Visualizing Data

Visualizing Data - LLSJ 3505 AX, Spring 2016

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Course Description

While the presentation of data has been part of news since its earliest days, it's in the midst of a renaissance. Graphics desks that used to be thought of as "the art department," outside the real work of a newsroom, are quickly becoming a central part of every newsroom's daily journalism operation. The people who make news graphics are expected to be full-fledged journalists and work alongside reporters and editors.

The purpose of this class is to learn how to tell a clear, honest and compelling journalistic story with data. We'll learn how to think about the visual presentation of data, how and why it works, and how to do it the right way.

Course Objectives

At the end of the semester you'll be able to:

*   Tell visual stories using data in the context of journalism.
*   Recognize and produce a wide vocabulary of graphical forms, know their capabilities and shortcomings, and in what situations they're typically used.
*   Locate a data set from the Internet, unlock its potential for telling stories, and use it in a visualization.
*   Understand data visualizations published in news and elsewhere, and being able to recognize and articulate errors and deception.

Tools & Lab

This is not a skills-training class, but rather a class where you'll learn fundamental concepts in a hands-on way. As a working visual journalist, you will be expected to use a variety of tools like these to do your work, and to be able to learn new tools as they're invented. You should be able to apply what you learn in this class to any of them.

In addition to the tools below, you should use the tools nature (and the New School) gave you: if you are a gifted illustrator, or an experienced programmer, I encourage and expect to use all of those skills here.

Paper and Pencils: Please purchase colored pencils and a pad of graph paper and bring them to class**.** Whatever versions of those you like are ok by me. For paper I like Rhodia Pads – either the classic orange or the new-fangled dotPads – but whatever paper you like sketching on is fine.

Illustrator and Excel: The primary software we'll be using in this class are Adobe Illustrator and Microsoft Excel. You'll learn these in class as well as using videos I'll share with you. Watching these videos is mandatory with exceptions: If you already learned Illustrator in another class or if you have expertise in something else -- for instance, if you know R or Tableau well, or if you're a software developer, talk to me about opting out.

Reading

There are two required books in this course:

The Functional Art, by Alberto Cairo. New Riders, 2012. ISBN-13: 978-0321834737
Numbers in the Newsroom, Second Edition, by Sarah Cohen. Investigative Reporters & Editors, 2014. ISBN: 0-9766037-1-3

There will also be required readings throughout the semester, which you'll see in the assignments below.

Grading

I'll determine each of your final grades by the factors described below.

Quizzes: 20%

There will be seven very short quizzes throughout the semester. They're meant to give us both a sense of your progress in learning the material. They'll be based on the reading and on the class discussions. I'll drop your two worst grades on the quizzes and average the rest. The quizzes will be worth 20% of your grade. I'm going to try using Canvas to administer the quizzes but will switch to paper if the system isn't what it's cracked up to be. **I will not give make-up quizzes for unexcused absences**.

Participation: 20%

As journalists you'll be required to be active participants in daily conversations with sources, your colleagues, and your editors. Much of the work in this class will happen between you and your classmates: You'll take the role of graphics reporter, data analyst, and editor, supporting your colleagues in group projects and in-class critiques.

I'll be assessing each of you based on this Participation Rubric.

Class attendance is mandatory. I will take attendance, and factor excessive absences into your final grade. I don't provide make-up quizzes for unexcused absences. If you miss a class, it's your responsibility to get notes from your classmates.

College is a turbulent time in your lives. Lots of things happen that are beyond your control that can derail your ability to be in class. But you can't get much out of the class if you don't attend and contribute. Let's take each other, and our time together, seriously.

This course also requires approximately 10 hours of work outside of class per week.

Adopt a Newsroom Paper: 30%

Part of a career in journalism will involve keeping close tabs on the work in your field. Being a news junkie is an advantage. For a visual journalist this means being aware of the best infographics work being done. Being able to read a visualization closely and figure out how it works is a key professional – and life – skill. So in this class we will lean heavily on looking at, pulling apart, and reproducing (with improvements) the work of others.

I've prepared a list of newsrooms around the world that create lots of interesting data visualizations and graphics. Each of you will select a newsroom (or, in some cases, groups of small newsrooms), and follow it all semester long.

You'll check in on its website, read the stories that interest you, and take notes on what graphics they've created. If there are especially interesting graphics (because they've very good or even because they're very bad), or if there ones you don't understand, you should send me a message and we may talk about them together in class. I will be keeping tabs as well and will call on you while we're discussing a graphic from that newsroom in class.

Around mid-semester you'll write a paper highlighting that news organization's work. It can be a "greatest hits" or a survey of their most recent work. The paper will include examples and will demonstrate your understanding of the key concepts you've learned so far this semester. It should answer questions like:

What news story does each graphic tell?

Describe, in a few sentences, the "nut graf" of each graphic. Read the story that ran with the graphic, if there is one. Does the graphic help you understand that story better? Do the data and the story agree with each other?

What are the thinking and visual principles behind the graphics?

Tufte's central point about visual principles is one of the key concepts you'll learn this semester. How does it play out in your newsroom's graphics?

Where does their data come from?

Every chart should have a source line. Where did they get the data? Did they make it themselves? Is it from a FOIA or is it open data? Is it available online? Does this newsroom tackle big data sets they've gathered themselves or mostly focus on small data sets prepared by others?

What techniques do they use?

Bar charts? Circle charts? Choropleth map? etc. Can you determine any of the statistical methods they used?

Are their graphics effective?

If you love them, sing their praises – but explain why using what you've learned in this course! If they're ugly, wrong or if they misses opportunities, try remaking one yourself. If they mislead, be a zealous prosecutor convincing us why.

Final Project: 30%

For the final project you'll pick a data set to visualize, work to understand it, pitch a story idea to me, and then execute a visualization.

1) Pick a data set.

You can use a data set from a source like data.gov, or from a news story whose data is available but for which there was not an effective visualization. In a pinch I can help you find a good data set to use. The data should be clean or easy to clean.

2) Write me a pitch.

You'll write me a short data memo specifying the data set you want to use, the source of the data, the story you're going to tell with the data (including, if you have a vision for it, the visualization techniques you want to use), and the work you think it will take to execute the visualization.

3) Acquire, clean and analyze the data.

I'll teach you a bit about how to clean data but this is a big topic. If it's an unusually messy or humongous data set you should probably steer clear. You'll put it into Microsoft Excel and format it for your graphics software to use.

Most importantly, you'll call an expert on your data (like, using a phone) to discuss your approach and what the data set's limitations are.

4) Present a draft.

As the semester comes to a close, you'll present your visualization to the whole class. You'll have a chance to respond to feedback as well as to integrate suggestions into your visualization before your final grade.

5) Hand in the final visualization.

By the last day of the semester you should send me a URL for the final visualization. I'll grade it based on how successfully you use the techniques you learned this semester, as well as how well you participated in discussions about it and how much you listened to and integrated feedback.

University Policies

The New School has stated policies on [Academic Honesty and Integrity, Intellectual Property, the Free Exchange of Ideas, and Freedom of Artistic Expression](#). Those apply to this course as they apply to every course here.

I'd just add that plagiarism is an immediate firing offense in every newsroom, and usually a career-ender. Borrowing ideas from each other and riffing off each other's work, especially in visual journalism, is to be expected – even encouraged. Just be explicit about what you're doing and give generous credit. Fabulism – making stuff up and passing it off as factual – is also a capital offense in journalism. The facts will sometimes ruin your graphic. That problem isn't solved by changing the facts. When in doubt, ask me for help.

Students With Disabilities

Students Disability Services (SDS) assists students with disabilities in need of academic and programmatic accommodations as required by the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Federal Rehabilitation Act of 1973.

In keeping with the university's policy of providing equal access for students with disabilities, any student with a disability who needs academic accommodations must contact SDS. The office will conduct an intake and, if appropriate, the Director will provide an academic accommodation notice for you to bring to me. This letter is necessary in order for classroom accommodations to be provided. Once you provide this notice, the Director will have a schedule a private discussion with the instructor about the accommodations in relation to this course.