CANON SINGING AS A FORM OF MUSIC MAKING FOR THE DEVELOPMENT OF FUTURE MUSIC TEACHERS' HARMONIC HEARING

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Abstract
Harmonic hearing just like any other type of musical hearing develops in the process of music making. One of music teachers' professional skills is polyphonic singing a'capella, and the formation and development of this skill require a basis of previously acquired musical perceptions: a definite developmental level of hearing and intonation, systematic work on acquiring the necessary vocal skills. Canon is one of the most widespread genres of polyphony, and the main thing at singing it is a skill to independently lead one's part and thoughtfully introduce it into the common sounding.
Research aim*: to develop the canon classification and learning strategies for developing a canon singing skill.*
The main results of the study are the canon classification and learning strategies for developing a canon singing skill.
Keywords: *harmonic hearing, canon singing skill, future music teacher*

Introduction

The development of Latvian musical culture is tightly linked with the traditions of choral singing. Being a kind of collective music making, choral singing is an essential part of Latvian culture, an indispensable and through centuries tested factor of the spiritual and creative growth of the Latvian people (Zavadska, 2015).

Harmonic hearing is a component of musical hearing. Consistency and purposefulness in the development of harmonic hearing is a necessary prerequisite for a polyphonic choral singing. According to the model designed for the development of future music teachers' harmonic hearing (Zavadska & Davidova, 2017), music making is one of the ways and means to develop the hearing. The purity of intoning in a choir, in a choral ensemble depends on the developmental level of harmonic hearing.

Criteria of the development of harmonic hearing in the direction *Music making – Polyphonic music making* may be as follows: a) vocal improvisation on a folk song theme, b) singing folk song arrangements, c) singing choral compositions by contemporary composers (in different vocal techniques), d) free music making *a'cappella* or with the accompaniment – canon singing (Davidova & Zavadska, 2016). Moreover, music teachers consider that at schools, just the canon singing is the most frequently used form of music making in groups during music lessons (Zavadska & Ignatjeva, 2014). Canon is one kind of choral and ensemble music making, which requires the ability to independently lead one's own part and thoughtfully interweave it into the joint polyphonic sounding.

Countryman, Gabriel and Thompson (2015) mentioned that usually canons are treated as pedagogical exercises rather than sources of compositions for an ensemble or choral repertoire performance. This is why future music teachers have to know how to use canons during their pedagogical practice to teach and prepare students for a polyphonic singing a'capella. According to Lorenz (1995), canons *"…provided an extremely efficient way to introduce polyphony; students were able to practice and master the monophonic versions before making the relatively easy transition into polyphony"* (p. 84). Ries (2018) underlines that singing canons a) reinforces fine unison singing, b) develops multi-part awareness which enhances musical independence, harmonic awareness and improves intonation, as well as c) provides a satisfying musical experience.

However, there is an obvious gap in the methodology of music education regarding the using of canons for the development of harmonic hearing.

Research aim: to develop the canon classification and learning strategies for developing a canon singing skill.

Research method: the analysis of methodological and theoretical literature, as well as pedagogical technologies within the context of the study topic.

Canon: Nature, types and forms

Canon is one form of multi-voiced polyphonic music and is closely linked with the development of musical culture in Europe. Jordania (2016) defines polyphony as a type of music, where at a time more than one pitch is heard. The more fundamental samples of canon represent an integrity organized in a special way incorporating imagery-emotional richness of content with a strictly verified musical structure (Feierabend, 2014).

Etymologically, the word 'canon' comes from the Greek κανών - a rod, bar, ruler (e.i., actually a bar as an object-measure), a rule. This is a form of polyphonic music based on strict imitation, where the melody of a leading voice is repeated by other voices after a definite interval of entry. The melody that sounds from the very beginning of a canon is called *proposta* (also*: a leader/dux*) while voices entering later - *riposta* (also: *a follower/comes*). In a canon, voices-followers may be precisely in unison with a melody-leader (and such canon is called a simple canon) or they may be derived from it by applying certain rules (Холопов, 2015).

Based on the analysis of canons' classifications offered by different authors (Owen, 1992; Feierabend, 2014; Вишнякова, Соколова & Мнацаканян, 2015; Холопов, 2015; Hammil, 2016), researchers offer the following classification of canons:

- Number of voices;
- Temporal difference between entries of voices;
- Interval between entries of voices (canon in tonic, fourth, fifth, octave etc.);
- Proportion between *proposta* and *riposta* (direction of the *riposta* movement in relation to *proposta*, tempos of *ripostas*);
- Exactness of repeating intervals of *proposta* by *ripostas*;
- The number of themes being imitated simultaneously (simple canon, double canon etc.);
- Forms of imitation (canon in augmentation, diminution).

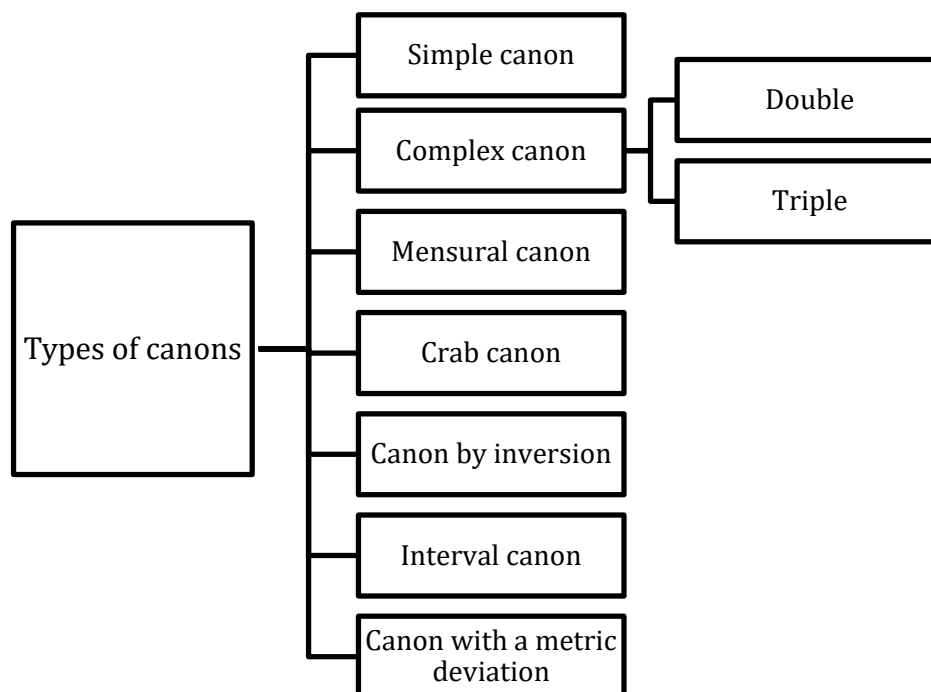Figure 1 (compiled by the authors) schematically illustrates types of canons.

Figure 1. Types of canons

Complex canon or double-triple has different themes; besides, every theme has its own voices-followers. For example, a double canon has two propastas or two ripostas, it can be finite and infinite. The minimal number of voices in a double canon is four.

Interval canon – voices-followers imitate the interval of the leading voice. In this case, an exact correspondence of riposta with proposta is not obligatory. Interval proportion between the neighboring sounds of a leading voice can be changed for that of the same name in a voice-follower, for instance, a minor second for major. If imitation is exact, canon is called an exact canon, if the imitation is not precise, a canon is called diatonic.

In canon by inversion riposta is the inversion of proposta. In the case when a leap is made in a melody of proposta, an inverse leap emerges in an analogous place of the

melody of ripostas. If the distance between intervals of a leap in proposta and riposta remains the same, canon is called a mirror canon.

The structure of a crab canon is based on the principle of a backward motion (in retrograde), when the melody of riposta moves in the reverse direction. These canons are called also table canons: the canon score could be placed in the center of a table, and the leader would perform it from left to right, while the follower would do it from right to left.

In a mensural canon (proportional canon) riposta imitates proposta altered in a temporal respect, i.e., each tone of a riposta melody can be augmented or diminished a certain number of times in respect of proposta.

In a canon with a metric deviation a metric deviation of parts takes place in a melody-follower: strong for weak and vice versa.

According to the structure (a form of the whole) canons are classified as follows:

- Canon with voices finished simultaneously, in which the imitative polyphonic texture in the final cadence is not held;
- Canon ending in voices interrupted in turn, but preserving the imitative character of writing;
- Infinite canon in which the end of the canon changes into its beginning (such a canon can be performed infinitely long). A variety of the infinite canon is a canonic sequence.

Depending on the way canons are written down, such canons as closed, puzzle (also: riddle/enigma) and simple (open) canons are distinguished.

At the earlier stages of the development of canonic forms, composers did not fix all voices, but put down only proposta adding special notes indicating time, interval and succession of riposta entries. This type of canon is called closed. In a puzzle canon, only the main voice is written down, without indicating rules when voices-followers enter. This kind of writing down allowed the performers to improvise. The most widespread type of fixing is the open canon, where all voices are written down (Вишнякова, Соколова & Мнацаканян, 2015).

Within the context of definitions and classifications of canon types, the term 'round' should also be mentioned. Hammil (2016) says that 'round' is generally a lighter canon for singing whose 'rule' is simply that the successive voices follow the first in exact imitation on the same notes at a set time interval, continuing over and over until an arbitrary end point. Each voice returns to the beginning after singing the song through, and so the piece turns around in a circle. In musical canon jargon, a round is an infinite canon (no set ending) at the unison (beginning on the same pitch). Author also underlines that canon and round are not synonyms: the terms 'round' and 'canon' are often used interchangeably, though there are many canons that are not rounds. Songs with exact imitation of the first voice are often referred to as canons rather than rounds when one or both of the following two conditions are met:

- Successive parts enter quickly in imitation, perhaps after only a few beats or a measure or two (and therefore do not necessarily divide the entire song into long sections of phrases that all harmonize with each other);
- The piece has a finite ending, with notes added to some parts to create this set ending (Hammil, 2016).

Learning Strategies for Developing a Canon Singing Skill

Work on a canon can become a useful development tool in person's practical work on polyphony in ensemble or a choir, i.e. singing canons is a link between a one-voiced and multi-voiced performing.

A. Preparatory stage

On the one hand, singing canons is quite an easy task, since it seems that it is enough for everybody to learn one single melody and then it can be sung in several voices. However, to perform a canon qualitatively and competently indeed, actually, appears not as simple as that. This is why practical work on canons is preceded by a preparatory stage.

In miming canon the succession of certain movements of facial muscles becomes a theme. And sounds-exclamations, swinging of heads, several gestures can be also added to miming. The succession of grimaces can become a theme of a miming canon as well.

The theme of a speech canon is a poetic text performed in a specifically organized rhythm. If a canon has some rhythmic peculiarities, before singing it is necessary to work separately on such difficulties as a dotted rhythm, syncope, notes with a dot etc.

B. Initial stage

At the initial stage of learning a canon the learners can be offered to perform a rhythmic canon by the support of musical instruments (for example, one voice – a drum, two voices – a maraca).

Vishnyakova, Sokolova and Mnatzakanyan (Вишнякова, Соколова & Мнацаканян, 2015) suggest the following succession of work on the composition (canon):

- Singing the canonic melody for the first time is the introductory stage. The task of this stage is to introduce the learners to a musical material. The canonic melody is performed from the beginning to end in a slow tempo;
- Singing for the second time involves work on the identified difficulties and phrasing;
- Singing for the third time implies specifying bowings and a dynamic plane, building culminations;
- Singing for the fourth time is performed in unison with the text. Work is done on the nature of the composition and difficulties with diction;
- In final singing performers are divided into groups, the moment of starting every part and order of entry of voices are discussed. The moment of the end of the canon is also specified. Besides, at the preparatory stage the performance of canons can be accompanied by the support on the piano.

Professor Ardelle Ries from University of Alberta (Ries, 2018) gives their recommendations on teaching the learners canons:

- Step the beat while singing;
- Step the beat & clap the rhythm while singing OR step the beat & clap the rhythm without singing;
- Sing the canon in unison: class is divided into groups - groups clap the rhythm or beat or sing - switch parts;
- Sing the canon in unison: teacher sings or claps the second voice; students identify what teacher is doing;
- Sing the canon: class is divided into two groups - both sing, but sing in canon;
- Choose smaller and smaller groups to sing the song in canon until only individuals.

Hammil (Hammil, 2016) maintains that when singing rounds, there are many factors to consider that affect the sound considerably. Therefore, she encourages lots of experimentation with the following variables:

- Rounds will sound quite different depending on the ***octave range*** and therefore the order of female/male voices, as that changes the interval structures throughout the song.
- They will sound very different depending on the ***number of parts*** used. A round can begin with two parts, for example, and then add successive parts in later cycles, or all parts can enter as soon as possible and create the fullest sound possible from the start. Some rounds, especially those with many short parts, actually might sound preferable when sung with fewer parts because that allows the sounds to follow in a changing wave throughout the song, and avoids having every short phrase sound identical and somewhat 'thick'.
- The ***order of the entering voices*** affects the sound dramatically. Singing every other part first — and then adding the intervening parts in later cycles — creates an interesting kind of 'space' and harmonic relationship that is appealing in some rounds. This is quite different from the immediate fullness one hears when all the parts enter right away in their numeric order.
- There is always an interesting decision to be made about ***how to end a round:*** parts can drop out as they complete their last cycle, or they can keep going until a designated moment when all parts end together chordally. If they drop out, they can either stay out or continue in a variety of ways: they can keep repeating their last phrase so all parts end together in unison, they can hum or "ooh" until all parts finish, they can simply rejoin the last line of the last part for a full unison ending, or they can re-enter with a harmonized coda, or some other set ending.
- ***Whether to accompany*** a round with instrumentation or sing it acapella is an interesting decision to make. With accompaniment, one risks obscuring the rich counterpoint of the voices, but the resulting 'grounding' and enhancement that accompaniment can provide is often worth that risk.

Analysing conceptions of different authors (Owen, 1992; Boshkoff & Kathy, 1997; Feierabend, 2014; Вишнякова, Соколова & Мнацаканян, 2015; Холопов, 2015; Hammil, 2016; Beck, 2017; Caldwell, 2017) and long pedagogical experience, authors of the article offer learning strategies for developing a canon singing skill:

- Sing in a circle when possible, with all parts facing each other. This not only provides the best acoustics for hearing all the parts, but helps singers hear the flow of the cycling melodies and harmonies;
- Try practicing without words, on a common vowel sound like "du" or "na" when striving to create a good harmonic blend; the harmonies might lock in more tightly than when every part is singing different words with different consonant and vowel sounds;
- Hearing a round played instrumentally will also reveal the harmonies better for the same reason: it eliminates the distortion of the pure tones of the chords from the singers' different consonants and vowels occurring in their different parts at the same time;
- Try standing in many small groups (quartets for 4-part rounds, trios for three, etc.) with all the "Part 1" people beginning first and all the "Part 2" people next, etc.;
- Adding movement while singing some rounds can be very exciting:
    - Have everyone start walking randomly around the room after all the parts are going, singing to others they greet or pass;
    - Create choreography for the different lines of a piece and watch the cycling flow of similar movements add a visual element to the counterpoint;
- Try singing one cycle (the 3rd time through the round, for example) on "ooh" (no words) and then bring the words back in on the next cycle. This can add variety to any song, but in rounds singing, the staggered changes to "ooh" and back to words are particularly effective;
- Sing very softly for practice sometimes. This helps remind everyone to avoid out-singing other parts in order to hear their own, and encourages listening more intently to the interrelationship of all the parts;
- To hear the beauty of the whole round with balanced parts, take turns standing in the center of the rounds singers simply to listen;
- Although equal volume in all parts is generally a good goal for balancing parts, there are phrases in some songs that sound great when they are brought out strongly;
- Having a leader in front of each part is very helpful when singing with a new group or a large group of people. When singing rounds with young children, use individual children as leaders of each part;
- Rounds provide a perfect 'take off' for vocal improvisation. After singing a round through several cycles, try improvising on a phrase or a word or a whole sentence from the round while everyone keeps singing.

To sing several canonic melodies is very useful at the initial stage of learning polyphony, since this allows developing skills of auditory control (Поплянова, 2009). Troughout many years, a lot of textbooks on music offer to introduce multi-voiced (two-voiced) singing of canons in Grade 3rd (8-9 years old), beginning it with the simpliest rounds (see Figure 2).

Figure 2. Frere Jacques
(https://dic.academic.ru/pictures/wiki/files/89/YB4001Canon_Frere_Jacques.png)

Levitin (2006) quotes recent brain research that provides a neuroscientific reason for this time-honoured practice of not introducing canon singing before Grade 3. The attention system of children under the age of eight, *"specifically the network that connects the cingulated gyrus and the orbitofrontal regions of the brain cannot adequately filter out unwanted or distracting stimuli"* (p. 224) before about age eight.

As soon as the children are ready for a vocal development and are able to sing keeping time, canons are an excellent introduction to polyphonic singing. Having learnt the material in monophonic sounding first, they later have greater freedom at performing polyphonic canon.

Quite frequently, folk songs serve as a material to teach singing canon. A lot of contemporary collections of canons are based on folk songs of different nationalities. This tradition is observed in the Latvian music culture as well (see Figure 3). Singing folk song canons strongly contributes to learning polyphony, since intoning a familiar melody promotes the development of the skill of hearing one's own as well as a parallel part, and the development of auditory control.

Bēdu, manu lielu bēdu

Figure 3. Latvian Folksong

Such canons are a rich source of materials for ensembles or choral groups which include boys undergoing the break of their voice. For instance, while the unchanged voices sing a canon, the voices which are changing can sing sounds of pedals, or different ostinato melodies.

Conclusion

Singing canons enhances the development of the ability to distribute attention between voices and auditory control, which, in turn, has a positive effect on the development of harmonic hearing. The canon singing strategies proposed by authors have been developed and tested during many years of pedagogical work. Experience shows that the use of these strategies significantly affects the development of students' harmonic hearing. However, to begin canon singing is recommended only after the age of eight, as by this time orbitofrontal regions of the brain responsible for the system of attention are developing.

References

Beck, A. (2017). *The Vocalize! Canon collection.* New York: Alfred Music.

Boshkoff, R. & Kathy, S. (Eds.) (1997). *The Sounds of Rounds and Canons.* Organization of American Kodály Educators.

Caldwell, E. (2017). *Teaching Canon Singing.* Retrieved 08.02.2020 from https://caldwellorganizedchaos.blogspot.com/2017/01/teaching-students-to-sing-partner-songs.html

Countryman, J., Gabriel, M. & Thompson, K. (2015). Children's spontaneous vocalisations during play: Aesthetic dimensions. *Music Education Research, 18 (1),* 1-19.

Davidova, J. & Zavadska, G. (2016). The model of the development of future music teachers' harmonic hearing: Results of the pedagogic experiment. In O. Holz, M. Aleksandrovich, & H. Zoglowek (Eds.), *Current Trends in Higher Education in Europe* (pp. 78-101). Berlin: LIT Verlag.

Feierabend, J. (2014). *The Book of Canons.* Chicago: GIA Publications. Retrieved 22.08.2019 from https://www.giamusic.com/store/resource/the-book-of-canons-print-g8552

Hammil, J. (2016). *Rounds & Partner Songs*, *vol. 1.* Amazon Warehouse. Retrieved 15.09.2019 from https://www.amazon.com/Joanne-Hammil-Rounds-Partner-Songs/dp/B0000CDUU2

Jordania, J. (2016). *What Is Polyphony, or How Should We Define It?* Retrieved 12.10.2019 from http://polyphony.ge/en/what-is-polyphony-or-how-should-we-define-it-3/

Levitin, D.J. (2006). *This is Your Brain on Music: The science of a human obsession.* New York: Dutton.

Lorenz, R. (1995). Canon as a pedagogical tool: Applications from sixteenth century Wittenberg. *Indiana Theory Review, 16,* 83-104. Retrieved 15.09.2019 from https://scholarworks.iu.edu/dspace/bitstream/handle/2022/3741/LorenzCanonV16.pdf

Owen, H. (1992). *Modal and Tonal Counterpoint: From Josquin to Stravinsky.* Schirmer Books.

Ries, A. (2018). *Let's Sing the Circle: The joy and wonder of canons!* Retrieved 14.08.2019 from https://www.omea.on.ca/wp-content/uploads/2018/10/RiesOMEACanonHandout.pdf

Zavadska, G. (2015). *The Development of Future Music Teachers' Harmonic Hearing in a Higher Education Establishment.* Accessible: https://du.lv/wpcontent/uploads/2015/12/Zavadska_kopsavilkums.pdf

Zavadska, G. & Davidova, J. (2017). The didactic model of developing harmonic hearing as a basis for designing a teaching aid. In L.G. Chova, A.L. Martinez, & I.C. Torres (Eds.), *Proceedings of the 10th annual International Conference of Education, Research and Innovation* (pp. 2928-2933). IATED Academy. doi: 10.21125/iceri.2017.0828

Zavadska, G. & Ignatjeva, S. (2014). The analysis of results obtained in the second stage of the pilot study on issues of developing music teachers' harmonic hearing. *Problems in Music Pedagogy, 13(1),* 33-55.

Вишнякова, Т., Соколова, Т. & Мнацаканян, Э. (2015). *Каноны для хора* [Canons for a Choir]. Санкт-Петербург: Планета музыки (in Russian).

Поплянова, Е. (2009). *Уроки господина Канона. Веселые игры и всякая всячина для детей* [Lessons of Mr. Canon]. Санкт-Петербург: Композитор (in Russian).

Холопов, Ю. (2015). *О принципах композиции старинной музыки* [On Principles of Ancient Music] Москва: Научно-издательский центр "Московская консерватория" (in Russian).