Digital Musique Concrète

1 of 2

I Musique concrète - recap

A Pierre Schaeffer - objet sonore

1 sound as a "concrete" as opposed to "abstract" object

2 recorded sounds eventually included recorded instrument sounds (see Sonic Contours)

3 recorded materials eventually included known recordings (see Collage #1)

B Acousmatic listening

1 listen to sound objects without viewing them

2 listen to them as things in and of themselves regardless of their source

3 careful, intentional listening

4 part of Pierre Schaeffer's original philosophy

C Tape techniques

1 cut/splice - durations determined by physical tape

2 speed - slowing down/speeding up had direct and unavoidable pitch consequences

3 pitch - lowering/raising pitch had direct and unavoidable speed consequences

4 direction - backwards/forwards

5 timbre - profound consequences based on cutting off important parts (as attack, etc)
or by playing in different directions

D Later techniques

1 later composers included electronic sounds

2 as technology was available, filtering, reverberation, space, etc. utilized

II Computers - consequences

A Tape techniques enhanced

1 cut/splice - durations determined by sample rate and other factors (may need to explain sample rate)

2 speed - can slow down or speed up a sound recording without affecting pitch

3 pitch - can raise or lower pitch without affecting speed

4 direction - can play forward and backward (no change)

5 timbre - complex computer analysis can "morph" one timbre to another based on time-varying spectral character (may need to explain this briefly) in addition to changing amplitude envelop (may need to explain this and relate to chopping off attack)

B Computer techniques

1 same ability to filter, reverb, etc., but more complex and controllable - no longer using single circuits or physical devices, but digital signal processing. more precise and flexible

2 analysis/synthesis routines allowed for manipulations of sound characteristics that weren't available with just the recorded sound

3 computer allowed for more control over multi-channel environments - octophonic (define) setups very common

4 able to take amplitude envelop of one sound and spectral characteristics of another - more on this in another lecture

III Philosophy and other information that affected compositional approach

A Timbre

1 more understood about how we perceive timbre; composers were more able to control the effects they wished to create

B Trevor Wishart, Denis Smalley - "spectral morphology"

1 based on Schaeffer's ideas of the objet sonore and acousmatic listening

2 object sonore defined as spectral morphology (the abstract "shape" of the time-varying frequency spectrum)

3 acousmatic listening is not careful listening of concrete objects, but rather intuitive responses to object types related to real-world experience. in other words, acknowledgement of the source (as opposed to Schaeffer who thought the sounds could be listened to in and of themselves)

C IRCAM/GRM

1 two centers in France that pushed musique concrète into the digital arena

2 most cutting-edge pieces came from these studios

The pieces and digital musique concrète (in chronological order)

I Sud (1985) Jean-Claude Risset

A Sound sources

1 the south of France - the sea, crickets, other noises - given a catalog at opening

a ocean

b boat/rain noises

c cricket, bird sounds

d some fundamental processing of the sounds - layering taking analysis of sounds and recreating in a slightly different way...

e stretching of sound, lowering, filtering

f ultimately, the highly filtered sounds create a rising pitch structure that creates a harmony used throughout most of the movements.

g instrumental sounds added as well

h different sound sources come together as qualities complement or contrast

i note the "sweeping" and the wave-like structures

2 second movement more highly processed, less original sound source

j bell-tones in second movement are, in fact, highly filtered/processed characteristics of waves

k downward sweeps also from waves

3 third movement combination of more natural sounds of first mvmt and processed sounds of second mvmt

l can begin to see where electronic sounds of second movement relate to the recordings of the first through juxtaposition

I Sud (1985) Jean-Claude Risset (cont.)

B Techniques

1 as read in "Digital Techniques and Sound Structure in Music" (by Risset - in reader) -discussed week before - trying to combine richness of natural sounds with precision and control of electronic sounds

2 the sweeping upward sounds were an unexpected side effect of a digital process that he built into the piece once discovered - using some of his early acoustic illusion processes

3 uses computer processes to avoid the natural aesthetic of collage that comes from working with recorded sources

4 analyses natural sound to form pitch and structure of work

5 sometimes called "analysis, resynthesis, and re-combination"

II ...que me hiciste mal... (1992) Pablo Cetta

A Sound sources

1 Recordings of (mostly) Argentinian cultural sources, primarily tango

2 title is part of a line from a famous poem: Tango, you did me wrong but I love you anyway...
but just the "you did me wrong" part

3 philosophically, it's much like stepping on Elvis' blue suede shoes, as Tenney did

B Techniques - compare to Collage #1 - (Blue Suede Shoes)

1 Tenney had only tape techniques - you see that Cetta used some of the same but also:

2 reverb, analysis of the materials, some digital processing - like pitch change without speed change

III Pins (1996) Paul Koonce

A Sound sources

1 probably much more familiar to us in terms of sources

a popular music/ funk riffs, classic rock riffs

b creaking doors

c "backup" warning beeps

d some instrumental sounds

e vocal sounds

f percussion sounds

g office machine sounds

h human sounds

i car sounds

B Techniques

1 Much more the "collage" than what composers like Risset were trying to avoid.

2 not necessarily a mistake... this piece is composed almost like a stream-of-consciousness poem...
one sound leading to another in orthogonal or parallel directions (e.g. the 70s rock organ turning into the air-raid siren)

IV Agon (1998) Horacio Vaggione

A Sound Sources

1 Much more indistinct - takes a while to hear what might be their original sound

a acoustic percussion sounds

B Techniques

1 Analysis/resynthesis

2 Granular synthesis (probably need to discuss what this is) using very small "clips", much smaller than what could be done with tape, and played back using complicated algorithms calculated by the computer