Tremolo-Rondalla: Research and Development in Organology, Musicology and Pedagogy

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ABSTRACT

Tremolo-Rondalla is a derivative of the Filipino Rondalla that was introduced into the extracurricular music activity in 1981 at the National University of Singapore. Since then research and development (done privately) has been in slow but steady progress to address some issues in organology, musicology and pedagogy. Rondalla is landmark pedagogy in Filipino music education. It had its roots in Spanish and South American tremolo musical legacies. Over the last two hundred years rondalla has become a community music form in the Philippines blending folk song, folk dance and music. The intercultural transfer of this concept to Singapore began in 1981 and over the years some fundamentals transformed to make rondalla relevant to the multi-cultural constitution of Singapore and the nature of music education there. This paper will describe some of the salient aspects of change and development in musicology, organology and pedagogy. In musicology there is the study of intonation systems (just and tempered comparisons in particular), acoustics and the development of a modular tier system of instrumentation, music theory re-designed to make it relevant for rapid skill development in rondalla music arrangements and composition (to suit the extra-curricular music programme at the National University). Tremolo music is a term more used today rather than plucked strings, marking a fundamental change in Singapore. Organology was the most challenging study and this was done privately and directly with industry sources. It first centered around important upgrades of the Filipino rondalla instruments (string termination, string alignment, wood grains and techniques of cutting the fret board that led to two distinct models: Model 3 Filipino Rondalla in just intonation, and Singapore Model Rondalla in Western equal tempered intonation. There was need also to re-study instrumental design, particularly the weight of the 14-pegged machine head of the Filipino rondalla with the design of the body parts. Research was done in the tremolo music diaspora. The role of the mandolin, which was introduced into rondallas in Singapore was also

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re-assessed. Eventually, after many trial models, five new rondalla types were created to provide choice in a tremolo music programme that may emerge in Singapore, Indonesia and the Mekong region: Model 3 Filipino Rondalla in just intonation; Singapore Model Rondalla in equal tempered intonation, Tremolo Rondalla in equal tempered intonation and Mandolin Rondalla in equal tempered intonation. Music directors can now have choice to apply instruments according to these types or mix and match across them and make their rondalla tiers interesting and relevant to the kind of music they choose to play: folk music in just intonation or classical and popular music in equal tempered intonation. Lastly, Rondalla pedagogy in Singapore has been based on the Heuristic Group Music Method which grew out of the teaching style of the late Professor Rudolfo De Leon at the College of Music at the University of the Philippines. The NUS Rondalla was the testing ground for this pedagogy which has sustained it for over three decades.

Dr. Joe Peters

He has had a long dual career in music and AV-IT at the National University of Singapore. Today, he has combined both areas into two distinct applications for graduate music education: a. Innovation and Technology in Music that marries a new technology (timeline music annotation) with an online management library system (TMAL) and an international online music index called MESI (Music Emissions Sustainability Index) that monitors music emissions worldwide from sonic emitters (radio, television, performances and recordings); b. Tremolo-Rondalla: A Heuristic Music Education Pedagogy for the Classroom, which this paper will explain. He was the first Singaporean to obtain a Masters in Music from the College of Music at the University of the Philippines. He read for his PhD at the University of Western Australia where he created a macro-measure for testing general music education curricula for its impact on societies (defined territories) they serve. A version of this measure is now called MESI. Currently, he is advising a number of graduate programmes in the Straits and Mekong regions on how, both, rondalla and technology innovation can be incorporated to enhance student learning and skills.

Rondalla In Singapore

The rondalla came to Singapore through Dr Joe Peters who studied this music form, in his spare time, while he was a post-graduate student at the College of Music at the University of the Philippines. He saw the potential for the rondalla within the extra-curricular music programme at National University of Singapore. Initially, the rondalla at NUS was for students who did not have a chance to learn music during their school careers. He expanded the Filipino model of the rondalla by adding new instruments, like the Spanish bandurria, the Italian mandolin and the Filipino mandola – the latter was re-constructed from a drawing that Dr. Peters

found in the Filipinianan Library at the University of the Philippines. Dr. Peters has re-designed the rondalla into a tier-based modular system, comprising one piccolo banduria, 4 Spanish or Filipino prime bandurias, 2-4 Italian Mandolins,2 Spanish or Filipino lauds; 2 Filipino octavinas; 2 Filipino mandolas; 1 prime guitar; 1 double bases; and assorted percussion. (Refer to Figure 1:Rondalla Tier)

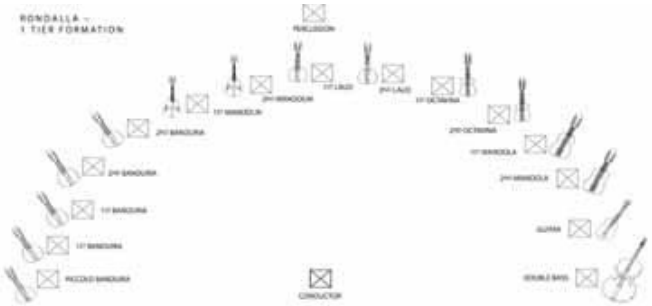

Figure. 1 : The Rondalla Tier

A limited number of rondallas were developed in Singapore. The first school rondalla was set up in 1984 at the Marymount Convent School. It was closed when the school closed about a decade later. Between 2000-2007 there were options for students at the Singapore Management University who took the music elective "Music East and West". Many students took this option every semester. About the same period the Phipillines Embassy in Singapore also had their own rondalla called The Embassy Strings, which comprised staff and residents in Singapore. Today, apart from NUS Rondalla, two other rondallas exists : St. Anthony's Church Rondalla and a para-professional one called the Singapore Tremolo Rondalla.

Rondallas are also being established in Indonesia and Thailand. Dr. Peters set up the Mahasarakham University Rondalla while he served, between 2012 -2013, as a Specialist professor. The only current active rondalla is at Buriram Rajabaht University. Likewise, the first rondalla in Indonesia was recently set up at Institut Seni Indonesia (ISI) at Solo, Surakata.

Issues in Organology, Musicology and Pedagogy

The 14 stringed Filipino banduria designed in 6 courses: 3 (G),3 (D),3 (A).2 (E),2 (B),1 (F#) is by all standards a unique instrument in the pantheon of tremolo musical instruments. This instrument has a related family with similar characteristics but varying sizes: piccolo and prime banduria, laud, octavina and mandola. Refer to Figure 2: The Filipino Banduria. The experience in Singapore with this Filipino model had the following reactions:

a. The string termination at the bottom of the instrument is full exposed and female players,in particular, always complain of their clothes being destroyed by that open metal parts;

b. The single 6th string (F#) posed some difficulty for tremolo articulation in relation to the rest of the strings that were either in double or or triple courses. Further more, this string was often limpid due to the short length of the body. Most arrangers and composers in Singapore have also tried to avoid using this string in their works;

c. The 14-pegged machine head was again quite heavy in relation to the length of the body and most players in Singapore seemed to slump forward in performance despite continuous prompting and training on this point;

d. Many listeners to rondalla music have continuously pointed out that the rondalla, as a whole, seems to be "out of tune". This is a complex issue and a problem that needs to be addressed as it also involves deep knowledge of music intonation, or more accurately, how the fret board is cut.

The literature on rondalla in the Philippines have all voiced that the Filipino rondalla had Spanish roots. Singapore acquired Spanish rondalla instruments (bandurria and Laud) and, thus, was able to learn from direct experience with both types within the same performing ensemble. Refer to Figure 3: The 12 Stringed Spanish Bandurria. The Spanish instrument has twelve strings in six courses and is one tone higher than the Filipino instrument: 2 (A),2 (E),2 (B).2 (F#),2 (C#),2 (G#). This has made its 6th string vibrant facilitating clean tremolo. The machine head is less heavy and balanced with its body structure. The string termination too is different - done in the usual European style where the string ends under a non-abrasive metal cover. Most important of all, the fret board is cut to Western equal tempered notation as compared to the just intonation fret board of the Filipino instrument.

Figure 2: Filipino Prime Banduria

Figure 3: The 12 Stringed Spanish Bandurria

In the Philippines, there are many thoughts about the development of the rondalla – a term used interchangeably with murga, comparsa, estudiantina, and many other localized terms, depending on context, region and even musical style. One persistent trend of thought, on the issue of heritage, is that the banduria (Filipino) and bandurria (Spanish) belong to the lute family of musical instruments, with their lineage traced to the 16 th century European cittern, which had an oval belly and six strings, and from there into antiquity. Culig (1995) strongly suggests that there was direct influence from the ancient Spanish mandurria, which means there was this relationship with the cittern and the lute family of instruments. This suggestion is already a prepared platform to do research on rondalla in the Philippines. However, there is contention, from the propagators of the modern mandolin orchestras in the Euro-America, who say that the cittern belongs to the mandolin family (http://www.flatlandramblers.com/cittern.htm)

Irving (2010, p.57) seems to also agree, that the Filipino banduria has a Spanish heritage, although he does provide more leads to expand thinking in this vein. What he provides is a drawing of a bandurrilla suggesting that it was the very first instrument brought to the Philippines. The instrument in this drawing looks like a variant of a 16th century lute. What Irving also believes is that the Filipino banduria was not directly influenced by Spain, but indirectly by Latin America, through the galleon shipping trade, a thriving business during the Spanish era. However, he, nor anyone else, in any other known literature, explored this link with Latin America. There are more varieties of the banduria in Latin America, which should provide good leads and opportunities for higher degree research. Other writers like Hila (1991), Pasamba (1985), Santos (2005) and Dadap (2007) have all reinforced the notion that the rondalla and the Filipino banduria are more contemporary developments, coming to prominence from the late 19th century and gathering momentum through the first half of the 20th century. They mention direct Spanish influence, but that seems to be part of the default thinking, as no one expands or explores the possible link with South America.

There is good reason to believe that the influence from Latin America was probably the route to the development of the 14 stringed banduria in the Philippines. Although Mexico was the point of departure for the galleon trade, there was much movement of people and goods on the South American continent to facilitate a rich abundance of goods for the galleon trade. The sailors and merchants on these ships would have come from far-flung areas of the continent, and elsewhere. Much like the Sea Trade Route between China and Europe also had goods from all of South East Asia through the efforts of the orang laut (sea gypsys). If one looks at the array of tremolo instruments in South America once can see close similarities between Filipino rondalla instruments and some instruments like the Bolivian and/or Peruvian bandurria, which had a variety of designs, with 8, 12, 16, and 20

strings, arranged mainly in 4 courses, and tuned to the guitar (dddd, ggg, bbb, eeee). There was also the Columbian bandola, which had 16 strings with tunings in 6 courses (f#f#, bb, eee, aaa, ddd, ggg) making this one of the closest relatives to the Filipino banduria. I would urge deeper research by young students (at the PhD level) to explore these connections with Latin American music. Refer to Fig 4: Columbian Bandola

Because of these fundamental differences between the Filipino banduria and the Spanish bandurria, new research must be done to find the true sources of the Filipino rondalla. One clue could be the role of the galleon trade between South America and Central Philippines that went on for centuries during the Spanish colonial period.

Figure 4: The Columbian Bandola

Rondalla was not expanded to the schools in Singapore and the Straits region en masse because of the need to understand and reconcile not only issues in organology, but in pedagogy and musicology as well. For academic purposes we can take the issues separately according to these subjects. In reality, all the issues are interrelated.

The work towards addressing the issues was a long drawn out one because the hope was that serious investigation and procedures for solutions would be based in any one of the academic institutions in Metro Manila or the Visayas. Over the decades there were individual attempts to improve the Filipino rondalla instruments and the mostly centered on making instruments with better wood and cleaner finish, particularly the fret board, where advanced players hungered for better feel and effortless fingering.

The research and development in Singapore was concerned with the feedback on tuning and intonation. When the rondalla performed folk music with folk singers there was not comment. However, when the rondalla played Western classical transcriptions or Spanish rondalla repertoire the comments were copious, caustic and quite negative for the survival of the group. That is the reason why the rondalla was never expanded into Singapore schools and the community at large. It survived for 35 years as a notable extra-curricular activity at the National University of Singapore. The issue of intonation had to be understood, acted upon and implemented according to what communities wanted – the just system for folk music and the tempered system for classical music.

The science behind the just and tempered systems (and even the free intonation system) was never at the centre of academic thought

in the Philippines because the rondalla had a comfortable niche serving folk song and dance. The Bayanihan developed by the late Dr. Lucrecia Kasilg was perhaps the zenith of this achievement and it became the symbol of the Philippines all over the world. Filipino rondallas that gather for the international festivals (from Philippines and other parts of the world) have all fallen into a mode of acceptance that this is a unique art form and the abundance of differences in intonation and pitch is part of the art. So rondallas perform folk, classical transcriptions and new music compositions without battering an eye as the audiences are specific and contained.Yet, these gatherings are filled with individuals talking enthusiastically and emphatically about the need for proper research and development that would address the problems that are preventing this music form from globalizing.

The research and development in Singapore concentrated on addressing the problems stated in this paper: string alignment, string termination; tempered intonation fret board cutting; and better wood, metal parts and instrument finish. Two luthiers worked in this, one in Vietnam and the other in the Philippines (O.C. Bandilla Company). After a decade of slow developments, the Vietnamese luthier created two distinct instrument types in tempered intonation: Tremolo Rondalla and Mandolin Rondalla. On the Philippines side also two distinct types were created: Model 3 Filipino Rondalla in just intonation and Singapore Model Rondalla in tempered intonation. The achievement on the Philippines side was that the first tempered rondalla with direct fret board cutting was created.The latter will remain classified by special agreement between Tremolo Rondalla Pte Ltd (Singapore) and O.C. Bandilla Company (Philippines). The very first handmade model of the latter was presented to the College of Music, University of the Philippines recently. Refer to Figure 6: Presentation Plaque of Singapore Model Prime Banduria.

Figure 6 : Presentation Plaque of Singapore Model Prime Banduria to UP College of Music

The development of four sets of rondalla types is to allow new growth for rondalla in Singapore by providing alternatives to potential demand. The demand for tremolo music is there. There were many other routes that could be taken to serve this demand. It is the Filipino rondalla experience that has been gained first hand, and so effort was put into this research and development to maintain rondalla as the prime concept for expansion of the music genre, as small groups of 8 seats

in a tier, in Singapore and the Straits and Mekong regions. Refer to Figures 7, 8, 9, and 10 for more information on these four types of rondallas.

Figure 7 : Model 3 Filipino Rondalla

This is the normal Filipino rondalla in just intonation but with the necessary upgrades: the wooden cap over the raw (no upgrade) metal string terminators; the string alignment changed to 3,3,2,2,2,2; and higher wood quality. The tuning remains traditional Filipino: F#, B, E, A, D, G. In Singapore this ensemble is used to accompany folk music and dance forms.

Figure 8 : Singapore Model Rondalla

This is the main achievement in the upgrade process. This Singapore model of the Filipino rondalla is in tempered intonation with the new fret board cutting method (classified). The string termination is now suspended over the front of the instrument. The string alignment is 3,3,2,2,2,2. The instrument uses better wood and metal parts and the initial test with performers show that the sound is much more vibrant and louder than Model 3. The tuning remains traditional Filipino: F#, B, E, A, D, G. In Singapore this ensemble will applied to Western classical transcriptions, Spanish Rondalla repertoire and new music.

Figure 9 : Tremolo Rondalla

The Tremolo rondalla was a bold attempt at creating a new design that addressed the shape, size and total balance of a tremolo instrument based on information from the tremolo diaspora: Russia to the Balkans, South America and other specific tremolo sites. The influence of the South American quarto and

charrango is of special significance. Through the natural brilliance of the luthier in Vietnam, this first functional model was created. This instrument has 10 strings in 5 courses (2,2,2,2,2) and tuned E,A,D,G,C. The dimensions are smaller than the Filipino rondalla and the finish and feel is smoother and lighter. The instrument is in tempered intonation and would be able to play classical music, Spanish Rondalla repertoire and new music.

Figure 10 : Mandolin Rondalla

The Mandolin rondalla is a derivative of the Tremolo rondalla so it follows much of the spcifications. This rondalla was created to allow the numerous violin family players who want the rondalla (tremolo) experience to convert efficiently and quickly. The tuning is G,D,A,E in all five sizes and the fret board is cut according to tempered intonation.

Hueristic Group Music Method

Musicology and pedagogy had to meet in the heuristic group music method that was used to sustain the NUS Rondalla over 35 years as a non-credit extra-curricular music activity. This heuristic method is based on the group teaching principles of the late Prof. Rudolfo Deleon who taught rondalla in the 70s and 80s at the UP College of Music. Through this method, the NUS Rondalla was trained to develop a self-sustaining system with self-paced instrumental instruction, music arranging (and composition for some) and conducting and musical leadership. Students were expected to also grow out of the phobia of printed music as scores for rondalla were not readily available like in the orchestra, band, and choir. This heuristic method launched a tradition of music writing making the music library of NUS Library today, one of the largest among roldallas in the world.. The heuristic method also catered for its own survival and growth through a “buddy system”, where seniors trained their juniors on a "I learn today and teach tomorrow" principle. This way, the dreaded annual turnover of new and untrained members that the extra-curricular music and dance programme at NUS faced, could be managed more efficiently in the NUS Rondalla. Many generations of NUS Rondalla members have since come and gone and many have carried music making into their adult lives.

The heuristic method predisposes that the teacher is able to co-relate music theory, rondalla technical information and a high degree of creativity. Because the rondalla strides two intonation systems, the just and the tempered, the way music is harmonized and performed requires teachers to have

teaching knowledge and skills that are advanced. One teacher is expected to teach a full tier. Refer to Figure 1: The Rondalla Tier. The students are presented with a set of charts and work sheets, which actually are not text to be studied but guides to understanding the knowledge and skills sets that are needed and the learning and music practice route to take to develop them. So students actually can do much self learning at their own pace and liking once they understand the fundamentals of music theory, instrumental knowledge and application, and performance. Each session of the heuristic approach is planned to end in a performance. Even the very first lesson – the performance work is based on the open strings of the rondalla and basic music theory that the work incorporates.

Heuristic Method Charts

The student and teachers files contain 10 charts (see below). The first five are basic bird's eye vision information that require the student and teacher to find where they are in terms of notes of the instrument, methods to locate and play the notes. Music theory is tucked into the charts and teachers are trained to uncover the information through construction activities using the worksheets. Once this is cleared a practice or exercise score is constructed based on scale and variations. Charts 6 -10 serve as menus to the exercises, and basic technique for right and left hands for the entire tier. There are three sets of score paper that would facilitate the exercises and the performance score for each lesson. All information is restricted to one page. Students are compelled to write their exercises between classes and bring copies for the whole tier to play. Even in the very first lesson there is a performance score based on jst the open strings but scored for the entire tier to play as a rondalla.

1. Rondalla Spectrum Chart and Worksheet (Fingering Chart)
2. Fret Board Chart and Worksheet
3. Cycle of Scales and Worksheet
4. Scale Variations Chart and Worksheet
5. Chord and Bass Line Construction Chart and Worksheet
6. Basic Technique Chart: Posture, Left Hand Muscle and Finger Power, Right Hand Tremolo Technique; Finger on Fret Simple Movement Rules.
7. Menus Chart: Tempo, Dynamics, Rhythm, Expressions, Symbols
8. Exercise Score Paper
9. Full Score Paper
10. Part Score Paper

The musical range of the rondalla is very wide because of the double bass, which is a symphony orchestra instrument with the lowest note (E) going down two octaves below the middle C (written) and more than two and a half octaves above the Middle C. Refer to Figure 11: The Rondalla Fingering Chart (which is the Rondalla Spectrum Chart that allows all in the tier to know where the notes are).

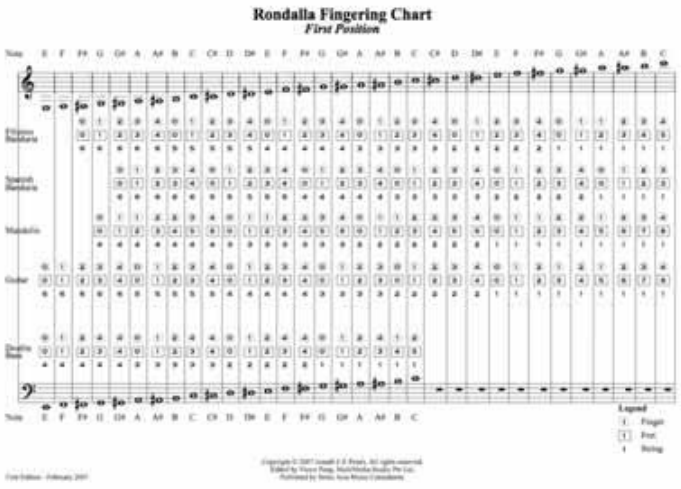

Figure 11: Rondalla Fingering Chart (Rondalla Spectrum Chart)

The worksheet for this chart is without the Finger. Fret and String locations. These can be easily found using the chart or calling on an allied chart called the Fret Boards: Rondalla. In the very first lesson the teacher already points the student to alternative positions for basic scales and based on student initiative they will use upper positions. This approach is fundamentally different from standard music methods that take some time to get to upper positions. Refer to Figure 12: Fret Boards: Rondalla.

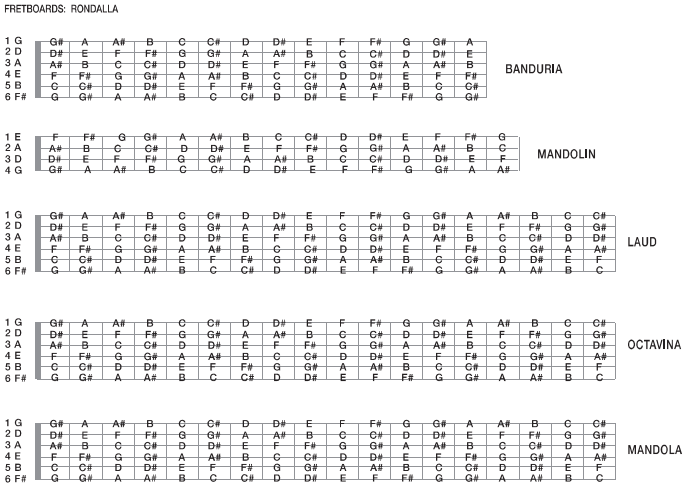

Figure 12: Fret Boards: Rondalla

Once the notes have been located then the music theory has to be brought in and for this the students are taught how to deconstruct the Cycle of Scales chart. Refer to Figure 13: Cycle of Scales. This chart usually frightens the beginner. But with expert explanation and practical demonstration, the teacher must show how scales are created and moved through the cycle, right and left, making the student understand how the sharps and flats get into each scale (major and the three basic minors). They then try creating a set scale using the worksheet (which is a blank Cycle of Scales chart). Once they understand this, then the cycle can be expanded to related Modes and Pentatonic scales. The latter are important to rondalla because of the just-tempered intonation that divides the repertoire. Where rondallas use both types of instruments then this extension into modes and pentatonic scales are important.

Usually, in the first lesson, the focus is on the open strings. But once the rondalla tier crosses into playing scales, then all the relevant charts come into play, building up exercises in an ensemble manner to sustain interest and concentration, and adding items from the menus to the exercise score so learning is progressive. Where instrumental technique and muscle exercises converge are in the variations. Refer to Figure 14: Variations on C Major Scale. The finger muscles are trained through these leaps in the scale. The exercise has to be done in all the scales that are constructed and played. While all this is going on the double bass and guitar are playing chords and bass lines to accompany the rondalla. Likewise, percussion parts are written for the ensemble exercises, always making the students aware that these constructions are also coming from the same menus.

The experience with the NUS Rondalla in Singapore actually developed students into arrangers while they were writing music exercises. One such example is this arrangement by the very first student president, Al Dizon, in what was a class exercise for the early beginners some three decades ago. Refer to Figure 15: Dandansoy Arranged by Al Dizon

Figure 13 : Cycle of Scales

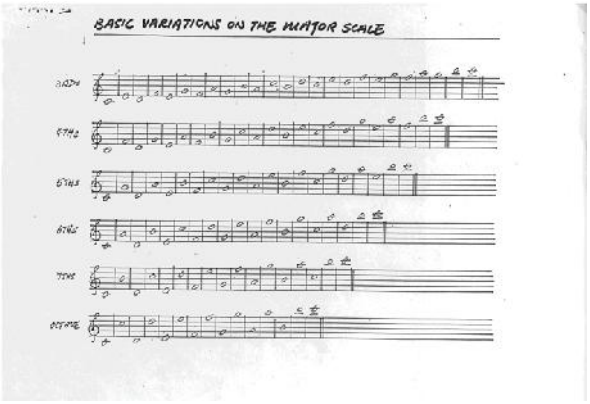

Figure 14 : Variations on C Major Scale

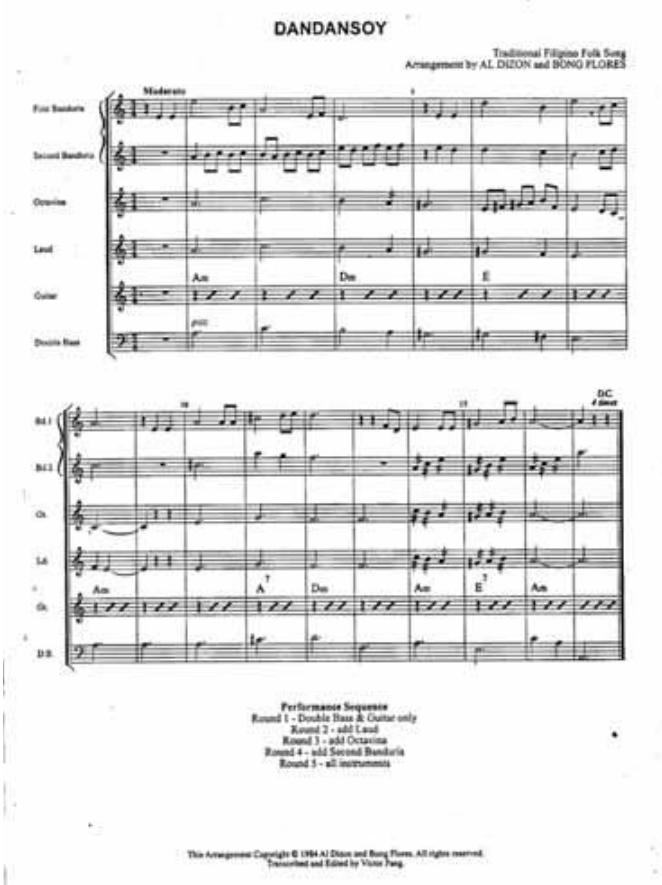

Figure 15 : Dandansoy Arranged by Al Dizon

Conclusion

Tremolo Rondalla as a music education tool could help bridge the erosion of just intonation based musical systems in the Straits and Mekong regions. The tussle between equal tempered and the myriad just intonation systems in these regions cannot be left to chance, because the just system will have to give way to the dominant equal tempered musical system as the latter dominates emissions from the emitters that represent the music industry – radio, television, recordings and performances. The challenge for all colleges training undergraduate, and more importantly, graduate and post graduate students, is to look for music education tools that can help Asia moderate and maintain a balance among the two systems, with sustainability of traditional and indigenous musical systems and cultures at the front of our minds. The task is urgent. Tremolo-Rondalla can contain these systems and at the same time provide an active and relevant music training tool particularly to allow fair fusion of folk dance, folk song and free intonation based music within the concept of tremolo music.

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