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CATEGORIZING THE JU ´HOAN MUSICAL HERITAGE

Emmanuelle OLIVIER
LMS - CNRS (Paris)

ABSTRACT   The article presents an illustration of a reflexion on musical categorization, as applied to the Ju ´hoansi settled in North-Eastern Namibia. Their musical heritage can be divided into categories based on the identification and the opposition of musical features, which are culturally relevant. The article also deals with the relations between musical categories, social context and verbalisation as well as with the question of the invariants and the transformations within the system.

Key Words: Categorization; Cognitive sciences; Ethnomusicology; Ju ´hoansi; Namibia

INTRODUCTION

Although questions of categorization have received regular attention in ethnosciences, linguistics and cognitive sciences, they seem to have had less of a theoretical treatment in ethnomusicology. Twentieth century ethnomusicology has paid great attention to native classification discourse; however, these classifications are, more often than not, based on criteria which are external to purely musical material, such as the social context, symbolic representations, or the words of songs.

Since 1994, Simha Arom has conceived of the relations between music and society in terms of correlations between an autonomous set of musical oppositions and social organisation. He proposes the following definition of the concept of ⟨⟨musical category⟩⟩, based on an alliance of musical, social and linguistic features:

> "Within the same cultural context, functionality and musical systematics are in fact closely linked. For every occurrence that needs musical support there is a particular repertoire. Each repertoire has a name in the local language, encompasses a specific number of pieces, and is characterised by predetermined attributions of vocal and instrumental roles, as well as by rhythmic or polyrhythmic patterns that the percussion instruments category, distinct from all the others. The totality of an ethnic community's music can therefore be presented as a finite set of mutually exclusive categories, named in the vernacular language" (Arom, 1994: 140) [1].

In our approach, which we exposed in a theoretical article written together with Hervé Rivière (Olivier & Rivière, 2001), the relations between ⟨⟨music⟩⟩, ⟨⟨society⟩⟩ and ⟨⟨language⟩⟩ are just a prolongation of a categorization based on musical criteria alone. In other words, we claim that a musical heritage can be divided into sets of pieces that are culturally recognised, and which are organised on a purely musical basis. Although it is clear that music does not exist independently of social contexts and that it is subject to verbalisation, none of these social and linguistic criteria

are taken into account within the operation of categorization itself: whether they occur in one or in several contexts, whether they are given a name or not, the categories are determined only by a musical act.

This article is, to some extent, an illustration of the principles of categorization that we defined in collaboration with H. Rivière, as applied to the music of the Ju ’hoansi settled in North-Eastern Namibia in the Nyae Nyae area. The definitions of the concepts of ⟨⟨category⟩⟩ and ⟨⟨repertoire⟩⟩ are borrowed from this article, and so are the reflexions on the relations between musical categories, social circumstances and verbalisation.

MUSICAL CATEGORY: A DEFINITION

The Ju ’hoan musical heritage comprises more than 200 vocal and instrumental pieces. Among their many musical characteristics, or ⟨⟨features⟩⟩, some may be termed ⟨⟨distinctive⟩⟩. “Any musical feature is distinctive when it constitutes the lowest common denominator of musical pieces that the members of a […] community group together *ipso facto* into sets [2]. A distinctive feature is in opposition to all other distinctive features” (Olivier & Rivière, 2001).

The Ju ’hoan melodic instruments each constitute a distinctive feature: pieces played on a hunting bow with a mouth resonator are different from the pieces for the same bow with an external resonator, and the same applies to all pieces performed on other instruments – braced musical bow, scraped musical bow, four-string pluriarc, five-string pluriarc, one-string zither and lamellaphone. Each of these sets is in opposition to the others by the fact that their pieces all share the same specific feature of musical formation.

Among the songs, the rhythmic accompaniment (hand-clapping by women) allows, in most cases, to distinguish one set from another. Thus, the songs Honey, Wind and Hyena are based on rhythmic patterns of the same duration (four beats), but whose internal values are different in each case. These differences, subtle as they are, are sufficient for the Ju ’hoansi to identify the different sets.

In Tables 1, 2, and 3, the beat is represented by the symbol △ and the hand-clapping rhythmic pattern which is superimposed on it is symbolised by ●.

Table 1. Rhythmic pattern of Honey.

Rhythmic pattern			●			●						●
Beat	△			△			△			△		

“A *bundle* of musical features may be distinctive, just like a single feature” (Olivier & Rivière, 2001). In Ju ’hoan music, a bundle of this type is necessarily *conjoined* insofar as the features which make it up never appear in other contexts (alone or together) and are consequently neither distinctive nor non-distinctive [3].

Table 2. Rhythmic pattern of Wind.

Rhythmic pattern			•		•			•			•	
Beat		△			△			△			△	

Table 3. Rhythmic pattern of Hyena.

Rhythmic pattern	•					•			•			
Beat	△			△			△			△		

This is the case of the *tcòqmà* pieces for the initiation of boys, which are determined by a bundle of three features: an instrument [the bullroarer] [4], a multivocal technique [polyrhythmic shouts] and the form [a prelude].

Some sets of songs for healing and hunting rituals are distinguished by a bundle of two features – the rhythmic pattern of their accompaniment and the duration of their vocal period [5]. Thus, the Table 4 corresponds to the Oryx set, defined both by the duration of its vocal period (a multiple of five beats) and by its accompanying rhythmic pattern.

Table 4. Rhythmic pattern of Oryx.

Rhythmic pattern	•			•				•		•		
Beat	△			△			△			△		

Table 5 presents the bundle of two features that defines the Rain set, made up of a vocal period in a multiple of seven beats and a specific rhythmic pattern.

Table 5. Rhythmic pattern of Rain.

Rhythmic pattern	•			•			•			•			•		•	•				•	
Beat	△			△			△			△			△		△			△			

The distinctiveness of any musical feature or of any bundle of musical features [6] determines a *category*. Any one category is therefore in opposition to any other category. To quote Danielle Dubois, "categories are determined by relations of inter-categorial discrimination and intra-categorial similarity or resemblance" (Dubois, 1993: 34).

As we have seen, Ju   'hoan categorization is based on musical features of different natures: musical instruments, vocal polyrhythmy, rhythmic patterns of accompaniment and vocal period [7].

Therefore, if we want to distinguish the category *oah tzísì* (Giraffe songs) from the category *oq'àcè tzísì* (songs for four-string pluriarc), the features [rhythmic pattern] of the first and [four-string pluriarc] of the second will be opposed, even though they are of a different nature.

These differences of nature are neutralised here in favour of the distinctiveness of features in a network of oppositions on *one and the same level*. In other words, from a taxonomic viewpoint, musical categories are all of the same nature, whereas the features that define them may not be.

Moreover, although a category can only be established because it has musical material embodied in musical pieces, these pieces do not enter as such into the operation of categorization: it is through the distinctiveness of the features alone that these categories are established. "A piece may, then, display one distinctive feature or another and therefore refer to several categories. This does not indicate porosity between categories, simply an intersection, or even inclusion or identity, between the sets of pieces" (Olivier & Rivière, 2001).

The 86 pieces brought together under the term of *n om tzísì* (songs invested with supernatural energy) refer to 40 categories (determined by as many different rhythmic accompanying patterns) when they are sung, but form a single category when they are performed on the hunting bow with mouth resonator, on the lamellaphone or on the four-string pluriarc. They thereby lose one category-defining feature (the hand-clapping rhythmic pattern) and receive a different one (a musical instrument). This changes nothing in the interplay of oppositions between categories, since the features [rhythmic pattern], [hunting bow], [lamellaphone] and [four-string pluriarc] can all be opposed to each other.

MUSICAL CATEGORIES AND SOCIAL CONTEXTS

In Ju 'hoan society, music is closely bound up with life: it underpins a large number of rituals (hunting, healing, childbirth, and initiation of boys and girls) and rhythms of everyday life (cooking, lullabies, games, and entertainment) [8]. Categorization also allows us to show that each set of pieces related to a category corresponds to one, two or several specific social contexts [9].

Only three Ju 'hoan sets of songs are performed in just one context: these are *tcòqmà* for the initiation of boys (of the same name), *n!áí tzí* (War song) for the War Game, and *!òm tzí* (Porcupine song) for the Porcupine game.

The *n!àng tzísì* (Eland songs) are accompanied by a pair of metal bars struck together, which materialise a specific rhythmic pattern. Unlike the previous sets, this one can be performed either for the birth of a child or for the initiation of girls.

The other musical sets are multi-purpose. Praying to the dead before a hunt and entertainment are two circumstances in which it is possible to perform any of the following: the pieces for the hunting bow with mouth resonator (*n!aoh tzísì*), the pieces for the braced musical bow (*g!omah tzísì*), for the scraped musical bow (*aìhn tzísì*), for the four-string pluriarc (*oq'àcè tzísì*), for the five-string pluriarc (*g áukace tzísì*), for the one-string zither (*n!aoh tzísì*) or for the lamellaphone

(*dùngò tzísì*). With the exception of the set for the four-string pluriarc, all these pieces can be performed equally well for men to announce a fruitful hunt or to seduce a woman.

As for the songs invested with supernatural energy (the *n   om tzísì*), which refer to 40 categories, they are performed for collective and individual healing rituals, before and after hunting the eland, for gathering, for soothing a baby, and for entertainment.

Once the process of categorization has been completed, the circumstances of musical performances are all revealed. All or some pieces related to different categories may however be organized into repertoires.

"By *repertoire*, we mean a set of pieces that do not all display the same distinctive musical feature and therefore refer to different categories. A *repertoire* is linked to one or more specific social circumstances" (Olivier & Rivière, 2001).

The Ju   'hoan musical heritage comprises three repertoires, each one made up in turn of the sets of pieces related to several categories. These pieces, exclusively connected to a given repertoire, may not be performed on any other occasion.

The Rope repertoire – *n harù tzísì* – thus comprises twelve songs referring to six categories; the Games repertoire – *kuí tzísì* – contains twenty songs referring to seven categories and the Melon repertoire – *tamah tzísì* – ten songs from three different categories. Here follows the transcription of the three rhythmic patterns, each of which defines a category whose pieces belong to the Melon repertoire (Tables 6[10], 7,and 8):

Table 6. Melon repertoire. Category 1.

Pulses	1	2	3	4	5	6	7	8	9	10	11	12	13
Rhythmic pattern	●		●		●		●		●			●	

Table 7. Melon repertoire. Category 2.

Pulses	1	2	3	4	5	6	7
Rhythmic pattern	●		●		●		

Table 8. Melon repertoire. Category 3.

Pulses	1	2	3	4	5	6	7	8	9
Rhythmic pattern	●		●		●		●		

A *repertoire* is therefore a concrete set of pieces whose existence depends on the context of performance, whereas a *category* is based on the distinctiveness of intrinsic formal properties.

Fig. 1. The musical world of the Ju 'hoansi.

The following diagram (Fig. 1) gives an overall view of the relations between the Ju 'hoan musical heritage and the contexts in which it is performed. The outer circle shows the circumstances of performance; the middle circle shows the musical sets; and the inner circle the musical formations (voice and/or instruments).

MUSICAL CATEGORIES AND VERBALIZATION

What we interpret in terms of categories and repertoires also lies within a discursive relation with the circumstances of performance. In such a relation, the latter are always liable to verbalisation, and more precisely to denomination.

Thus, the following social contexts give their name to corresponding sets: the initiation of boys (*tcòqmà*) to the homonymous musical set, and the same goes for the Eland initiation of girls (*n!àng – n!àng tzísì*); gathering (*!’hù – !’hù tzísì*); the Porcupine game (*!òm – !òm tzí*); the War Game (*n!àì – n!àì tzí*); the Melon Game (*tamah – tamah tzísì*); the Rope game (*n harù – n harù tzísì*); games (*kúí – kúí tzísì*).

Other sets are named after the circumstance which preceded, and inspired, the creation of their first song. This is the case of "Tomb," "Dying and Crying" and "Death is hunting me" [11].

Functions also enable to name musical sets. The majority of the sets performed for healing have a curative function, and take their name from one of the following:

- the appearance that the dead person responsible for the illness has taken on – a natural element (Rain, Wind, Water), a foodstuff (Honey), an animal (Giraffe, Elephant, Eland, Oryx, Kudu, Wildebeest, Buffalo, Duiker, Aardvark, Springhare, Scorpion, Mamba, Python, Puffadder, G úí bird, Giant Eagle Owl) or means of transport (Car);
- the illness that the patient is suffering from (Paludism, Exhaustion) or that the shaman had to suffer from to reach his/her status (Madness);
- the patient himself (Child);
- the animal from which the Ju ’hoansi wish to protect themselves (the Hyena, an animal which is said to dig up dead bodies).

On the other hand, music, and more specifically the features of musical material as such, are rarely given a name. Among the Ju ’hoansi, the rhythmic patterns, the metrical structures and multivocal techniques that define categories, never have a name, whereas the great majority of musical instruments do. To use an expression from Dubois and Grinevald (while discussing the sense of smell), a word does not refer *a priori* to the "intrinsic properties of the real world" (Dubois & Grinevald, 1999: 11).

The feature [rattle] gives its name to the Rattle Songs. The same goes for the hunting bow with mouth resonator, the braced musical bow, the scraped musical bow, the one-string zither, the four-string and five-string pluriarcs and the lamellaphone.

The same hunting bow is used in two different sets of pieces, each of which related to a different category, determined by a particular playing technique. In one set, a musician uses his mouth as a resonator; in the other, two musicians play together on the bow, which is placed on an external resonator (a gourd or the overturned shell of tortoise in the sand). However, the Ju ’hoansi do not use different words for the two versions of this instrument, which are both referred to as *n!aoh*. Each set of pieces, however, has its own name, which refers to its function: the pieces

connected with hunting and which allow people to communicate with the dead simply bear the name of the hunting bow (*n!aoh tzísì*), whereas those that are performed by two musicians as entertainment are called *n!aoh kuí tzísì* – *kuí* which means ⟨⟨game⟩⟩ or ⟨⟨playing⟩⟩.

Apart from the hunting bow, *n!aoh* also indicates the one-string zither [12]. As a result, the sets for the bow and for the one-string zither have the same name (*n!aoh tzísì*). The Ju   'hoansi do, however, distinguish between the two instruments by giving them a different gender: the bow is masculine, since it is used especially by men for hunting, whereas the zither, which is a purely musical instrument, is feminine.

Ju   'hoan denomination do not mark the difference of nature which exists between categories and repertoires. This is why the Ju   'hoansi perform, on the occasion of their initiation ritual for boys (after hunting the two first elands), songs (*n!àng tzísì*) related to the same category and, on the occasion of their Rope game, songs (*n harù tzísì*) related to several categories, without any linguistic marker allowing to distinguish the category (*n!àng tzísì*) from the repertoire (*n harù tzísì*). Although the ethnomusicologist must, obviously, take account of vernacular meta-musical discourse, this latter plays no role, in the categorization process itself: generally speaking, naming over-determines categories. For instance (and this completes the previous example), the sets of pieces that make up the repertoires *n harù tzísì*, as well as *tamah tzísì* and *kúí tzísì*, are not given any particular name: the categories that they refer to are established by their distinct rhythmic patterns, and the singers are clearly aware of these. We should remember that these categories are always included inside repertoires, and that these latter always take on the name of the circumstances of their performance. It should be noted that names are used, above all, to refer to sets of pieces, whatever their musical content, relatively to their social contexts.

The Ju   'hoansi also give us an example of a single term – Eland – used to name two sets of songs related to separate categories (determined by a rhythmic pattern of accompaniment). This homonymy does indeed indicate an identity between the songs; however, they are identical only insofar as their symbolic representations are concerned. We agree on this point with Honeste, who stated that "if a word can have several different referents, this is because it establishes between them relations which are, undoubtedly, the result of associations on the level of representations" (Honeste, 1999: 29). In this case, some of the songs are performed before and after hunting the eland, whereas the others are used for the initiation ritual of girls, which is also called Eland. This homonymy results from a polysemic representation of the Eland, which is both a symbol of masculine "production" and of feminine "reproduction" (Biesele, 1993: 81). The term *Eland* is a good example of a polysemic term which constitutes "the centre of a network of referents" (Honeste, 1999: 30), which are connected together by symbolic associations. However, this example takes us away from our main subject of musical categorization as such, and takes us into a categorization of music based on criteria which are external to it.

TREE REPRESENTATIONS

The categories defined here have just been established on one level, that of the lowest common denominator in a set of pieces. A multi-level system, presented as a tree-diagram, would bring out more clearly certain articulations between the social and the musical. We will show this through the example of the 86 ⟨⟨songs invested with supernatural energy⟩⟩, the *n om tzísì*.

These pieces, divided into 40 sets each related to a different category [13], make up about half of the musical heritage, and are connected to several different types of contexts, both ritual and ⟨⟨profane⟩⟩. The Ju ’hoansi group them together under one generic term because they all contain *n om*, supernatural energy which enables the shaman to enter a trance and to communicate with the Dead, to heal the sick or to help the hunters. These same songs are also given other names, which denote their particular functions: *!áíá tzísì* (‘trance - songs’; songs which help the shaman to go into a trance), *hòèà khòè tzísì* (‘heal - person - songs’; songs which allow the shaman to heal the sick), *xòm tzísì* (‘pray - songs’; songs of prayer addressed to the Dead or to the God-creator) and *gàòàn tzísì* (‘dead - songs’; songs which allow the living to communicate with the Dead).

Moreover, the *n om tzísì* take on the name of *dà’áa tzísì* (‘fire - songs’) when they are performed collectively around a fire without being danced to. The change of name is due in this case to the performing modalities of the songs – with or without dancing.

Unlike the other pieces, the organization of the *n om tzísì* presents an arborescence on three levels, each determined by extra-musical criteria – geographical origin and symbolic function.

The *n om tzísì* can be divided into two groups according to their geographical origin: the *oah tzísì* (Giraffe songs) performed in the southern part of the Ju ’hoan area, and the *!xó tzísì* (Elephant songs) performed in the north. The term *!xó tzísì* designates a set of twenty four songs related to a single category. The *oah tzísì* consist both of a group of thirty nine sets referring to as many categories, and of one set of these (containing two songs). This latter one designates in fact, by metonymy, the group of thirty nine sets [14]. The same term therefore occurs at two different levels of organisation (see Fig. 2).
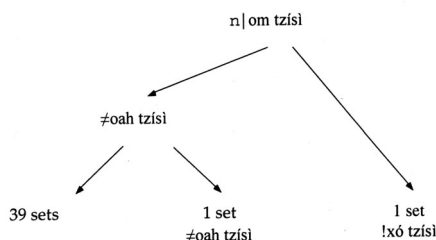

Fig. 2. Tree-diagram of the *n om tzísì*.

While all of the *n om tzísì* can be performed as lullabies and for entertainment, only the Giraffe songs are used to accompany hunting rituals. Moreover, the two

groups, Giraffe and Elephant, cannot be used together in the same healing ritual. For if their power is to work properly, the shamans must be supported by songs belonging to only one of these groups: the one that corresponds to their place of origin. Nowadays, however, the Giraffe and Elephant songs exist side by side in many villages (as a result, notably, of more and more frequent marriages and relationships between the Ju 'hoansi of the South and those of the North).

The *n om tzísì* are used in several circumstances, and are often performed in different ways: as a solo or by a choir, with or without rattles attached to the men's legs, metal bars struck together, dancing. These features, which can appear individually or in bundles, may be said to be the ⟨⟨highest common denominator⟩⟩ since they occur in all the *n om tzísì*. Although they do not define a category, they nevertheless allow us to identify most of the circumstances in which the *n om tzísì* are performed.

Fig. 3 is a tree-diagram whose branches divide according to the presence or absence of one of the features of the performing modality. The *n om tzísì* may therefore be divided according to whether they are performed collectively or individually, whether they are accompanied by dancing or not, whether or not the men wear rattles attached to their legs and, finally, whether or not a woman strikes together metal bars. In other words, the *n om tzísì* are always performed collectively, except when they are used to soothe a child to sleep. In the first case, they are always danced to, except when they are performed as daytime entertainment. The collective songs which are danced to are accompanied by rattles, except when they are performed as night-time entertainment. Finally, the collective *n om tzísì* are performed with dancing and rattles for healing rituals, whereas with an extra pair of metal bars they are necessarily connected to hunting rituals.
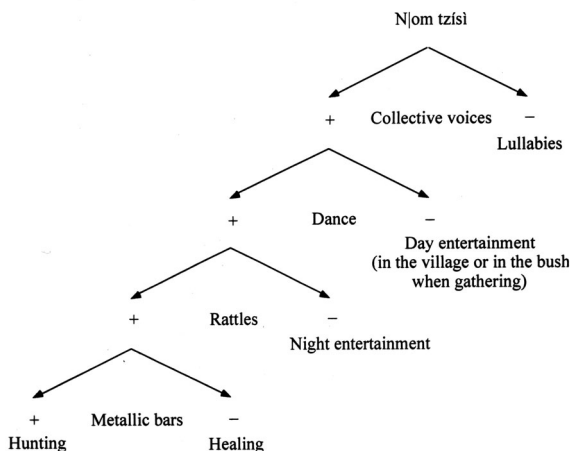

Fig. 3. Tree-diagram of the *n om tzísì* performing modalities.

The *n om tzísì* can also be divided into two groups of songs according to the presence or the absence of a musical feature – [accelerando] – which is superimposed

on the category-defining features. The pieces that include this feature refer to the categories Giraffe, Oryx, Grass, Eland, Mamba, Python, Lion and Aardvark, and are performed alternately with the other *n om tzísì*. They are designated by the phrase *!xàrí tzísì* ('run away - songs'), a metaphor for the feature [accelerando] (whereas the other *n om tzísì* are not given any particular name). We have here a rare example of a *supra-category*, determined by a feature of musical material, and which also gives it its name.

MUSICAL CATEGORIZATION: A LIVING PROCESS

Although the Ju 'hoan musical heritage is highly organised, this does not mean that it is frozen or static. Pieces disappear and new ones are created. The introduction of new pieces does not, however, disrupt the organisation of the musical heritage insofar as they incorporate a distinctive musical feature that already exists. Besides, the appearance of a new feature, creating thereby a new category, does not modify in any way the relations between categories: only the number of pieces and distinctive features changes, thus renewing the heritage. Surveys enable us to identify the invariants in the system, the (relative) stability of certain categories, their transformations, their disappearance, their creation. In the context of inter-ethnic contacts, such as those that exist between the Ju 'hoansi and their Bantu-speaking neighbours (particularly the Herero, Tswana and G eriku) and their Khoisan-speaking neighbours (Nharo, !Kung, Kxoe), it is possible to measure the impact of borrowing, and whether these borrowings are permanent or short-lived.

The Ju 'hoan musical heritage is regularly renewed by the creation of *n om tzísì* and of instrumental pieces [15]. According to the Ju 'hoansi, the God-creator or the Dead ⟨⟨give⟩⟩ the new *n om tzísì* to the shamans when they are in a dream or in a trance (see Marshall, 1969: 366). These songs appear when the existing ones turn out to be useless for healing an illness that has come about because of some serious event, such as the transgression of rules of kinship in a marriage, unfair sharing of food or of material wealth, or forced separation of members of a family. The songs thus created may take on the features of an existing category. That is why more than one of them may be called Giraffe, Eland, Oryx or Honey. The Ju 'hoansi then add to their name an adjective which allows them to be ⟨⟨dated⟩⟩ chronologically: the oldest song becomes *n!a'àn* (old) when a second one – *tzèmà* (young) – is created. The first then takes the name of *n!a'àn n!a'àn* (old old) when a third appears – *tzèmà* – upon which the second becomes *n!a'àn*. The following ones are all called *tzèmà*. A newly-created song which includes a novel feature thus establishes a new category: this is the case of the song ⟨⟨Death is hunting me⟩⟩ composed by N!ani of   xa oba in 1995.

The Ju 'hoansi say that most of their instruments were borrowed from other populations, and gradually assimilated into their musical heritage.

The scraped musical bow   *aìhn* is said to have been introduced to the South of the Nyae Nyae area by a Ju 'hoan man called   Aò, who had gone to work in a mine in Botswana, near Gaborone [16]. There, he heard the instrument played by N!a,

a woman from a different San group (and whose language he didn't understand, so that they had to communicate in Tswana, a Bantu interlanguage in Botswana), and she is said to have taught him how to play this instrument. Men from various populations – Tswana, Herero, Kavango, Nama – also played this bow called *kárórò*.   Aò renamed it   *aìhn*, from the Ju   'hoan name for the palm leaf (*Hyphaene ventricosa*) which the string is made from. The instrument was brought back together with pieces composed by N!a, and then the Ju   'hoansi adapted *n   om tzísì* to it and created new pieces. The introduction of this instrument – which constitutes a novel ⟨⟨feature⟩⟩ – thereby established a new category which was gradually accepted by the society, being associated, like other instrumental categories (see Fig. 2: *The musical world of the Ju   'hoansi*), with the announcement of a fruitful hunt, seduction, praying to the Dead before the hunt, and entertainment.

The four-string pluriarc,   *oq'àcè*, is also said to be originated from the South and to have come to the Nyae Nyae area at least four generations ago, thanks to a Ju   'hoan couple, N!oce n!a'an and her husband   Aò, from Hereroland, near the territory of the Nharo (another San group). These two people had travelled because of the *xáró* ritual exchanges (see Wiessner, 1977) that they had with some inhabitants of Nyae Nyae. N!oce n!a'an is then said to have taught her companions how to play the   *oq'àcè*. The first pieces were probably composed by her, and then the instrumentalists created new ones and adapted *n   om tzísì* to this instrument. N   hakxa n!a'an (from   auru village) composed in 1998 a piece for this instrument, entitled Conservancy [17].

Unlike its feminine counterpart, the five-string pluriarc *g áukace*, which is played only by men, is said to come from the Nyae Nyae area. Its creation is told of in the following story, which might in fact be a myth: Kxao N   ae was married. One day, he went with his wife to visit her family. When his wife refused to return home with him, he killed her, and then managed to run away before his brother-in-law could find him and avenge his sister. Hiding in the bush, he made himself a five-string pluriarc and created a piece entitled Mangetti, the name of the tree (*Ricinodendron rautanenii*) from which the instrument had been made. In the end, he went back to his village, playing this piece of music, which helped him to find peace with himself. When his mother, who knew nothing of the recent tragedy, saw him, she was subjugated by the music. Since then, say the Ju   'hoansi, many more pieces were created by Kxao N   ae and by the instrumentalists that came after him.

Finally, the lamellaphone is no doubt a recent borrowing from Bantu-speaking neighbours. Two types of lamellaphone have been adopted: the lamellaphone with ten blades, borrowed from the G   eriku (settled in the north of the Ju   'hoan area) together with its original pieces, which were then transformed along Ju   'hoan polyphonic style; the lamellaphone with twenty one blades, probably borrowed from the Tswana (south of the Ju   'hoan area) as a support for songs from categories that already existed or for new pieces created especially for it.
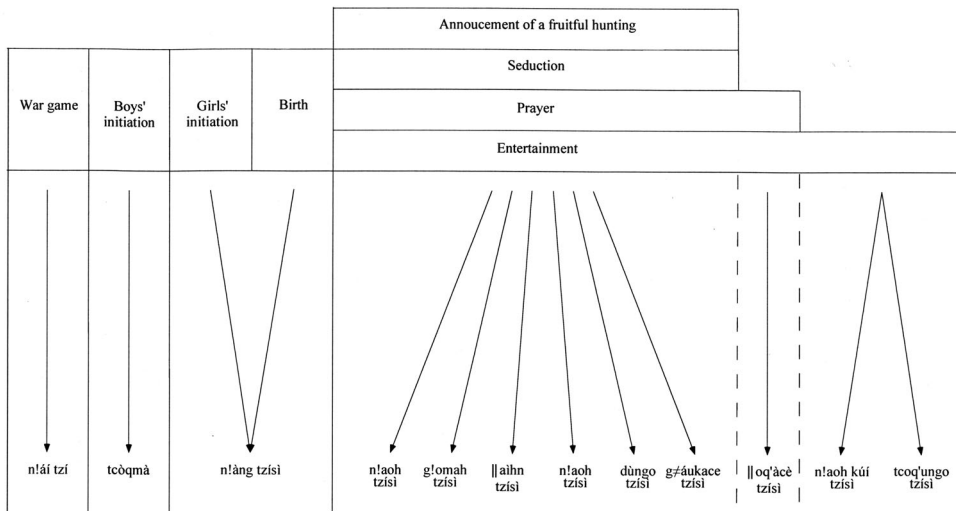
The pieces played by the two lamellaphones refer back to the same name, *dùngò tzísì* ('lamellaphone *sp.* - songs'), although some of them (for the ten-blade version) are only ever played for entertainment, whereas the others (for the twenty one-blade version) are also connected with hunting, seduction and prayer. The twenty one-blade lamellaphone, played in the same circumstances as the hunting bow with mouth resonator, is gradually replacing the latter. Indeed, young men are tending to abandon the bow, an ⟨⟨old⟩⟩ instrument, in favour of the lamellaphone, which is considered to be more ⟨⟨modern⟩⟩.

CONCLUSION

To sum up, here is a table of correspondences between Ju   'hoan circumstances of performance, categories and repertoires (Table 9).

Table 9. Correspondences between Ju   'hoan circumstances of performance, categories and repertoires.

In this text, we have proposed a classification based solely on features of musical material, which are recognised culturally, each of which being in opposition to all

the others. Unlike a taxonomy, the categories have been established only on one level: that of the lowest common denominator for the pieces grouped together in sets. Their features, which may be very different (instruments, rhythmic patterns, processes of composition, formal structures), being thus considered as equivalent as far as categorization is concerned. We have however shown, in the analysis of the 86 *n om tzísì*, that a tree-diagram system of organisation can show articulations between the social and the musical, which a single-level system could not allow us to apprehend.

Although the categorization presented here is purely ⟨⟨musical⟩⟩, this does not prevent us from considering the relations between sets of pieces and their circumstances of performance, thus bringing out the complex ⟨⟨geography⟩⟩ of the musical heritage, in which, to use the words of Claude Lévi-Strauss (1962: 85), "different types of logic are at work at the same time on several axes."

The question of verbalisation, and more specifically of denomination, has been also considered, once again as external to the operation of categorization as such. Our aim here was indeed, as Dubois & Grinevald (1999: 11) showed, to analyse the "relations between cognitive categories and lexical categories." It appears clearly that musical categories are not often marked lexically (apart from features concerning instruments), and that denomination applies mainly to a set of pieces in its relation to the circumstances of performance. We may thus see an independence between words and "the nature of the referent to which they apply" (Brigaudiot & Danon-Boileau, 1999: 38). Moreover, as we have seen, still with the *n om tzísì*, a single musical object can be represented in different linguistic ways: thus, these songs are given different names, according to their functions.

Finally, the cultural relevance of the categories depends, for us, on the recognition by the local people of the category-defining features. However, categorization as defined here does not claim to be a translation of their thought-system. One may indeed wonder whether the global view of a musical heritage is the same for the researcher and for the possessors of this heritage. Or, to put it in other words, if the musical features are culturally relevant, the operation of categorization does not allow us to apprehend the way in which the possessors of this heritage see it themselves. Do the musicians oppose each of the features to all the others, or do they proceed step by step? It is a question that interests the current cognitive debate on the processes and strategies elaborated by the human brain in order to structure and classify the objects of the real world.

NOTES

(1) S. Arom directed a "Categorization" group in the Lacito-CNRS laboratory from 1996 to 1998. The ideas exposed in this present article owe a great deal to our discussions of the definitions of ⟨⟨category⟩⟩ and ⟨⟨repertoire⟩⟩ within this group. However, it is not implied that the theoretical positions developed in this article are necessarily shared by the participants of the Categorization group.

(2) This definition also applies to sets containing only one piece. A case in point is the category Rain (*g!à tzí*: 'rain - song') characterised by a vocal periodicity and a specific seven-beat rhythmic pattern (see below, Table 5). These ⟨⟨singletons⟩⟩, remarkable as they are, are however devoid of any particular properties in regard to categorization.

(3) A game-song – *zaqn tzí* ('*Boscia albitrunca* – song') – presents a specific rhythmic pattern and is based on a particular scale (tetratonic hemitonic G - B - C - E). It is therefore a conjoined bundle of features, one of which, the rhythmic pattern, is clearly identified by the Ju 'hoansi. As for the other feature (the scale), it is not certain that the Ju 'hoansi consider it as related to the categorial identity of the song, whereas it may appear so to the ethnomusicologist. This example brings up the question of whether or not categorization can be seen as a translation of native thought, a question that we will come back to in the conclusion of this article.

(4) Distinctive features are presented in square brackets.

(5) As in a lot of sub-Saharan music, Ju   'hoan songs are based on principles of repetition and variation (Arom, 1985: 434). Their musical material is contained within a period, a metrical framework which corresponds to a multiple of the rhythmic pattern which supports the voice.

(6) For ease of presentation, in the rest of the text, distinctive bundles of features will be treated as single features.

(7) Dancing, although it is directly linked to music, is not considered here as a category-defining feature. Thus, the song *g   ho tzí* ('cooking - song') still refers to the category *n!àng tzísì* ('Cape eland - songs'), even when it is not danced to, unlike the other songs referring to the same category. Nevertheless, the Ju   'hoansi consider it as being apart from the other *n!àng tzísì*, not only by the absence of dancing, but also because of the circumstances in which it is performed – while the eland meat is cooking in the village (whereas the other *n!àng tzísì* are performed after the meal) – and by the place in which it is performed, with the singers sitting around the cooking pot (instead of around the ritual fire). Here, we can see the limits of categorization based on musical criteria alone, which could be supplemented by a categorization which would take into account extra-musical criteria (dancing, place and time of performance, the texts of songs, etc.).This in turn could allow us to apprehend social categories which have until now been underlying.

(8) The circumstances of performance, which have already been widely studied, will not be described here (see notably Biesele, 1993; England, 1995; Katz, 1982; Katz & Biesele, 1986; Katz, Biesele & Saint Denis, 1997; Larson & Wiessner, 1979; Lee, 1968; 1984; Lewis-Williams, 1981; Lewis-Williams & Biesele, 1978; Marshall, 1962; 1969; 1976; Olivier, 1997; 1998; 1999; Shostak, 1981).

(9) Or functions, which, for the sake of clarity, will be treated as circumstances.

(10) The numbers of the categories in the Melon repertoire have been attributed chronologically; none of these categories has a particular name.

(11) For the story of the circumstances that led to the creation of the singleton set "Death is hunting me," see Olivier (1999: 172-3).

(12) This instrument, which was probably borrowed at the beginning of the twentieth century from the neighbouring Tswana and Herero Bantu populations, is close to the bow in its morphology: both comprise a single string which vibrates freely. This is, in any case, the reason given by the Ju 'hoansi to explain the fact that both instruments have the same name.

(13) Each set of *n om tzísì* has a name in the Ju 'hoan language followed by its translation and, in brackets, the number of its songs: *da'àmà tzí / child (1), dì tzísì / madness (3), g úí tzí / g úí bird (1), g xàì tzí / scorpion (1), g!à tzí / rain (1), g!áí tzí / puffadder (1), g!aih tzí / wildebeest (1), g!ò'é tzísì / oryx (6), g!ú tzí / water (1), g!ú!óbo tzí / g!ú!óbo snake (1), g àqrà tzí / g àqrà plant (1), g kàá tzí / mangetti tree (1), kàràbàs tzísì / karabas (2), màq tzí / wind (1), n aìgò tzí / mamba (1), n amm tzí / exhaustion (1), n ang tzísì / python (2), n oàh tzí / kudu (1), n!àng tzísì / eland (4), n!haì tzí / lion (1), n!hàm tzí / spider (1), !òró tzí / stone chat (1), tzí n!a'àn n!a'àn / old old (1), útò tzí / car (1), zám tzí / tortoise (1), zó tzísì / honey (2), àò tzísì / buffalo (3), kàè tzí / sick (1), 'á tzí / aardvark (1), 'áú tzí / duiker (1), aìh tzí / malaria (1), oah tzísì / giraffe (2), !áí dòmà tzí / grave (1), !áí g à'á !úà tzísì / to cry and die (2), !áí kà gunì mí tzí / death hunts me (1), !ore tzí / mouse (1), !úrúkúbà tzí / giant eagle owl (1), !ù !ò dìn tzí / under the shade of a small shrub (1), !xó tzísì / elephant (24), !'háú tzí / brown hyena (1), 'àìsì tzísì / grass (6).*

(14) Today, if the Giraffe songs are synonymous with the *n om tzísì* this is because this animal is considered to possess the most powerful supernatural energy, with the help of which the shamans may go the most easily into a trance and exercise their power effectively. These songs have replaced the Eland songs, which were formerly the dominant ones, and which in turn may have replaced the Oryx songs (Olivier, 1999: 178-180).

(15) The other musical sets are said to be ⟨⟨old⟩⟩, and are not susceptible to renewal.

(16) This seasonal (and often forced) labour is attested from the end of the Nineteenth century, which allows us to date approximately the introduction of this bow into the Ju 'hoan heritage.

(17) To commemorate the decision of the Namibian government to declare the Ju 'hoan territory as a ⟨⟨conservancy zone⟩⟩, managed directly by its inhabitants.

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Author's Name and Address: Emmanuelle OLIVIER, *CNRS - LMS (UMR 8099) Centre A.-G. Haudricourt 7 rue Guy Moquet 94800 Villejuif, Paris, FRANCE. E-mail: olivier@vjf.cnrs.fr*