

# Deconstructive Audio: The Aesthetics of Outmoded Technology

## **COURSE NUMBER**

CAMS/MUS 378

## **TERM**

Fall 2014

## **MEETING TIME**

Thursdays, 2:50-5:25PM, Room 209, JAC

## **PROFESSORS**

Jenny Olivia Johnson (MUSIC; [jjohnso3@wellesley.edu](mailto:jjohnso3@wellesley.edu)) & Nicholas Knouf (CAMMS; [nknouf@wellesley.edu](mailto:nknouf@wellesley.edu))

## **OFFICE HOURS**

Prof. Johnson: W 1-3PM, or by appointment

Prof. Knouf: M 3-5PM, or by appointment

## **COURSE INTRODUCTION**

Glitch-core, bit-crushing, circuit bending, hardware hacking, tape splicing, record scratching--in response to the hegemony of laptops and high-functioning software among contemporary digital media producers, many musicians and sound artists are now turning for musical expressivity to electronic objects thought to be long-obsolete, decayed, or, at the very least, technologically limited or "consumer-grade": the beat-up synthesizer, the rewired amplifier, the Speak & Spell toy, the 8-bit Nintendo system. In this course we will investigate this trend by looking backwards, towards the histories of these kinds of objects and their relationship to the earliest forms of musical expressivity with electronics. We will trace a complicated historical path through radio studios, telephone labs, audio research facilities, computer mainframe manufacturers, toy manufacturers, and encryption agencies to discover the impacts technological innovations (and failures) in other 20th-century arenas had upon the aesthetics and techniques of a wide variety of electronic musicians. In addition to developing a rigorous understanding of the history of electronic music through the parallel technological adolescences of other electronics, we will also learn to build electronic music-making machines of our own, using largely analog and outmoded technologies, as well as emulating the unpredictable, glitchy, decayed and often hauntingly beautiful sounds of the past using both analog synthesizers and audio formats, and present-day digital materials, including Arduino microprocessors and digital audio workstations. This course is open to beginners and experts alike; in-class discussions and presentations will be paired with appropriate workshops in beginning electronics and/or programming and individualized instruction as needed.

## **LEARNING OUTCOMES**

At the conclusion of this course, students will have been introduced to:

- The dialectic interplay between theory and practice
- How to “open up” the black box of technology: the literal opening-up of electronic objects and theoretical opening-up of discourses around technology
- The historical resonances of these earlier practices with contemporary sonic production
- The work of contemporary sound artists
- The problematics of genre and nomenclature around the term “sound art”
- In addition, students will create final sound art projects using analog (or a combination of analog and digital) technology, and will also hone their critical thinking and writing skills through a series of short-form response assignments and one paper.

## ACTIVITIES PLANNED (in order)

- Soldering a contact microphone & using it as a hydrophone (underwater mic)
- Turntable techniques and vinyl record manipulation
- Programming and playing an analog modular synthesizer
- Soldering a mini-theremin
- Playing a contemporary theremin
- Circuit-bending electronic toys and consumer-grade materials
- Composing with ¼” open reel analog tape by splicing, using pre-recorded materials
- Basic electronics/programming concepts with Arduino microprocessor
- Using Arduino and a speaker to create an algorithmic composition using tone()
- Using telephone coils and AM radios to “sniff out” circuits
- Creating a capacitive radio synthesizer with AM radios
- Learning to program and perform with a vocoder synthesizer
- Final student projects (single or group)

## GRADING POLICY

- Participation: 10%
- Weekly Sakai posts (minimum 500 words): 10%
- Small Paper: 15%
- Midterm Crit of Final Project in Progress: 10%
- Technical assignments: 15% (pass/fail)
- Final project: 40%

## GRADING GUIDELINES

### Grading rationale

A grade of “A” is given to students who meet with conspicuous excellence every demand which can fairly be made by the course.

A grade of “B” is given to those students who add to the minimum of satisfactory attainment excellence in not all, but some of the following: organization, accuracy, originality, understanding, insight.

A grade of “C” is given to those students who have attained a satisfactory familiarity with the content of a course and who have demonstrated ability to use this knowledge in a satisfactory manner.

A grade of “D” is a passing grade. There is no grade of D+ or D-.

Grading is non-competitive: helping your classmates will never harm your grade.

## ADMINISTRIVIA

### Absence & Late policy

Absences are allowed in three circumstances: personal illness, family crisis, or college-sanctioned activity. In all three cases we ask to be informed as soon as possible in advance so that we can make proper arrangements for completing the missed work—knowing that in true crisis situations advance notice may not be possible. Excused absences are the only cases in which work can be turned in late without penalty. In all other cases, late work will result in a 10% decrease in your grade for each day it is late, and will be accepted up to one week after the due date. *Please do not turn in work late*: it is highly detrimental to your overall performance, makes it very easy to fall behind, is disruptive to the other students who completed the assignments on time, and adds an additional burden on us in terms of finding time to grade your assignment at a later date. It is oftentimes in your best interest to turn in on time a less-than-perfect assignment rather than a slightly-closer-to-perfect late one.

### Cold Calling

If we see that you are not participating much in class, we may decide to cold call on you. It thus is important to be prepared to speak at every class session, and to participate regularly. This will produce a class environment that fosters your own learning, as well as that of your fellow students. Your opinions and comments matter.

### E-mail

Any questions of a non-personal nature regarding course content, assignments, etc., should be posted to the “General Discussion” Sakai forum, as it is likely other students in the course either have a similar question or can provide you with an answer! Personal questions can be discussed over e-mail, during office hours, or by appointment. We will try to respond to all e-mails within 24 hours. We generally reply to e-mails during business hours during the week, and rarely reply to e-mails on the weekends. Please send e-mail from your Wellesley account to ensure that it does not inadvertently end up in our spam folders.

If you do have a question that needs to be sent by e-mail, please e-mail both of us so that we both can be left in the loop.

One final note regarding e-mail: please use proper salutations and grammar in writing your e-mail. (This also goes for forum posts on Sakai.) It might seem like a minor point, but it goes a long way towards producing the environment that is conducive to our joint learning!

## Feedback and Comments

We will provide varying levels of feedback on your assignments during the semester. For shorter assignments, this may come in the form of a few short phrases or words. For longer assignments we will provide more extensive comments, not only on content but also on form and mechanics. This feedback might appear at times to be rather direct; know, however, that whenever we provide feedback it is in the service of making you a better writer, a better thinker, a better maker. We are of course more than willing to discuss my feedback with you in person.

## Grading concerns

Please take at least 24 hours to review our comments before contacting us regarding any grading concerns. We prefer to do this during office hours or a scheduled appointment, and not before or after class.

## Honor code

We want to remind you of the honor code: "As a Wellesley College student, I will act with honesty, integrity, and respect. In making this commitment, I am accountable to the community and dedicate myself to a life of honor." We expect that you will act accordingly, and you can expect we will do the same.

The College and us take plagiarism seriously. Please be sure to reference any materials you quote or paraphrase, no matter the medium. Let us know if you have any questions regarding this issue.

## Pronouns

If you have a preference as to which pronoun you would like me to use with you, please let us know.

## Paper formatting and guidelines

Please turn in papers and summaries with proper grammar and spelling. If either detract from our ability to understand your argument, we reserve the right to decrease your grade accordingly.

Papers should be turned in electronically to Sakai, doubled-spaced using a standard serif font (Cambria, Garamond, Georgia, Palatino, Times New Roman, etc.) at a size of 12pt with 1in margins. Please do not try to increase your page count through creative combinations of font, font size, and margins: we've seen it all, and your time would be better spent working on the substance of your paper.

Please be consistent in your choice of citation format; we do not care if you use Chicago, MLA, or APA. As with spelling and grammar, if your citations detract from my ability to understand your paper, we reserve the right to decrease your grade accordingly.

## Social Media

It is Professor Knouf's and Professor Johnson's mutual policies to not add students as friends on Facebook until they have graduated. Professor Knouf has a public Twitter handle (@zeitkunst) and if Twitter is your thing and if you are interested, feel free to follow him there (although of course there is no obligation to do so). Knouf has a public website at <http://zeitkunst.org>. Professor Johnson also welcomes visits to her

website: <http://www.jennyoliviajohnson.com>.

## **Students with disabilities**

If you have a disability and need accommodations, please contact Jim Wice, Director of Disability Services, in Clapp Library 314 to arrange these accommodations. See <http://www.wellesley.edu/disability> for more information.

# COURSE CALENDAR & ASSIGNMENTS

## Week 1. (September 4) Introduction; Contact Microphones; Turntablisms

### READING ASSIGNMENTS

#### REQUIRED:

- John Cage, "The Future of Music: Credo," in *Silence: Lectures and Writings* (Hanover, NH: Wesleyan University Press, 1961), 3–6.
- Donna J. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (Routledge, 1991), 149–181.
- Tara Rodgers, "Maria Chavez," in *Pink Noises: Women on Electronic Music and Sound* (Durham: Duke University Press, 2010), 94–103.

#### RECOMMENDED:

- Joanna Demers, *Listening through the Noise: The Aesthetics of Experimental Electronic Music* (Oxford and New York: Oxford University Press, 2010), 55–59.
- Kodwo Eshun, *More Brilliant Than The Sun: Adventures In Sonic Fiction* (London, UK: Quartet Books, 1998).
- N. Katherine Hayles, *How We Became Posthuman : Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University Of Chicago Press, 1999).

### WRITING ASSIGNMENTS

- Introductory Post on Sakai (due Wednesday, 9/3 by 11:59pm)

## Mandatory Workshop: Saturday, September 6, 2-5pm, Jewett Sound Lab

- Basic sound editing and uploading
- Basic video editing and uploading
- Usage of Soundcloud, Instagram, YouTube, and Tumblr for project documentation
- Recording: LTS hardware, basic usage of Zooms and Focusrite

## Week 2. (September 11) Theremins and Analog Synthesizers

### READING ASSIGNMENTS

#### REQUIRED:

- David H. Cope, *New Directions in Music*, 4th (Dubuque, IA: Wm C. Brown Company Publishers,

1984), "Electronic Music", 141–181.

- Herbert Eimert and Karlheinz Stockhausen, eds., *die Reihe I* (1958 [1955]): "What is Electronic Music?", Herbert Eimert, 1–10; "The Third Stage: Some Observations on the Aesthetics of Electronic Music", H. H. Stuckenschmidt, 11–13; "At the Ends of Fruitful Land...", Pierre Boulez, 19–29; "Actualia", Karlheinz Stockhausen, 45–51.

### RECOMMENDED:

- Joel Chadabe, *Electric Sound: The Past and Promise of Electronic Music* (Upper Saddle River, NJ: Prentice Hall, 1996), "The Great Opening Up of Music to All Sounds", 21–62.
- David Toop, *Ocean of Sound: Aether Talk, Ambient Sound and Imaginary Worlds* (London: Serpent's Tail, 1996), "burial rites", 66–86.

### WRITING ASSIGNMENTS

- Response #1 due on Sakai by Wednesday 9/10 at 11:59pm

### TECHNICAL ASSIGNMENTS

- Technical Assignment #1 (1-2 minute sound piece using either your contact microphone or a turntable or both) due as an mp3 post to Sakai by Wednesday 9/10 at 11:59pm

## Week 3. (September 18) Circuit Bending

### READING ASSIGNMENTS

#### REQUIRED:

- Jacques Attali, *Noise: The Political Economy of Music* (Minneapolis, MN: University of Minnesota Press, 1985), "Listening", 3–20.
- Kim Cascone, "The Aesthetics of Failure: 'Post-Digital' Tendencies in Contemporary Computer Music," *Computer Music Journal* 24, no. 4 (2000): 12–18, <http://www.mitpressjournals.org/doi/abs/10.1162/014892600559489>.
- Garnet Hertz and Jussi Parikka, "Zombie Media: Circuit Bending Media Archaeology into an Art Method," *Leonardo* 45, no. 5 (2014/08/29 2012): 424–430, [http://dx.doi.org/10.1162/LEON\\_a\\_00438](http://dx.doi.org/10.1162/LEON_a_00438).

### WRITING ASSIGNMENTS

- Response #2 due on Sakai by Wednesday 9/17 at 11:59pm
- Paragraph describing your end-of-semester project idea due on Sakai by Wednesday 9/17 at 11:59pm

### TECHNICAL ASSIGNMENTS

- Technical Assignment #2 (1-2 minute piece using either one of the theremins or the analog

synthesizer) due as an mp3 post to Sakai by Wednesday 9/17 at 11:59pm)

## **Week 4. (September 25) Tape Splicing and Manipulation; Looping**

*Special Guest: Martin Brody, Professor of Theory and Composition, Wellesley College*

### **READING ASSIGNMENTS**

#### **REQUIRED:**

- TBA

### **WRITING ASSIGNMENTS**

- Response #3 due on Sakai by Wednesday 9/24 at 11:59pm

### **TECHNICAL ASSIGNMENTS**

- Technical Assignment #3 (circuit-bending project) due as a video post to Sakai by Wednesday 9/24 at 11:59pm

## **Week 5. (October 2) Composing with Arduino using tone()**

### **READING ASSIGNMENTS**

- "What is Arduino?" <http://arduino.cc/en/Guide/Introduction>
- "Getting Started with Arduino" <http://arduino.cc/en/Guide/HomePage>

### **TECHNICAL ASSIGNMENTS**

- Technical Assignment #5 (video indicating your achievement of basic Arduino examples) due as a video upload on Sakai by Wednesday 10/8 at 11:59pm

## **Week 6. (October 9) Algorithmic Composition and Serialism**

### **READING ASSIGNMENTS**

#### **REQUIRED:**

- Lejaren A. Hiller Jr. and Leonard M. Isaacson, *Experimental Music: Composition with an Electronic Computer* (New York: McGraw-Hill Book Company, Inc., 1959), selections.
- Warren Weaver, "Some Recent Contributions to the Mathematical Theory of Communication," in

*The Mathematical Theory of Communication* (Urbana and Chicago: University of Illinois Press, 1998 [1949]), 1–28.

- Iannis Xenakis, *Formalized Music: Thought and Mathematics in Composition* (Stuyvesant, NY: Pendragon Press, 1992), “Free Stochastic Music”, 1–42 (skim).

#### RECOMMENDED:

- Abraham Moles, *Information Theory and Esthetic Perception*, trans. Joel E. Cohen (Urbana, IL: University of Illinois Press, 1968 [1958]).

#### WRITING ASSIGNMENTS

- Response #4 due on Sakai by Wednesday 10/1 at 11:59pm

#### TECHNICAL ASSIGNMENTS

- Technical Assignment #4 ( ) due as on Sakai by Wednesday 10/1 at 11:59pm

### Week 7. (October 16) MIDTERM CRIT OF FINAL PROJECTS IN PROGRESS

#### TECHNICAL ASSIGNMENTS

- PROJECT IN PROGRESS, presented in class

### Week 8. (October 23) Radio: Radio Dramas, Capacitive Radio

#### READING ASSIGNMENTS

#### REQUIRED:

- Bertolt Brecht, “The Radio as an Apparatus of Communication,” in *Radiotext(e)*, ed. Neil Strauss (Brooklyn: Semiotext(e), 1993 [1932]), 15–17.
- elpueblodechina a.k.a. Alejandra Pérez Núñez, “Bending Informational Circuits,” in *Radio Territories*, ed. Erik Granly Jensen and Brandon LaBelle (Los Angeles/Copenhagen: Errant Bodies Press, 2007), 240–246.
- Félix Guattari, “Popular Free Radio,” in *Soft Subversions*, ed. Sylvère Lotringer, trans. David L. Sweet (1979; New York: Semiotext(e), 1996), 73–78.
- Allen S. Weiss, *Phantasmic Radio* (Durham, NC, USA: Duke University Press, 1995), “Preface: Radio Phantasms, Phantasmic Radio”, 1–8; “From Schizophrenia to Schizophonia: Antonin Artaud’s *To Have Done with the Judgment of God*, 9–34; ”Lost Tongues and Disarticulated Voices: Gregory Whitehead’s *Pressures of the Unspeakable*, 75–92.

#### RECOMMENDED:

- Steve Goodman, “Contagious Transmission: on the Virology of Pirate Radio,” in Jensen and La-

Belle, *Radio Territories*, 48–54.

- Sophie Gosselin, “Sound Mutations: from Radio Diffusion to Radio Communication,” in Jensen and LaBelle, *Radio Territories*, 136–152.
- Nicholas A. Knouf, “Radio Feeds, Satellite Feeds, Network Feeds: Subjectivity Across the Straits of Gibraltar,” *fibreculture*, no. 20 (2012), <http://twenty.fibreculturejournal.org/2012/06/19/fcj-140-radio-feeds-satellite-feeds-network-feeds-subjectivity-across-the-straits-of-gibraltar/>.
- Tetsuo Kogawa, “From Mini FM to Polymorphous Radio,” in *Anarchitexts: Voices from the Global Digital Resistance*, ed. Joanne Richardson (Brooklyn, NY, USA: Autonomedia, 2003), 177–182.
- Ellen Waterman, “Radio Bodies: Discourse, Performance, Resonance,” in Jensen and LaBelle, *Radio Territories*, 118–134.

## WRITING ASSIGNMENTS

- Response #6 due on Sakai by Wednesday 10/22 at 11:59pm

## Week 9. (October 30) Hauntology and Vocoding

### READING ASSIGNMENTS

#### REQUIRED:

- Jacques Derrida, *Specters of Marx: The State of the Debt, The Work of Mourning & the New International*, trans. Peggy Kamuf (New York: Routledge, 2006 [1993]), 1–17 (if too much, at least through page 9).
- Mark Fisher, “What Is Hauntology?” [In English], *Film Quarterly* 66, no. 1 (2012): pages, <http://www.jstor.org/stable/10.1525/fq.2012.66.1.16>.
- Simon Reynolds, “Haunted Audio,” *Wire*, no. 273 (2006): 26–33.
- Avital Ronell, *The Telephone Book: Technology, Schizophrenia, Electric Speech* (University of Nebraska Press, July 1, 1991), “A User’s Manual”, xv; “Delay Call Forwarding”, 1–25; “Birth of a Telephone: Watson—Dead Cats”, 226–250, <http://www.amazon.com/exec/obidos/redirect?tag=citeulike07-20&path=ASIN/0803289383>. SCAN

#### RECOMMENDED:

- Steve Goodman, *Sonic Warfare: Sound, Affect, and the Ecology of Fear* (Cambridge, MA: MIT Press, 2009).
- Scanner, aka Robin Rimbaud, “The Ghost Outside the Machine,” in *Sound Unbound: Sampling Digital Music and Culture*, ed. Paul D. Miller, aka DJ Spooky that Subliminal Kid (Cambridge, MA: MIT Press, 2008), 131–134.
- Dave Tompkins, *How to Wreck a Nice Beach: The Vocoder From World War II to Hip-Hop: The Machine Speaks* (Brooklyn: Melville House Publishing, 2010).

## WRITING ASSIGNMENTS

- Response #7 due on Sakai by Wednesday 10/29 at 11:59pm

## TECHNICAL ASSIGNMENTS

- Technical Assignment #6 (short 1-2 minute sound piece using some aspect of radio technology) due as an mp3 upload to Sakai by Wednesday 10/29 at 11:59pm

## Week 10. (November 6) Paul Drescher Ensemble

### READING ASSIGNMENTS

- TBA

### WRITING ASSIGNMENTS

- Response #8 due on Sakai by Wednesday 11/5 at 11:59pm

## TECHNICAL ASSIGNMENTS

- Technical Assignment #8 (short 1-2 minute piece using the vocoder) due as an mp3 upload to Sakai by Wednesday 11/5 at 11:59pm

## Week 11. (November 13) Loud Objects

### READING ASSIGNMENTS

- TBA

### WRITING ASSIGNMENTS

- Response #9 due on Sakai by Wednesday 11/12 at 11:59pm

## TECHNICAL ASSIGNMENTS

- Technical Assignment #9 ( ) due as on Sakai by Wednesday 11/12 at 11:59pm

## Week 12. (November 20) Analog and the Sacred

### READING ASSIGNMENTS

### REQUIRED:

- Alvin Curran, "When I Saw Kosugi Get Into a Large Duffel Bag with his Guitar," in *Arcana V: music, magic and mysticism*, ed. John Zorn (New Yorke: Hips Road, 2010), 98–103.
- Tim Hodgkinson, "Holy Ghost," in Zorn, *Arcana V: music, magic and mysticism*, 191–226.

- Pauline Oliveros, "The Collective Intelligence of Improvisation," in Zorn, *Arcana V: music, magic and mysticism*, 292–296.
- Genesis Breyer P-Orridge, "Thee Splinter Test," in Zorn, *Arcana V: music, magic and mysticism*, 297–313.
- Terry Riley, "Music-Myth," in Zorn, *Arcana V: music, magic and mysticism*, 314–326.

#### RECOMMENDED:

- Georges Bataille, *Inner Experience* (State University of New York Press, 1988).
- Roger Caillois, *Man and the Sacred* (University of Illinois Press, 2001).

#### WRITING ASSIGNMENTS

- Response #10 due on Sakai by Wednesday 11/20 at 11:59pm

**Week 13. (November 27) - NO CLASS (Thanksgiving)**

**Week 14. (December 4) FINAL CRIT OF SEMESTER PROJECTS**

#### TECHNICAL ASSIGNMENTS

- FINAL PROJECTS performed or exhibited in class

**Have a wonderful winter break!**