyo and others is opposed by the Western methods by which I understand music. That being said, I do not mean to downplay the role of aesthetics in understanding orientation selection and integration. Treating this issue at length is beyond the scope of this paper, though must be briefly entertained because of its relevance to the topic at hand. Since a structure's orientation is not explicitly stated nor mediated in West African pedagogy, I am entirely

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[8] One may say that since both West African and Western musical pedagogy share the end goal of "feeling" what is being played, they are both disposed to the experiential. It is crucial to avoid conflating such a disposition with that of the modes of cognition and expression by which the goal is realized.

reliant on my aural senses, which have been subject to a lifetime's worth of aesthetic moulding, to comprehend what I hear when playing West African music. Returning to the *Kpanlogo* example from before can help explain this notion.

As shown earlier, my orientation to one of *Kpanlogo's* three supporting drum patterns is different to that of native performers (see Figure 3). Upon closer examination, one will notice that my orientation in fact resembles the backbeat patterns which pervade nearly all of contemporary Western pop music, let alone a plethora of other genres — the types of music I have been surrounded by since birth. The aesthetic preference of placing a bass tone at the beginning of a metric cycle followed by a strong, relatively higher tone on beats 2 and 4 within these types of music has become so ingrained within my own mind that I cannot help orienting myself to the *Kpanlogo* pattern, which just so happens to have a strong high tone on every other beat with a bass tone between them, as if it were a rock drum beat (see Figure 4). This aesthetic pull prevails despite the pattern not being in a clear 3-2 or 2-3 relationship with the clave (another aesthetic characteristic my ear relies on, this time stemming from Latin jazz) when perceived using my orientation (See Figure 3-b). I am convinced that had this *Kpanlogo* pattern been presented to me using the orienting techniques of the West, I would have perceived it from its native orientation all along and not struggled to form congruence between the pattern and the bell initially.

Figure 4 — Kpanlogo Support Drum (My orientation) Compared With Rock Beat

Conclusion

Juxtaposing West African and Western pedagogy, as I have done, makes clear the kinds of oral and literate means of transmission and thinking by which individuals of these music-cultures form orientations and gestalts. It also reveals why I have repeatedly struggled to integrate many West African drum and dance pieces correctly, and points out an aesthetic component to the issue of orientation selection and integration when encountering a different mode of expression and cognition; I have no doubt others have experienced something similar to what I have shared here.

Perhaps the most interesting byproduct of my work is its implication concerning how music of other cultures should be taught to and learned by those unfamiliar with a particular culture's musical practices. If one's goal is strictly to execute that culture's music, regarded only for its replicable sonic elements, then there is no need to consider the methods by which that music is transmitted and conceptualized by people of that culture. Simply present or learn it using the modes of expression and thinking most familiar to oneself so that gestalt formation remains unimpeded. On the other hand, if the aim is to immerse oneself within that culture's *music-making*, then mere execution falls short. One must attempt to manifest that culture's methods of comprehending music and organizing it in the mind, possibly at the detriment of successful performance as doing so may interfere with gestalt formation as it does for me when I engage in West African drum and dance music. I am not suggesting leaving behind one's own methods, a near impossible task, but to be open to embodying another's. It is no stretch to say, then, that grappling with orientation and gestalt formation is in fact a kind musical empathy — to hear what others hear, *how* they hear it.

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