Autumn

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Toru Takemitsu
Forrest Balman - MUS 716

Life up until composition of *Autumn*

- Born October 8, 1930
- Spent early childhood in China
- Was drafted at 14
  - Grew resentful of Japanese society
- Founded Jikken Kobo
  - Mixed media, non-Japanese
- Began to research his heritage
  - Hears Cage's *Concert for PNO*
  - Learns to play biwa
- Writes for traditional instruments
  - *Eclipse* - Biwa & Shakuhachi
  - *November Steps* - Biwa, Shakuhachi & Orchestra
  - *Autumn* - Biwa, Shakuhachi & Orchestra

Percussion (4)

Trombones (3)

Trumpets (3)

Oboes (2)

Clarinets (3)

Celesta

Flutes (3)

Horns (4)

Harp (2)

Bassoons (2)

Violas (10)

Double Basses (6)

Violins (26)

Cellos (8)

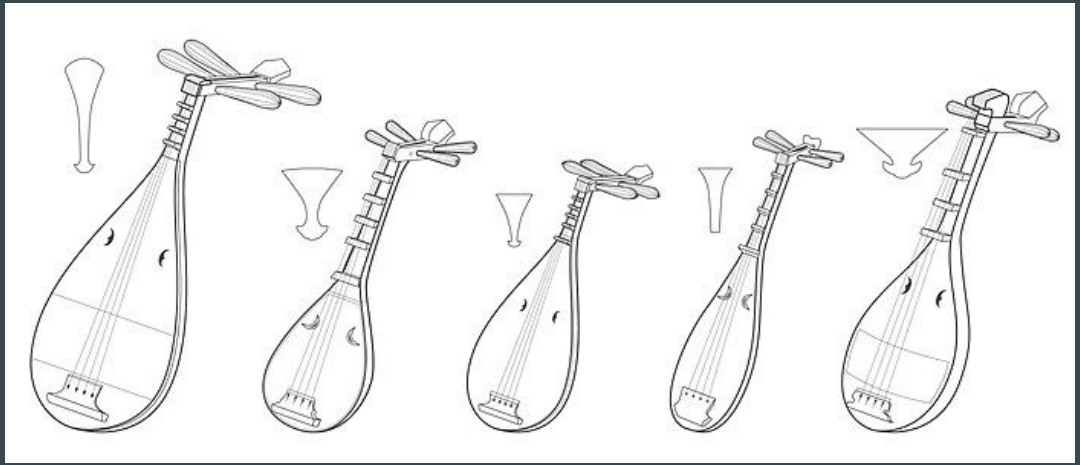
Biwa

Shakuhachi

Instrumentation

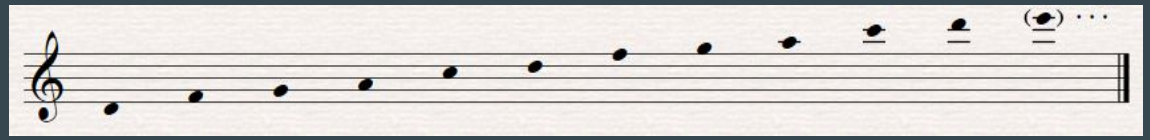
Biwa

- Japanese lute
  - Revised Chinese Pipa
- 4, or 5 strings
- Large plectrum
- Varied tunings
  - usually based on fifths



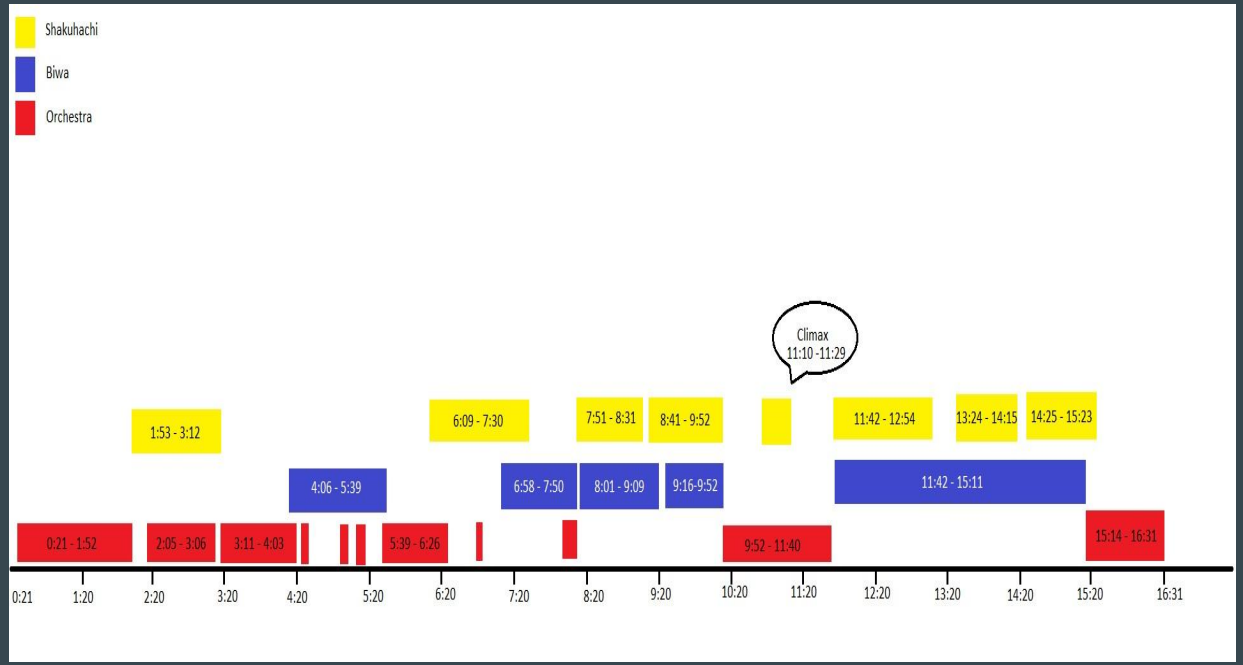
Shakuhachi

- Japanese flute
- Varied sizes
  - Shaku - ~1 foot
  - hachi - 0.8 shaku
  - 1.8 shakuhachi most common
- Blown like a bottle
- D pentatonic scale
  - 2 octave range
  - can extend above



Form

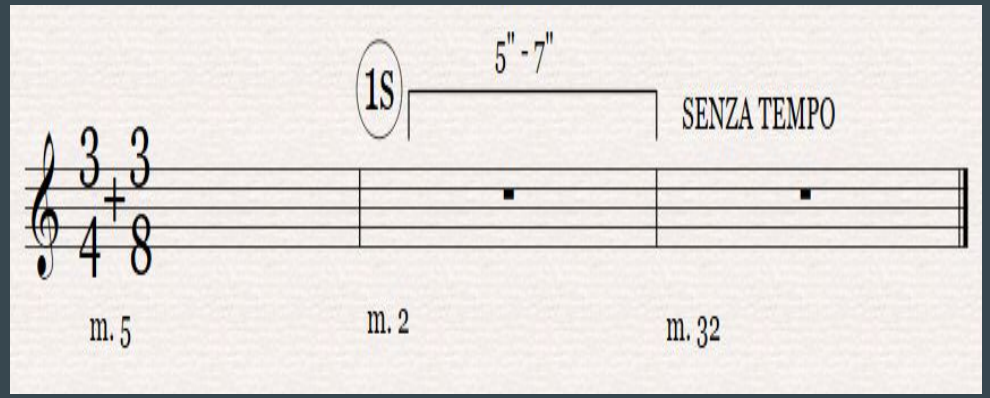
- Tone poem-esque
- Gagaku
- Separation of solo / orchestra
- Climax ⅔ through
- Narrative structure
  - monologue, dialogue, scene setting



Rhythm

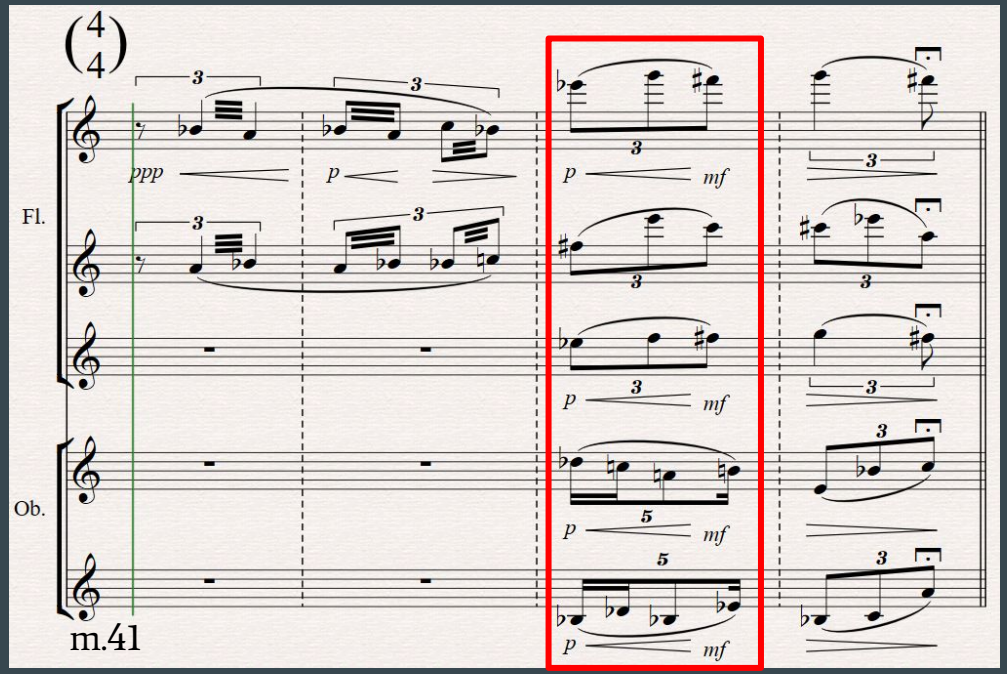
Meter

- Use of 3 different metric schemes:
  - Strict meter - quarter note pulse
    - exception m. 5 - ¾ + ⅜
  - Time based “Sections”
    - “1S” or “2S”
      - Phrase lasts x seconds
  - Free
    - Traditional instruments
      - absence of meter / time
      - ad. lib



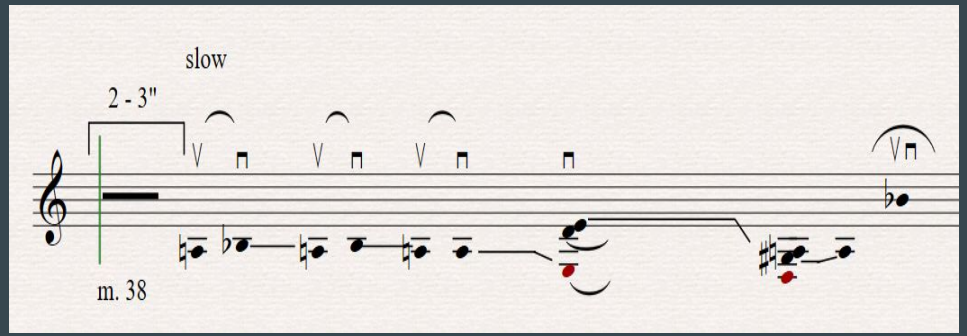
Western Rhythm

- Multi-layered rhythmic organization
  - Meter
    - Beats divided by dashed lines
  - Beat subdivision
    - Each beat can assume “sub-meter”
      - Tempo is slow overall
        - Removes metric accents
        - Beat equality
- Polymeter at the beat level
  - Contrasting tuplets create freedom



Eastern Rhythm

- Absence of meter
  - Phrases
    - Gestures grouped together
    - Stemless noteheads imply pitch only
    - ad. lib by performer
  - Spatial relativity
    - Events spaced in relation to length
- Recreation of tablature
  - Traditional notation lacking
    - Translates fingerings to staff
    - Top > Bottom + Right > Left ⇒ Left > Right + Top > Bottom



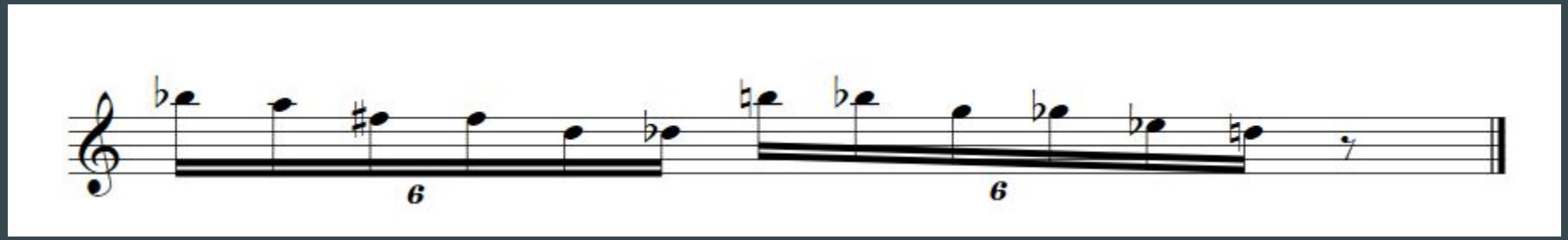
Pitch Organization

motivic material - Half Steps

- Most frequently used melodic interval
  - Japanese sound-world
    - Existence in minor pentatonic/modes
    - Shakuhachi breath pitch control
    - Biwa string bending
  - Melodies bridged half steps
    - Sequential half steps approached by leap
  - Instances of canon throughout
- Examples
  - m. 18 First violins
  - m. 37 Horns
  - m. 47 Clarinets
  - mm. 60 -62 Strings

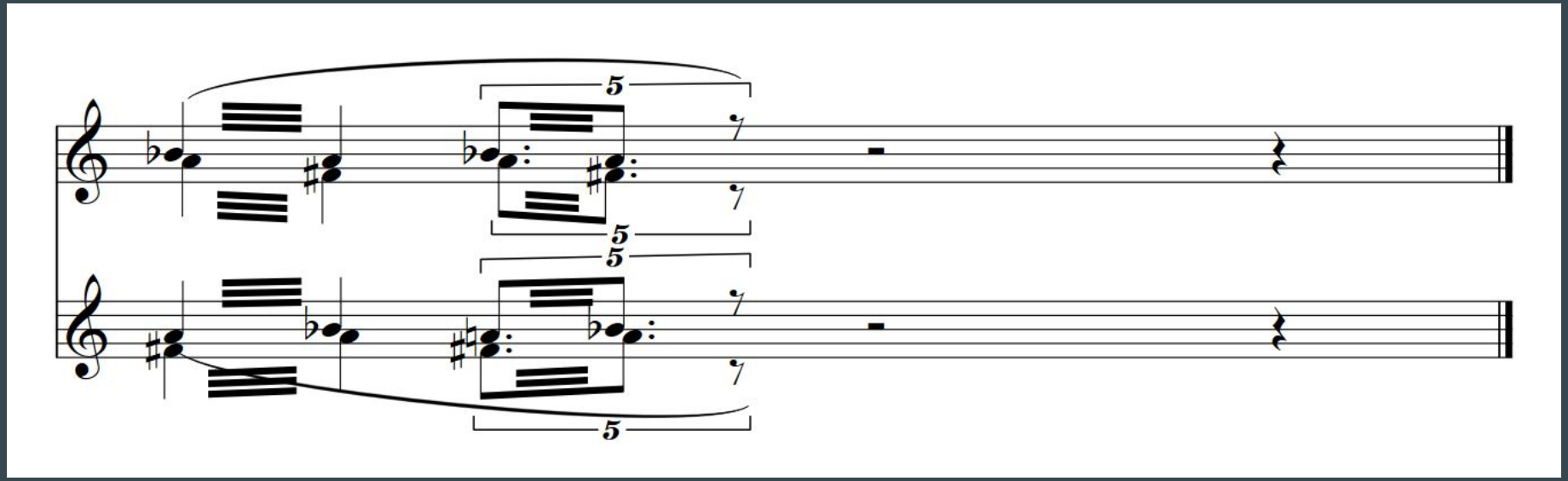
Strings m. 18

- minor 2nds linked together by minor/diminished 3rds



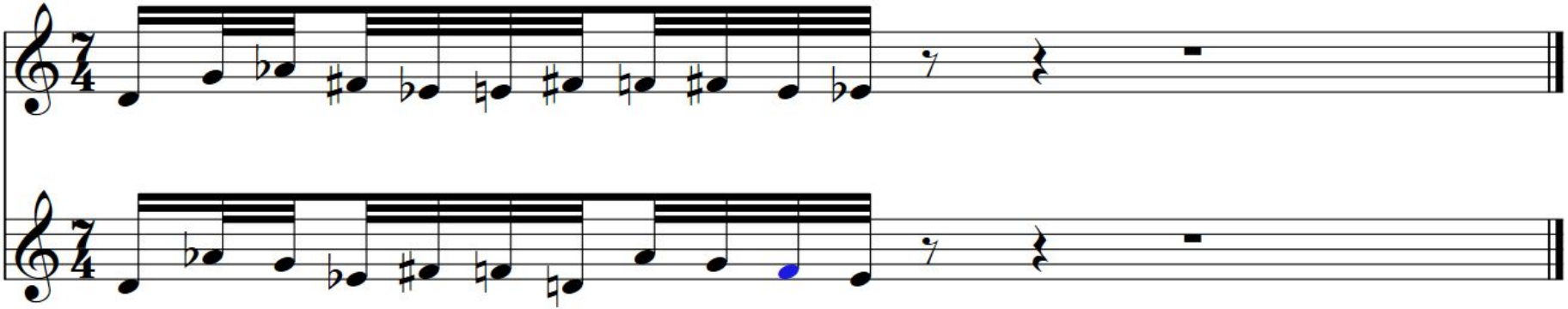
Horns m. 37

- tremolo minor 2nds in the upper register, tremolo minor 3rds in the lower register
- swapping of voices in close proximity
  - minor 2nd interval shared by beat one of horns 1 + 2 / beat two of horns 3 + 4
  - minor 3rd interval shared by beat on of horns 3 + 4 / beat two of horns 1 + 2



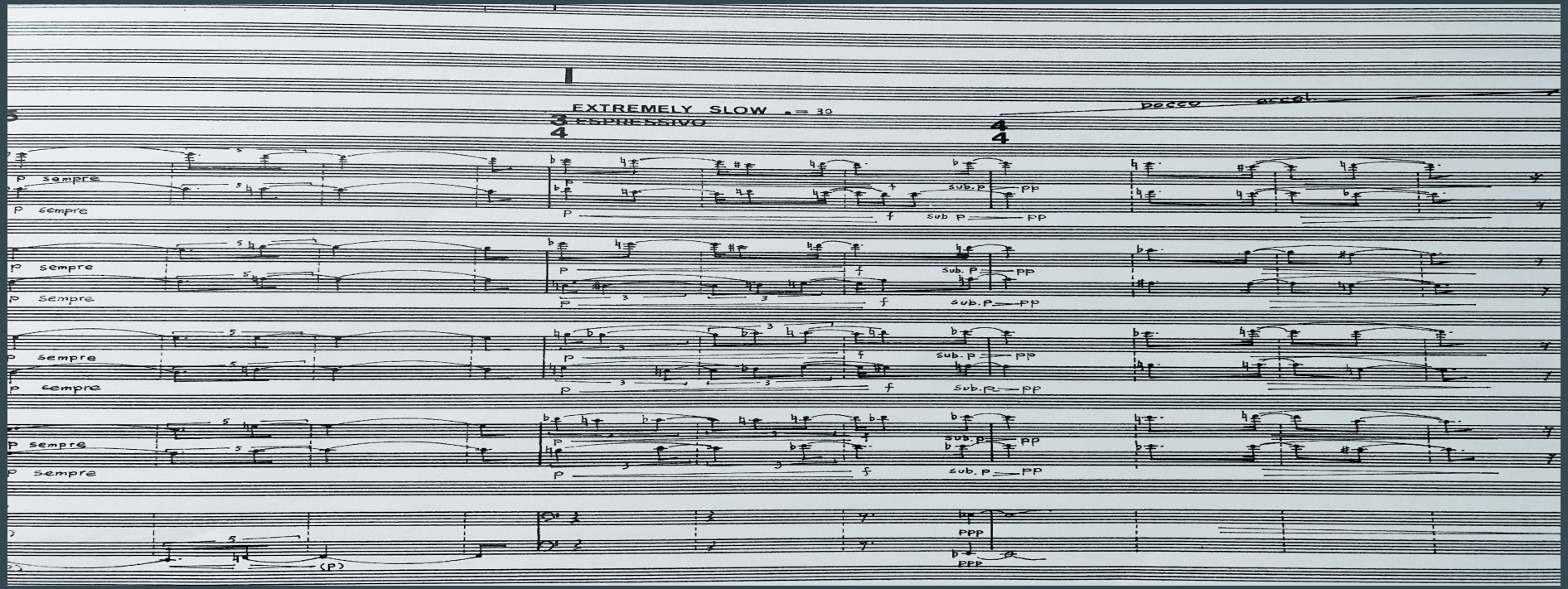
Clarinets m. 47

- ascending/descending minor seconds/augmented unisons approached by leap
- swapping of voices in close proximity, again
  - G/Ab => F#/Eb opposite one another in each clarinet



Strings m. 60 - 62

- minor seconds approached by leap in all strings



Melody Summary

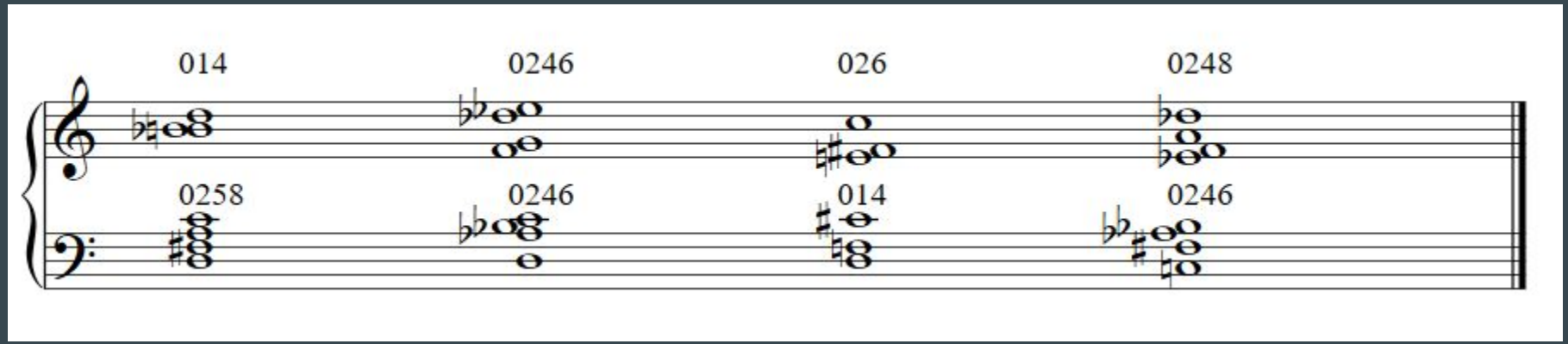
- Melodies make use of a wide variety of intervals
  - minor seconds are prominent but all intervals up to the tritone (and their reflections) are used frequently
  - no easily discernible hierarchy from interval analysis
    - if there is a pattern, it is deviated from heavily at Takemitsu's discretion

harmonic material - PCS analysis

- 01X pitch class sets
  - chordal instruments/instruments in groups >= three make use of trichords with 01
    - harps/celesta
    - strings
    - clarinets/trombones
  - Tetrachords are usually devoid of half steps.
- Examples
  - m. 5 Celesta
  - m. 8 - 10 Harps
  - m. 10 Clarinets/Trombones
  - m. 12 Harps
  - m. 17 Celesta
  - m. 37 Biwa
  - m. 69/70 Harps

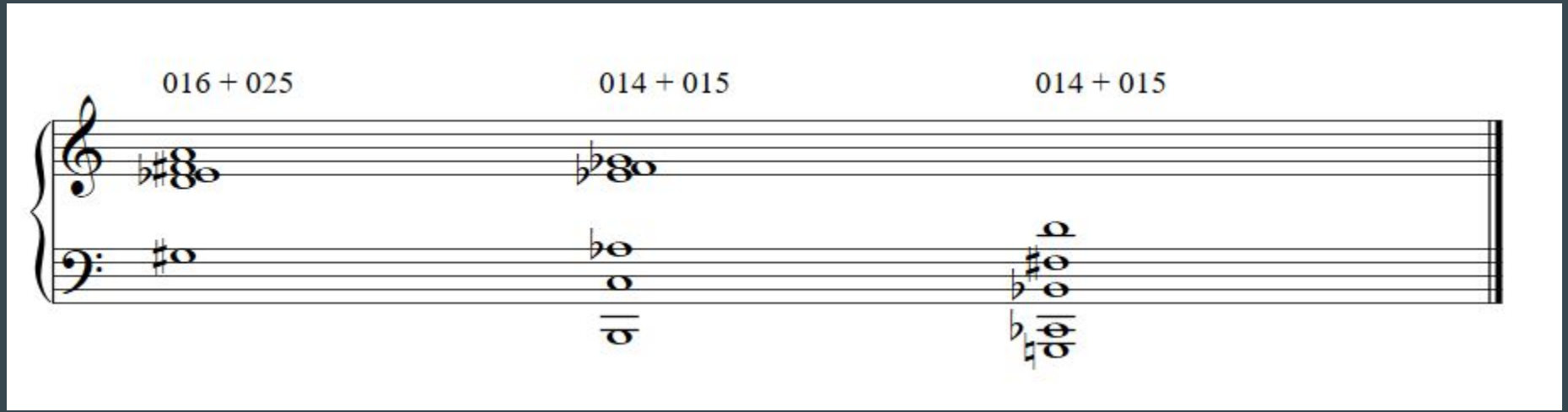
m.5 Celesta

- 014 trichords/0246 tetrachords prevalent in both hands
  - 01 and 02 prefixes across all chords



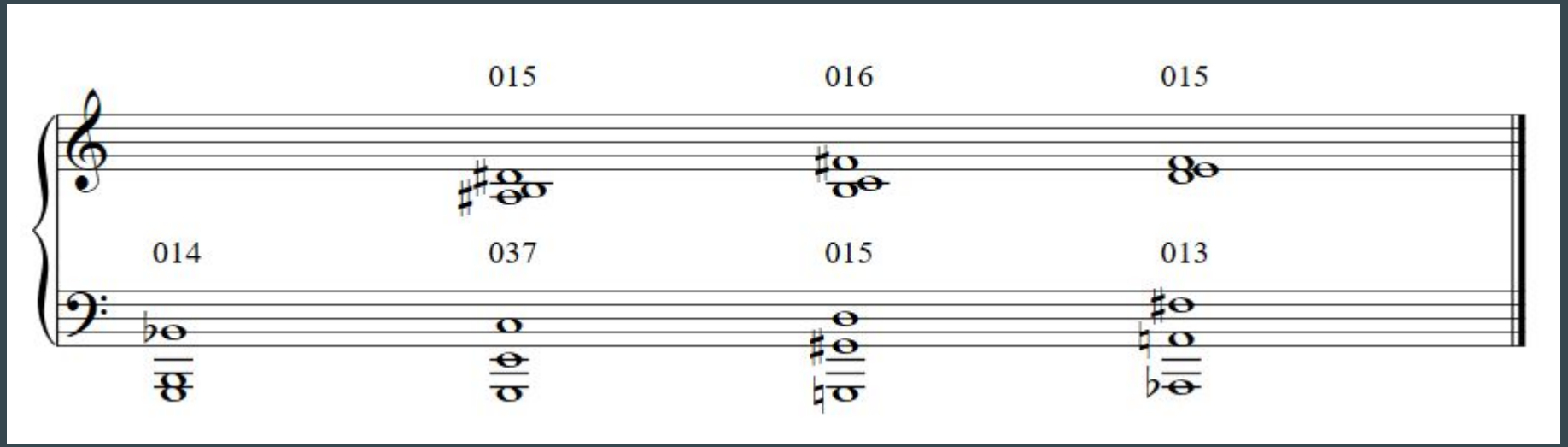
m.8 - 10 Harps

- 014/015 trichords across two measures of harmony
  - harps/celesta usually play aggregate of other parts, so these harmonies can be inferred from other instruments



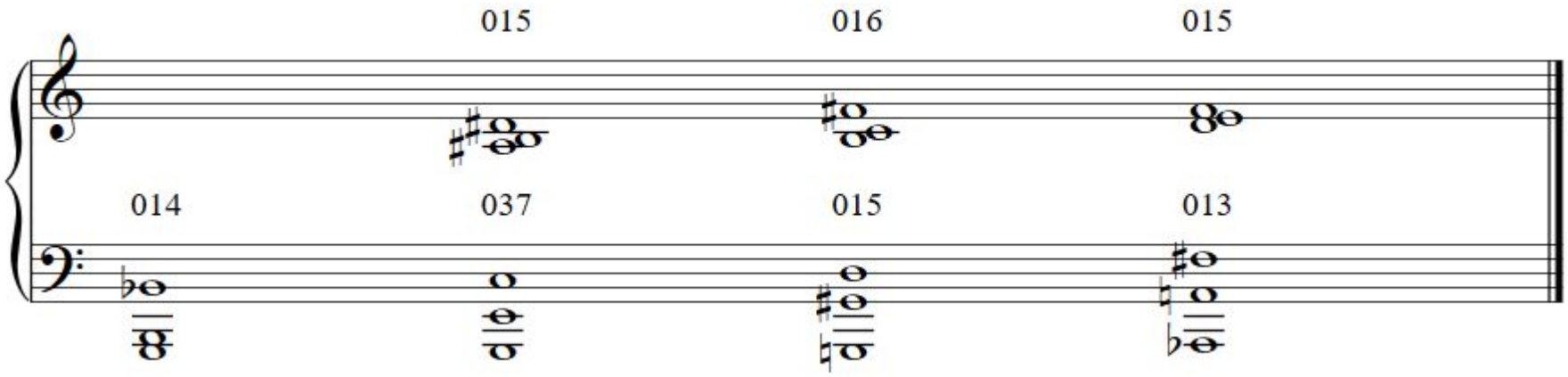
m.12 Harps

- 01X trichords prevalent throughout phrase
  - exception of 037 (minor triad)
  - 015 particularly visible



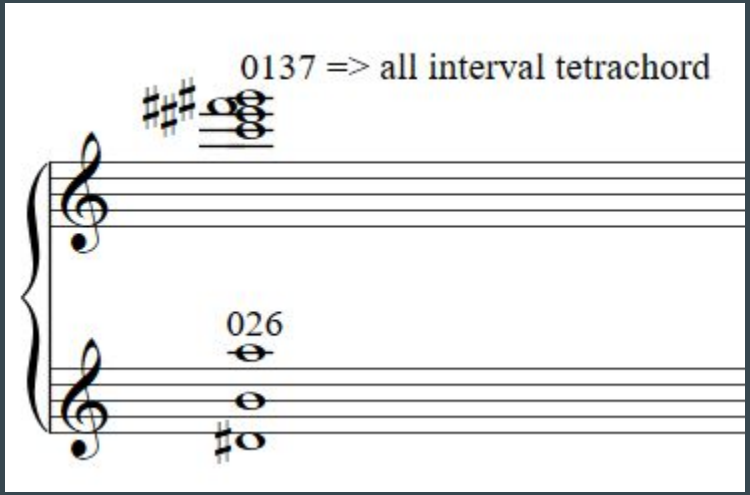
m.12 Clarinets/Trombones

- 01X trichords prevalent throughout phrase
  - exception of 037 (minor triad)
  - 015 particularly visible



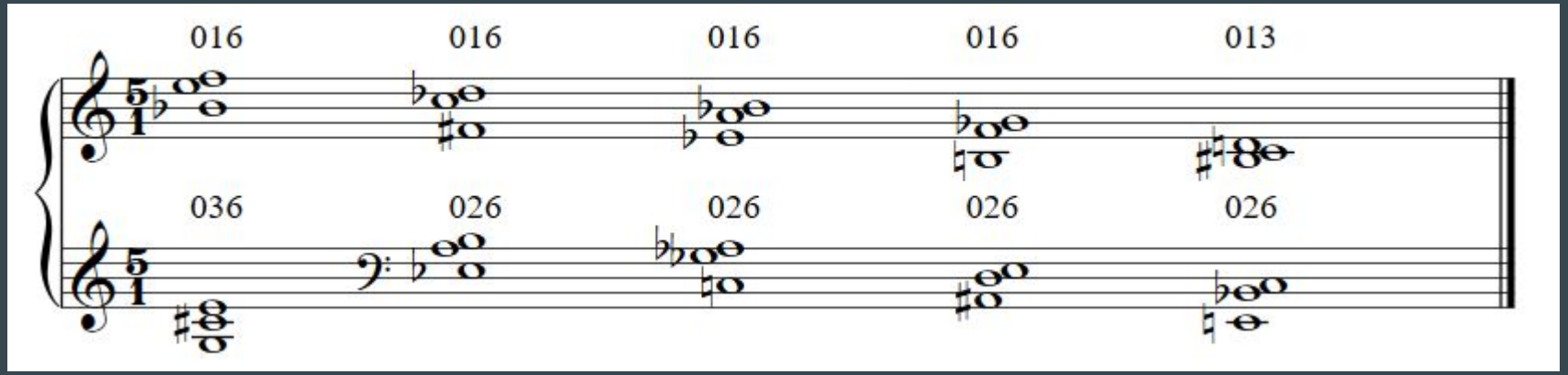
m.12 Harps

- 0137 tetrachord in right hand
  - contains all intervals exactly once
  - 026 partial chord of first sonority heard in celesta, m. 5



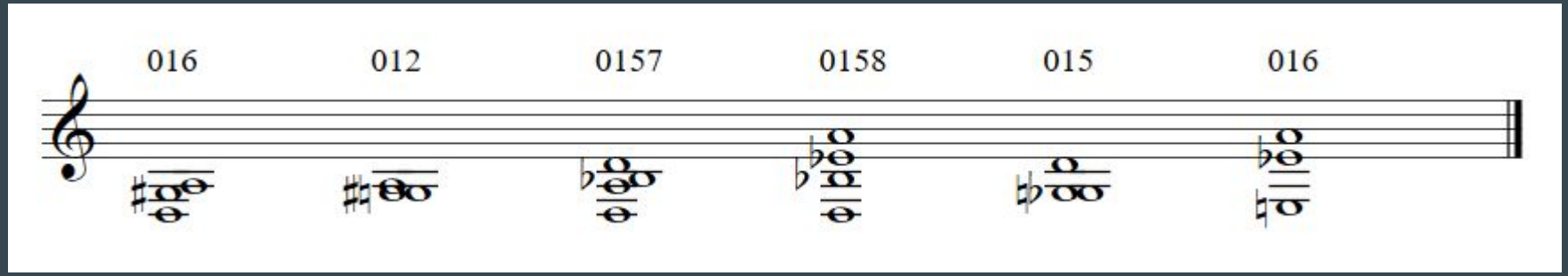
m.17 Celesta

- 026 trichord growing in importance
  - 01X trichords still relevant throughout
  - 0X6 trichords virtually every chord in passage
  - planing => French impressionist influence?



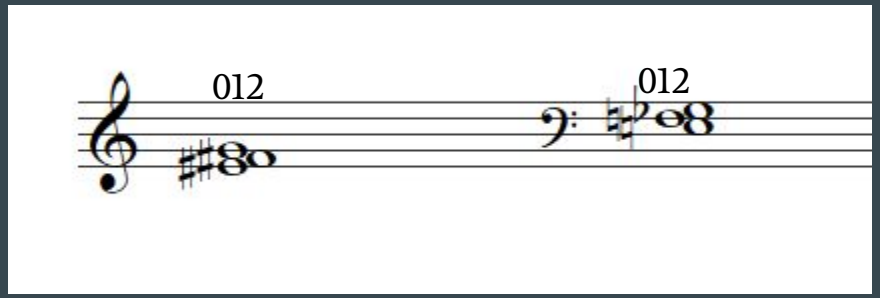
m.37 Biwa

- 01X trichord source?
  - Biwa half step doubling exists in every voicing throughout first cadenza



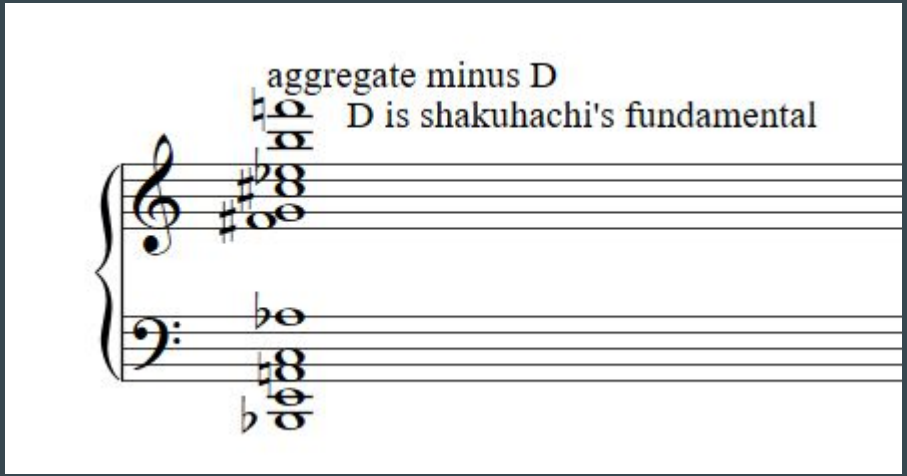
m.69-70 Harps

- 012 trichords
  - trichords that are an aggregate of consecutive half steps



m.64 Climax

- 11 chord. Chromatic scale minus D
  - Shakuhachi is tuned to D.
  - Re-enters after climax with E quarter sharp moving down towards D



Harmony Summary

- Takemitsu favored 01X trichords and 02XX tetrachords
  - There is counterpoint, most of the harmonic analysis is based on unison harmonies.
  - Rhythmic organization makes overlapping harmonies that are a byproduct of counterpoint/suspensions challenging
    - These harmonic impacts are lessened by the spacing of parts across the orchestra

Techniques

Master Orchestrator

- Clear understanding of instrumental capability
- Use of many obscure techniques throughout
- High level of focus and technical demand
  - Techniques derived from attempt to emulate shakuhachi/biwa?
- Examples:
  - Double trill - flute m. 4

  - Flutter-tongue + plunger mute - trombones m. 21

  - Mute mixing - strings m. 70

Shakuhachi Orchestration

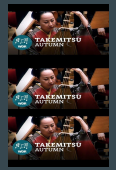
- Expressive, dialogal instrument
  - As powerful chromatically as a slide whistle
- Breath and control dictate phrase quality
- Examples:
  - Wide tremolo + pitch bend

  - “Birthday candles” (overblowing)

  - “Whistle vibrato” -

Biwa Orchestration

- Strong/concise phrasing
  - Capable of more complicated sounds
- Percussive, angry, violent => contemplative, sincere
- Examples:
  - Strummed chords
  - Plectrum “scrape”
  - Down strum slap -



Takeaways / Summary

- Don’t let notation detract from your ability to communicate to the performer
  - However, don’t “reinvent the wheel.”
- If a piece lacks structure, re-examine the form
  - Experiment with benchmarks to give yourself a point of arrival.
- Tuplets can imply flexibility
  - If a phrase is meant to be felt, approximate, then subdivide the beat appropriately.
- Interesting pitch material can be derived from simple means
  - Don’t necessarily fall into using a strict process. Listen to your intuitions.
- Texture and color juxtaposed
  - Instruments are capable of pitch content, as well as extra-musical effect.
  - Too much percussion can lead to novelty. Less can mean more.
- Subdividing orchestral sections to thin texture
  - Can create chaos or complexity.