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Upper Fifth Listening

Upper Fifth Listening: Experimental & Electronic Music **LESSON ONE**

Watch http://www.youtube.com/watch?v=gN2zcLBr_VM

What did you think? What's the point? How did you feel? Is it music?

Aleatoric Music

- Music in which some aspects of composition or performance are left to chance.
- John Cage's piece, 4'33", makes the environmental noise (i.e., background noise) into the "music".
- Another word for aleatoric is **indeterminacy**.

Melody, harmony and rhythm are not important – aleatoric composers are not even concerned with beauty or emotional content. They are aiming only to make the audience experience *something* through their composition.

Upper Fifth Listening: Experimental & Electronic Music **LESSON ONE**

Noise as music

– Experimental music involves producing sounds from unusual sources.
– Composers also experiment with unusual playing techniques on standard instruments (mouthpiece only, keys only, wood of bow, etc.).
– Singers are required to make all sorts of effects (whispering, humming, coughing, screaming, whistling, chanting, half speaking - sprechstimme, etc.).

CLIP Cornelius Cardew – Memories of You (Heinemann 1:18)
What unconventional sound production techniques are used in this piece?

John Cage

– Started off as a serialist composer (a student of Schoenberg),
– but quickly became interested in more experimental methods of music.
– He is particularly well-known for his use of prepared piano.

Look at the table of preparations and the score for Cage's Sonata No. 5 (Heinemann pp 61-62), then listen to it at http://www.youtube.com/watch?v=VYsx5Di3bso

Is this aleatoric music? What is important? Melody? Harmony? Timbre? Structure?

See also http://www.youtube.com/watch?v=ce4TCth0gGM

Do you remember?...

What are the principal features of Experimental Music?

- makes use of random components (aleatoric or indeterminate)
- involves producing sound in unusual ways (prepared piano)
- uses noise as music

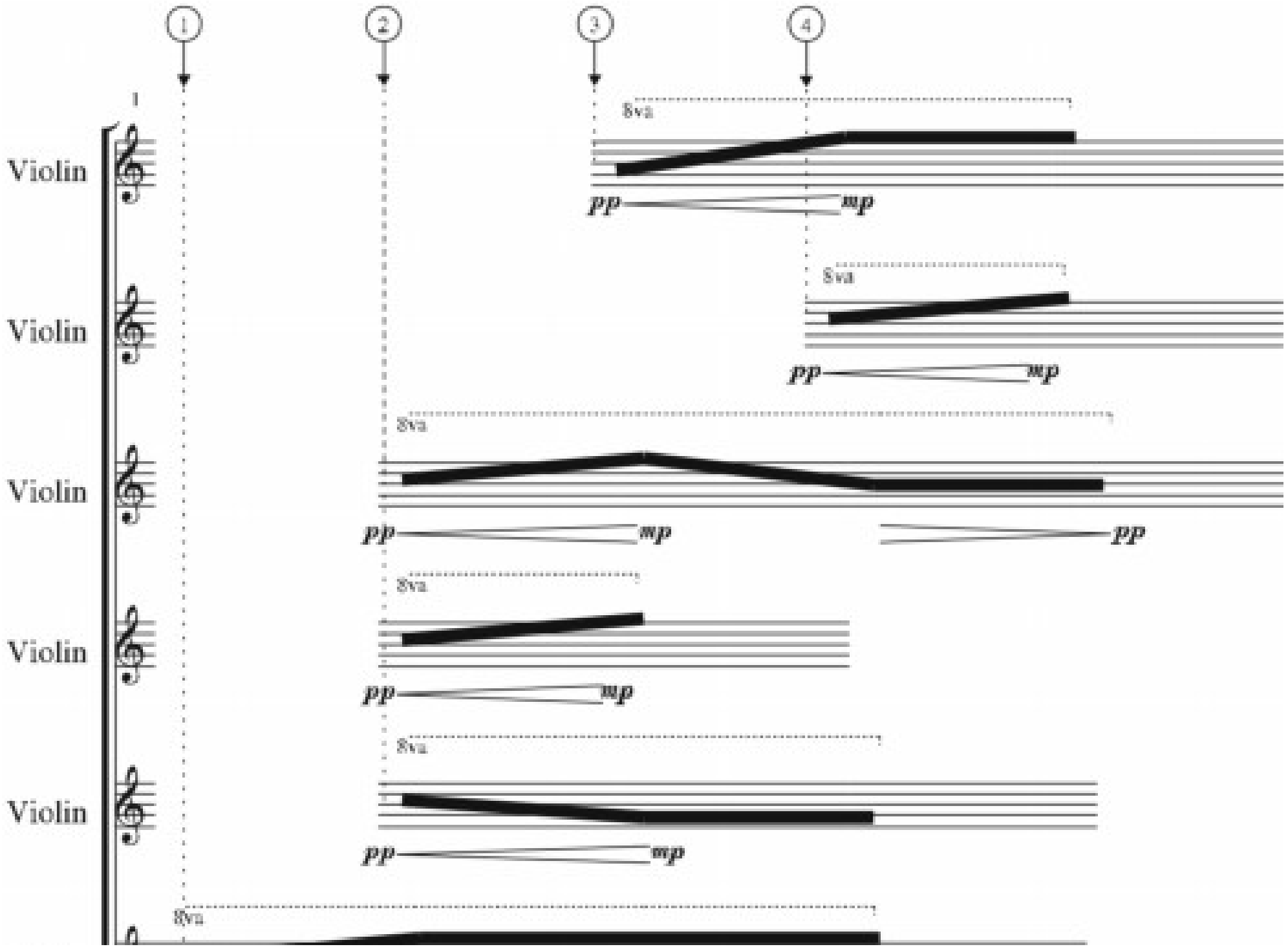
Analytical listening task (New Anthology – Zoom Tube)

Graphical notation

Experimental composers often use graphical scores (in particular, Cornelius Cardew).

Why?

- many sounds can't be notated using staff notation
- enables anyone to perform, irrespective of musical training
- gives the performer more freedom in interpreting symbols


1
2
3
4
1
Violin
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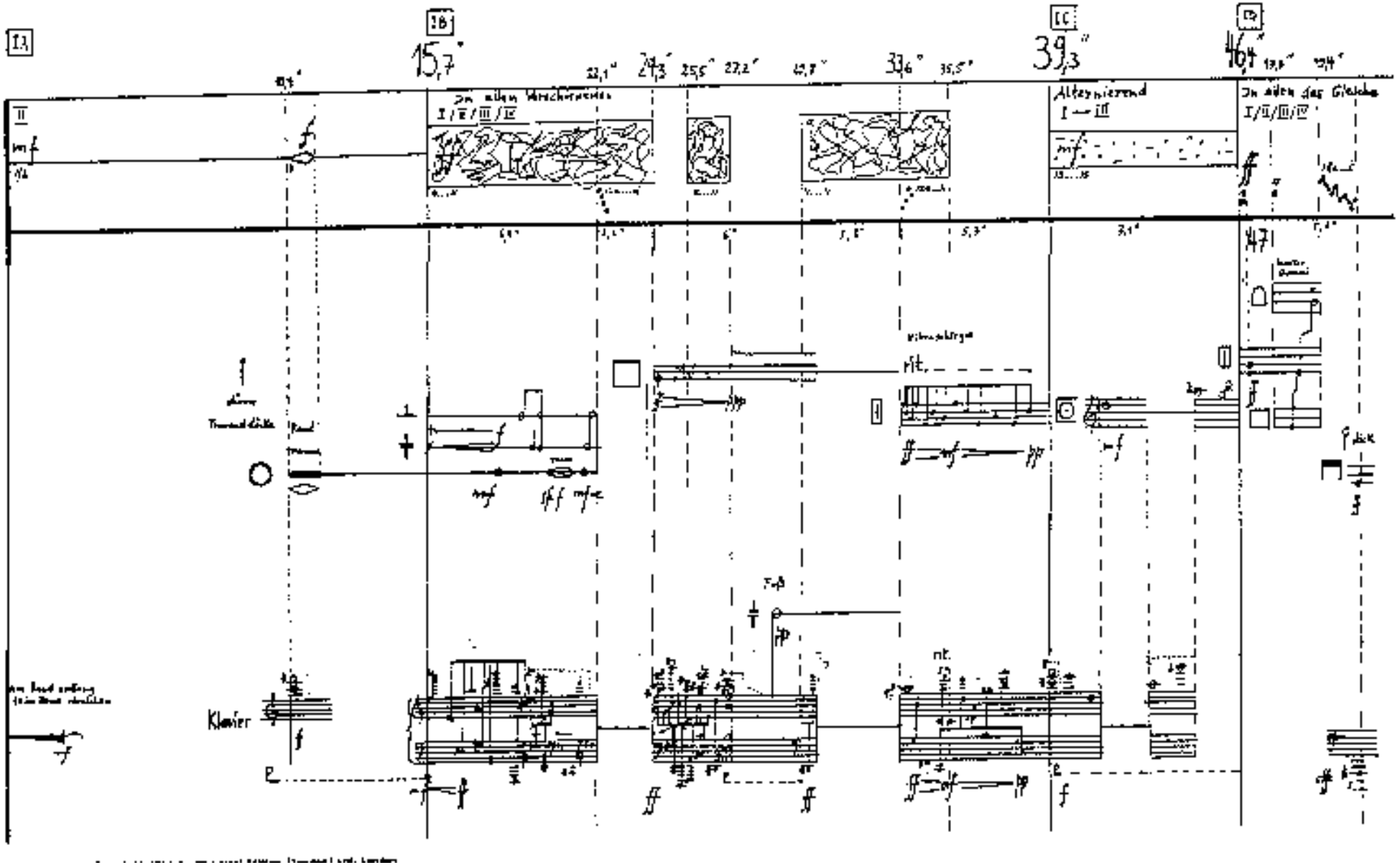
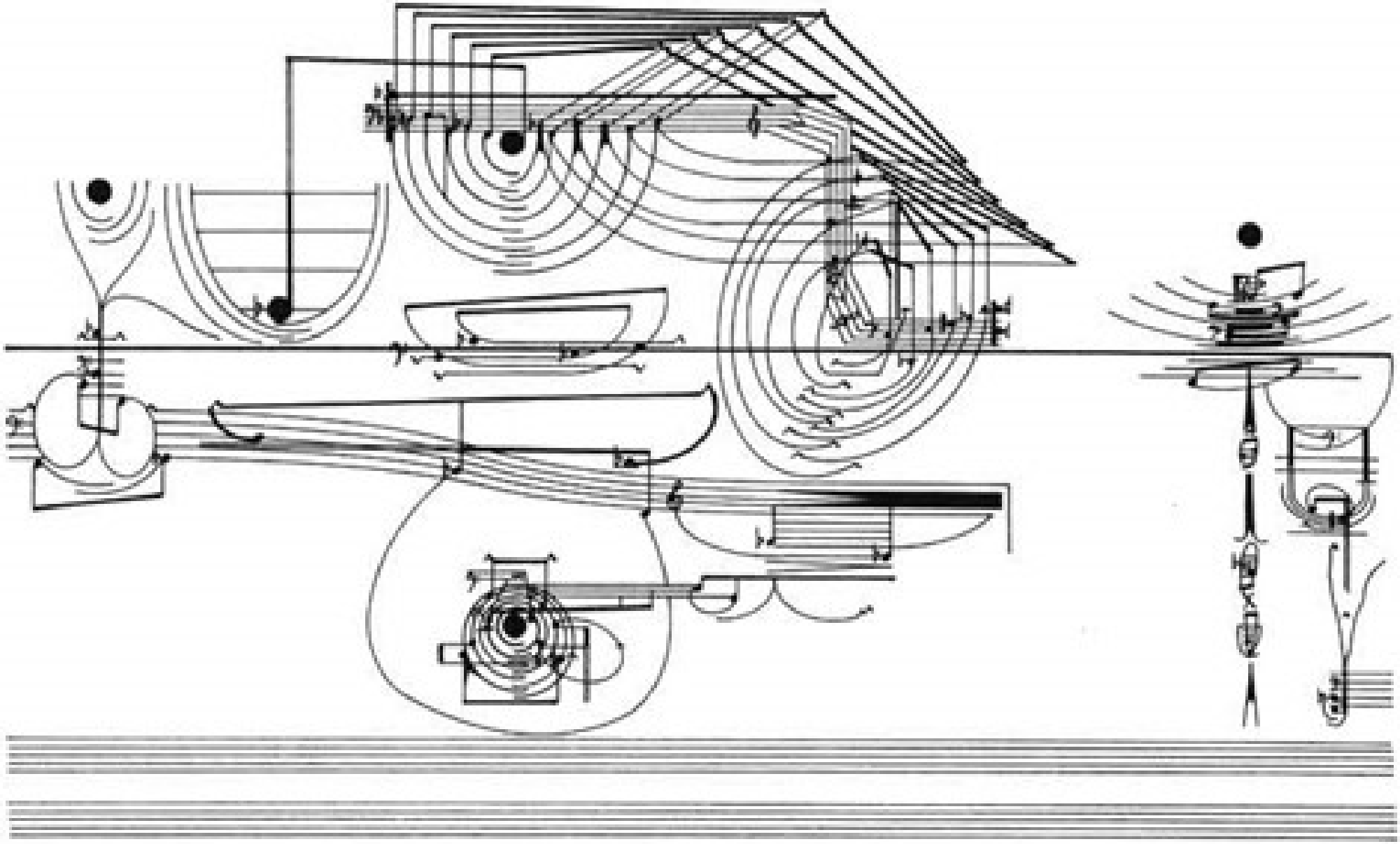
8va
pp
mp

Nr. 12 Kontakte

Karlheinz Stockhausen





Cardew was distressed that performers complained they couldn't interpret his scores!! He instead decided to use a text-based approach:

Look at the score of Cardew's Paragraph 7 from The Great Learning (Heinemann p. 67) then follow it through as you listen to the short version at http://www.youtube.com/watch?v=geaWU2iEdyA

ACTIVITY Devise your own graphical score using any form that you wish. As you construct the graphics, have a clear idea of what sound you want to come out of it.

- Rhinegold listening exercises (Book 1, Nos 12, 14, 16; Book 4, Nos 16, 18).
- Set prep: Naxos Worksheet

Electronic Music

- **Tape recorders** meant composers didn't have to rely on live performers
- They also meant composers could use techniques such as:
  - Reverse playback
  - Vari-speeding
  - Looping
  - Multi-tracking

- Sound technology meant composers could edit sounds, even create them.
- **Musique Concrete**
  - Recording sounds made by everyday objects
  +
  - Editing and transforming them using sound technology

- E.g. *Hymnen* by Stockhausen. This piece combines a number of national anthems and then transforms them electronically: http://www.youtube.com/watch?v=o0aeagbZBRs

Sound technology

- Reverberation (or just "reverb")
  - The effect produced when a sound is reflected by the surrounding surfaces
- Delay
  - Repetition of a sound at a set time interval for a given number of repeats.
- Flanger
  - Feeding a percentage of a delayed sound source back into the original
  - Aural effect is a sweeping/swooshing sound
- Panning
  - Altering the left-right balance between a stereo speaker system
- Sampling
  - Records sections of sound that can then be saved and altered
  - Aspects of the **attack**, **decay,** etc. can then be customized.

Electronic instruments

Synthesizers

- used to create new sounds
- sometimes used to mimic acoustic instruments

1970-80 – Analogue synthesizers
1980s – present – Digital synthesizers
1990s – present – Software synths (all controls on computer screen)

A huge range of electronic sounds can be created:
http://www.youtube.com/watch?v=IjhrY5ku4bI
(don't worry about all the physics – just appreciate the range of different sounds that can be created!)

Ondes Martenot

- Early type of synthesizer
- Control *either* through six-octave keyboard *or* by sliding a metal ring
    - Position of the ring corresponds to pitch
        - Enables unbroken, sweeping glissandi
- Keyboard enables vibrato effects
- Dynamic control operated by the left hand in a small drawer of controls
    - The further the control is pressed, the louder the note.
    - Also controls for the instrument's timbre.

http://www.youtube.com/watch?v=Yy9UBjrUjwo

Theremin

- Two metal antennae (one for each hand)
  - One control oscillators for frequency
  - One controls the amplitude (volume)
  - The electric signals from the Theremin are amplified and sent to a loudspeaker.

http://www.ted.com/index.php/talks/pamelia_kurstin_plays_the_theremin.html

Samplers

Virtual Modelling Synthesizer

Waveform alterations – attack, decay, timbre, dynamics, tempo

Moment form

Heinemann p. 69, Ex. 8

New Anthology listening

If time at the end of the lesson, watch http://www.youtube.com/watch?v=13D1YY_BvWU&feature=related

LESSON FIVE

Collect prep.
Logic Lesson (if available) – tutorial worksheet?