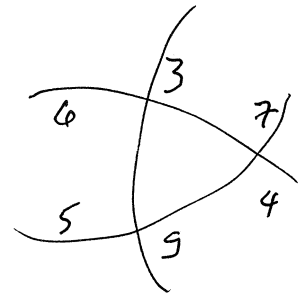
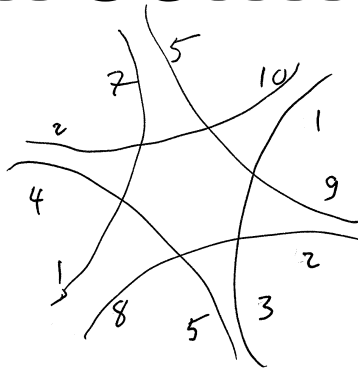
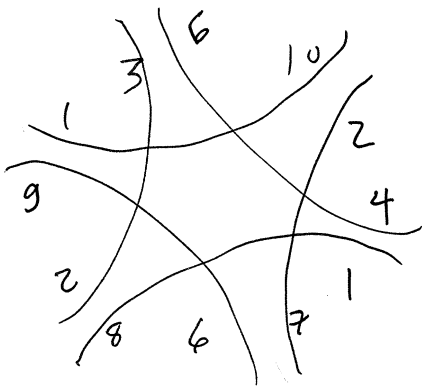
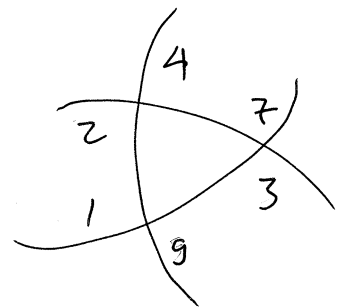
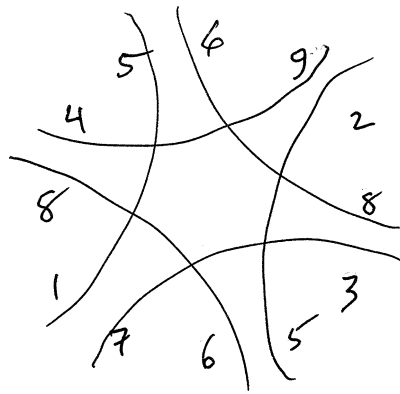
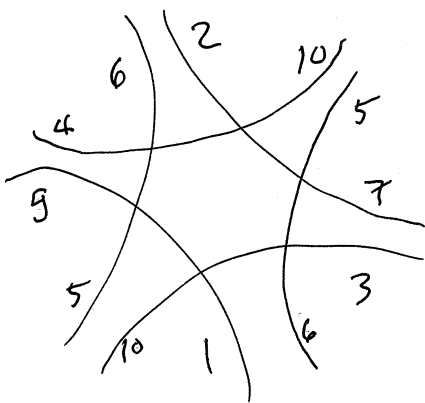


Tom Johnson



Septet III:

Valse



Septuor "Valse." This (10,4,2) design, like the other 13 designs that complete the piece contains 45 four-note chords and all 45 pairs of elements 1 to 10

Introduction

Septet III is a mechanical sounding little waltz that takes a long time to go nowhere in particular, but you will probably find that it does not sound trivial, and you will need time to enter into this little machine and begin to hear how it is working. The music follows an intricate system with notes spinning directly out of a mathematical configuration known as a large $(10,4,2)$. This means that:

The 10 notes of the scale are all heard the same number of times.

Each of the 14 sections contains a different collection of 15 four-note chords, always heard as two-notes-plus-two-notes.

The $14 * 15$ chords used in the piece constitute all the 210 possible four-note groupings within this 10-note scale.

In each section the 15 chords are heard three times each, and each pair of notes comes together once.

Except at the beginnings and ends of phrases, each measure contains two notes that are common to the preceding measure and two that are common to the following measure.

Additional symmetries are so numerous that trying to find all of them would be an endless task.

I am indebted to my mathematician friend Franck Jedrzejewski, who helped me calculate the 14 $(10,4,2)$ designs, following procedures defined by Kramer, Magliveras and Stinson in the *Australasian Journal of Combinatorics* (1991).

Tom Johnson, January 2010

Septuor "Valse"

Tom Johnson

$\text{♩} = 72$

Flute I
mf

Flute II
mf

Oboe

Clarinet (C)

Violin I

Violin II

Viola

Septet III

13

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

p

25

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

37

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

49

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

mf

mf

Septet III

61

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

73

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

Septet III

85

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

97

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

109

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

mf

mf

121

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

p

Septet III

133

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

145

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

157

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Detailed description: This system of musical notation covers measures 157 through 168. It features seven staves for Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. Flute II, Oboe, and Clarinet have active parts in measures 157-160. Flute II, Violin I, and Viola have active parts in measures 161-168. The other instruments (Flute I, Oboe, Violin II) are silent throughout this section.

169

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

mf

Detailed description: This system of musical notation covers measures 169 through 178. It features the same seven staves as the previous system. Measures 169-171 are silent for all instruments. In measure 172, Violin II and Viola begin a melodic line marked *mf*. This line continues through measure 178. All other instruments (Flute I, Flute II, Oboe, Clarinet, Violin I) are silent throughout this section.

Septet III

181

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

193

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

205

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

This system of musical notation covers measures 205 to 216. It features seven staves for the instruments: Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. Measures 205-210 show the woodwinds and strings playing a rhythmic pattern of eighth notes. In measure 211, the woodwinds and strings play a melodic line with a sharp sign. Measures 212-216 continue with the woodwinds and strings playing a rhythmic pattern of eighth notes.

217

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

This system of musical notation covers measures 217 to 226. It features seven staves for the instruments: Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. Measures 217-220 show the woodwinds and strings playing a rhythmic pattern of eighth notes. In measure 221, the woodwinds and strings play a melodic line with a sharp sign. Measures 222-226 continue with the woodwinds and strings playing a rhythmic pattern of eighth notes. The dynamic marking *mf* is present in measures 221 and 222.

Septet III

229

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

241

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

253

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

265

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

277

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

mf

mf

Detailed description: This system of musical notation covers measures 277 to 288. It features seven staves: Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. The key signature has one flat (B-flat). The time signature is 4/4. In measure 277, the Flute I part begins with a melodic line marked *mf*. The Viola part also begins in measure 277 with a melodic line marked *mf*. The other instruments (Flute II, Oboe, Clarinet, Violin I, and Violin II) are silent throughout this system.

289

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

p

p

Detailed description: This system of musical notation covers measures 289 to 298. It features the same seven staves as the previous system. In measure 289, the Flute I part continues its melodic line. In measure 290, the Flute II part begins with a melodic line marked *p*. In measure 291, the Oboe part begins with a melodic line marked *p*. The Viola part continues its melodic line from the previous system. The Violin I and Violin II parts remain silent throughout this system.

Septet III

301

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Detailed description: This system of musical notation covers measures 301 to 312. It features seven staves: Flute I (Fl. I), Flute II (Fl. II), Oboe (Ob.), Clarinet (Cl.), Violin I (Vn. I), Violin II (Vn. II), and Viola (Vla.). The Flute I part is active from the beginning, playing a melodic line with eighth and sixteenth notes. The other instruments are mostly silent, indicated by rests. The Viola part has some activity in the later measures of this system.

313

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Detailed description: This system of musical notation covers measures 313 to 322. It features the same seven staves as the previous system. In measure 313, the Flute II, Oboe, and Viola parts begin to play. The Flute I part remains silent. The Viola part has a more active role in this system, playing a melodic line with eighth and sixteenth notes. The other instruments are mostly silent.

Septet III

325

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

337

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

mf

Septet III

349

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

p
p

361

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

373

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

385

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

397

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

p

409

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

421

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

433

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

445

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

mf

mf

Detailed description: This system of musical notation covers measures 445 to 456. It features seven staves: Flute I (Fl. I), Flute II (Fl. II), Oboe (Ob.), Clarinet (Cl.), Violin I (Vn. I), Violin II (Vn. II), and Viola (Vla.). The Flute II and Clarinet parts begin with a dynamic marking of *mf* (mezzo-forte) at measure 445. The Flute I part is mostly silent, with some notes appearing in measures 455 and 456. The Viola part has a few notes in measures 445 and 446. The Violin I and II parts are mostly silent throughout this system.

457

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

p

Detailed description: This system of musical notation covers measures 457 to 466. It features the same seven staves as the previous system. The Flute I part begins with a dynamic marking of *p* (piano) at measure 457. The Flute II part has a dynamic marking of *p* at measure 458. The Clarinet part has a dynamic marking of *p* at measure 458. The Violin II part has a dynamic marking of *p* at measure 458. The Viola part is mostly silent throughout this system.

Septet III

469

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

481

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

493

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

505

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

517

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

529

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

541

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

This system of music covers measures 541 through 552. It features seven staves: Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. The Oboe part is the most active, playing a melodic line with eighth and sixteenth notes. The Violin I part also has a melodic line, while the other instruments are mostly silent, indicated by rests.

553

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

This system of music covers measures 553 through 564. It features the same seven staves as the previous system. The Oboe part continues its melodic line. The Clarinet part begins to play in measure 558. The Violin I and Violin II parts also have some activity, with Violin I playing a few notes in measure 553 and Violin II playing in measure 558. The Viola part is mostly silent.

Septet III

565

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

577

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

589

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

601

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Septet III

613

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

mf

mf

Detailed description: This system of musical notation covers measures 613 to 618. It features seven staves: Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. The key signature has one sharp (F#). In measure 613, Flute I and Oboe play a quarter note G4. From measure 614 to 618, the strings (Violin I, Violin II, and Viola) play a rhythmic pattern of quarter notes: G3, A3, B3, C4, D4, E4, F#4, G4. The dynamic marking *mf* (mezzo-forte) is placed below the Violin I staff in measure 614 and below the Viola staff in measure 615.

625

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

p

p

Detailed description: This system of musical notation covers measures 625 to 630. It features the same seven staves as the previous system. In measure 625, all staves are silent. In measure 626, Flute II and Clarinet play a quarter note G4. From measure 627 to 630, the strings (Violin I and Viola) play a rhythmic pattern of quarter notes: G3, A3, B3, C4, D4, E4, F#4, G4. The dynamic marking *p* (piano) is placed below the Flute II staff in measure 626 and below the Clarinet staff in measure 627.

Septet III

637

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

649

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

661

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Detailed description: This system of musical notation covers measures 661 through 672. It features seven staves for Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. Flute II and Clarinet have melodic lines starting in measure 665. Violin I has a melodic line starting in measure 661. Viola has a melodic line starting in measure 661. The other instruments (Flute I, Oboe, Violin II) are silent throughout this system.

673

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

mf

Detailed description: This system of musical notation covers measures 673 through 684. It features the same seven staves as the previous system. Flute I and Violin II have melodic lines starting in measure 673. Flute I is marked with a mezzo-forte (*mf*) dynamic. Violin II is also marked with a mezzo-forte (*mf*) dynamic. The other instruments (Flute II, Oboe, Clarinet, Violin I, Viola) are silent throughout this system.

Septet III

685

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

p

Detailed description: This system of musical notation covers measures 685 to 696. It features seven staves for Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. The key signature has one sharp (F#) and the time signature is 3/4. Flute I begins with a quarter note G4, followed by rests. Oboe and Violin I enter in measure 686 with a half note G#4, marked with a piano (*p*) dynamic. Violin II has a half note G4 in measure 685. The music concludes in measure 696 with a half note G4.

697

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Detailed description: This system of musical notation covers measures 697 to 706. It features the same seven staves as the previous system. Flute I begins in measure 697 with a quarter note G4, followed by eighth notes. Oboe enters in measure 700 with a half note G#4. Violin I enters in measure 703 with a half note G4. The music concludes in measure 706 with a half note G4.

Septet III

709

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

Detailed description: This system of musical notation covers measures 709 and 710. It features seven staves for Flute I, Flute II, Oboe, Clarinet, Violin I, Violin II, and Viola. Flute I has a melodic line in measure 709, while the other instruments are mostly silent. In measure 710, Violin II and Viola play a rhythmic accompaniment.

721

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

mf

mf

Detailed description: This system of musical notation covers measures 721 and 722. It features the same seven staves as the previous system. In measure 721, Flute I has a short melodic phrase, while the other instruments are silent. In measure 722, Flute II, Oboe, Violin I, and Viola all play, with a dynamic marking of *mf* (mezzo-forte) indicated below the Flute II and Viola staves.

Septet III

733

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

p

745

Fl. I

Fl. II

Ob.

Cl.

Vn. I

Vn. II

Vla.

Septet III

757

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.

770

Fl. I
Fl. II
Ob.
Cl.
Vn. I
Vn. II
Vla.



Editions 75

75, rue de la Roquette, 75011 Paris

e d i t i o n s 7 5 . c o m

218

Two-Eighteen Press
5004 Applewood Circle
Carmel, NY 10512-2640