Reading Machines

Course description
This course invites students into a historically ranging, critically intensive, and hands-on learning environment about the technologies by which humans transmit ideas. “Reading Machines” takes a long view of how we got to now, from the history of manuscripts and books to digital platforms. The course proposes that 1) then and now, our technologies for sharing text, image, and data crucially shape the ideas which they convey, and 2) these contexts can help students plan new mechanisms for communication in the present. The course offers critical readings and discussions, lab-like experiences with different text technologies, and student projects.

Who is this for?
“Reading Machines” aims to reward students moving into a variety of disciplines and programs. The course seeks to marry the critical insights of the humanities with the design-and-build impulses of engineering, blending NC State’s “Think and Do” motto into a discovery experience for first-year students. The course also provides a framework for critical and creative thinking as part of NC State University’s QEP program called “TH!NK.” These standards and behaviors of critical + creative thinking, useful in every academic context, are built into the course’s program of activities, many of which are also designed to help you reflect on these very skills (i.e. metacognition). Students will become adept at using the intellectual standards for critical + creative thinking in evaluating the work of others as well as proposing, analyzing, and arguing research questions related to this course’s content.

This course has no prerequisites. It is restricted to first-semester freshmen in the University Honors Program (UHP) but open to other interested students with the UHP’s permission.

Our goals
The course’s goals are for students, having completed all course requirements, to:

1. be able to identify an array of historical and comparative contexts for media technologies;
2. accrue a concept inventory for understanding and analyzing various media and their communicative functions;
3. gain skills in working with varied media forms, from writing with quills to elementary physical computing, in order to generate critical projects; and
4. navigate the many resources at NC State for supporting such projects, including the NCSU Libraries and MakerSpaces.
Learning Outcomes

Students leaving the course should have working analytical vocabulary and diverse introductory skill set for their continuing work as creative and critical makers at NC State and beyond. In addition, the course aims to deliver learning outcomes generalizable to all continuing courses of study. In accordance with the goals of the TH!NK program, students will, upon completion of this course, be able to:

1. explain the intellectual standards of creative + critical thinking;
2. evaluate the work of others using these standards;
3. apply critical + creative thinking skills and intellectual standards in the process of identifying and reckoning with research problems or projects; and
4. reflect on your own thinking and the thinking of others.

Finally, the course also satisfies the university’s GEP requirement for Interdisciplinary Perspectives (IP). Each course in this category will provide instruction and guidance that help students to:

1. Distinguish between the distinct approaches of two or more disciplines.
   a. Course outcome: identify and distinguish between approaches to historical and contemporary text technologies from disciplines including English and Engineering.
   b. Means of assessment:
      i. Students will research and apply critical readings from participating disciplines in their course projects.
      ii. Students will assess historical and contemporary text technologies in class and write guided reflections in course journals.
2. Identify and apply authentic connections between two or more disciplines.
   a. Course outcome: construct a concept inventory for analyzing various media and their communicative functions.
   b. Means of assessment:
      i. Each course assignment requires students to match an engineering development cycle to the structures of argument in project planning.
      ii. All course assignments and journal entries are predicated on students’ development and successful integration of analytic concepts.
3. Explore and synthesize the approaches or views of the two or more disciplines.
   a. Course outcome: Students will produce media forms according to a blended creative and critical approach.
   b. Means of assessment:
      i. Students will collaboratively construct projects which manifest principles of creative engineering and utilize diverse resources on campus to do so.
ii. Students will write reflection papers for each of the three major assignments and a final presentation, all of which depend upon successful argumentation and disciplinary synthesis.

**Your instructor**

Paul Fyfe, Associate Professor of English  
Office: 269 Tompkins Hall, Tues-Wed-Thurs 3-4p or by appointment  
paul.fyfe@ncsu.edu  
http://go.ncsu.edu/pfyfe

You can call me Paul, Professor, Dr. Fyfe, he, him, &c—whatever you are comfortable with. Please let me know if you wish to be referred to using a name and/or pronouns other than what is listed in the student directory.

**Our materials**

The course requires the following:

2. Costs for NCSU Libraries MakerSpace materials

Additional course materials will be provided (e.g. book binding materials). Many course readings will be linked electronically. Students should be prepared to print out these materials when necessary.

**What I need from you**

1. **Attendance.** This course allows for three absences for any reason; no excuses necessary. Additional absences will cost 1/3 letter per infraction. I reserve the right to treat repeated lateness as an absence. We can probably accommodate conflicts with class time—professional, personal, etc.—but please talk with me in advance. The university’s policy on Attendance Regulation (REG02.20.3) is available online http://policies.ncsu.edu/regulation/reg-02-20-03

2. **Participation.** Our class will be conducted as a seminar which will thrive on the participation of its members. Participation means thoughtfully preparing any reading materials, exploring study objects, and communicating with the seminar. It includes but is not limited to speaking up in class. While this is strongly encouraged, our course will provide multiple ways of participating in the topic and materials.

3. **Fortitude.** Because of its occasional engagement with technologies, this course may (ok, will) include some moments of frustration or even outright failure. These exercises may require your patience and fortitude in ways that other classes do not. It will also reward them. But never stew in isolation. If you get confused or stuck, let’s talk. We’ll figure it out together.
4. **Quizzes.** Basic reading quizzes will be completed on Moodle before the start of class on any day they are assigned. These can be taken open book.

5. **Class forum.** We will often write and share materials in a class forum on Moodle. You will make entries based on different assignments and submit the journals biweekly for evaluation.

6. **Critical skills scenario.** The first of three course projects, this scenario presents you with a problem related to the course requiring your researched response.

7. **Electronic literature assignment.** The second project requires an experiment in writing electronic literature. Tools and guidance will be provided.

8. **Critical making project.** The final project requires students to creatively manipulate the codex technology into an experimental interface. Detailed instructions and workshops will help students develop and produce their ideas.

9. **Class presentation.** In lieu of a final exam, each student will submit their critical making project as well as an accompanying presentation to the class. In this short presentation, you’ll explain your ideas, how they fit into our course’s conversations, and where you see the conversation going next. These five-minute presentations will take a special form called “Pecha Kucha”—a highly visual style that will aid you in making effective presentations in the future. Further instructions to come.

**What you can expect from me**

As your instructor, I commit to punctual appearance at class times as well as preparation of assigned texts and contexts. Emails will be answered within two business days. All graded assignments will be completed and returned within one week of submission.

**Because grades**

- Participation 10%
  - In-class community
  - Workshop participation
  - Workshop projects
- Quizzes 10%
- Course journal 15%
- Skills scenario 15%
  - Initial reflections
  - Project worksheets with milestones
  - Completed scenario
Electronic literature 20%
  Project requirements sketch
  Proposal
  Peer review comments
  Final draft with reflection
Critical making project 20%
  Initial proposal with needs assessment
  Project milestones
  Final projects
  Individual reflection of work
Pecha Kucha presentation 10%

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**Getting help**

Your success in this class is important to me. We will all need accommodations because we all learn differently. If there are aspects of this course that prevent you from learning or exclude you, please let me know as soon as possible. Together we’ll develop strategies to meet both your needs and the requirements of the course.

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 919-515-7653. For more information on NC State’s policy on working with students with disabilities, please see the [Academic Accommodations for Students with Disabilities Regulation (REG02.20.01)](http://policies.ncsu.edu/regulation/reg-02-20-01).

**All the policies—including plagiarism (boo)**

All students are responsible for reviewing the NCSU Polices, Regulations, and Rules (PRRs) which pertain to their course rights and responsibilities. These include: [http://policies.ncsu.edu/policy/pol-04-25-05](http://policies.ncsu.edu/policy/pol-04-25-05) (Equal Opportunity and Non-Discrimination Policy Statement), [http://oied.ncsu.edu/oied/policies.php](http://oied.ncsu.edu/oied/policies.php) (Office for Institutional Equity and Diversity), [http://policies.ncsu.edu/policy/pol-11-35-01](http://policies.ncsu.edu/policy/pol-11-35-01) (Code of Student Conduct), and [http://policies.ncsu.edu/regulation/reg-02-50-03](http://policies.ncsu.edu/regulation/reg-02-50-03) (Grades and Grade Point Average).
Incomplete work

As stated by the university grading policy, "An IN must not be used...as a substitute for an F when the student's performance in the course is deserving of failing. An IN is only appropriate when the student's record in the course is such that the successful completion of particular assignments, projects, or tests missed as a result of a documented serious event would enable that student to pass the course." In this class, a grade of "IN" will only be given (1) in response to a written student request [e-mail is fine] submitted to the instructor before 4:00 on the last day of classes; (2) at the instructor's discretion; and (3) because of a serious interruption a student's work not caused by his/her own negligence. The university's policy on incompletes REG 02.50.03) can be found at http://policies.ncsu.edu/regulation/reg-02-50-03

When things get tough

As members of the NC State Wolfpack community, we each share a personal responsibility to express concern for one another and to ensure that this classroom and the campus as a whole remains a safe environment for learning. Occasionally, you may come across a fellow classmate who seems in crisis or may need help. In these cases, consider reporting to NC State Students of Concern (http://studentsofconcern.ncsu.edu/). If you are needing help or just someone to talk to, please get in touch with the Counseling Center at Student Health (http://healthcenter.ncsu.edu/counseling-center/) which offers confidential services.

Our open classroom

NC State University provides equality of opportunity in education and employment for all students and employees. Accordingly, NC State affirms its commitment to maintain a work environment for all employees and an academic environment for all students that is free from all forms of discrimination. Discrimination based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation is a violation of state and federal law and/or NC State University policy and will not be tolerated. Harassment of any person (either in the form of quid pro quo or creation of a hostile environment) based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation also is a violation of state and federal law and/or NC State University policy and will not be tolerated. Retaliation against any person who complains about discrimination is also prohibited. NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at http://www.ncsu.edu/policies/campus_environ or http://www.ncsu.edu/equal_op. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity (OEO) at 515-3148.

Additionally, I consider it part of my responsibility as instructor to address the learning needs of all of the students in this course. The course presents materials that are respectful of diversity: race, color, ethnicity, gender, age, disability, religious
beliefs, political preference, sexual orientation, gender identity, citizenship, or national origin among other personal characteristics. I also believe that the diversity of student experiences and perspectives is essential to the deepening of knowledge in a course. Any suggestions that you have about other ways to include the value of diversity in this course are welcome. In scheduling midterms and other exams, I have tried to avoid conflicts with major religious holidays. If there is a conflict with your religious observances, please let me know as soon as possible so that we can work together to make arrangements.

**Electronic Hosting Statement**

Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web-postings, where relevant to the course. Examples include online discussions of class topics, and posting of student coursework. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.

This course may also involve electronic sharing or posting of personally identifiable student work or other information with persons not taking or administering the course. Students will be asked to sign a consent form allowing disclosure of their personally identifiable work. No student is required to sign the consent form as a condition of taking the course. If a student does not want to sign the consent form, he or she has the right to ask the instructor for an alternative, private means of completing the coursework.

**What did you think?**

Online class evaluations will be available for students to complete during the last two weeks of class. Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will never know how any one student responded to any question, and students will never know the ratings for any particular instructors.

- Evaluation website: https://classeval.ncsu.edu
- Student help desk: classeval@ncsu.edu
- More information about ClassEval: http://www2.acs.ncsu.edu/UPA/classeval/index.htm

**The plan (subject to change)**

Unless otherwise noted, all readings should be completed before class on the day they are assigned.

**Part 1: Reading Machines**

*Goals: Backgrounds, Analysis, Critical Reasoning*

Wed Aug 16: Welcome and Overview
*Homework (HW):* Get necessary materials for course. Read before the first meeting:


*Topics:* Introduction to the course, TH!NK structure, media analysis

*In class:* What do we mean when we say “reading”?

**Mon Aug 21: Standards of Critical and Creative Thinking**

*HW:* Read in advance


*Topics:* Intellectual standards of creative and critical thinking

*In class:* SEE-I

*Forum:* “ Adopt-a-standard” assignment. In the next few days of your experiences at NC State or in our world, document where you encounter your adopted standard. In what ways do you find it used or abused? How could it be more successfully implemented?

**Wed Aug 23: Reading Questions**

*HW:* Read in advance and take quiz on Moodle:


*Topics:* Metacognition, the politics of reading

*In class:* Review first assignment (skills scenario) and record initial reflections on worksheet. Review metacognitive cycle for self-directed learning (with handout). Brainstorm list of things we need to address the problem.

Forum: Media diet and visualization assignment. In any of the next several days before our next class, choose a 24-hour period during which to record your "media diet." In other words, keep track of what kinds of media you use, for how long, and for what purposes. Digest this into a chart or graph or some kind of visualization. (For types of visualizations, you might find inspiration here: [http://datavizproject.com](http://datavizproject.com). Note this can be hand drawn, a screenshot, a chart, whatever. Then, share your data and/or visualization along with a paragraph reflection about what you learned from watching your diet. Anything surprising? Patterns you noticed? Things you would want to change?

Mon Aug 28: Writing to Think

HW: Read in advance and take quiz on Moodle:


Mueller, Pam A., and Daniel M. Oppenheimer. “The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking.” *Psychological Science* (2014): 1-10. [http://pss.sagepub.com/content/early/2014/05/21/0956797614524581](http://pss.sagepub.com/content/early/2014/05/21/0956797614524581) [or PDF]


Topics: Writing and cognition

In class: Quills and ink practice, create “artisanal tweets” and post on campus

Forum: Reflect on tweet activity and strategies for its delivery

Wed Aug 30: Reading without Thinking

HW: Bring your laptop to class. Read in advance and take quiz on Moodle:


Topics: debates about reading, platforms, affordances

In class: “Spritz” tests. Hand out project plan and milestones worksheet.

Forum: Reflections on the temporalities and platforms for reading.

Mon Sept 4: [No class: Labor Day]

HW: read and take quiz on Moodle:


Wed Sept 6: Meaning in the Margins

HW: Finish and submit project plan.

Topics: Marginalia

In class: Meet at the Ask Us desk in DH Hill Library (not the Hunt Library). Discussion with librarian Cindy Levine and Book Traces marginalia search.

Forum: Record marginalia search and reflections.

Mon Sept 11: Close Reading

HW: Begin reading paperback copy of Mr. Penumbra’s 24-Hour Bookstore, pages 1-62 and take quiz on Moodle

Topics: Marginalia

In class: close reading exercise

Forum: Read a little farther in Mr Penumbra, or else go back over pages which previously interested you. Make several items of marginalia in your paperback copy. Reflect in this forum on your own practices of note taking and annotation for pleasure reading, analysis, memory work, paper storage, &c.


HW: Read in advance and take quiz on Moodle:


Topics: Remediation, digital materiality

In class: Bibliographic description of a digital object

Forum: Finish your bibliographic description and reflect.

Mon Sept 18: Social Reading

HW: Read, annotate, and converse on livemargin.com social text of Mr. Penumbra’s 24-Hour Bookstore (pages 63-75 in paperback, chapters “The Smell of Books” and “The Peacock Feather”). Read the novel through page 97.

Topics: Social reading, annotation, the wisdom of crowds, backchannels.

In class: Examine the requirements of successful information communities, what platforms facilitate them, and why.

Forum: Create and submit a meme along with a brief reflection.

Wed Sept 20: Close Listening

HW: Download and listen to the audio selections of Mr. Penumbra. Continue reading the novel through page 164.

Read in advance and take Quiz on Moodle:


Topics: modalities, sound

In class: Review memes and explore different audio performances.

Forum: One paragraph reflection on creating your audio recording. Submit after you finish and upload the homework for Monday.

Mon Sept 25: The Voice of the Text

HW: Record and submit an audio snippet of your own from any section of Mr. Penumbra
Topics: Performance, embodiment

In class: Review snippets.

Forum: None. Work on hard Assignment #1.

Wed Sept 27: Text Analysis 1

HW: Read in advance and take quiz on Moodle:

Mr. Penumbra through page 221


Topics: E-texts and Optical Character Recognition (OCR)

In class: Meet at the Ask Us desk of DH Hill Library for an OCR workshop with Jason Evans Groth. Lifecycle of a digitization in DH Hill Library

Forum: None. Finish Assignment #1.

Fri Sept 29: Assignment #1 due by 5:00pm

Mon Oct 2: Text Analysis 2

HW: Finish preparing your etext. Finish reading the novel (through page 288). Read in advance:


Topics: Text analysis

In class: Experiments with text analysis tools and “distant reading”

Forum: Paragraph reflection on what kinds of knowledge distant reading might or might not enable.

Part 2: Breaking and Critical Making

Goals: Distortion, Production, and Communication

Wed Oct 4: Electronic Literature

HW: Read in advance:

Shirley Jackson, “Snow” (2014-)
https://www.instagram.com/snowshelleyjackson/ a 360-word story in progress on Instagram
Topics: Interactivity and deformance

In class: Instructions for Assignment #2. Selections from Jason Nelson, Secret Technology (choose some to explore) http://www.secrettechnology.com/

Forum: Reflection on your adopted text of Nelson, what interpretive framework you had to shift into for explaining it.

Mon Oct 9: Deformance


Topics: Mashups, hacking, breaking, deformance


More advanced language settings can be achieved using Cheap Bots, Done Quick! http://cheapbotsdonequick.com/ (advanced users recommended)

Forum: Once finished with Twitter bot, post link to forum and reflect, as a group, on your goals and results.

Wed Oct 11: Deformance, part 2

HW: Complete Twitter bots.

Topics: Deformance, cont.

In class: Review Twitter bots.

Forum: Treat a selected page from our disaggregated Mr. Penumbra paperback according to samples from Tom Philips A Humument. Post a picture of your finished product into the forum and explain your work.

Mon Oct 16: Making Books, part 1

HW: Submit prospectus for assignment #2. Read in advance and take quiz on Moodle:


In class: Tour of Print Lab, College of Design with David Knight
Topics: moveable type, letterpress printing

Forum: Read McCullough’s chapter on “Ambient”. In your own words, summarize the key point of the chapter in a sentence, then list three items for discussion, whether insights, further questions, or possible relations to your experiences at NC State.

Wed Oct 18: Libraries without Books

HW: Read in advance


Topics: The future of libraries, ambient information, mobility

In class: “Walking discussion” in the Hunt Library with NCSU Librarians

Forum: Reflections: how do you use physical spaces in the libraries or on campus? How are these uses conditioned by the spaces, and how might you mindfully adjust your practice?

Mon Oct 23: Peer Review and Project workshop

HW: Return peer review of assignment #2.

In class: Exchange peer reviews, confirm everyone can successfully change and edit the template files.


HW: Read in advance and take quiz on Moodle:


Topics: Material cultures and the codex

In class: Book making and binding workshop #1 in Conservation Lab, DH Hill Library

Forum: Reflections on the kinds of knowledge earned through making, or forms of attention required by craft.

Mon Oct 30: Making Books, part 3

HW: None. Keep busy with Assignment #2.

Topics: Material cultures and the codex
In class: Book making and binding workshop #2 in Conservation Lab, DH Hill Library

Forum: Reflections on mindfulness, tech, and craft in your own life.

Wed Nov 1: Augmented Media

HW: None. Keep busy with Assignment #2.

Topics: Augmented reality, interface, virtuality

In class: Construct Borsuk, Between Page and Screen from DIY kits. Read the book.

Forum: How do you “read” BtwP&S? What kind of a book or writing is it?

Fri Nov 3: Submit completed Assignment #2 by 3:00p

Mon Nov 6: Intro to Critical Making

HW: Read in advance:


Topics: Critical making, introduction to making safely

In class: Review third creative + critical assignment. Orientation to the MakerSpace in DH Hill Library. Please note this orientation is required to certify you to work in this space.

Forum: Place and importance (or absence) of making things in your own academic subject.

Wed Nov 8: Iterative Making, i.e. Screwing Around

HW: Read in advance and take quiz on Moodle:


Topics: Laser cutting, circuits, physical computing

In class: Experiment and document in the MakerSpace in DH Hill Library.

Forum: Read the Chachra article. Then, in this forum, reflect on how Chachra’s argument compares to your own experiences of inclusion, exclusion, bias, or
diversity within the context of STEM education, technology culture, innovation, makerspaces, or other related contexts.

Mon Nov 13: Critical (of) Making

HW: Assemble project groups, begin brainstorming, needs assessment, and discussing a project plan. Read in advance and take quiz on Moodle:


Topics: Maker ethos and critique

In class: Discussion and workshop


Wed Nov 15: Project Lab and Peer Review

HW: Submit speculations on a final project. Include needs assessment, role assignments, and project plan. Email them to paul.fyfe@ncsu.edu

Topics: design fictions

In class: Project Lab in DH Hill Makerspace

Forum: Project documentation and reflection.

Mon Nov 20: Project Lab (on your own)

HW: Complete peer review worksheet. Email them to paul.fyfe@ncsu.edu

Topics: All the topics.

In class: Independent lab time for final projects.

Forum: Project documentation and reflection.

Wed Nov 22: NO CLASS / THANKSGIVING

Mon Nov 27: TBD

HW: Milestone for final project.

Topics: metacognition, Pecha Kucha, Final rubrics

In class: Project cycle review. Linkages to course keywords. Review expectations and formats for final project and presentations.

Forum: Project documentation and reflection.
Wed Nov 29: Presentation and Final Pre-Flights

HW: Milestone for final project.

Topics: comparative media analysis, review

In class: “mystery object” case study. Peer reviews, group meetings, course evaluations.

Mon Dec 11, 9:00-11:00 am: Final Presentations, Fishbowl Forum in DH Hill Library

HW: Submit final projects and process papers. Project demos and Pecha Kucha presentations.

Credits

No course takes shape in a vacuum. This one evolved from its predecessor, HON 202: Reading Literature in the Digital Age. And both were inspired by the course structures, lesson plans, and creative teaching of several persons, including Kari Kraus (HDCC 208A: Creative Futures, Fall 2011, University of Maryland), Brian Croxall (ENG 389: Introduction to Digital Humanities 3.0, Spring 2015, Emory University), Mark Sample (DIG 401: Hacking, Remixing, and Design, Fall 2013, Davidson College), Ryan Cordell (ENGL 3340: Technologies of Text, Fall 2014, Northeastern University), and Andrew Logemann (ENG 471: The Future of Reading, Gordon College, Spring 2016). The title of the course alludes to Stephen Ramsay’s Reading Machines: Toward an Algorithmic Criticism (U of Illinois P, 2011).

This course also depends on the generosity of people at NC State, especially at the NCSU Libraries: Cindy Levine, Markus Wust, Eli Brown, Josh Boyer, Jamie Bradway, Robin Harper, Emily Schmidt, Jessica Handloff, and Adam Rogers. Thanks also to the NC State Honors program for its support.
For the first of the three major assignments in this class, you are tasked with critically evaluating and responding to the scenario described on the next page. Your response will ultimately take the form of a set of informed written responses to the questions which follow. Think of it like a guided essay: the questions will be prompts for the reasoned, researched arguments you will make. We will progress through this assignment in deliberate stages which you must complete in order to get a grade. For this first assignment, these stages include:

- Record initial reflections | Due 8/23 Completed _______________
- Needs assessment (in class) | Due 8/23 Completed _______________
- Complete project plan | Due 9/6 Completed _______________
- Record milestones | Due 9/15 Completed _______________
- Deliver completed scenario | Due 9/29 Completed _______________

Each of the preliminary stages of the assignment will be evaluated for completion with feedback provided as necessary. They should all be collected and submitted in hard copy to a collection box outside my office, Tompkins 269, by 5:00p on Friday, September 29. Final papers should be double-spaced with 1” margins and aim for at least six pages.

The completed scenario will be graded according to how successfully the submission engages the nine qualities we have identified in the intellectual standards for critical thinking. (Note that you are not evaluated on the four standards for creative thinking for this assignment.) You should plan to research and use credible external sources in your responses. Rather than setting a minimum number of sources, I want you to evaluate what kinds of external support you need to satisfy the intellectual standards.

“A” papers exhibit a strong command of the issue, research varied perspectives upon it, understand who it affects and why, recognize its complexities, and offer clearly expressed, well-reasoned responses to the guiding questions. In other words, these papers have depth and breadth; they identify relevant aspects of the debate and treat them with precision, accuracy, and fairness; and they argue their own significant perspective with logic and clarity.

“B” papers show emerging awareness of the facets of the issue and an ability to identify relevant sources and perspectives in the debate. There may be room to further develop the paper’s depth, support its perspectives with research, or refine its logic and clarity of expression.
“C” papers identify some aspects of the issue without significant examination of its complexities or adequate recognition of multiple perspectives upon it. They may have challenges in logic or accuracy, or be hindered by errors.

“D” papers do not complete the basic terms of the assignment or seriously lack across most of the standards identified already.

“F” papers are unsubmitted or show signs of inappropriate use of someone else’s work or uncited sources online. Cases of plagiarism result in automatic Fs for the assignment and potential referral to a university disciplinary committee.
Original Scenario

A school district in Waukesha, Wisconsin is exchanging all their textbooks for iPads for K-12 instruction for maximizing students’ skills in multimedia and more interactive learning.

Questions

1. How would such a change enhance (or not) multimedia skills and interactive learning?

2. What kinds of additional information or evidence would support or oppose the school district’s initiative?

3. Are there other routes to the school districts’ goals besides adopting iPads? If so, describe.

Altered Scenario

A different school district in Sheboygan, WI is proposing to replace textbooks with iPads only in accelerated learning classes (gifted and talented, advanced placement, etc.).

Questions

4. What new questions, concerns, or problems does this situation raise?

5. What would be your informed recommendation to the school?
Initial Reflections: What is your gut reaction to the proposal in the original scenario? If you had to write about this today, what might you say?
Needs Assessment: To respond to the original scenario more critically and thoughtfully, what would we need to know? What kinds of things might we look for? Where would we find them?

Skills Assessment: What are you good at doing which might help with this assignment? What are you not so good at doing which this assignment requires? How might you deal with those weaknesses?
A project plan can help you structure and accomplish your approach to the critical skills scenario assignment. This plan should map out the intellectual demands of the assignment and match those to what you’ll accomplish by when. A project plan should include these “milestones” to help keep things moving, but also to build in moments to reflect on what aspects of your initial plan have worked and might need to be adjusted.

To write a project plan, *do not simply make a timeline*. Instead, consider the “needs assessment” you’ve already started. How will you respond to these needs? What kinds of investigations or research might you need to conduct? How might you address strengths or weaknesses in getting the project done? What might you need to do to ensure your work meets the TH!NK intellectual standards? Which of those standards seem challenging to answer and how can you deal with them?

Your project plan should include descriptions of your approach to the work as well as a timeline with milestones. Please create the project plan in a separate document to deliver in class on **Wednesday September 6**. The next page includes a “milestone” checklist for you to complete by Friday Sept 15 and submit on Friday Sept 29 along with your completed project.
Project Milestones (complete during the week ending Friday September 15)

What parts of your plan have you accomplished?

What approaches to this assignment have been successful? What approaches seem less promising?

What do you need to change about your project plan to generate the best possible assignment?
For the second of the three major assignments in this class, we are adding the “creative” to our emphasis on “critical” thinking. In line with our study of creative compositions in different mediums, you will compose a short piece of electronic literature. No special coding experience required: I will provide you a template and instructions on things to tweak. You will customize your poem, make sure it works in a browser, and write a reflection describing what you did, why, and how it sheds light on our current discussions.

The poem itself will be based upon an existing poem called “Taroko Gorge” by the new media scholar and artist Nick Montfort (https://nickm.com/taroko_gorge/). It uses Javascript to assemble gradually a poem, pulling randomly from word lists that the author supplies, and putting them into a determined order. Your basic job is to replace the words in the lists. Of course, you will want to approach this thoughtfully, with a rationale for your randomized poem and an interest in what new meanings might/not come out of it. Ultimately, you will submit two things: 1) the creative piece, i.e. an HTML file with your working poem, and 2) the critical reflection, i.e. a paper that explains the interests of your poem, how it connects to our class, and what you learned in the process of making it.

As with the first assignment, we will undertake this one in several stages of planning, process, and reflection.

| Submit prospectus                  | Due 10/16  | Completed ____________ |
| Peer review                        | Due 10/23  | Completed ____________ |
| Record milestones                  | TBD        | Completed ____________ |
| Finished project + reflection      | Due 11/3   | Completed ____________ |

The prospectus is a two page, single-spaced document. On one page, describe your initial idea and its critical + creative interests. On the next page (or pages), lay out your project plan. You will want to construct this plan based on your own sense of your needs.

We will exchange these prospectuses with each other. Then each student will undertake a peer review of each other’s proposals. These reviews will follow a set of structured questions that I will provide. You will return peer reviews to me, and I will add further comments before returning them to the author.

You should set your own milestones on this project. Whereas the first assignment gave you a sheet and structured questions to work from, try to take ownership of this part of the project cycle. Plan some milestones and deadlines for yourself.
The **finished project** will be your working HTML file with your randomized poem. You will submit this via email along with a written **critical reflection**. Your reflection should describe a) what you did, b) how it connects to our class, and c) how your process changed along the way (including what you learned from peer review). You might want to divide the paper into those very three sections. This document should be at least 4 double-spaced pages with 1” margins.

Every critical reflection should cite Mark Sample’s assigned blog post “Notes towards a Deformed Humanities.” Every critical reflection must try to answer the questions: how does breaking or deforming things become a way of knowing? And what does your exercise in deformed poetry help you understand or question?

Each of the preliminary stages of the assignment will be evaluated for completion with feedback provided as necessary. The final documents should be emailed; the entire package should be submitted in hard copy to a collection box outside my office, Tompkins 269, by 5:00p on Friday, November 3rd.

The completed project will be graded according to how successfully the submission engages the goals above.
Randomized poetry

Say what?

For assignment #2, we'll be creating versions of a randomized poetry generator called "Taroko Gorge" using code adapted from e-lit writer Nick Montfort. Here are a couple of samples from other persons who have adapted this template: Tasty Gougere | Tacoma Grunge.

We will begin with a basic HTML file, a customizable template for e-literature originally written by Nick Montfort, an associate professor of digital media at MIT in the Program in Writing and Humanistic Studies. You can see more of his work online. The idea with "Taroko Gorge" to pull random words from wordlists and fit them into designated places within a poem, based on parts of speech. Technically, this works using the scripting language Javascript, which then generates specific parts of an HTML page (i.e. web page). Each time the web page loads, a different version of the poem is produced.

For this assignment, we'll be doing some very constrained work. You don’t actually know to need HTML or Javascript or css or anything else. You'll just open the template file with your editor, customize the text it contains, and save/view with a web browser. This should be enough to allow you to produce your own randomized poem!

1) Get the HTML template file

I've uploaded the HTML file to Moodle. On your computer, "save as" an .html file anywhere you want to work on your computer. I have "commented" within this file to help you find the places to edit.

2) Get a code editor

You'll need a text editor so you can write code! This is not the same as the "text editors" you may have preinstalled on your computer -- these will format your code as text and it won't run. For free applications I recommend:

- Notepad++ (PC)
- COTEditor (mac)
- TextWrangler (mac) (ignore the pleas to download BBEdit - TextWrangler works just fine)
Choose one and download. I prefer TextWrangler for the Mac, but it's up to you.

3) Open the HTML file with your code editor

When you open your template file in your editor, you'll see a lot of preliminary code, various statements from the author, then a bit of "CSS" which controls the colors, font, and layout. You can mess with this if you like. However, the important stuff comes just afterwards: the word lists.

Within the code for

```html
<script type="text/javascript"
```

are lists of "variables," called "var" which the subsequent code will sort into a designated order. Your basic job is to change out the words within those lists. I've colored them red in the following example:

```javascript
var above='brow,mist,shape,layer,the crag,stone,forest,height'.split(',');
```

This list supplies the poem with beginning words for its lines, choosing from the words 'brow...height' that are contained by single quote marks. Note there are no spaces between the words. They are separated by commas. And only words inside the 'marks' will count. (The word "split" is actually a coding command, not included in the list.) Another list:

```javascript
var trans='command,pace,roam,trail,frame,sweep,exercise,range'.split(',');
```

Will supply the verbs for the poem's statements. As with the previous list, all the possible words are listed with commas, no spaces, and contained in single 'quote' marks.

Now that you're changing words around, look carefully through the rest of the template to find all the places you can substitute word lists. I have added "comments" to the code to help you find these places. Now you're ready to start composing.

3) Start brainstorming, experimenting

Think about the affordances of randomized poetry, slowly meted out onto the screen. What ideas do they help express? What do they creatively distort? You, as a creative writer, should approach your poem in mind of what the software can help you accomplish, or what effects it can have on the reader. Your first idea might not work, or it might need tweaking. You will probably want to see what's happening on screen as you write the poem itself.
No one writes in a vacuum, either. For inspiration, check out the different versions people have created of Taroko Gorge -- you'll find them listed along the right hand side of the page. Talk about it with your classmates. Keep an idea journal for yourself. Keep experimenting.

4) Save/view your file

We don't need to bother putting these files on the web. Instead, to open and run the poem, just ask Chrome (or another browser) to open taroko_gorge_template.html (File > Open or right-click on the file and Open With > ). Ask for help if you need it.

If something doesn't work, do not panic. You just have to debug. Did you accidentally delete a quote mark or period mark or other part of the code, while you were changing word lists? Maybe compare your edited version to a fresh version of the original template. Lastly, ask for help!

5) Title your poem

In the template file, scroll down to the very bottom, and replace [YOUR POEM TITLE] with, you guessed it, your poem's actual title. Do that in both places called for by [YOUR POEM TITLE] and the [DATE].

Make changes whenever you need to!

6) Optional customizations

At the top of the template file, you'll find the "CSS" code which controls the colors, font, layout, etc. of the page. You DO NOT HAVE to make adjustments to these things. But you might want to -- and, once you get the hang of it, it's not that hard.

For example, the code background: #062; controls the background color of your page. To make an adjustment, you would only need to change the encoded color value. Examples of other color values abound online. Try this, for instance. You can just as easily change the font, color, size.

More advanced users can change other aspects of the page, as they wish.

Wait, how do I...?
If you get into trouble or want to walk through step-by-step, just email me: paul.fyfe@ncsu.edu or ask a knowledgeable classmate.
The following worksheet is intended as a guide for your peer review. Your job is less to evaluate the proposal than to describe what it does in context of the requirements. Read the proposal draft carefully and then answer the following questions. Return this completed sheet to me, along with the proposal, on Monday October 23rd.

1) What is the proposed idea for the randomized poem? What words, language, or concepts will it use? If unclear, what more would you need to know about it?

2) How will the project use randomization? In what ways does the randomizing platform advance the poem’s ideas? What new meanings or questions are likely to emerge?
3) How does the proposal respond to Mark Sample’s blog post “Notes towards a Deformed Humanities”? Are there specific connections to Sample’s ideas that the proposal emphasizes or overlooks?

4) In our process cycle, the project plan grows out of a needs assessment. What are the most important “needs” that this project plan attempts to answer? If you cannot tell, what would you recommend?
Our course, “Reading Machines,” has taken various approaches to showing you the fundamental concept of media studies. As the theorist Marshall McLuhan famously expressed, “the medium is the message.” When you change or distort the medium, so you also change its messages, meanings, and understandings.

In the first third of the semester, we followed a critical study of these issues by thinking about platforms for reading and writing. In the next third, we explored the links of creative expression and electronic media. In the final third, we have turned to practices of making and distortion.

The final of the three major assignments in this class exercises your abilities to use making as a creative, critical, and philosophical practice. You will form teams of two to three people to design and create something using the resources of the DH Hill Library Makerspace. Your goals are a) to create a “reflective design” and b) use it to explore the central concept of this class: the relationship of medium and message.

Your group will prototype a media object which uses the principles of “reflective design,” basically making apparent the rules of a thing by imagining them otherwise. (As described in the required “Bibliocircuitry” article.) Inspiration for your prototype might come from the many mediums we have explored this semester, or which you want to explore further. Inspiration might also come from the very tools the Makerspace offers to help you create, augment, or deform a medium. For instance: How might you augment the sample book you stitched? Could it somehow interact with the digital world? How might you create marginalia that bridges the physical and digital divide? How might a laser cutter create a “treated page” by burning parts of it away? How might 3D printing aid in the creation of a tactile experience of something digital? How could wires, conductive tape, and a microprocessor let you imagine ways which people could physically interface with online data or websites? And so on. The questions and parameters of your prototype are up to you.

We will get an introduction to the varied technologies at the Makerspace which may help inspire your interests in working with specific processes. Your team will also meet to consider what mediums, issues, and questions you want your project to engage. Together, you will formulate group roles and a project plan, coordinating the research, work, and writing amongst yourselves, and ultimately presenting the project to the class as a team.

We are devoting a significant amount of class time to this work as “lab time,” though the Makerspace will be available to assist you at other times, as well. Materials fees at the Makerspace can possibly be covered by the honors program (Micaelah will help). The DH Hill Makerspace is interested to potentially feature student projects from HON313 in its display space for visitors to see.
Your final project will include the following parts:

1. The prototype of your media object, or a recording of its demonstration, or photographs, or some other appropriate documentation
2. A written paper which
   a. describes the project and its functions
   b. situates it within examples of and discussions about related media
   c. explains its significance as a tool for thinking in context of critical making and our course concepts
3. Individual reflection papers from team members about their work, their teammate’s work on the project, and responses to instructor feedback
4. Project planning document and forum milestones

I expect the written papers will comprise at least 6-8 double-spaced pages at 1” margins and 12pt font. You can go over. Papers are welcome to make reference to other readings from the course or further research, but all papers, at minimum, must
a) cite the article “Bibliocircuitry and the Design of the Alien Everyday” as well as b) use appropriate keywords/concepts from the course glossary. You are welcome to cite other assigned course readings and/or projects we have undertaken this semester.

Like the other assignments, we will progress through this assignment in deliberate stages, all of which you must complete in order to get a grade.

Groups formed, initial speculations | Due 11/10
Project proposal (needs + skills assessment, group plan) | Due 11/15
Project milestones and course journal reflections | Ongoing
Final project, reflection, and group presentation | Due 12/11

Your team will also present during the class’s final examination session on Monday, December 11, from 9:00-11:00am. Instructions about those presentations will come separately.

Each of the preliminary stages of the assignment will be evaluated for completion with feedback provided as necessary. Like the second assignment, this assignment will be assessed based upon a) evidence of your project’s process and b) execution of the final project’s requirements. A successful assignment:

- Raises questions and formulates problems in the context of its medium, protocols, usages, and related discussions
- Synthesizes and generates new or unexpected ideas for its prototype
- Scopes and executes a working prototype and/or rationalizes its shortcomings
- Reaches reasoned, appropriate, and original conclusions about the project
- Effectively communicates its ideas
“A” projects take intellectual risks and generate unexpected insights into the relations of medium and message. They propose original or creatively synthesized projects, exhibit strong understandings of the context for their creative intervention, make compelling connections to course concepts, deal adequately with complexities, and offer clearly expressed, well-reasoned responses to the assignment.

“B” projects show satisfying engagement with risk and creativity in context of the assignment, an emerging awareness of the facets of the issue, an ability to identify connections to course concepts and explain their significance. There may be room to further improve the significance of the project or refine its logic and clarity of expression.

“C” projects take few risks and identify only some aspects of the issue without significant examination of its complexities. They may have challenges in logic or accuracy, or be hindered by errors. They explain no connection to course concepts.

“D” projects do not complete the basic terms of the assignment or seriously lack across most of the processes identified already.

“F” projects are unsubmitted or show signs of inappropriate use of someone else’s work or uncited sources online. Cases of plagiarism result in automatic Fs for the assignment and potential referral to a university disciplinary committee.

One group will receive a bonus grade, an “A/F” designation for the most ambitious, inspiring failure. This will tabulate as an additional 10% of the project grade. The “A/F” project aims to reward the project which takes the most interesting risks, even though it might not be able to completely execute them. The winner will be voted by secret ballot by the class and the instructor during the final session.
1. We’re making prototypes of media objects. Perhaps more important than the objects are the thoughts they provoke. What does your project help us think about? How is it useful as “a tool to think with”?

2. What specific quotes from the required “Bibliocircuitry” article do you plan to use, or find most helpful? Transcribe them (or a portion of them) below with page number citation.
3. What other readings or activities from class or references from elsewhere could be useful in your final paper?

4. What are the top two or three keywords from our course glossary which you plan to use, and why?

5. Beyond what you produce for this semester, what would version 2.0 of your project look like? How could you make it riskier, more ambitious?
1. What aspect of this final assignment do you know is important to accomplish, but that you might be putting off or avoiding, for whatever reason?

2. What have you learned about your personal work habits from the previous two project cycles? How are you adjusting in this project cycle?
3. What aspects of working with your partner/s could be improved? Are there specific ways you could address this?

4. What elements of your final project are you prepared to cut or scale back, if you run out of time?
Instead of a final exam, this class culminates in “lightning talks” during which groups will share a glimpse of their final project. This occurs during our final exam period: Monday, December 11, 9:00-11:00 am, in the Fishbowl Forum in DH Hill Library. (The glassed-in room across from Howling Cow ice cream in the west wing, main floor.) Each group will have three minutes to demonstrate their projects, five minutes to deliver their presentations, and three minutes available for questions. Groups may arrange these presentations any way they wish: starting with a demo and then presenting or vice versa. In the presentation, members can share time and responsibilities as they see fit.

The presentation itself will tour us through your group’s thoughts about the project: what it is and what it helps us think about. The presentations will all be delivered in a very specific style. This style, called “Pecha Kucha” (from the Japanese for “chit chat”), has earned popularity within arts and design communities for requiring presentations to be cleanly designed, engaging, and short. While you may not decide to present Pecha Kucha style at a future conference, learning its format and rules will make you a better presenter in any context. In addition, we all get to see neat stuff that our classmates are thinking about.

Everyone will have exactly five minutes (300 seconds) to share their story. Don’t think of this as an exhaustive review of what you’ve included in your final paper. Instead, imagine this as an animated poster session. Try at least to give us an understanding of the prototype, how it connects to this class, and its function and significance as a reflective design. Note, however, that the presentation format is rigorously controlled. Our Pecha Kucha presentations will have a set of firm rules:

- You will have exactly **5 minutes**.
- Your presentation can use PowerPoint (or Keynote or Google Presentations or Prezi or whatever), but you’ll be restricted to **15 slides**. No more, no less.
- Your presentation must follow the **1/1/5 rule**. You must have at least one image per slide, you can use each exact image only once, and you should add no more than five words per slide (they can also contain no words at all).
- Each slide must **automatically advance every 20 seconds**. You will narrate as it plays. Get help if you need it to set up automatic timed transitions.

Do not attempt tell us everything that you might say in a written paper. Instead, you should try to write a provocative overview, an interesting story about the facets of your group’s ideas. When designing the presentation, think short, informal, and creative. The idea here is that the form’s restriction promotes creative and also accessible work. Simply put: tell us a story. Use slides for emphasis and impact. Another warning: don’t schedule yourself to talk for a full 20 seconds then switch to another full 20 seconds of talking and so on. Pecha Kucha will leave you behind. Practice your timing. Use a stopwatch to help. Practice again.
All groups will present on Monday, December 11. Bring the presentation file on a flash drive, or play it from your own laptop.

Grades will factor a) the effectiveness of your presentation, b) its engagement with course themes and materials, and c) creativity. Every student will also get to vote for the most audacious, risk-taking project for the “A/F” award. The winner will receive an additional 10% on the group grade.

How to start? There are numerous resources on the Web for learning more about making Pecha Kucha presentations, particularly in academic contexts, including:


Email me anytime if you need help. Looking forward to this! -- Paul