

Canonic Offerings

for string quartet

Clifton Callender

2013

Canonic Offerings

For string quartet

Duration ~10'

Canonic Offerings is based on my work with canons that have an infinite number of solutions. These are maximally self-similar melodic lines that can be combined successfully and performed simultaneously by any number of voices, each voice at its own tempo yielding either rational or irrational tempo ratios, with the melody moving either forward or backward. In *Canonic Offerings* I have selected a small number of these combinations based on three such melodies, attempting to give the flavor of the combinatorial possibilities within the context of a unified (and finite) composition.

Canons two, four, and five are based on the concept of continuous *accelerando* throughout. Arrows from one tempo marking to another indicate a continuous acceleration from the first to the second tempo. The changes of tempo should be as smooth and steady as possible. For practical notational purposes, faster tempos are regularly reinterpreted as slower tempos using *metric modulation*. For example, a tempo indication of $\text{♩} = \text{♪} = 60$ means that the tempo at the end of the previous measure is $\text{♩} = 60$. The half note is then reinterpreted as a quarter note, so that the tempo at the beginning of the measure is $\text{♩} = 60$. All tempo indications are relative to an initial tempo of $\text{♩} = 72$. If the initial tempo is slightly faster or slower than $\text{♩} = 72$, then all of the subsequent tempo indications will need to be adjusted accordingly.

The complex tempo ratios (e.g., 11:4, 28:12:7:3, and $\sqrt[4]{8}$) in canons two, four, five, and possibly three require the players to use click tracks for synchronization. These click tracks are stereo files that contain separate tempo tracks on the right and left channels. Players should listen only to the single channel that is indicated for their part.

Click tracks are available by contacting me at clifton.callender@gmail.com.

Canonic Offerings

Score

Introduction / Canon 1

Clifton Callender

$\text{C} = 72$

A

Violin 1 *legato*
Violin 2 *mp*
Viola
Cello *legato*
mp

Vln. 1
Vlc.

Vln. 1
Vlc.

Vln. 1
Vlc.

Canonic Offerings
Introduction / Canon 1

14

Vln. 1

Vlc.

B $\bullet = 120$ *legato senza vib.*
light bow

Vln. 1

Vln. 2

Vla.

Vlc.

23

Vln. 1

Vln. 2

Vla.

Vlc.

Canonic Offerings
Introduction / Canon 1

3

28

Vln. 1

Vln. 2

Vla.

Vlc.

This section shows four staves of musical notation. Vln. 1 and Vln. 2 play eighth-note patterns with grace notes. Vla. and Vlc. provide harmonic support with sustained notes and bass lines. Measure 28 starts with a forte dynamic. Measures 29-30 show a transition with eighth-note chords. Measure 31 begins with a piano dynamic. Measure 32 concludes with a forte dynamic.

33

Vln. 1

Vln. 2

Vla.

Vlc.

This section shows four staves of musical notation. Vln. 1 and Vln. 2 play eighth-note patterns with grace notes. Vla. and Vlc. provide harmonic support with sustained notes and bass lines. Measure 33 starts with a forte dynamic. Measures 34-35 show a transition with eighth-note chords. Measure 36 begins with a piano dynamic. Measure 37 concludes with a forte dynamic. The instruction "mf" appears below the Vln. 1 staff at the end of measure 37.

attacca

*sempre accelerando **

Canon 2

A $\text{♩} = 60$ — *accel.* $\text{♩} = 60$ — *accel.* $\text{♩} = 60$ — *sempre simile*

Violin 2 

Vln. 2 $\text{♩} = 60$ — $\text{♩} = 90$

Vla. $\text{♩} = 60$ — *accel.*

Vlc. $\text{♩} = 60$ — *sempre simile*

Vla. 

Vla. $\text{♩} = 60$

Vlc. 

* Click track is a stereo file. Violins 1 and 2 listen to the right channel; Viola and Cello listen to the left channel.

Canonic Offerings
Canon 2

60 → 60

Vln. 1

f

Vln. 2

f

Vla.

f

Vlc.

mf f mf mp f mp p

60

Vln. 1

Vln. 2

Vla.

60

Vln. 1

Vln. 2

Vla.

60

Vln. 1

Vln. 2

Vla.

180

mf f mf mp f mp p

Canonic Offerings
Canon 2

6

Vln. 1

Vln. 2

B

→ $\text{♩} = 160$

$\text{♩} = 120$ → $\text{♩} = \text{♩} = 90$ → $\text{♩} = \text{♩} = 60$

Vln. 1

Vln. 2

($\text{♩} = 82.5$) → $\text{♩} = \text{♩} = 60$

Vln. 1

Vln. 2

Vla.

Canonic Offerings
Canon 2

Musical score for Canon 2, featuring four staves:

- Vln. 1:** Playing eighth-note patterns primarily in B-flat major.
- Vln. 2:** Playing eighth-note patterns primarily in A major.
- Vla. (Bassoon):** Playing eighth-note patterns primarily in B-flat major.
- Vlc. (Double Bass):** Playing eighth-note patterns primarily in A major.

Performance instructions and dynamics:

- Measure 1:** *mf cresc. poco a poco*
- Measure 2:** *alf*
- Measure 3:** *cresc. poco a poco*
- Measure 4:** *mf cresc. poco a poco*
- Tempo:** $\text{d} \cdot \text{d} = 60$ (Measure 1), $\text{d} \cdot \text{d} = 90$ (Measure 2), $\text{d} \cdot \text{d} = 60$ (Measure 3)

Canonic Offerings
Canon 2

8

Vln. 1

Vln. 2

Vla.

Vlc.

Vln. 1

Vln. 2

Vla.

Vlc.

$\text{tempo} = 60$

$\text{tempo} = 90$

al f

al f

$\text{tempo} = 60$

cresc. poco a poco

cresc. poco a poco

Canonic Offerings
Canon 2

d = 180

Vln. 1 
al f possibile

Vln. 2 
al f possibile

d = d = 60

Vla. 

Vlc. 

d = 180

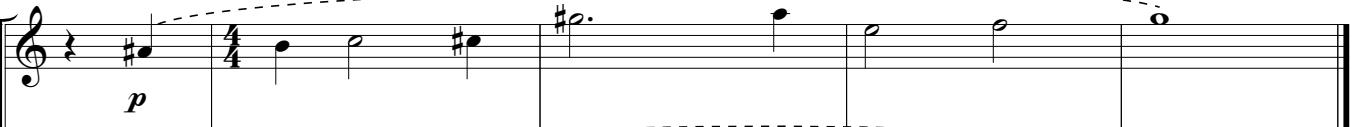
Vla. 
al f possibile

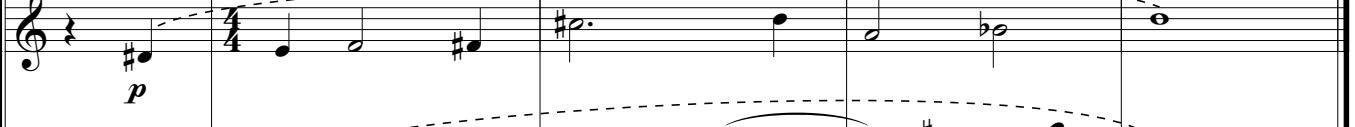
Vlc. 
al f possibile

d = d = 90 (click track ends)
senza vib., semplice

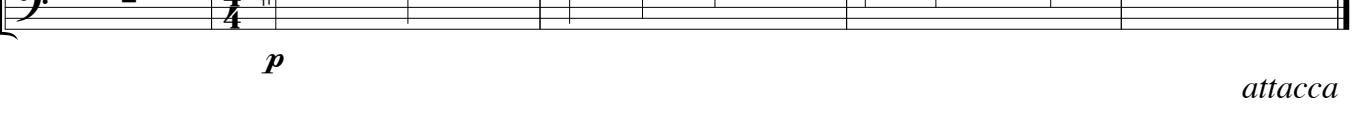
poco accel.

molto ritardando

Vln. 1 

Vln. 2 

Vla. 

Vlc. 

attacca

Canon 3

A

Violin 1 $\text{♩} = 101$ *con sord.* *legato cantabile*

Viola $\text{♩} = 101$ *con sord.* *legato cantabile*

Cello $\text{♩} = 72$ (*senza sord.*) *legato cantabile*

Vln. 1 $\text{♩} = 101$ *ppp* *p*

Vla. $\text{♩} = 101$ *ppp* *p*

Vlc. $\text{♩} = 72$ (*senza sord.*) *ppp* *mp*

5

10

* Stereo click track is available. Violin 1 and Viola listen to the right channel; Cello listens to the left channel.

Canonic Offerings
Canon 3

15

Vln. 1

Vla.

Vlc.

20

Vln. 1

Vla.

Vlc.

$\bullet = 120$

B

26

Vln. 1

Vln. 2

Vla.

Vlc.

Canonic Offerings
Canon 3

12

32

Vln. 1

Vln. 2

Vla.

Vlc.

mp

legato

f

mf

p

37

Vln. 1

Vln. 2

Vla.

Vlc.

43

Vln. 1

Vln. 2

Vla.

Vlc.

Canonic Offerings
Canon 3

Musical score for Canon 3, page 13, featuring four staves: Vln. 1, Vln. 2, Vla., and Vlc. The score is in common time, key signature is one flat, and the tempo is indicated by a '49' above the first measure.

The instrumentation includes:

- Vln. 1:** Playing eighth-note patterns, dynamic *f*, with slurs and grace notes.
- Vln. 2:** Playing sixteenth-note patterns, dynamic *p*, with sustained notes and grace notes.
- Vla.:** Playing sustained notes with grace notes, dynamic *mf*.
- Vlc.:** Playing sustained notes with grace notes, dynamic *pp*.

Performance instructions include *sub.* above the first measure, *attacca* at the end of the section, and dynamic markings *f*, *p*, *mf*, *pp*.

attacca

Canon 4

v.1 { G clef
v.2 { G clef

va. { F# clef
vc. { C clef

$\text{♩} = 120$ ritardando
pp cresc.

$\text{♩} = 120$ rit.
al f

$\text{♩} = 180$ ritardando
mp f
mp f

$\text{♩} = 120$ rit.

* Click track is a stereo file. Violins 1 and 2 listen to the right channel; Viola and Cello listen to the left channel.

Canonic Offerings
Canon 4

15

Handwritten musical score for Canon 4, consisting of six staves of music. The score includes dynamic markings such as *al*, $\text{♩} = \text{♩} = 180$ rit., *f*, and $\text{♩} = \text{♩} = 120$ rit. The music features various note heads, stems, and bar lines, with some notes having arrows indicating direction or specific performance techniques.

Staff 1: *al* $\text{♩} = \text{♩} = 180$ rit.

Staff 2: *f*

Staff 3: $\text{♩} = \text{♩} = 120$ rit.

Staff 4:

Staff 5:

Staff 6: $\text{♩} = \text{♩} = 120$ rit.

Canonic Offerings
Canon 4

Handwritten musical score for Canon 4, featuring five staves of music with various dynamics, articulations, and performance instructions.

Staff 1: Measures 1-5. Key signature: B-flat major. Dynamics: $\text{al } \text{♩} = \text{♩} = 120$ rit. Articulations: up-arrows above notes in measures 3-5.

Staff 2: Measures 1-5. Key signature: B-flat major. Dynamics: $\text{al } \text{♩} = \text{♩} = 60$ accel. Articulations: slurs and grace notes.

Staff 3: Measures 1-5. Key signature: B-flat major. Dynamics: $\text{al } \text{♩} = \text{♩} = 60$ accel. Articulations: up-arrows above notes in measures 3-5.

Staff 4: Measures 1-5. Key signature: B-flat major. Dynamics: $\text{al } \text{♩} = \text{♩} = 60$ accel. Articulations: up-arrows above notes in measures 3-5.

Staff 5: Measures 1-5. Key signature: B-flat major. Dynamics: $\text{al } \text{♩} = \text{♩} = 60$ accel. Articulations: slurs and grace notes.

Performance Instructions:

- Staff 1:** $\text{al } \text{♩} = \text{♩} = 120$ rit.
- Staff 2:** $\text{al } \text{♩} = \text{♩} = 60$ accel.
- Staff 5:** $\text{al } \text{♩} = \text{♩} = 60$ accel.
- Measure 3:** f — mp cresc.
- Measure 4:** mp cresc.

Canonic Offerings
Canon 4

17

al d = 60 accel.

al d = 60 accel.

al d = 60 accel.

Canonic Offerings
Canon 4

$\text{♩} = 160$ rit.

12

13

14

$\text{al } \text{d} = \text{d} = 90 \text{ accel.}$

al ff

al ff

$\text{al } \text{d} = \text{d} = 60 \text{ accel.}$

f

$\text{al } \text{d} = \text{d} = 120 \text{ rit.}$

$\text{al } \text{d} = \text{d} = 60 \text{ accel.}$

Canonic Offerings
Canon 4

19

al d = d = 120 rit.

al d = d = 60 accel.

al d = d = 60 accel.

al d = d = 120 rit.

al d = d = 160 rit.

al d = d = 60 accel.

*decrec.
d = d = 60 accel.*

decrec.

20

Canonic Offerings
Canon 4

al $\text{♩} = \text{♩} = 120$ rit.

decresc.

mf

al mf

decresc.

al $\text{♩} = \text{♩} = 120$ rit.

al mp

al $\text{♩} = \text{♩} = 90$ accel.

al $\text{♩} = \text{♩} = 120$ accel.

mp

n

al mf

pp

pp

al $\text{♩} = 60$

mp

mp

$\text{♩} = 72$

Canon 5

A

expressive, but with only a little vibrato

legato full bow

Violin 1

Musical score for Canon 5 section A. The score consists of four staves: Violin 1, Violin 2, Viola, and Cello. All staves are in common time (indicated by '4') and major (indicated by a sharp sign). The key signature changes to A major (no sharps or flats) at measure 7. The dynamics are marked with 'f' (fortissimo) and 'ff' (fortississimo). The instruction 'legato full bow' is given for all parts.

Vln. 1

Vln. 2

Vla.

Vlc.

Musical score for Canon 5 section A continuation. The score consists of four staves: Vln. 1, Vln. 2, Vla., and Vlc. All staves are in common time (indicated by '4') and major (indicated by a sharp sign). The key signature changes to A major (no sharps or flats) at measure 7. The dynamics are marked with 'f' (fortissimo) and 'ff' (fortississimo). The instruction 'legato full bow' is given for all parts.

Vln. 1

Vln. 2

Vla.

Vlc.

Musical score for Canon 5 section A continuation. The score consists of four staves: Vln. 1, Vln. 2, Vla., and Vlc. All staves are in common time (indicated by '4') and major (indicated by a sharp sign). The key signature changes to A major (no sharps or flats) at measure 7. The dynamics are marked with 'f' (fortissimo) and 'ff' (fortississimo). The instruction 'legato full bow' is given for all parts.

Canonic Offerings
Canon 5

B

*sempre accelerando **

accel. → $\text{♩} = \text{♪} = 72$ → accel. → $\text{♩} = \text{♪} = 72$

Vln. 1

Vln. 2 \textbf{p} cresc. poco a poco

Vla. \textbf{p} cresc. poco a poco

Vlc. \textbf{p} cresc. poco a poco

26 *sempre simile* → $\text{♩} = \text{♪} = 72$ → $\text{♩} = \text{♪} = 72$

Vln. 1

Vln. 2

32 → $\text{♩} = \text{♪} = 72$ → $\text{♩} = \text{♪} = 72$

($\text{♩} = 84$)

Vla.

accel. → $\text{♩} = 72$ → $\text{♩} = 72$

\textbf{p} cresc. poco a poco

* Click track is a stereo file. Violins 1 and 2 listen to the right channel; Viola and Cello listen to the left channel.

Canonic Offerings
Canon 5

23

37

d = d = 72

accel.

semper simile

p *cresc. poco a poco*

40

Canonic Offerings
Canon 5

43

Vln. 1

Vln. 2

Vla.

Vlc.

45

Vln. 1

Vln. 2

Vla.

Vlc.

al ff

Canonic Offerings
Canon 5

25

Musical score for Canon 5, measures 49-51. The score consists of four staves: Vln. 1, Vln. 2, Vla., and Vlc. The key signature is A major (three sharps). The tempo is indicated as $\text{♩} = \text{♪} = 72$.

Measure 49: Vln. 1 plays eighth-note pairs. Vln. 2 has grace notes and a dynamic *pp*. Vla. and Vlc. provide harmonic support.

Measure 50: Vln. 1 continues eighth-note pairs. Vln. 2 has grace notes. Vla. and Vlc. continue their harmonic function.

Measure 51: Vln. 1 begins a sixteenth-note pattern. Vln. 2 has grace notes and a dynamic *alff*. Vla. and Vlc. provide harmonic support.

Canonic Offerings
Canon 5

Musical score for Canon 5, page 26. The score consists of four staves: Vln. 1 (G clef), Vln. 2 (G clef), Vla. (C clef), and Vlc. (B clef). The key signature is two sharps. The time signature changes from common time to 72. The score includes dynamic markings *pp*, *al ff*, and *pp*. The Vln. 1 staff features grace notes and slurs. The Vln. 2 staff has a single note. The Vla. staff shows a continuous eighth-note pattern with a tempo marking of $\text{♩} = \text{♪} = 72$. The Vlc. staff contains sixteenth-note patterns. The score concludes with a final dynamic *pp*.