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Music 396: Research: Musical
Geographies
St. Olaf College
Spring 2017
Tues. 1:20-2:45; Thurs. 2:15-3:35 p.m.
CHM 232

Office Hours - MWF 10:30-11:50 a.m. and by
appointment (email me or sign up at
<http://www.tinyurl.com/EpsteinOfficeHours>)

Course Description:

Maps have long punctuated musicological texts, but only recently have musicologists begun to leverage maps as tools for analyzing, organizing, and presenting research. Inspired in part by the “spatial turn” in the humanities at large and fueled by the increasing accessibility of Geographic Information Systems (GIS) software, musicologists can now visualize and analyze complicated trends across time and place with greater ease than ever before. This course will explore how digital mapping can complement, enhance, and complicate musicological research and presentation. By reading scholarship in musicology and in the digital humanities, doing original musicological research, writing about and creating maps, students will become scholars of the digital humanities and will contribute new musicological knowledge and pedagogical resources.

Course Goals:

- 1) Apply insights from digital humanities and musicology scholarship to the task of making music historical maps.
- 2) Develop digital mapmaking skills on multiple platforms.
- 3) Conduct original research in a musicological subfield and present your research to a diverse audience.

There are no required texts for this course. Readings, recordings, and scores will be available on Reserve at the Music Library and digitally via this syllabus.

Assignments and Assessments:

- You'll keep an **informal research journal** to help you manage and reflect on your research process. When in doubt, take notes in it. The worst feeling is knowing you saw something useful, but not remembering where you saw it. Have an idea you're not sure is relevant? Use your Research Journal as a very informal scratch pad.

Whenever you sit down to do work for this class, write in your journal for no more than 5 or 10 minutes at a time. Use this time to plan your work and think back to work you've already done. What materials will you look at? What information will you search for? What do you hope to accomplish? You might also choose to write for 5 minutes at the end of your work session. What did you accomplish? Where did you leave off, and what do you hope to accomplish tomorrow? **At least once a week (ideally Friday or Saturday) you should write a progress report, summarizing what you accomplished that week.** I'll evaluate your

journal as a whole at the end of the semester on a complete/incomplete basis up to 8 points, with 2 points reserved for particularly insightful, detailed, self-conscious,

- You'll write **annotations for 4 model digital humanities projects** that use mapping to explore cultural history. While the first annotation is assigned, the other three can be completed at any time. You can choose to annotate a project already featured on [the DH Models page of the website](#) or something new you find. Once you've completed your annotation, email it to me; I'll do some light copyediting and you can post it on the website. We'll do some analyses of DH projects in class so that you get a sense of the form and focus your annotations should take.
- You'll write at least **7 blog posts** at pages.stolaf.edu/musicalgeography. (By default, blog posts on Wordpress are public, but you may choose to make your blog posts private, in which case only I will be able to see them.) Some will be in response to prompts that you'll find in the syllabus. Some will be of your own initiative. Your posts will provide updates on your research process as you work on various assignments, described below. Your 250 to 500-word posts should carefully cite relevant sources using footnotes (see this [Blogging Style Guide](#) for information on creating footnotes in Wordpress posts) and you should consider taking advantage of the blogging medium to incorporate images, sound clips, videos, hyperlinks, or other digital resources. Your final blog post should be a lengthy (500-1000 words) reflection covering what you feel you learned this semester; what struggles you faced and/or overcame; and any recommendations you have for future musicological map-makers.
- You'll lead class discussion on a reading once during the semester. You'll pick the reading from the bibliography at the bottom of this syllabus and will send out a few discussion questions in advance. Note that your role is not to summarize the reading, but rather to guide your classmates to think critically about the reading's article, draw out its strengths and weaknesses, analyze its argument and evidence, and grapple with its relevance to your or their projects.
- You will create a number of digital maps that visualize various aspects of music history across time and place. The topic, scope and form of these maps will vary, and you will play a role in determining what maps are feasible to make given the time and resources at our disposal. Individuals or small groups will specialize in making maps using separate platforms (Google Maps, ArcGIS, Carto, Omeka Neatline).

Evaluation:

Participation (attendance, in-class discussion, annotations, blog posts, journaling): 60%

Mapping Projects: 40%

Final Grade Scale:

A+/A	95-100%	B+	87-90%	C+	77-80%
A-	90-95%	B	83-87%	C	73-77%
		B-	80-83%	C-	70-73%

Detailed explanations of what is meant by each letter grade range can be found at

Expectations:

Mine: 1) I expect you to come to class prepared. That means doing the assigned reading and listening, writing down preliminary responses to any questions I send out in advance, and writing your blog posts on time so they can inform your in-class discussion. 2) I expect you to **check your email at least once every day**. I'll send out important course info via email that you won't want to miss! 3) I expect you to extend respect, patience, and civility to your classmates and to your professor. That includes moments when some of us are at our most vulnerable – for instance, singing and performing music in class, or posting opinions and interpretations on the blog. 4) I expect you not just to silence but to *please turn off* cell phones and other electronic devices before class. Laptops may be used responsibly in this class.

Yours: 1) You can expect a dry sense of humor, a sincere concern about your interests, needs, and problems, and an irrepressible passion for music history. 2) I'll try my hardest to create assessments that are fair, reasonable in scope, and focused on helping you learn, not on punishing you for what you haven't learned. 3) You can expect that I'll be accessible in person and via email. Specifically, you can expect a response to your email within 48 hours except on the weekend; if it's taking longer than that, send me another email in case I missed the first. 4) You can expect homemade cookies if you come to my...

Office Hours:

I plan to be in my office from 10:30 to 11:50 a.m. every Monday, Wednesday, and Friday throughout the semester, except for days when class is cancelled. If none of those days and times works for you, shoot me an email and we'll find another time. If those days and times do work for you, stop by with or without an appointment. (To make an appointment, even at the moment you arrive, go to <http://www.tinyurl.com/EpsteinOfficeHours>.) Feel free, feel welcome, feel encouraged, feel compelled to bring any questions, concerns, or ideas to my office. I'm here for you, so please take advantage of this opportunity! If you come to office hours in the hope of getting help with course materials, please bring with you any material you've already produced as part of your daily (daily!!!) studying.

Attendance:

Simply put, attend class. Not only is it crucial for your own learning, but your classmates depend on your insights, too. As a result, your attendance/participation grade will drop by one point for each unexcused absence and each unexcused lateness or early departure will count as a half absence. If you have a legitimate reason to miss or be late to class, contact me in advance.

Honor Code and Academic Integrity:

It is understood that students have committed themselves to the school's codes of honor and academic integrity, which you may review at <http://wp.stolaf.edu/thebook/academic/honor/> and <http://wp.stolaf.edu/thebook/academic/integrity/> respectively. For all coursework outside of class, you may consult and refer to sources, and you may choose to study and listen with your classmates and others. But the work you submit must be entirely your own, and you must give credit to others where they have informed your ideas or examples. On all assignments, please identify any student or other person you consulted or who consulted with you, and please cite any sources to which you referred. Any plagiarism will result in a failing grade on the assessment in question. Depending on the severity of the case, plagiarism may also result in a failing grade in the course.

Accommodations:

I am committed to supporting the learning of all students in my class.

If you have already registered with Disability and Access (DAC) and have your letter of accommodations, please meet with me early in the course to discuss, plan, and implement your accommodations in the course. If you have or think you have a disability (learning, sensory, physical, chronic health, mental health or attentional), please contact Disability and Access office at [507-786-3288](tel:507-786-3288) or wp.stolaf.edu/asc/dac.

This course affirms people of all gender expressions and gender identities. If you prefer to be called a different name than what is on the class roster, please let me know. Feel free to correct me on your preferred gender pronoun. If you have any questions or concerns, please do not hesitate to contact me.

Course Schedule

All readings and writing assignments should be completed before class on the day under which they appear.

Tuesday, 2/7

Why make maps of music history?

Readings:

[David J. Bodenhamer, “The Spatial Humanities: Space, Time, and Place in the New Digital Age,” in *History in the Digital Age*, ed. Toni Weller \(New York: Routledge, 2013\), 23-38.](#)

What is GIS? The spatial turn?

What’s the difference between space and place? (Here’s [some background reading](#), in case it’s unclear.)

What are some critiques of GIS?

How might Bodenhamer’s introduction to digital mapping inform the work we’ll do this semester?

Epstein et al, *Musical Geography* website, “[Rationale](#),” “[Process](#),” “[Problems](#)”

Writing Assignment #1:

Visit the [Journals](#) folder to open your journal Google doc. Let me know if you have trouble accessing it.

After doing the reading, write your first journal entry. In your own words, describe our project and explain your role in it. What are our research goals? For what audience(s) is our work intended? What skills and perspectives will you bring to the project? What do you hope to get out of it?

Writing Assignment #2:

Choose a print map from the [Atlas Historique de la Musique](#) or from *A History of Western Music* (sign up below so everyone works on a different map). Analyze the map in your journal. Questions to answer:

- What relationship between space/place and music is the map showing?
- What kind of research was likely necessary to make the map?
- As you think about what the map is communicating, describe what you perceive as its strengths and weaknesses.
- If you could remake the map in digital form, how would you improve it?
- What problems (geographical, historical, political) does the map solve or create?

(Note that this analysis will become part of a blog post you'll write next week, so do actually *write out* answers to these questions.)

Sign up for a map below.

[Religious Divisions in Reformation Europe, c. 1560](#) -

[Influential Centers for Polyphonic Music in 15th-16th-century Europe](#) -

[Mozart's Travels](#) -

[19th-Century Musical Romanticism](#) -

[The Spread of the Organ in Western Christendom](#) -

[Conservatories, Festivals, and Opera Houses in Western Europe](#) -

[Conservatories, Festivals, and Opera Houses in Eastern Europe and Beyond](#) -

[Linguistic Boundaries between Occitan and Medieval French](#) -

Thursday, 2/9

What are the Digital Humanities?

Discussion Questions for all three readings:

What are the "Digital Humanities?"

What criticisms are/have been lodged against the "Digital Humanities?"

Should we consider our own work within this category?

[Rafael C. Alvarado, "The Digital Humanities Situation," in *Debates in the Digital Humanities*, ed. Matthew Gold \(Minneapolis: University of Minnesota Press, 2012\), 50-55.](#)

Against the Digital Humanities: [Daniel Allington, Sarah Brouillette, David Golumbia, "Neoliberal Tools \(and Archives\): A Political History of Digital Humanities," *LA Review of Books* \(May 1, 2016\).](#)

Counterpoint to Allington, Brouillette, Golumbia: [Amardeep Singh, "In Defense of Digital Tools \(by a non-tool\)," *www.electrostan.com* \(May 2, 2016\).](#)

Digital map to explore: [Imagerio.org](http://imagerio.org)

Companion website to explore: <http://hrc.rice.edu/imagineRio/>

Questions to consider:

What are the strengths and weaknesses of this map? What lessons does this map (and its accompanying project) offer to us as we begin our research?

How does the *Imagine Rio* project exemplify the priorities of the Digital Humanities? What skills and content from what disciplines/fields does the project draw together?

Tuesday, 2/14
Problematizing Maps

[Bethany Nowviskie, “How to Play with Maps,” in *Cultural Mapping and the Digital Sphere: Place and Space*, ed. Ruth Panofsky and Kathleen Kellett \(Edmonton: University of Alberta Press, 2015\), 107-127.](#)

[Mark Monmonier, “Introduction” and “Maps for Political Propaganda,” in *How to Lie with Maps* \(Chicago: University of Chicago Press, 1996\), 1-4 and 87-112.](#)

Discussion Questions:

What are the ethical and political stakes of mapmaking?

How can we draw our users’ attention to the constructed and distorted nature of our maps without undermining our authority?

What does Nowviskie mean when she says “play with maps?” What is the relationship between map-play and humanistic inquiry?

Mapping Project Assignment #1:

Sign up to research one of these mapping projects (in pairs).

Tour #1: Opera’s origins and spread - *Grove* -

Tour #2: Travels of Du Fay and Josquin (Western Europe) - *Grove* -

Home #1: Slave song collection (US) - *Slave Songs of the United States of America* -

Home #2: Premieres of music by Debussy and Ravel - *Catalogues* -

Bring to class (or share digitally) a spreadsheet that collects information on the topic you signed up for last week. You’ll have to decide what information to include on the spreadsheet, but at least one column should be city and one should be country, or one column should be latitude and one column should be longitude. (Other columns might include piece names, composer names, dates, a description, sources, media, and anything else relevant to your topic.) Once your spreadsheet includes 10+ items (you choose how complete you want it to be), make a Google Map to visualize the information. ([Click here for instructions on how to import a spreadsheet into Google Maps.](#)) Please save your spreadsheet and your map to [our class folder](#). You’ll present your map - how you made it, what it shows, how you would improve on it - in class.

If time: Digital map to explore: Imaginerio.org

Companion website to explore: <http://hrc.rice.edu/ImagineRio/>

Questions to consider:

What are the strengths and weaknesses of this map? What lessons does this map (and its accompanying project) offer to us as we begin our research?

How does the *Imagine Rio* project exemplify the priorities of the Digital Humanities? What skills and content from what disciplines/fields does the project draw together?

Extra Credit (life bonus, no grade bump): Write an abstract for [this conference](#).

Thursday, 2/16

Elevator Tutorial with Jason Paul

Meet in the DiSCO (RML 492)

Writing:

Last week, you critiqued a print map. This week, you made your first digital map. To what extent did your digital map make the improvements you recommended of the print map you analyzed? [Create a blog post](#) that shows off the print and digital maps and links your experiences analyzing the first with your experiences creating the second. What challenges will we face as we continue to try to improve on traditional music historical maps?

Tuesday, 2/21

The Affective Experience of History

Readings:

[James Q. Davies, "On Being Moved/Against Objectivity," *Representations*, 79-87.](#)

[Hans Ulrich Gumbrecht, *In 1926: Living at the Edge of Time* \(Cambridge: Harvard University Press, 1997\), ix-xv and explore/skim individual chapters or threads within the book.](#)

Sign up to analyze/annotate one of the following music-and-mapping DH Models:

[Spotify's Musical Cities](#) -

[Radio Garden](#) -

[Musical Passage](#) -

[Dezede](#) (French language) -

[Music Map](#) -

[Radiooooo](#) -

[Paris: City of Light](#) -

[Roaring Twenties](#) -

Thursday, 2/23

GIS Tutorials

Meet in the DiSCO (RML 492)

Sign up to specialize in one of the following GIS platforms. Two students should sign up for each; a third can sign up for ArcGIS.

ArcGIS -

Carto -

Omeka Neatline

Tuesday, 2/28

More Mapwork

Map Assignment:

Continue refining your initial map project using whatever platform seems best suited to the kind of argument you'd like to make or to the kind of resource you hope to provide.

Research Assignment:

Start thinking about what deeper project you'd like to work on this semester. It could be an expansion of something you've already started (either in a previous iteration of this project or in the first mapping assignment), or it could be something completely new. Come to class prepared to pitch your final project to me and your classmates.

Some of my ideas for final projects - feel free to use these or come up with better ones!

Establishment of opera houses in Europe, 1600-present (expanding on/refining Historical Atlas map)

Establishment of concert series in Paris, 1650-present

Slave song collection in the USA (using more than just the one source)

German reception of Darius Milhaud's music, 1918-1933

Church music in New Spain

Music schools in pre-colonial India

Travel of composers in the 15th and 16th centuries (expanding on DuFay/Josquin map)

Mozart's travels (improving Historical Atlas map)

Art Music in 1920s NYC (based on *Making Music Modern*)

- Possibly interested - Looking at premieres of works in art museums throughout 20th century? Eli

The Banjo Travels (based on [Laurent's *The Banjo*](#))

Thursday, 3/2

Deep Maps

Readings:

Tuesday, 3/7
Digital History/Maps I

Intentionally awful projection #1: <https://xkcd.com/1784/>

Intentionally awful projection #2: <https://xkcd.com/1799/>

What different map projects say about the people who like them: <https://xkcd.com/977/>

[Diana Sinton, "Critical Spatial Thinking," *The International Encyclopedia of Geography*, ed. Douglas Richardson, Noel Castree, Michael F. Goodchild, Audrey Kobayashi, Weidong Liu, and Richard A. Marston \(Hoboken: Wiley & Sons, 2017\), 2-9.](#)

What is critical spatial thinking?

How can we apply critical spatial thinking to concepts like location, place, distance, etc.?

What insights from Sinton's article might you apply to your own mapping projects?

Skype guest: Diana Sinton

Optional Reading: [Diana Sinton and William Huber, "Mapping Polka and its Ethnic Heritage in the United States," *Journal of Geography* 106, 41-47.](#)

Thick Mapping:

[Todd Presner, David Shephard, and Yoh Kawano, *Hypercities: Thick Mapping in the Digital Age* \(Cambridge: Harvard University Press, 2014\), 13-21.](#)

What do you see as the promise and peril of thick/deep mapping?

Where have you seen successful applications of Presner's ideas? Will you pursue his vision in your own map(s)?

[Philip Ethington and Nobuko Toyosawa, "Inscribing the Past: Depth as Narrative in Historical Spacetime" in *Deep Maps and Spatial Narratives*, ed. David J. Bodenhamer, John Corrigan, and Trevor M. Harris \(Bloomington: Indiana University Press, 2015\), 72-101.](#)

In what ways does the work of Ethington and Toyosawa complement or contradict the work of Presner, Shephard, and Kawano?

According to Ethington and Toyosawa, is it possible to construct a “deep map” without ever actually *showing* geographical space?

Most maps require imagination, and Ekiken’s “narrative map” is one example. But Presner, Shephard, and Kawano seem to advocate for *less* imagination and *more* detail in their thick maps. Which model do you prefer, and why?

See also: <http://fredgibbs.net/courses/digital-mapping/> and <http://lincolnmullen.com/projects/spatial-workshop/>

Thursday, 3/9
Digital History/Maps II

Writing Assignment: Write a blog post discussing your research and mapmaking process thus far. What challenges are you facing as you hunt for sources? Or, what exciting discoveries are you making? (Be sure to share examples of fabulous primary sources you’ve found that might make their way into a map.) What conceptual problems do you need to resolve in order to make your map? (Consider citing scholarship we’ve read that engages with these conceptual issues.) Please finish your post by 5 p.m. on Wednesday so that your classmates and your professor have time to read through all the posts before Thursday’s class.

For class: Come prepared to present one issue you’re working through, particularly with respect to representing your topic spatially. Your classmates will offer feedback and suggestions to help you move forward.

Reading:

[Knowles, Anne Kelly. “GIS and History,” in *Placing History: How Maps, Spatial Data, and GIS Are Changing Historical Scholarship*, ed. Anne Kelly Knowles \(Redlands, Calif.: ESRI Press, 2008\), 1-26. \(Also read the Foreword and Preface.\)](#)

[Frank, “Spatial History as Scholarly Practice,” in *Between Humanities and the Digital*.](#)

Tuesday, 3/14
Musicological Models

[Audio Introduction to the reading](#) (includes discussion questions at the very end)

[Reinhold Strohm, *Music in Late Medieval Bruges* \(Oxford: Oxford University Press, 1985\), 1-9 and 74-101.](#)

[1562 Map of Bruges](#) and [1612 Map of Bruges](#), for reference; Optional: [blog post about accuracy of these maps](#)

Mapping assignment: As you read, document the place names/locations and spatially marked events you encounter in [this shared Google Sheets document](#). I suggested some column headings but you should feel free to change, add,

and remove headings as you see fit. In class, we'll revise the list in order to make a map that, like Eli's Art Music in 1920s New York map, functions as a companion to *Music in Late Medieval Bruges* and hopefully offers new information and immersive media to a broad audience of scholars, students, and the general public.

Thursday, 3/16

Case Study and Guest Lecture (via Skype): Harmony Bench and Kate Elswit

Bench, Harmony. *Mapping Touring*. <http://www.harmonybench.com/blog/tag/mapping-touring>

Elswit, Kate. *Moving Bodies, Moving Culture*. <https://movingbodiesmovingculture.wordpress.com/>

[Harmony Bench and Kate Elswit, "Mapping Movement on the Move: Dance Touring and Digital Methods," *Theater Journal* 68, no. 4 \(December 2016\).](#)

Tuesday, 3/21 and Thursday, 3/23

BREAK

Tuesday, 3/28

Historical Maps

[David Rumsey and Meredith Williams, "Historical Maps in GIS," in *Past Time, Past Place: GIS for History*, ed. Anne Kelly Knowles \(Redlands, Calif.: ESRI Press, 2002\), 1-16.](#)

David Rumsey and Edith M. Punt, *Cartographica Extraordinaire: The Historical Map Transformed* (Redlands, Calif.: ESRI Press, 2004) - **GA197.R86 R86 2004** [LO](#)

Thursday, 3/30

Case Study:

Todd Decker, Race on Broadway ([read paper](#), consult [accompanying Powerpoint](#), and [play with map](#); Skype with Todd)

Also read:

<http://publicdomainreview.org/collections/w-e-b-du-bois-hand-drawn-infographics-of-african-american-life-1900/>

Tuesday, 4/4

Principles of Design

Schedule a meeting time with Epstein for sometime this week to discuss your project

Edward Tufte

Graham, Milligan and Weingart, "Making your Data Legible: A Basic Introduction to Visualizations," in *Big Historical Data: The Historian's Macroscopic* (London: Imperial College Press, 2016), 159-94. Exploring

Thursday, 4/6 - Individual Meetings (not during classtime)

Tuesday, 4/11 - No Class - Work on Research, Post to Blog if you're feeling inspired

Thursday, 4/13

[Ian Gregory, "Exploiting Time and Space: A Challenge for GIS in the Digital Humanities," in *The Spatial Humanities: GIS and the Future of Humanities Scholarship*, ed. David Bodenhamer, John Corrigan, and Trevor Harris \(Bloomington: Indiana University Press, 2010\), 58-75.](#)

- This reading is heavily theoretical, but theory can be practical, too. How might you use it for your own work?
- Gregory does not write beautifully. How can you improve on Gregory's style in your own writing?

[T. Mills Kelly, *Teaching History in the Digital Age* \(Ann Arbor: University of Michigan Press, 2013\), 55-77.](#)

- What is a recombinant source?
- What are some advantages and disadvantages of digitized archives?
- How might your research benefit from some of the techniques Kelly describes?
- How is your own work contributing to the digitization of archival or primary source materials that hadn't previously been assembled into a unified collection?
- Do you agree with Kelly's presentation of GIS as a student-friendly pedagogical tool and resource for historical research?

Tuesday, 4/18

Case Study and classroom visit: Austin Mason and Susannah Ottoway

Thursday, 4/20

No Class - Epstein at Conference

Tuesday, 4/25

Presentations

Thursday, 4/27

Presentations:

5/2, 5/4

Individual Meetings - Troubleshooting, Stylizing

Lincoln Mullen's visit - workshop

5/11 - No Class; work on projects

5/16 - Final Reflections

Take 20-30 minutes to look back through your blog posts, your journal entries, and the syllabus, and come up with a list that includes:

- Your three favorite readings from the semester. ("Favorite" could mean "most useful" or "most provocative" or "most enjoyable.")
- Your least favorite reading from the semester.
- Your favorite and least favorite interactions with an outside scholar.

All blog posts, DH model annotations, and final projects are due by 4 p.m. on Saturday, May 20.

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Digital Spatial Analysis

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Davidson, Cathy. "Why Yack Needs Hack (and Vice versa): From Digital Humanities to Digital Literacy," in *Between Humanities and the Digital*, ed. Patrik Svensson and David Theo Goldberg (Cambridge, Mass.: MIT Press, 2015), 131-144.

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Diana Stinton, *The People's Guide to Spatial Thinking*

Thulin, Samuel. 2016. "Sound Maps Matter: Expanding cartophony." *Social and Cultural Geography*:1-19. doi: 10.1080/14649365.2016.1266028.

Tyner, James A., Mark Rhodes, and Sokvisal Kimsroy. 2016. "Music, Nature, Power, and Place: An ecomusicology of Khmer Rouge songs." *GeoHumanities* 2 (2):395-412.

- Dan Cohen & Roy Rosenzweig, eds., *Digital History: A Guide to Gathering, Preserving, and Presenting the Past on the Web*, 2005.
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- Richard White, "What is Spatial History?" See website for Stanford University's Spatial History Project (2010): <http://www.stanford.edu/group/spatialhistory/cgi-bin/site/pub-php?id=29>
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- See website for the UCLA Institute on Teaching Geospatial Humanities
- M. Dodge, M. MacDerby, & Turner, eds., *Geographic Visualizations* (2008).
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- ON integrating design & multimedia: Scott McCloud, "Time Frames," pp. 711-36 in *The New Media Reader* (2003).
- for some really techie stuff on recording sound, past & present: Institute for High Performance Sound Technologies for ??? and Scholarship.

- Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction*, Duke U. Press, 2003.

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