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21M.361 Composing with Computers I (Electronic Music Composition)
Spring 2008

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21M.361: Composing with Computers I (Electronic Music Composition)

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Spring 2008 OCW

MODULE TWO: Feedback and Continuity

(2 weeks)

Studio feedback, Pro Tools bussing, hardware and software delays, hardware filtering, software reverb, continuous/improvised structure. The compositional focus of the last module was on breaking things up and putting them together with a clear mind to form. This module focuses on improvisation and continuity, seamlessness and gradual change. Our instrument for last module was at first natural and human-made sounds, and then sounds we managed to extract from those. Those are “acceptable” compositional materials. For this module we use what most people try to avoid and consider ‘unacceptable’: speaker-mic feedback. It’s good to be able to use noise and garbage—the next module is on noise. When I came up with this module in 2003, I thought it was an original idea. How silly, of course it wasn’t; nothing is original. I found recordings of the sound artist Max Neuhaus doing speaker-mic feedback with intervening instruments (they are the bulk of Listening 2.1) in the mid 60s. We also use intervening instruments—old fashioned filters, delays, and other harmonic toys. Of course, delays themselves are feedback devices, sometimes even with loops. Also, last module tended to produce short pieces. This module produces longer ones; this requires a whole different compositional concept and strategy. This time we will have no score to guide us; just an improvisational feel, and clever editing.

Lab 2.1 MANDATORY: Learning how to make different sounds with speaker-microphone feedback, in stereo, using outboard equipment: MXR delay, SND filterbank, Aphex EQ, all of which are analog.

Assignment 2.1 (due next lab): **Feedback Improvisation**

1. **Make a 20–30 minute improvisation exclusively consisting of feedback sounds created by various means within the studio.** You can use any sound source there other than voice and pre-recorded media (CDs, pre-existing soundfiles, etc.). Your main **sources of sound should be speaker-mic feedback loop with intervening filterbank, parametric EQ, delay**, and mixing board faders/EQ. You might be tempted to rely mainly on delay and percussive sounds; but please try to stay focused, at least initially, on speaker-mic feedback. You can “play” the microphone as well as all the pieces of equipment and the mixer’s faders, with an ear toward creating continuous sounds. I’ll stipulate a rule: you have to use **all** outboard equipment, viz. the MXR delay, SND filterbank, Aphex EQ, and Aphex Aural Exciter. If you like, you can see if intervening things (like Neuhaus’ percussion instruments) elicit new and desired sounds. As far as working methods go, feedback is never entirely predictable or

repeatable, so try to record everything—there's no guarantee you'll be able to reproduce a sound. Be prepared to record long improvisations—and do think of yourselves as performing. And be prepared for the improvisations to be awful, boring, and painful at times. Listen for the occasional good sound, and when things are going right, you might get a long stretch of wonderful sounds. This recording will be the source material for part 2 of this assignment, and for both parts of Assignment 2.2.

2. Make a 4 minute montage of the best parts of your improvisation. In other words, find the parts you like, and string them together with crossfades. **This is not a composition;** that happens next week. This is merely to show off what sounds (and changes) you think are kind of neat. Leave the result as an appropriately-named aif in the appropriate folder.

Listening 2.1 (due next lab):

Compulsory

Max Neuhaus/John Cage—Fontana Mix - Feed 1–3 (1965/68) (each 10 minutes long...)

Graham Woolley—one hundred mics (2006) [a student composition]

Max Neuhaus/John Cage/Peter Whincop—Fontana Mixes - Feed 1–6 (2007)

Recommended

Peter Whincop—0610 New (2006)

Peter Whincop—0609 [jam2sp1.1] (2006)

Max Neuhaus/John Cage—Fontana Mix - Feed 4–6 (1965/68) (each 10 minutes long...)

Class 2.1: Listening to Assignment 2.1, discussing Listening 2.1.

Lab 2.2: Pro Tools bussing, Pro Tools feedback loops using software delay and reverb inserts.

Assignment 2.2 (due next class): **Feedback Composition and Continuity**

1. **Using your 20–30 minute feedback improvisation**, play around with all you learnt in Lab 2.2: **use internal feedback loops with delay and/or reverb**. This should still be live performance, since you are using real-time inserts.

2. With your original material and now this new material, **compose a 3–7 minute piece** using the Pro Tools techniques you know (except **you may not use any audiosuite effects**—not gain, not pitch shift—and **the only inserts you can use are delay and reverb in a feedback loop**). Aim for a piece that—whatever its means of production—**sounds as if it is continuous and evolving**. Think more about cutting and less about pasting. This should help retain the original temporality. If you do re-use material in various sections of the piece, don't make this apparent. The final product should sound as if it is something that is chronologically viable as an improvisation or a prepared performance. Similarly, **layer sounds as you like** (here of course you have to paste), but remember that the goal here is a rich

homogeneity, not the juxtaposition of diverse sound events. In general, crossfade will be your friend. Leave a final aif, etc.

Listening 2.2 (abbreviated, due next lab):

Compulsory

Gordon Monahan—Speaker Swinging (1982)

Slap Happy Humphrey—逆光線 Gyakkosen (Light In My Eyes) (from s/t) (orig. 1992/1996)

Peter Whincop—It was so nice to see you again (2002)

Phil Kline—Bachman's Warbler (1992, rec. 1997–98)

Michael Gordon—Industry (for solo cello and electronics) (1993, rec. 1994)

Recommended

Sonic Youth/Steve Reich—Pendulum Music (from Goodbye 20th Century) (1969/rec. 1999)

David Cossin—A. C. T. (Amplified Cardboard Tube) (rec. 2002)

Student

Catherine McCurry, Ed Platt, Jim Wagner, Kelsey Byers, Melike Yersiz, PJ Steiner, Rae Zucker, Sari Canelake, Tilly Whitney

Class 2.2: CRITIQUE (due next lab). Listening to Assignment 2.2, discussing Listening 2.2.
