Georgia Institute of Technology
School of Literature, Media, and Communication

LMC 3206 (Spring 2013)
Communication and Culture: Data
T/Th 3:05-4:25pm, Skiles 308

Professor: Lauren Klein (lauren.klein@lmc.gatech.edu)
Office Hours: T/Th 12:30-1:30pm, Skiles 359 (and by appointment)
Course Website: http://lkleincourses.lmc.gatech.edu/data13/

Course Prerequisites
ENGL 1102

Core Area
Humanities

Course Description
Think of your SAT score, all of your Facebook friends, or even your DNA—we live in what's been called the "age of data," and yet, the concept of data has a long and complex history, one that dates back to the Enlightenment and arguably even before. This course will thus examine ideas about data—and in particular, ideas about data visualization—through examples of charts and tables, both historical and contemporary, as well as through literature, philosophy, film, and other media forms that engage the cultural and theoretical issues surrounding data, and related forms of visual display. Over the course of the semester, we will familiarize ourselves with several basic data refining and visualization techniques. In lieu of formal essays, students will develop analytical and creative data-based projects that are informed by the range of topics we've explored throughout the course.

Learning Outcomes
- Students will become aware of the traditions and conventions of literature, film, and other forms of narrative art, and they will be able to analyze those traditions and conventions in specific cultural contexts; and
- They will learn to gather, organize, and express information clearly and accurately, with sensitivity to will be able to do so both by using traditional media and by tapping the potential of new digital media.
- More specifically, students will develop an understanding of the concept of data, as well as of a related set of conceptual and theoretical issues;
- They will develop an awareness of the power—and pitfalls—of data collection.
- They will create a series of thoroughly considered data-based projects that are informed by the range of topics discussed throughout the course.

Required Texts
Available at Engineer's Bookstore and online:
    Mark Haddon, *The Curious Incident of the Dog in the Night-Time* (Vintage,
        2004). ISBN 978-1400032716.
    John D'Agata and Jim Fingal, *The Lifespan of a Fact (*Norton, 2012). ISBN 978-

0-393-340730.
Shumeet Baluja, *The Silicon Jungle* (Princeton UP, 2011). ISBN 978-0691147543.
M.T. Anderson, *The Astonishing Life of Octavion Nothing: Traitor to the Nation,
Vol. 1: The Pox Party* (Candlewick, 2008). ISBN: 978-0763636791.
Additional readings to be posted on course website.

List of Graded Assignments
Your grade for the course will be calculated as follows:

* Participation and quizzes: 12 points
* Blogging assignments: 24 points
* First midterm assignment: 12 points
* Second midterm assignment: 24 points
* Final assignment: 28 points

When calculating final grades, I employ the following rubric:
A = 90-100   B = 80-89   C = 70-79   D = 60-69   F = 0-59

If you are curious about the general criteria I employ when grading, please refer to this chart of characteristics, adapted from the grading characteristics developed by Professor Mark Sample of George Mason University:

GRADE	CHARACTERISTICS
A (10-12 points * multiplier)	**Exceptional**. The work is focused and coherently integrates examples with explanations or analysis. The work demonstrates awareness of its own limitations or implications, and it considers multiple perspectives when appropriate. The work reflects *in-depth* engagement with the topic.
B (7-9 points * multiplier)	**Satisfactory.** The work is reasonably focused, and explanations or analysis are mostly based on examples or other evidence. Fewer connections are made between ideas, and though new insights are offered, they are not fully developed. The work reflects *moderate* engagement with the topic.
C (4-6 points * multiplier)	**Underdeveloped.** The work is mostly description or summary, without consideration of alternative perspectives, and few connections are made between ideas. The work reflects *passing* engagement with the topic.
D (1-3 points * multiplier)	**Limited.** The work is unfocused, or simply rehashes previous comments, and displays *no evidence of student engagement* with the topic.
F (0 points)	**No Credit.** The work is missing or consists of one or two disconnected sentences/scenes/etc.

Description of Graded Assignments

Reading Assignments

Because a significant learning objective of LMC 3206 is to enhance your understanding of the traditions and conventions of literature, and other forms of narrative, you will be reading a wide range texts—some written clearly, some more dense; some short, some long. Because these texts will inform our classroom discussions—and what you, in particular, have to contribute—it is absolutely essential that you stay on top of the reading assignments and complete them before the start of each class. Reading assignments are assessed through classroom participation, as well as the occasional quiz.

Blogging Assignments

In effort to stimulate interaction on the course blog, as well as to allow you to introduce new material into classroom discussion, we will be experimenting with a new format for class blogging. During the second week of the course, I will divide the class into four blogging groups. Each blogging group will rotate through the following roles (also developed by Mark Sample of George Mason University):

First Readers: This is akin to the standard blog post assignment: a 200-300 word response to the week's materials. There are a number of ways to approach the "first reader" response: to consider the week's material in relation to its historical or theoretical context; to write about an aspect of the week's material that you don't understand, or that you don't agree with; to formulate an insightful question or two about the material and then attempt to answer your own question; or another line of inquiry of your own choice. First readers are responsible for posting their response to the class blog by noon on the day BEFORE the class meets.

Respondents: Students in this group build upon, disagree with, or clarify the first readers' posts by noon on the day of the class's meeting.

Searchers: Students in this group find and share at least one relevant online resource (broadly conceived), and are responsible for providing a short evaluation of the resource, highlighting what makes it worthwhile, unusual--or, if appropriate—problematic by noon on the day of the class's meeting.

The fourth group has the week off.

At the completion of each cycle (i.e. each four weeks), you will receive 0-12 points on the basis of your contributions. At the end of the semester, these points will be averaged to determine your final blogging grade.

Midterm and Final Assignments

In addition to the assignments described above, you will be completing three formal assignments. The form of the first midterm assignment is pre-determined: an analysis of a dataset in terms of the concepts and issues discussed in the course thus far. For the second midterm and final assignments, you will be developing a more applied data-related project, accompanied by a reflection essay. Specific instructions for each

assignment will be distributed at least two weeks before the due date of that assignment. Due dates can be found on the week-by-week schedule (see below).

Attendance, Punctuality, and Late/Skipped Assignments
You are allowed three excused absences. Beginning with the fourth absence, your overall course grade will be lowered by a full letter grade (e.g. A to B) for each unexcused absence. This means that if you miss more than six classes, you will fail the course.

Please be respectful to your fellow students and arrive on time. If you arrive more than 15 minutes late, you will be considered absent for that class. If you absolutely must miss a class meeting, please contact me at least 24 hours in advance in order to make alternate arrangements.

All written assignments are mandatory. Should you submit an assignment after the due date, your grade for that assignment will decrease by a full letter grade for each day that it is late. Should you fail to submit an assignment entirely, you will receive an F on that assignment and, consequently, you will receive a lower grade for the course.

ADAPTS Contact Information
Students with disabilities should self-report to ADAPTS at:

> Smithgall Student Services Building, Suite 220
> Phone: (404) 894-2564 / TTD: (404) 894-1664
> Email: adaptsinfo@gatech.edu
> http://adapts.gatech.edu/

Writing Support
As of last year, the Georgia Tech communication center, CommLab, is now open for undergraduate (and graduate) use. At CommLab, professional and peer tutors are available to work with you to improve your writing skills. More information, including instructions for how to set up an appointment via the website, is available here:

> Clough Learning Commons
> Phone: (404) 894-3805
> Email: commlab@gatech.edu
> http://www.lmc.gatech.edu/writingcomm/commcenter/

Honor Code Statement
Plagiarism is an extremely serious offense. Any evidence of plagiarism will result in an F on the assignment and possibly in the course, as well as potential disciplinary action. For more information, please refer to the definition of "academic misconduct" included in the Georgia Tech honor code, available online at:
> http://www.honor.gatech.edu/

If you are unsure as to what constitutes plagiarism, please contact me before submitting your assignment.

Week-by-Week Schedule

Unit I: What is truth? What is a fact? What is data?
- **Tuesday, January 8ᵗʰ** – *Course overview*

- **Thursday, January 10ᵗʰ** – *What is a fact?*
  "The Fact of the Matter" (Radiolab episode)

  In class: Errol Morris, *The Thin Blue Line* (1998).

- **Tuesday, January 15ᵗʰ** – *Fact-checking*
  John D'Agata, "What Happens There" (PDF)
  John D'Agata and Jim Fingal, *The Lifespan of a Fact*, Chapters 1-3

  In class: Fact-checking exercise; Jennifer McDonald, "In the Details"; Edward Wyatt, "Best-Selling Memoir Draws Scrutiny."

- **Thursday, January 17ᵗʰ** – *Lifespan of a Fact discussion*
  The Lifespan of a Fact, Chapters 7-9
  John McPhee, "Checkpoints" (PDF)

  In class: Skype with Jim Fingal; Laura Miller, "In Defense of Fact Checking."

  Due: <mark>Blog Cycle 1.1</mark>

- **Tuesday, January 22ⁿᵈ** – *The Historical Fact*
  Steven Shapin and Simon Schaffer, "Seeing and Believing: The Experimental Production of Pneumatic Facts," from *Leviathan and the Air-Pump* (PDF)

- **Thursday, January 24ᵗʰ** – *The Trouble With Facts*
  MT Anderson, *The Curious Case of Octavian Nothing*, Part I (pp. 1-116)

  In class: *Octavian Nothing* discussion; Shapin and Schaffer, "The Trouble with Experiment," from *Leviathan and the Air-Pump* (PDF); Mark Marino, "Living Will."

  Due: <mark>Blog Cycle 1.2</mark>

- **Tuesday, January 29ᵗʰ** – *The Modern Fact*
  Octavian Nothing, Part II (pp. 117-236)

  In class: *Octavian Nothing* discussion; Bruno Latour, "Constitution," from *We Have Never Been Modern* (PDF); Mark Hansen, "Movable Type."

- **Thursday, January 31ˢᵗ** – *Computational Journalism Symposium*

NO CLASS MEETING – Attend at least one session of the Computational Journalism Symposium (for schedule, click link).

Due: First assignment: Dataset analysis

- **Tuesday, February 5th** – *The Postmodern Fact*
Octavian Nothing, Parts III and IV (pp. 237-353)

 In class: *Octavian Nothing* discussion; computational journalism discussion; Jean Baudrillard, "The Precession of Simluacra," from *Simluations* (PDF).

- **Thursday, February 7th** – *Matrix Discussion*
Larry and Andy Wachowski, *The Matrix* (1999)

 Due: Blog Cycle 1.3

Unit II: Visualizing Data
- **Tuesday, February 12th** – *Taxonomies*
Jason Oberholtzer and Cody Westphal, "Introduction," "Internet," "Life,"
 "Nerds," and "Music," from *I Love Charts* (PDF)
Alex Wright, "Networks and Hierarchies" and "The Moose that Roared," from
 Glut: Mastering Information through the Ages (PDF)

 In class: Lev Manovich, "What is Visualization?"; "A Periodic Table of Visualization Methods"; Margo Anderson, "Introduction" and "The Census and the New Nation," from *The American Census: A Social History* (PDF).

- **Thursday, February 14th** – *Charts*
Edward Tufte, "Graphical Excellence" and "Graphical Integrity," from *The*
 Visual Display of Quantitative Information (PDF)

 In class: William Playfair, from *The Commercial and Political Atlas* and *The Statistical Breviary* (PDF); Florence Nightingale's coxcomb charts; Ben Schmidt on shipping logs and Melville; workshop on chart tools

 Due: Blog Cycle 1.4

- **Tuesday, February 19th** – *Timelines*
Daniel Rosenberg and Anthony Grafton, "Time in Print," "A New Chart of History," and "Frontier Lines," from *Cartographies of Time: A History of the Timeline* (PDF)

 In class: Theodore Porter, "The Laws that Govern Chaos," from *The Rise of Statistical Thinking, 1820-1900* (PDF); Chronozoom: Lev Manovich, "Data Stream, Database, Timeline"; workshop on timeline tools.

- **Thursday, February 21ˢᵗ** – *Applications*
  Johanna Drucker, "Humanities Approaches to Graphical Display" (PDF)
- Edward Tufte, "Visual Confections: Juxtapositions from the Ocean of the Streams
  of Story," from *Visual Explanations: Images and Quantities, Evidence
  and Narrative* (PDF)

  In class: Rebecca Solnit, *Infinite City: A San Francisco Atlas*; Jonathan Harris,
  "We Feel Fine" and "The Whale Hunt"

  Due: Blog Cycle 2.1

  Tuesday, February 26ᵗʰ

  Due (in class): Midterm Project Presentations

- **Thursday, February 28ᵗʰ**
  NO CLASS, professor out of town

  Due: Midterm Project and Reflection

- **Tuesday, March 5ᵗʰ** – *Problems with viz*
  Malcolm Gladwell, "The Picture Problem"

- In class: Lorraine Daston and Peter Galison, "Epistemologies of the Eye" and
  "Mechanical Objectivity" from *Objectivity* (PDF); The Muppets travel by map.

- **Thursday, March 7ᵗʰ** – *Cities of data; cities of the mind*
  Mark Haddon, *The Curious Incident of the Dog in the Night-time*, pp. 1-76

  In class: *Curious Incident* discussion; "The Secret Lives of Numbers"; Stephen
  Wiltshire's cityscapes; MVRDV's datascapes.

- **Tuesday, March 12ᵗʰ** – *Geospatial viz*
  The Curious Incident of the Dog in the Night-time, pp. 76-158

  In class: *Curious Incident* discussion; Eli Horowitz, *The Silent History*; Charles
  Cuming, The 21 Steps.

- **Thursday, March 14ᵗʰ** – *Curious Incident discussion*
  The Curious Incident of the Dog in the Night-time, pp. 158-226

  Due: Blog Cycle 2.2

- **Tuesday, March 19ᵗʰ and Thursday, March 21ˢᵗ**
  NO CLASS MEETING – Spring Break

Unit III: The Future of/and Data

- **Tuesday, March 26th** – *Personal data*
  Jennifer Egan, "Great Rock and Roll Pauses," from *A Visit to the Goon Squad*
  (PDF)
  Alexander Galloway, "Are Some Things Unrepresentable?," from *The Interface Effect* (PDF)

  In class, Cory Archangel, "Data Diaries"; Jason Nelson, various projects.

- **Thursday, March 28th** – *Data and surveillance*
  Rita Raley, "Dataveillance and Countervailance," from *Raw Data is an Oxymoron* (PDF)
  Lisa Parks, "Satellite and Cyber Visualities: Analyzing 'Digital Earth,'" from
  The Visual Culture Reader (PDF)

  In class: Feltron Annual Reports; Stephen Wolfram, "The Personal Analytics of My Life"

  Due: Blog Cycle 2.3

- **Tuesday, April 2nd** – *Data Mining*
  Shumeet Baluja, *The Silicon Jungle*, pp. 1-100

  In class: Charles Duhigg, "How Companies Learn Your Secrets"; A Superstitious Fund.

- **Thursday, April 4th** – *Big Data*
  The Silicon Jungle, pp. 101-200

  In class: Anne Helmond, "Culture is Data"; Lev Manovich, "Trending: The Promises and the Challenges of Big Social Data"

  Due: Blog Cycle 2.4

- **Tuesday, April 9th** – *Silicon Jungle Discussion I*
  The Silicon Jungle, pp. 200-end

- **Thursday, April 11th** – *Gattaca discussion*
  Andrew Niccol, *Gattaca* (1997)

  Due: Bonus Blog Cycle

- **Tuesday, April 16th** – *Data and publics*
  Daniel Rosenberg and Anthony Grafton, "Outside and Inside," from
  Cartographies of Time: A History of the Timeline (PDF)

In class: Office for Creative Research, 9/11 Memorial Algorithm; Microsoft Research, "The AIDS Memorial Quilt"

- **Thursday, April 18th** – *Data and art*

  In class: John Whitney, *Matrix III*; Vik Cosek, ASCII movies; John F. Simon, Jr.; Takashi Murada, data moshing videos; JODI; Lev Manovich, "The Anti-Sublime Ideal in Data Art"; more TBD.

- **Tuesday, April 23rd and Thursday, April 25th**

  In class: Project Presentations

  April 30th, 11:30am – Final Project/Reflection Due