

Fusing Korea and Cuban Rhythms to Derive Rhythm Contents for Popular Music

Chang Ku Lee, Seungyon-Seny Lee,

¹ The Graduate School Sangmyung University
Hongjimun 2Gil 20, Jongro-Gu, Seoul 03016, KOREA
bcdrummer@daum.net

The Graduate School Sangmyung University
Hongjimun 2Gil 20, Jongro-Gu, Seoul 03016, KOREA
senylee01@gmail.com

Abstract. This study categorizes Korean and Cuban traditional rhythms by character and grouping structures and combines two of them according to 4 methods. First, clave & additional rhythm perspective of combining, second, Linear combination, third, matching and combining according to Hertz of instruments, fourth, combination according to Bombo&Ponche technology and acoustics perspective

Keywords: Rhythms, Jangdan, Afro Cuban, Clave

1 Introduction

This study suggests rhythm unique pop music contents by creatively combining Korean and Cuban traditional rhythms.

In Koran traditional music, a type of rhythm called "Jangdan" plays a key role. Since ancient times, Jangdan is recognized with 3-beat grouping structures of rhythms and advanced techniques of irregular meters.[1] Likewise, Cuban traditional music features grouping structures of 3-beat rhythms drawing on irregular-meters. Fundamentally, there are quite a few similarities between both countries' traditional rhythms.[2] For the most ideal results, categorization by character and grouping structure is utilized in combination Korean and Cuban rhythms. The results are then matched and combined in 4 different methods. First, clave & additional rhythm perspective of combination, second, Linear combination, third, matching and combining according to Hertz of instruments, fourth, combination according to bombo&ponche technology and acoustics perspective.



Fig. 1. 4 different methods

2 Body

2.1 Classification of Korean and Cuban Rhythm by Character and Grouping Structures

In order to classify and match characters of rhythms, Simple Time, Compound Time, Mixed Time and Grouping Structures are involved. Grouping structure is the division of rhythms into identical form of groups. Figure 2 illustrates the grouping structure of Ghin-Samche it is comprised of 4 grouping structures of dotted eighth note and a beat of 12 eighth notes.

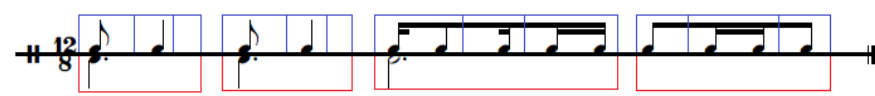


Fig. 2. Examples of Ghin-Samche 4 Grouping Structure & 12Beat

Table 1 Shows the classification of Korean and Cuban rhythms by character and grouping structure.

Table 1. Characters and Grouping Structures. (Cuban in bold)

Grouping Structure	Simple Meter	Compound Meter	Mixed Meter
16 G.S		Gagok Jangdan	YoungNamMuAk' ChungBo Jangdan,
10 G.S		Gagok' PyunJangdan, YuMinRak 1Jang, BoHuJa& YuMinRak	UtNoRi Jangdan 5/8 *2 Mambo
6 G.S		DodriJangdan, Mihoanyb, Yumbuhoanyb, African 3:2 Clave or African 2:3 Clave	
5 G.S		Cijo(5Beat), Sangsabyulgok	5/8 Mambo
12 G.S		Jungmori Jangdan, Chita Jangdan Bembe, Vudu(1G.S=8note)	
8 G.S		Cijo(8Beat), JulhwaJangdan	
4 G.S (4Beat& 12Beat)	Hwimori Jangdan Baion, Guaguan co ,Mozambique	GudguriJangdan, Ghin-Samche Jangdan, JungJungMori 6/8x2 Nanigo, Yuka, Palo, Arara, Abakua (4G.S By Point 4 note =12beat)	

2.2 Combining Korean Rhythm and Cuban Rhythm

According to above results, the rhythms will be matched and combined in 4 methods. First combination is in perspective of clave & additional rhythm. Clave is derived from Western Africa and Central Africa, and they believed to be the root of Cuban

religious music and secular music.[3] It also leads the rhythmic beat in many other music styles. Clave rhythmic pattern becomes the primary rhythm and additional rhythm combined to be the secondary.[4] Second perspective of combination is Linear. It is, as suggested by the term, linear methods, arranging rhythms and instruments in a line according to their acoustics properties and technical properties and combining additional rhythm linear to clave rhythm.[5] Third is matching and combining based on Hertz of instruments. By extracting Hertz of percussion used in Korean music and Cuban music, instruments of treble, middle and bass sounds are then combined according to their Hertz.

Lastly, the fourth way of combination is in technical combining of Bombo&Ponche in acoustics perspective. Bombo refers to a technique of playing percussion instruments for low-pitched, but not muted, sounds, whereas Ponche is a technique of playing high-pitched sounds with a hard attack.

2.3 Creating Rhythm Contents by Fusing

In this study, two tunes chosen for combination considering first, the similarities between character and grouping structure and second, the possibilities of the combination are being musically sound through the 4 methods.

For creating rhythm contents, Korean rhythm GinSamcheJangdan and Cuban rhythm Nanigo were selected for their Compound Time character and 4 grouping structures.

Figure 3 shows that both rhythms are composed of 12-beat Compound Time and grouping structures of dotted eighth notes.

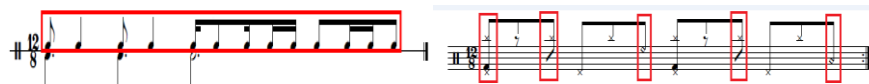


Fig. 3. Hertz values of Korean and Cuban percussion instruments

Count(8note)	1	T	T	2	T	T	3	T	T	4	T	T
GinSamche	o	o		o	o		o	o	o	o	o	o
Nanigo	o		o			o			o			o
Clave & Another	CL	AN	CL	AN	AN	CL	AN	AN	CL	AN	AN	CL
Linear	Gin	o	o	o	o		o	o	o	o	o	o
	Na	o		o			o		o		o	o
Hertz	Kor (Janggu)	L (B)		L	R (P)			R		L	R (p)	
	Kor	Buk	KGR				KGR		KGR			KGR
	Cuba (Conga)	B		o	o				P		o	
	Cowbell	o		o		o			o	o		o

Fig. 4. Combination of Two Rhythm

In Figure 4, the 4 grouping structures and 12-beat count are described as 1TT 2TT 3TT 4TT counts. First, the structures of rhythms are marked and then how to select clave & additional rhythm is written. In this combination, the primary rhythm of Cuban Nanigo is clave and Korean rhythm is additional rhythm. After that, the two rhythms were aligned in linear perspective and the instruments were placed regarding their Hertz. Lastly, how bombo and ponche technics are applied is indicated.

Conclusion

This study classifies and matched Korean and Cuban rhythms and with that result, creates unique, musical and artistic pop music rhythm contents by combination.

However, the goal is not about immediate application of these rhythms in the industry or becoming prominent patterns of rhythm. The significance of this research is to create new rhythm by developing unique methodology and algorithm of combination, and further to combine Eastern and Western rhythms which will ensue more research and development of great hybrid-cultural contents.

References

1. BaekDaewoung, "What is the Rhythm?", MinSokWon, 37--45, Korea (2008)
2. Lee, Bong-Jae, "Cultural Meanings of Afro-Cuban Music and Its Performing Principles" Dept. of Musicology & Culture Graduate School, Dong-A University, Busan, 197, Korea (2009)
3. E. Uribe, The Essence of Afro-Cuban Percussion & Drum set. Alfred Publishing Co. Inc, 148 (1996)
4. Frank Briggs, Mel Bay's Complete Modern Drum Set, Melbay. Publications. Inc, 75 (1994)
5. Gary Chaffee, Linear Time Playing, CPP/Belwin, 4--5(1993)