Maps reveal, delineate, verify, orient, navigate, anticipate, historicize, conceal, persuade, and, on occasion, even lie. From the earliest maps in cave paintings and on clay tablets, to the predictive climate visualizations and crime maps and mobile cartographic apps of today and tomorrow, maps have offered far more than an objective representation of a stable reality. In this hybrid theory-practice studio we'll examine the past, present, and future – across myriad geographic and cultural contexts – of our techniques and technologies for mapping space and time. In the process, we'll address various critical frameworks for analyzing the rhetorics, poetics, politics, and epistemologies of spatial and temporal maps. Throughout the semester we'll also experiment with a variety of critical mapping tools and methods, from techniques of critical cartography to sensory mapping to time-lining, using both analog and digital approaches.

Course requirements include: individual map critiques; lab exercises; and individual research-based, critical-creative “atlases” composed of at least five maps in a variety of formats.

Course Materials

All readings will be posted to our class website: http://www.wordsinspace.net/mapsmedia/fall2018/

To access password-protected readings, you'll be prompted to enter the user name <student> and password <seecritfilez>. Not so secret, eh?

A few notes about the weekly readings/screenings/listening exercises:

- I believe we can better appreciate the complexity, relevance, and resonance of each of our weekly themes by approaching them from multiple theoretical, historical, practical, and creative directions. That’s why, for each week, I’ve put together a mini “anthology” rather than assigning a single definitive text. Yes, sometimes those reading lists might look intimidatingly long – but the total number of pages hardly ever exceeds 150 (and a lot of those pages are illustrated!), which is a more-than-reasonable workload for a graduate student. Plus, each text on that list is there because it has the potential to add a distinctive voice to our conversation (you should see the ridiculously long lists of readings that didn’t make the cut!).

- That said, my selection of a particular text does not constitute an endorsement of it. Sometimes I choose texts that annoy me, or with which I disagree, for a few reasons: because they’re widely cited and I think it’d behoove you to be aware of them, because I want to allow you to exercise your own judgment, and because I’m pretty sure they’ll make for good conversation.

- We will not address all the readings in our in-class discussions. Some readings are primarily factual, some are self-explanatory, some simply present interesting illustrations or case studies; we needn’t discuss these sorts of texts in-depth – but they’re still worth your time. They provide valuable nuance and color that will inform our discussions, shape your own understanding, and, ideally, inspire ideas for your own projects.
OTHER RESOURCES

You’ll find the website for our Fall 2015 class (including examples of the students’ work) here, our 2016 class here, and our 2017 class here.

The following web resources are worth consulting regularly, too:

- The Atlantic’s CityLab posts on maps
- The Library of Congress’s Worlds Revealed: Geography and Maps Blog
- Making Maps: DIY Cartography (John Krygier + Denis Wood)
- Maps Mania
- Dee Morris & Stephen Voyce’s series of posts on Jacket2
- Penn State’s online Cartography and Visualization course
- David Rumsey Map Collection
- LivingMaps Review [a potential venue for those you who aspire to publish your writing and creative work on maps?]
- Mapzen’s Blog
- Nasa Earth Observatory
- Stamen Design
- Strange Maps
- Territory Journal [another publication venue?]
- Wired Map Lab
- Andy Woodruff’s Blog
- My own mapping links

Your Contributions

ATTENDANCE AND PARTICIPATION

Our class is a mix of seminar and workshop, and its success depends on your regular attendance and reliable participation. We need each other to show up on time, having completed the readings, and prepared to engage constructively and respectfully with one another. See below for more on our commitment to inclusion and respect.

[I apologize for the pedantry of the following. Yet recent semesters' experience has demonstrated that such codification of policy is necessary.]

If you must be absent, please notify me in advance. One absence will not affect your grade. Two absences will result in a “one step” reduction in your final grade (i.e., from an A to an A-). Three absences will result in a “two-step” reduction. Four absences will result in failure of the course; to avoid the ‘F’ on your transcript, I’ll instead advise you to withdraw from the class. Please note that absences include those days you might miss at the beginning of the semester because of late registration. Please note, too, that a class absence does not entitle you to a private reenactment of the missed class.

I am required by The New School to take attendance at the start of class. Students who arrive more than 15 minutes late will be marked absent. Your timely arrival is appreciated. Students who are consistently late disrupt their classmates and impede our class progress.

[I have adapted the following from my colleague Amir Husak:] While I am happy to work with you to tailor the class’s content and assignments to your interests, and to develop strategies for project planning and time management, I also recognize that “it is every student’s right to fail.” There are myriad circumstances — personal, professional, cultural, etc. — that might prevent you from fulfilling the class requirements. While I appreciate that these circumstances are often difficult, the class requirements remain the same for everyone.

Attendance and participation are worth 20% of your final grade.
READING RESPONSES + DISCUSSION PROMPTS

Because this is a praxis-oriented course blending critical discussions with critical making exercises, we have to use our class time efficiently. We won’t always have the luxury of engaging in leisurely, seminar-style discussions of our readings (see above for more about my reading selections). Nevertheless, I do want to ensure that we make time to address particular passages from the readings that resonate strongly for you, that we grapple with any burning questions they raise for you, that we address any frustrations or excitement or discomfort they generate for you. So, if there are particular texts or topics or questions – or themes that extend across various readings or weekly themes – that you find especially compelling, you’re invited to “flag” those items for our in-class agenda. (Your predecessors in previous sections of “Maps as Media” have asked that I implement this requirement.)

On at least two occasions over the course of the semester – on any two weeks of your choosing (ideally, not the last two weeks!) – you’ll offer a brief 150-word maximum!) response to the week’s readings and their significance within the broader context of the class. If a particular week’s readings riled you up or moved you, that’s your cue to post. Describe what resonated for you or troubled you or confused you; share a passage or quotation you’d like us to unpack together; pose some questions you want us to take up in our discussion. Please post your responses as comments to the appropriate day’s page on our class website. Your two posts are due by noon on Wednesdays before class, and altogether they’re worth 10% of your final grade.

MAP CRITIQUE

We’ll dedicate some time in most of our classes to presenting and critiquing several (canonical/ exemplary/ experimental/ overwrought/ elegant/ etc.) maps in a variety of formats, to see what they do right and wrong, what they illuminate and obfuscate, how they integrate form and content effectively and poorly, and what lessons we can take away from them and apply, or avoid, in our own projects.

Each of you will post and present one map critique – ideally, of a map that both addresses (in a direct or tangential way) the week’s theme and pertains to your semester project. Don’t think of this exercise as an additional assignment; instead, use it to advance your own agenda. To identify a map for review, you might look through the websites I list below, and the books I’ll be previewing in Week One. You could also simply Google “your project topic” + “map”; I’ll bet you a dollar you’ll find a few options. Please consult with the other presenters for the week to work out who’s chosen which projects. You’re welcome to double- or triple-up on a particular map, provided you each offer a distinctive perspective.

Your fifteen-minute presentation-and-discussion should consist of two parts: (1) a critique and (2) a critical-creative application prototype. The critique should focus on a single mapping project and should employ some of the critical tools and criteria we discuss in Week 3. Your application is a critical-creative attempt to apply to your own research project the same effective and/or ineffective techniques used in the map you’ve critiqued. You might choose to exaggerate the failures of that map by creating a parody – or you might choose to try out some helpful features from your critique subject in order to generate mapping techniques that might aid in your own work. Be sure to identify what elements inspired you and why, and how and where we can see those elements’ influence in your map. Your application can take virtually any form and format – from a drawing to a paper prototype, from a quilt to a sound map. Keep in mind that this is only a prototype – a rough sketch, a maquette, a “napkin drawing”; we’re more concerned in this context with the ideas behind your project than with your execution.

Before class on your presentation day, please post your text and images (~900 words for grads, ~600 words for undergrads) – which should encompass both your critique and the explanation of your application exercise, along with documentation of your application – to our class website. You should aim to wrap up your formal presentation in seven or eight minutes (I’ll cut you off after ten), so we have time for discussion. And please be sure to have your presentation media loaded on the classroom computer before class begins so we can start on time. Your review is worth 15% of your final grade.

You can view Class of 2015 critiques here, 2016 critiques here, and 2017 critiques here.
At the beginning of the semester you should begin to think about a fluid, capacious research topic that you’d like to explore through the maps you create over the course of the semester. Ideally, this topic will pertain to projects you’re exploring in your other classes or your thesis, to a “through-line” you’ve pursued throughout your academic program, or to work you’re doing in your extracurricular life. You’ll need to submit a 600-word proposal for this project, via Google Drive, by Wednesday, September 19, at 4pm. This proposal should include:

1. a topic description, thematic overview, problem statement, or research question;
2. a discussion of your topic’s personal relevance, larger critical or political significance, timeliness, etc.;
3. a preliminary discussion of how your topic might lend itself to spatial/cartographic investigation (i.e., what can you learn by mapping it?);
4. a description of the geographic area(s) and scale(s) you plan to focus on in your maps; and
5. a tentative bibliography of at least seven sources (some scholarly publications, some popular publications, some precedent maps, etc.) that will likely prove useful in your research and practice.

You’ll share your proposal in class, in an informal three-minute presentation, on September 26. The proposal is worth 15% of your final grade.

You can read about 2015 final projects here, 2016 projects here, and 2017 projects here.

Each of the maps you then create over the course of the semester should pertain to this topic and cumulatively represent myriad ways of illustrating or investigating your subject. You’ll begin exploring a few mapping strategies in/for our in-class labs. You can then continue to develop these prototypes independency, or generate map ideas of your own. By the end of the semester, you should have a minimum of five (for grads) or four (for undergrads) completed maps, in a variety of “media formats” (e.g., hand-drawn, photographic, audio-based, online-interactive, etc.). You’ll then need to compile those maps into an atlas, which you can present in whatever format you choose (e.g., a book, a website, an installation, etc.), as long as you frame the contents as a cartographic set – as five “spatial variations on a theme.” You should make sure to:

- offer some means of narratively or argumentatively navigating through your collection;
- generate connective threads between your individual maps; and
- provide critical/descriptive commentary reflecting on the unique medial qualities of each piece in the set (see, for example, how Annette Kim, whom we’ll read later this semester, addresses the distinctive features of each map in her “Critical Cartography Primer,” on pp. 113-145 of Sidewalk City).

As you peruse your atlas, ask yourself: Do my maps stand on their own? Do they speak for themselves? Perhaps they don’t. Consider integrating prefaces, captions, legends, citations (i.e., where do the data come from?), disclaimers, etc., where appropriate. You’re also encouraged to integrate some of our class readings – or supplemental cartographic history and theory texts you’ve read on your own – into your atlas text (or, consider how Nick Sousanis graphically integrates theoretical material in his Unflattening).

Please do not email me five separate files or five separate links, or hand me five separate documents; your final submission should be one integrated collection, with all components synthesized and contextualized. If your work consists of analog, performative, or ephemeral media that doesn’t readily lend itself to submission, you’ll need to share with me some coherent form of documentation.

You’ll submit your project before the start of class on December 12, and during that class each student will deliver a 10- to 15-minute presentation of his/her work (details to come). Your final atlas is worth 40% of your final grade.
Policies and Procedures:

INCLUSION & RESPECT

Modified from The New School’s Safe Zone declaration: We in this classroom are dedicated to creating a welcoming environment for all members of the university community inclusive of race, ethnicity, national origin, culture, language, gender and gender expression, sexuality, religious and political beliefs, age, and ability. We’ll aim to celebrate our diversity and to respectfully negotiate differences in experience, understanding, and expression. We will stand against all forms of discrimination and oppression, whether directed against individuals or groups. We will also make an effort to respect one another’s individuality in our forms of address, which includes learning one another’s preferred names and pronouns.

If you experience anything in the classroom that undermines these values – or if there is anything I can do to better cultivate inclusivity and respect – please feel free to let me know. Likewise, if you are facing personal challenges inside or outside the classroom that are impacting your class performance, I’m happy to speak with you about strategies of accommodation, and to help you find the appropriate support resources at the university.

SUBMITTING WORK VIA GOOGLE DRIVE

You’ll occasionally be asked to submit your work via Google Drive. Because I prefer to insert margin comments and propose revisions directly in/on your text, I need to work with an editable document (e.g., not a pdf). For this reason, I ask that you please either (1) create your documents in Google Drive; or (2) upload documents in .doc format, which I can then download and annotate using “track changes,” and return to you via email. You can share your material with me by clicking on the “Share” button in the upper-right corner of Google Drive/Docs, inserting my email address, then clicking on the little pencil icon and choosing “can edit.”

I’ll probably propose some line edits and add some margin comments to your Doc. I don’t expect you to respond to my recommendations and queries, but I do hope you’ll at least consider them! If, however, you would like to continue the dialogue in the comments section by responding and requesting additional feedback from me, you’ll need to alert me via email because I can’t continually monitor for new activity across all students’ documents.

POSTING WORK ONLINE

We’ll all create accounts for our class’s blog, and we’ll briefly review how to post. You’re invited to post any class-related material – events, exhibitions, news, etc. – at any time, and you’ll occasionally be asked to share your work online. If you’re not comfortable posting your work, please don’t hesitate to talk to me.

DEADLINES

Assignment deadlines are noted on the syllabus. Late work will be penalized, and extensions will be granted only rarely, and only after consulting with me well in advance of the assignment deadline. Sorry – I know some other faculty are a bit more lenient with deadlines, but I tend to set aside big blocks of time for assignment review, and I provide substantial feedback – so missing deadlines means you miss your “window of opportunity” for review, which is an essential part of your learning in this course (and any course, for that matter).

A student who has not submitted all assigned work by the end of the semester does not receive an “Incomplete” by default. “Incompletes” are assigned only in extreme circumstances, and require that the student consult with me well before the end of the semester and sign a contract obligating him or her to complete all outstanding work by a date that we agree upon.

CHANGES TO THE SYLLABUS

I make every effort to map out the entire semester before the semester begins, so we both know what we’re in for. Yet we may need to make a few small alterations to our schedule: we might host a guest who’s passing through town, I might decide to cut a couple of our readings or substitute new material that’s published over the course of the semester, etc. Any changes will be noted, with plenty of advance notice, on our class website, which will always be the
most the most accurate, up-to-date “control center” for our class. This printed syllabus is really just an administrative document.

ACADEMIC HONESTY

All students are expected to familiarize themselves with the University’s academic honesty policy. Plagiarism or cheating of any form will result in immediate failure of the course. If you have any questions regarding proper citation of sources or other academic integrity matters, consult the University Learning Center.
Week 1: August 29: Calibrating the Compass

Introductions
Syllabus Review

Getting our Bearings: I’ll be referring to these texts in class; you’re welcome to read them, but you’re not obligated to do so!

- Aaron Reiss, “My 5 Favorite Maps: Bill Rankin,” The Atlantic CityLab (September 26, 2014). See also Bill’s top-10 list.
- Torn Apart / Separados

References & Inspiration: I’ll bring these books to class so we can look through them. I’ve also requested that copies of (almost) all of these titles be placed on reserve in the List Center Library @ 6 East 16th St.; I encourage you to reference them throughout the semester.

- Katharine Harmon, You Are Here: Personal Geographies and Other Maps of the Imagination (New York: Princeton Architectural Press, 2004): maps of the body and spirit, maps of emotion and memory, maps of fictional places and cosmology, maps of air routes and stereotypes
- Nato Thompson, Experimental Geography: Radical Approaches to Landscape, Cartography, and Urbanism (Brooklyn: Melville House, 2008).
Week 2: September 5: Cartographic Futures, Presents & Pasts

**Field Trip, 4-5pm: NYPL Map Division, 42nd St + 5th Ave, meet outside room 117**

The Old
- Read about the amazingly ambitious *History of Cartography* project, some of which is available to you freely online: "*The History of Cartography, the ‘Most Ambitious Overview of Map Making Ever,’ Now Free Online,*" *Open Culture* (September 3, 2015). Now, you'll read a few small samples from that collection:
- Just for fun: check out the maps released by the CIA in November 2016, in honor of the agency’s 75th anniversary. And the recently published complete archive of National Geographic maps.

The New and Timeless: these two pieces foreshadow many of the themes and critical questions we’ll be discussing throughout the semester
- What new cartographic developments – humanitarian or ecological applications, business opportunities, creative experiments, political or ethical threats, areas of critical study, etc. – are most compelling to you? You might draw from inspiration from the two essays above, or you might consider how mapping aids in predictive policing and military combat; how new geolocative technologies make it possible for online retailers to deliver to remote, henceforth “un-addressed” parts of the world; how real-time mapping opens up new potential in the worlds of gaming or performance; how artists find creative fodder in geo-media glitches; how smartphones could be compromising our “spatial thinking”; how Google Maps is, by its own volition (or miscalculation), renaming neighborhoods [see this, too]; or how new cartographic technologies have facilitated gerrymandering; or how the lack of accurate cartographic data in the Congo compromises public health work; or any of the other ways mapping is transforming transportation, trade, culture, climate, and realms beyond. Your task is to choose a cartographic issue or application of personal interest; do a little digging online for relevant news, recent scholarship, and illuminating “think pieces”; find a map that illustrates your chosen phenomenon; post your map to our collaborative Google Slide deck; then come to class prepared to share your map and talk about why it’s exemplary of some bigger cartographic – and /or cultural, political, economic, aesthetic, etc. – concern. You’ll each have one minute to present! Aaack!

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Tools & Techniques for Critique: Yes, there’s some redundancy in the readings below! We’re aiming to map the overlaps and discrepancies in various critical rubrics.

- Mike Foster, “The Lost Art of Critical Map Reading,” Graphicarto (February 27, 2014).
- Laura Kurgan and Bill Rankin, “Seeing Cities” Guernica (December 15, 2015) [Bill will be visiting us on 9/26!]
- Shannon Mattern, “Maps as Media,” Words In Space (September 15, 2015) [feel free to skip/skim the discussions of indigenous mapping in the final section, “Herding Dragons”; we read about this work a bit last week — and we’ll revisit it again in our indigenous mapping lesson in a few weeks].

- Please start preparing your semester project proposal – due Wednesday, September 19, at 4pm!
- And while you’re developing ideas for your final project, think about which week you’d like to present your map critique. Ideally, this assignment will feed into your final project. Reserve your slot here.

Lab: Small-Group In-Class Map Critiques

SEPTEMBER 19: No Class: Yom Kippur

Reminder: Your semester project proposals are due, via Google Drive, by Wednesday September 19, at 4pm, so I’ll have plenty of time to read, respond, and organize you into presentation groups for class on 9/20! For more information, see the first paragraph under “Map Labs and Atlas” in “Your Contributions.”

Week 4: September 26: Cartographic Epistemologies & Blind Spots

**Guest:** Skype 4-5pm: Bill Rankin, Associate Professor of History @ Yale, Cartographer

5:15 – 6:45: **Discuss Individual Project Proposals**

Yes, this looks like a long reading list. But it's really only two substantial texts (Pickles and Vertesi, the latter of which has lots of images), plus several short, digestible excerpts and posts. In all, about 75 pages. You can do it.

**Epistemology**

- Excerpts from Sophia B. Liu & Leysia Palen, “**The New Cartographers: Crisis Map Mashups and the Emergence of Neogeographic Practice,**” *Cartographic and Geographic Information Science* 37:1 (2010): focus on 72, 78-82, 86-9 [Where do our data come from, and how do we render them mappable?].

**Frames, Borders, Gaps, Cuts & Boundaries**


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Week 5: October 3: Cognitive Mapping, Dissonance & Resistance⁴ / Lab #2

- Lily Bui On, “Dragons, Memory & Navigating the Globe Using Only Your Wits,” Nautilus (October 13, 2014) [a preface to our indigenous mapping discussion in three weeks].
- Tim Wallace, “Kevin Lynch & The Imageable Boston,” Bostonography (December 15, 2010) [and follow Wallace’s link to the “Perceptual Forms of the City” material in the MIT Archives].

Lab: Discuss methods for cognitive and participatory mapping.

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Week 6: October 10: Critical Cartography & Counter-Mapping

Map Critiques: up to four students present their map critiques

- Yet counter-mapping was taking place before the term existed: Dee Morris & Stephen Voyce, “William Bunge, the DGEI, & Radical Cartography,” *Jacket 2* (March 20, 2015).

Other Examples:
- Aimi Hamraie’s Mapping Accessibility project: [About + Methodology](#).

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MORE ON WM BUNG E: MIT Center for Civic Media on [The Detroit Geographic Expedition and Institute](#); a collection of Bunge maps on Detroitography; the [DGEI Field Notes](#) @ Antipode, as well as papers from a symposium reflecting on those notes; Andy Merrifield, “Situated Knowledge Through Exploration: Reflections on Bunge’s ‘Geographical Expeditions,’” *Antipode* 27:1 (January 1995); and Linda Campbell, Andrew Newman & Sara Safransky’s “Uniting Detroiters” project, inspired by Bunge.
Week 7: October 17: Indigenous Maps, Spatial Ontologies & Epistemologies

Guest: 4-5pm: Kasey Klimes, Google Maps [Kasey will be sharing work that pertains primarily to last week’s discussion on critical cartography. After her visit, we'll turn to this week’s theme: indigenous cartography.]

- Margaret Wickens Pearce and Renee Pualani Louis, “Mapping Indigenous Depth of Place,” American Indian Culture and Research Journal 32:3 (2008): 107-26 [you’ll find some repetition with Peluso’s piece, from last week, but the major part of this article focuses on graphic applications]
- Explore some sample projects:
  - Check out LandMark: Global Platform of Indigenous and Community Lands, Pan Inuit Trails, and the Ground Truth Initiative.
- Many more examples in the Supplemental Resources below!

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Week 8: October 24: Lab #3: Mapping Platforms

**Map Critiques:** up to three students present their map critiques

Our list of resources – platform and data sets – will depend on the nature of your projects. We’ll update the list online at least a week before 10/24.

Week 9: October 31: The Aerial Gaze

**Lab: Map Workshop:** Share your work in progress and get some feedback! We’ll split the class into quarters, and each of you will have roughly **ten minutes two do two things:** present one prototype map-in-development for your final atlas, and solicit and receive feedback. How prototype-y are we talking? It can be rough, but your concept and execution plan should be clear, so your classmates will have something concrete to respond to.

**What are the epistemologies and politics of aerial imagery?**

- And a variety of short applications:
  - Check out Terrapattern.

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Week 10: November 7: Multimodality, Multivocality & Deep Mapping

**Map Critiques:** up to four students present their map critiques

- Shannon Mattern, *Deep Mapping the Media City* (Minneapolis: University of Minnesota Press, 2015).
- In class, we'll look at Megan Prelinger, Rick Prelinger and Stacy Kozakavich’s series of fabulous atlases for the Bay Observatory in San Francisco, and Bobby Pietrusko’s beautiful Urban Intermedia work.

Week 11: November 14: The Mapping Arts

**Map Critique:** up to three students present their map critiques

**Guest:** Tiffany Chung

- Daniel Rosenberg, “Against Infographics,” *Art Journal OPEN* (March 11, 2016) [on aesthetics & epistemology].
- Bellerby & Co Globemakers
- Work from our visiting artist

NOVEMBER 21: No Class: Thanksgiving

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Week 12: November 28: Mapping Sensation & Affect / Lab #5

**Map Critiques:** up to three students present their map critiques

- You can choose to read about either smell maps or sound maps:
- Check out the various sound maps at Cities and Memory, London Sound Survey, and Radio Aporee – and explore the affective maps at Good City Life.
- Danielle Quercia, Luca Maria Aiello, and Rossano Schifanella, “Mapping Towards a Good City Life,” Journal of Urban Design and Mental Health 3:3 (2017) [connecting affect to cognitive mapping].

**Lab:** Sensory Mapping – more info TBA

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Week 13: December 5: Mapping Time

**Map Critiques:** up to three students present their map critiques

- “*Timeline Maps*” in the David Rumsey Map Collection (March 29, 2012).
- Topotime
- Space/Time Directory

Week 14: December 12: Final Presentations

This week, for the first half of class, we can explore topics or practice skills of your choosing. We'll dedicate the remainder of our time either to (1) an open lab, during which you can work on your final projects and solicit feedback from your classmates and instructors; or (2) our first few final presentations.

Week 15: TBD: Final Presentations

The New School didn’t map out the academic calendar very carefully and consequently forgot to schedule a 15th session of all Wednesday classes. Doh! We'll have to determine when to hold our final class: Immediately after our December 12 session, as an Act II? Sometime during the weekend of the 14th? Or during the university’s official make-up day, on Tuesday, December 18?

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11 [Rethinking Timelines](#) Project @ University of Sydney; Daniel Rosenberg, *Time Online*, University of Oregon; [Speculative Timelines](#) research group; Sybille Lammes, Chris Perkins, Alex Gekker, Sam Hind, Clancy Wilmott, and Daniel Evans, eds., *Time for Mapping: Cartographic Temporalities* (Manchester: Manchester University Press, 2018).