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The Ethiopian Lyre *bagana*: an instrument for emotion

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ABSTRACT

The *bagana* is a ten-stringed box-lyre of the Amhara of Ethiopia. Paraliturgical and solo instrument played only for religious and meditative purposes, it often creates immediate and intense emotions for both players and listeners. Based on informations collected during four fieldworks held in Ethiopia (2002-2005), multidisciplinary analyses have showed that these strong emotional reactions are created by sonorous and contextual means only. Structural and timbral properties of the *bagana* repertoire are the most salient ones playing a role in the arousal of the emotional reactions, and the religious meaning and the values embodied in the instrument are the most important contextual characteristics. These analyses show that *bagana* performances are meant create a specific time and space for emotion.

KEYWORDS

1. Emotion and traditional music

2. Perception and musical characteristics
3. Culturally-coded timbres

INTRODUCTION

One of the most common sayings about music is that it can create emotional reactions. This conception seems to be shared by several cultures around the globe (Becker 2005, p. 463). The studies of the emotion(s) created by music are usually focused on western music and based on one of the two theories: formalism and referentialism (Deliège 1995). These theories can be put side by side with the two categories of the musical meaning defined by Nattiez (2005, p. 971) in the field of musical semantics: intrinsic and extrinsic musical significations. In both areas, a distinction is made between what is “pure” music and what refers to something “outside” the music. The focus on one or the other aspects (“pure” or “outside”) has been and still is of primary importance in the history of ethnomusicology since this choice defines its scope and furthermore, its very own definition (Nettl 1964, pp. 1-26).

The rather rigid categorization in “intrinsic vs. extrinsic” characteristics has been nuanced by Nattiez himself (2005, p. 981, my translation), who stated that “even if the association of a musical signifier (...) is a convention, it does not mean that this convention is not motivated by some intrinsic properties of the sign (...)”. A musical signifier can also act as a signal, to physiologically trigger a behavior. The relationship between the signifier and the triggered behavior may be conventional, it is not arbitrary. Nattiez agrees here with Aubert, (2005, p. 211, my translation) who asserts that musical expressions, especially in a tradi-

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tional context, are never gratuitous: they are meant to produce effects.

The learned and conventional aspect of emotional reactions considered as result of a cognitively construed event (Ortony, Clore & Collins 1988, p. 4) plays also a crucial part in the emotional response to a musical performance. The variety of musical expressions creating emotions around the world speaks for itself (Becker 1994, pp. 41-42).

This paper will present sonorous and contextual characteristics of *bagana* repertoire and performances that explain why it produces intense emotional reactions among both players and listeners. In this presentation, the term “emotional reaction” will refer to the cognitively complex and culturally shaped interpretation of the physiological responses induced by the event, even though Damasio designate it as “feeling” (Becker 2001, p. 145). This change of terms is due to confusions created by the use of “musical feeling”

The *bagana* is a ten-stringed box-lyre played only for religious purposes by the Amhara of Ethiopia. It often creates very intense emotional reactions for players and listeners even though they do not have many possibilities to express and increase their emotional reactions. Bodily manifestations are socially strictly limited in *bagana* performances (Aga 2000, p. 9). Mandatory hieratic posture, wearing traditional clothes (Figure 1), minimal gestures and absence of staging for the players, sitting down quietly for listeners are the only adequate *habitus of listening* (Becker 2004, pp. 70-71). These characteristics make the *bagana* a good study case for an analysis of emotional reactions achieved mostly by the music itself.



Figure 1. Young player at home. She wears the traditional veil *natella* as a sign of respect towards the instrument and to put herself behind the *bagana*. Addis Ababa, 2002.

METHODS

This paper presents a preliminary pilot study based mostly on informal interviews, field observations and multidisciplinary analyses originally made for a different purpose. During four fieldworks (2002-2005), about ten listeners and fourteen players (or players-to-be) were met and interviewed informally with a voluntarily naïve and open question: “what do you feel when you play / hear the *bagana*?” Attendance and filming of private and public performances completed these interviews by focusing on bodily behaviors and face expressions. Then formal and acoustical analyses confronted with musician’s feedbacks (in order to establish which characteristics are make sense for them) showed that some sonorous characteristics play also an important part in the emotional reactions arousal.

RESULTS

1. CONTEXTUAL CHARACTERISTICS

The myth of origin of the *bagana* is one of the most often cited factors by players and listeners when asked to explain why the instrument generate such intense emotional reactions and why they start to play this instrument. According to the tradition, the *bagana* was given from God to the biblical King David to praise Him with it. Kind David, as ancestor of the Virgin Mary (Mekouria 1994, p. 146) is important in the Orthodox ethiopian faith and the learning of his psalter is one of the first stages of the traditional religious training (Shelemay 1992, 244-245). Powerful protector against evil spirit, the *bagana* is also reputed to efficiently relay prayers to God and create a kind of direct connection with Him. In the Amhara society, God is elusive (Reiminick 1975, p. 28) and the *bagana* is a privileged way to access him. Having the opportunity to play, to listen or to make such a sacred instrument is considered a blessing to be thankful for.

The *bagana* has a special status among the Amhara instrumentarium, since it is the only melodic instrument devoted only to the *zema*, the spiritual part of Amhara music. Always carefully decorated, it is kept in a special place ornate with religious paintings. Mostly played in the privacy of the home, it is sometimes part of paraliturgical ceremonies (such as monthly and yearly celebrations of the saints and inaugurations of new churches). The terms used to designate the playing and the player of the *bagana* are different than those used for other instruments, without the ludic connotation. The painted representations of the instrument reflect both the biblical and divine origin of the instrument and its sonorous power: it can be either shown played by the crowned King David sitting on his throne or played on the side of the Virgin Mary’s deathbed. According to oral tradition, *bagana* made Mary’s agony painless (Chojnacki 1983, p. 305). This representation illustrates quite literally the reputed appeasing power of the instrument.

Historically, *bagana* was a noble instrument, played by famous emperors, queens and nobles. In the Amhara contemporary society, it embodies values of nostalgia, nationalism and traditionalism. Playing, listening or liking the *bagana* is a way to assert oneself as respectful of the traditional values. The *bagana* is a prayer instrument at least as much as a musical instrument. Even those who distance themselves from the religious dimension of the *bagana* are impregnated with this conception. Since a musical stimulation with a religious meaning can easily produce a strong emotional reaction (Becker 2001, p. 145), it is not unexpected to find strong emotional reactions when a *bagana* is performed.

2. SONOROUS CHARACTERISTICS

Sonorous characteristics of *bagana* songs can be categorized in three kinds. The first kind groups those whose intrinsic properties explain their emotional potential. In this category is found the repetitiveness and the nature of the rhythm. Naïve listeners who do not belong to the Amhara cultural area can perceive the influence of these characteristics. The second kind comprises extrinsic characteristics, that refers to concepts or beliefs specific to the Amhara society and are only fully understood by people trained in this musical area: the *ethos* of the scales and the lyrics fall into that category. Finally, mixed characteristics constitute the third kind. Both Naïve and native listeners perceive them but native listeners have culturally constructed them in a more elaborate way. In this category are found what makes the *bagana* unique in its own musical tradition: the vocal and instrumental timbres and the loudness.

2.1. REPETITIVENESS

Bagana songs present a strongly repetitive. They are always based on a short *ostinato* (from about 8 to 30 seconds) presented several times. Contrarily to the other musical instruments repertoires of the Amhara music, the variations of these *ostinati* are minimal (partial repetitions, introduction or suppression of ornaments). The basis melody is always recognizable. The fact that repetitiveness is mandatory in *bagana* music (any attempt to introduce more variations makes the result “non-*bagana*” according to masters) shows that this structure is used on purpose. Repetitive music is known to have a strong influence on the state of consciousness among many musical traditions (namely the Zimbabwean *mbira*, cf. Berliner 1981, 131), and even among Western-trained listeners: “the sounds become meditative objects, relaxing the mind” (Dennis 1974, p. 1036).

2.2. RHYTHM

Bagana players use a rhythm that seems both regular and irregular. The regularity is brought by the quite constant global durations of the presentations of the entire *ostinato*: around 7 % variation for two different master players performing a song comprising more than 15 repetitions of the *ostinato*. Irregularity is brought inside each presentation of the *ostinato*: the *tempo* seems always changing. There seems to be an unconscious fixed time referent, never exteriorized, but constant during the whole song. Each cell of a song is composed by 2 to 5 of these discrete pulses and what is felt as the perceived – and changing – pulse is only the first one of each cell. Since almost each consecutive cell comprises a different number of these discrete pulses, a moving or an-isohronic pulse is perceived. The scrambling of the feeling of time development probably helps to distance the listener from his intellectual and psychomotor references, helping him to « let go » (During 1990, 225, my translation). Several traditions use apparent free rhythm for religious recitation (Clayton 1996, 324), in order to make time itself sacred. Dealing with rhythm is an important criterion of the playing quality: only beginners are allowed to play in a totally regular way.

2.3. SCALES

The Amhara traditional scales used with the *bagana* repertoire have a specific *ethos*. Several cultures around the world and through history have linked scales and specific emotions (Rouget 1990, p. 185). *Bagana* songs are played in two of the four traditional pentatonic Amhara scales, *tezeta* and *anchihoye*. *Tezeta* literally means “nostalgia” and “remembrance” and *anchihoye* is considered a very sentimental scale, often used in spiritual repertoires. Even though the *ethos* of the traditional scales is not consensual (that fact has been noted in other traditions, cf. Hoshino 1996, p. 31) and the realizations vary according to musicians and performances, the analysis of old *bagana* recordings shows that *tezeta* and *anchihoye* scales only were used in the past. When several musicians have recently tried to adapt the other traditional scales to *bagana* songs, they were considered by masters as out of the tradition and the instrument.

2.4. LYRICS

The analysis of *bagana* songs’ lyrics show that the three kinds of themes are used in this repertoire: biblical narrations, praises and laments on uselessness of earthly life. Biblical narrations are usually presented in a simple poetic form and most of the time with the same melody. Praises are often addressed to the Virgin Mary as the advocate of men’s cause and the most accessible divine figure. Laments songs texts comprise short poems (*q’ene*) with double meaning, understandable for educated people with an important knowledge about tradition, religion and history.

They act as a *catharsis*, allowing the attendants to appease the fear of death, of food-deprivation and of the consequences of perpetrated sins, which are the most common subjects evoked in those poems. The psychological release of feelings induced by song texts has been noted in other musical tradition, namely *blues* singing (Ottenheimer 1979).

Most of the lyrics of the new songs performed today belong to the first two categories and are usually written by specialists in spiritual songs. The lyrics, since related to religion, are very important and are often submitted to examination before commercial release or public performances. They often create pain (from empathy with Christ sufferings) and gratitude (from the joy of the Salvation). This combination is often very intense and concurs to the strong emotional reaction created by the presence of the instrument and the music (cf. Figure 2).



Figure 2. Young girl listening to a public performance of *bagana* during a monthly celebration. Saint Raguel Church, Addis Ababa, December 2002.

2.5. TIMBRES

The use of specific vocal and instrumental timbres is one of the most salient characteristics of *bagana* performances. Timbres used with the *bagana* are very different than those used in other Amhara musical expressions (both secular and sacred). *Bagana* produces very low and buzzing sounds produced thanks to a wide bridge-obstacles mechanism that makes the string bounce against the upper edge of the bridge (cf. Figure 3)

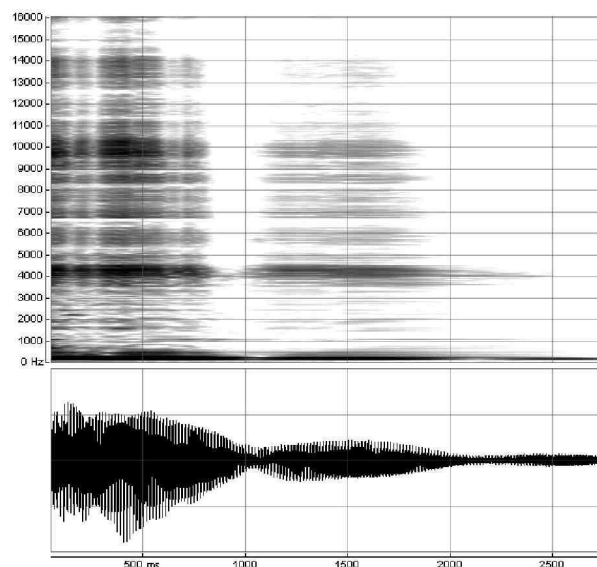


Figure 3. Narrow-band sonogram of the buzzing sound of the *bagana*. Upper limit of the analysis : 15 kHz. Recorded in Addis Ababa, 2003.

The mechanism causes an important enhancement of the spectrum of the sounds and a modification of the temporal development. The buzzing quality of the *bagana* sounds is very unique in the Amhara makes the sounds immediately recognizable and trigger the associated meanings and the appropriate reaction: intense emotional reactions. Even if observations of the few expressive behaviors (Juslin and Sloboda 2001, p. 74) listeners show during *bagana* performances (tears, sudden calming, overwhelmed faces) start almost instantly when the playing starts, it seems to be more than just some kind of conditioned reflex. According to a widely spread saying, the *bagana* sounds “attract the mind and control the emotions”. Vocal timbres used with *bagana* playing are also unique. Traditionally, two phonation types are considered to fit *bagana* sounds: *harsh* and *breathy*. Both characterized by an incomplete closure of the vocal folds (Laver 1994, p. 418-420) and rather few muscular efforts compared with the tense voices used in the rest of Amhara musical performances (cf. Figure 4).

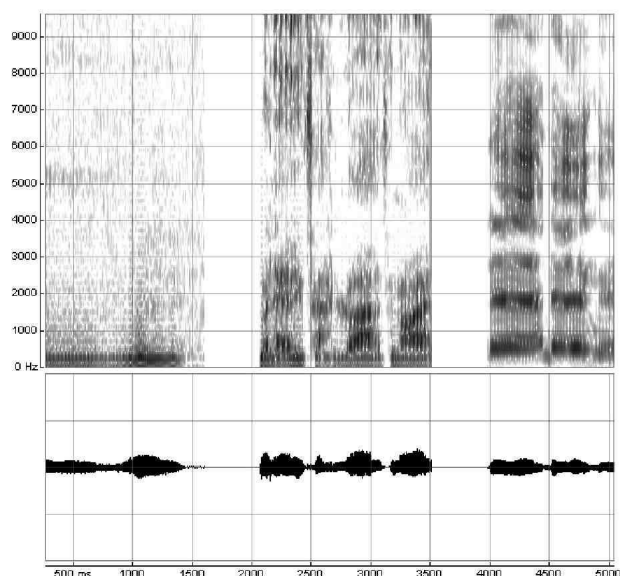


Figure 4. Wide-band sonogram of: 1. Breathy voice by a *bagana* player 2. Harsh voice by a *bagana* player 3. Singing voice used with the Amhara other chordophones. Upper limit of the analysis : 9 kHz. Recorded in Addis Ababa, 2004 and 2005.

2.6. LOUDNESS

The general loudness of vocal and instrumental sounds is also dealt differently in *bagana* songs than in other musical performances. The organological choice of a leather sound-board and gut strings makes the loudness of the instrumental sounds low and decreasing a lot with distance. The phonation types also produce weak sounds, but whose high ranked spectral components that strengthen and are strengthened by instrumental high ranked components. This cooperation of instrumental and vocal sounds is quite unusual in Amhara music, wherein voice clearly dominates instruments.

DISCUSSION

This pilot study has shown that the *bagana* produces a very specific perceptual effect that can lead to a strong emotional reaction. A performance of *bagana* creates a sonorous sphere surrounding the player where the space and time are different from those of the every-day world.

All the informations gathered from the informal interviews with players and listeners seem to indicate that the *bagana* has the potential to create a strong emotion related to music, or SEM as defined and studied by Gabrielsson (2001). According to his descriptive system of the phenomenon (2003), the nature of indications related to *bagana* emotions is most often related to the fifth (Emotions and feelings) and sixth (Transcendental) general categories, which was expected. Nevertheless, it is worth noticing that infor-

mations depending on the Cognition category (forth) are much more numerous than the Personal (seventh), the Perception (third), and finally the Physical Reactions and Behaviors (second) categories. These differences can be explained by the completely free nature of the interviews but it shows that the factors occurring in the creation of the SEM that are spontaneously and gladly evoked are the personal feelings (mostly happiness) and the religious character of the instrument, which are the socially adequate reactions to a *bagana* performance. The less spontaneously evoked factor is the bodily sensation, which can be explained by the general conception of the body among Amhara devotees, viewed as weak and subject to temptations. The rather stereotyped nature of the answers shows that the *bagana*, unless other Amhara and non-Amhara musical instruments, is designed to arouse a specific kind of emotional reactions. A more systematic study with appropriate and controlled methodological tools will provide a better understanding of the emotional reactions created by the *bagana* as well as clues about the general conception of the emotional impact and the general conception of the music among the Amhara of Ethiopia.

The problematic of the emotions created by music in a cross-cultural perspective raises several methodological problems: language issues, social and personal modesty and disturbances introduced by the presence of the analyst, and many more. Two impossibilities make the work even more complicated. The first relates to the use of models tested only Western-trained listeners (e.g. Smith and Cuddy 1986), the other the lack of technical devices that would have given the opportunity to go around some language issues (Rickard 2004).

Trying to link formal characteristics of a music with its emotional effects can be hazardous in very general contexts such as the western classical tradition since the object of the study is supposed to create a large range of emotions. In the case of the *bagana*, since the goal of the repertoire is specific, to relate important formal characteristics with their perceptual effect makes sense, the importance of the formal elements being verified by the use of feedbacks from the musicians themselves.

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