Introduction

From a rhythmic and acoustic viewpoint as well as from a strictly organological one, so-called “water drums” are one of the most interesting musical behaviours of the Baka of Cameroon and Gabon.

Called likuende by Cameroonian Baka and  perchèndə by Gabonese Baka, water drums are a kind of musical and recreational activity primarily, if not exclusively, performed by women in streams and ponds of the rainforest. They are typical not only of the Baka but also of other peoples of the western Congo basin (whether they are hunter-gatherers or not). Water drums consist of hitting, pressing, moving and stirring water with the hands or other parts of the body by repeating indefinitely (with possible micro-variations) different rhythmic patterns which, once they are combined together, create a continuous, regular base. On this peculiar sound texture the performers may sing or rhythmically pronounce words to accompany the water-originated patterns, even if the most common form of this musical activity is purely “instrumental”.

This sort of musical game or pastime appears to be generally widespread among the Baka, even though the repertoire of the rhythms known by the players and their ability greatly differ. The number of the latter, mostly women and young girls intent on washing clothes or pots or else taking a bath, can vary but is generally limited to a few people. Standing in water up to their waists, women bend forward and “play” water with both straight and circular movements of their forearms, therefore producing the above-mentioned rhythmic patterns.

As for the macrostructure of the musical pieces, water drum performances follow the same principle found in almost all the Baka’s musical repertoires: the principle of obsessive repetition of one or more sound sequences (i.e. patterns, which are the typical units of the piece) with or without variations and for a variable number of times.
Classification of Water Drums

A number of observations on the material set in vibration, the features of the sounds produced and the performing methods bring water drums closer to several families of the Hornbostel-Sachs classification.

At first, the relative cohesion of the material the instrument is made of, i.e. water, and the absence of membranes and strings call back to mind the idiophones, whereas certain traits of the performing technique and the acoustic result are reminiscent of membranophones (single-skin drums). In addition, the way the definite pitch sounds are produced may also suggest the plosive aerophones.

Even so, considering the peculiar nature of the substance set in vibration (i.e. water), I think it would be more appropriate to create a separate family (in addition to the original ones present in the Hornbostel-Sachs classification) which I would call “Hydrophones”. However, it is also important to note that this definition might be limiting if other musical instruments, even theoretical ones, are to be included and so a more general term like “Fluidophones” could be adopted instead. This definition would in fact make it possible to classify any instrument based on fluids other than water within this same family. In any case, it is a classification problem that is outside the subject of this paper.

Performing Techniques and Types of Sounds Produced

Generally speaking, a water drum performance is accompanied by the indistinct, continuous gurgling of water “stirred” by the players’ hands, a background noise of waves and splashes against which sounds with more definite timbre and contour stand out. However, because of specific performing methods, even the sound of waves crashing into each other or breaking on the water surface has a precise function and a temporal place, indirectly strengthening the rhythmic structure of the piece.

The various performing techniques of water drums (which cannot be shown in detail today) and the correspondent sonorities that determine the structure of rhythmic patterns have been studied taking into account the analyses performed on videos, audio recordings and pictures taken on the field. All this has also been integrated with direct learning experience in the rainforest streams under the guidance of Baka women.

As for sound production, a first distinction can be made among:

1) Sounds directly generated by the player’s hands, forearms and feet when they get in contact with water;

2) Sounds produced by a reciprocal percussion of these body parts (hand with hand or hand striking the arm);

3) Sounds produced by water without the player’s direct intervention, but as a result of movements she had previously made with her upper or lower limbs.
A second distinction must then be made between indefinite pitch sounds and definite pitch sounds. The latter, that are often essential to the characterization of patterns, are produced with a specific technique, of which we will soon speak, and “tuned” by varying the strength, the speed and the depth of the percussive moves in order to obtain two, three or even more different pitch sounds.

Eventually, a third distinction can be made between single sounds (like those produced by a simple percussion of the water surface) and multiple sounds (double or triple ones), i.e. those occurring one after the other in rapid succession, even though they are obtained by a single performing movement.

As for specific performing techniques, the most common ones are as follows:

1) Open hand hitting the water surface.
   The resulting sound is single, of medium intensity, high-pitched and quite sharp, like a slap on water. The performing method is similar to the percussion of a membranophone.

2) Hand moving water sideways.
   In this case, the hand enters the water and begins to “dig” with a circular movement. Such movement raises a wave which falls back on the water surface or “bounces” off the wave produced by the other hand at the same time.

3) Hands hitting one another.
   This is a single, sharp and precise sound, just like the one produced by two hands clapping together.

4) Hand (or foot) forcefully entering the water and pressing it downward.
   The resulting sound is double (or triple, when considering also the noise of the wave raised by the movement): the first sound anticipates the second one, which is a remarkably stronger and deeper definite pitch sound. The abrupt shifting of water downward creates a void filled by the water itself, which produces the second tuned sound, a sort of plop followed by a sudden splash of water upward: this is the most characteristic and significantly rhythmical sound produced by the Baka’s water drums. Eventually, a third sound follows the first two: it is the gurgling noise of a wave breaking on the water surface.

Rhythmic-Kinetic Transcriptions

The Baka’s musical instruments for which the western classical notation would be inadequate or incomplete, such as water drums or certain types of rattles, required special transcriptions which I made relying particularly on the kinetic analysis of the performances and on their subdivision in a series of performing moves considered as pertinent. I called this kind of graphical representation “rhythmic-kinetic transcription”.
The study of the movements of the players’ limbs and the resulting transcriptions of the kinetic-acoustic patterns taken into account made it also possible, in some cases, to detect “latent” rhythms, i.e. rhythms produced by the movements of the players’ body and limbs, but not directly found in the sounds. These are implicit kinetic rhythms which, when combined with those of the rhythmic-melodic transcriptions, can give a clearer idea of the complexity of the patterns the pieces consist of and, more generally, of the process of the Baka’s musical production.

Conclusion

In addition to the unusual, fluid nature of the vibrating material and the resulting peculiar sonorities, what makes water drums so interesting is the fact that the performers are able through specific techniques to effectively control both rhythmical and “melodic” aspects of the musical patterns, which are often far more complex than it appears at first sight. As the analyses and the transcriptions have shown so far, the rhythmic-acoustic structure of the audible patterns partially differs from the underlying rhythmic-kinetic structure related to the performing movements which are, in some cases, made in advance as to the production of the actual sounds.

Besides, as for sound pitch, the Baka women’s ability to control the strength, speed and depth of their own percussive movements enables them to give water drums a particular melodic dimension which remarkably increases their expressive potential.

Even though, especially in recent years, the Baka have been facing profound social and cultural changes, which imply an apparently relentless loss of traditional knowledge and cultural diversity, most of their musical practices do not seem to be affected by this process (at least for the time being). Among these practices, water drums stand out for the complexity of their performing techniques as well as for their great rhythmical and expressive potential, aspects which make them one of the most original examples of the Baka’s musical culture.

References

Please contact the author for references.

(Note: the paper will be complemented by video recordings and musical transcriptions.)