Statistics and the humanities: News and numbers in journalism as a proof of concept

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Abstract

A number of colleges and universities are embracing quantitative literacy as a core competency for undergraduates. Faculty members in the humanities often express concern that they will not be able to contribute courses to such a core competency. In this poster, the experience of developing a team-taught journalism-statistics course is described. The structure of this course, description of student projects in which quantitative information was enveloped in news stories and student reactions to this class will be presented. The role of this course in promoting changes in general education requirements will be discussed. Finally, strategies for scaling this course up to serving large classes will be discussed.

OUTLINE

1. JRN/STA 380: News and Numbers: Lies, Statistics, and the Stories Media Tell
2. History and institutional context + Course description excerpts
3. Using news in stat classes is not new
4. Learning objectives
5. Course logistics – Visitors; Example Assignments; Projects
6. Lessons learned (and still learning)
7. Challenges and changes?
8. How might we offer this in the future?
9. How was the course received? Would we be tempted to do this again?

1) JRN/STA 380 "News & Numbers"

JRN-STA 380 explores the quality of how quantitative ideas and material are represented in daily news - useful to students in any major

o Topics "ripped" from current events and headlines—especially those numbers and data related to political polling, the financial crisis, and energy/environmental issues.
o In analyzing the numbers that underlie such current news stories, we dig under the surface of a *USA Today* graph or a CNN poll to give students the chance to critique contemporary journalism's use of numerical representations.
o examine and critique concepts such as journalistic objectivity and bias, the concept of uncertainty, and various visual presentations of numerical data.
o give students opportunities to craft their own articles on related topics, some of them tied to course speakers and/or Miami faculty who have expertise in political polls, financial systems, and environmental sustainability.
o students will "cover" their lectures of selected speakers and write -- as individuals and in groups --their own news stories.
o advances in-depth critical thinking, promotes clear communication, and teaches compelling storytelling about complex topics.
o aims to help students understand numbers in a way that helps them become more discerning media consumers, more perceptive journalistic critics, and more actively engaged citizens in democratic life.

2) History and institutional context

2006 – Breakfast on campus for stat instructors from across campus
2008 – QL Faculty Learning Community Began
2009 - JRN/STA 380 offered as proof-of-concept for QL in humanities
2009 – new STA department partitioned from former MTH/STA
2010 - QL core competency requirement passed by CAS
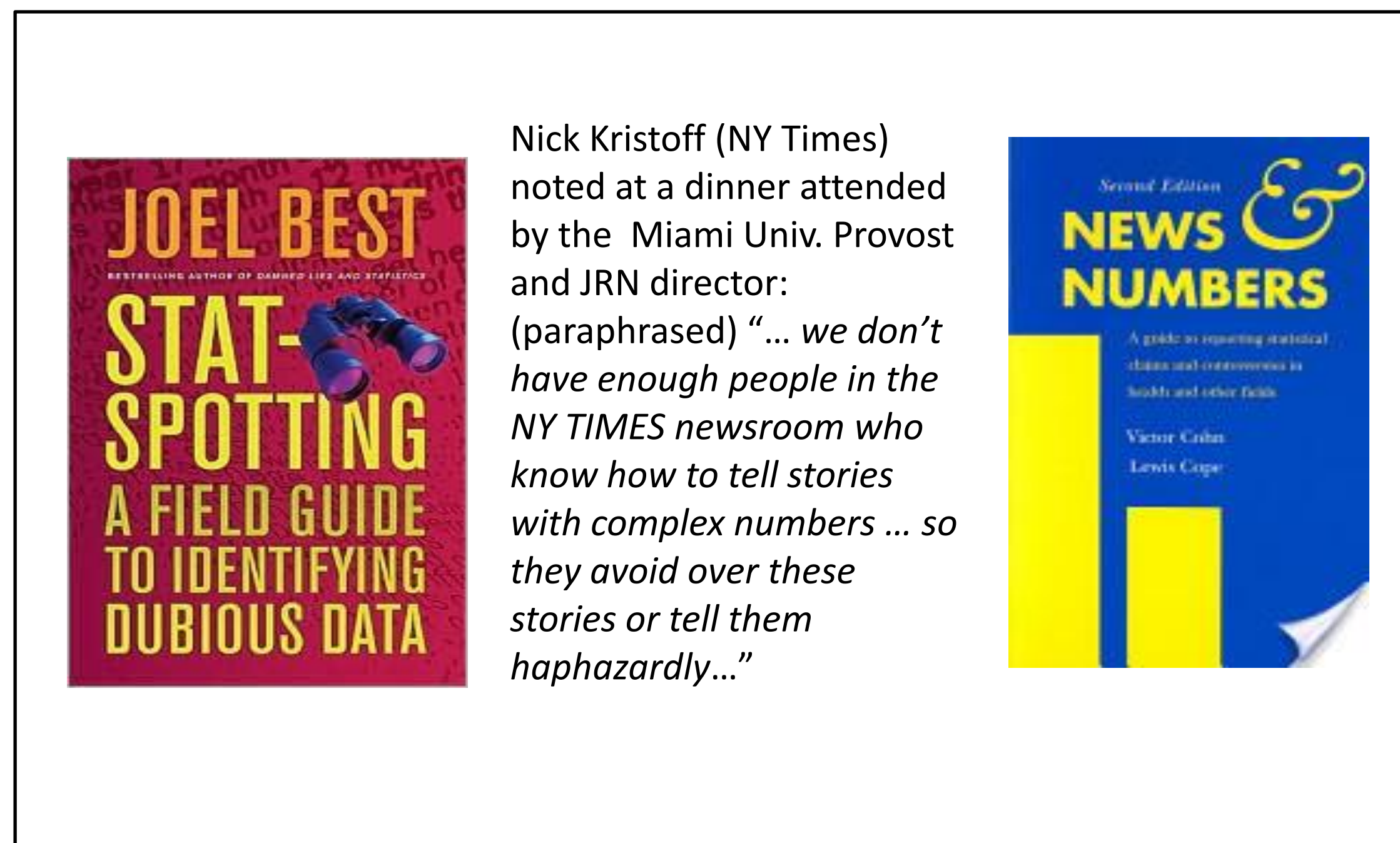2011 - scaling JRN/STA 380 to larger classes

3) Using news in stat classes is not new

3.1 Previous work

• Bernie Madison book using news to teach quantitative literacy – also recent talk http://www.ohiomsc.org/omsc/PDF/QLMadison.pdf

• Statistical literacy and news media in A. Gelman and D. Nolan (2002) *Teaching Statistics: a bag of tricks.* Oxford University Press.

• CHANCE course - http://www.dartmouth.edu/~chance/

3.2 Current course

• Not using news as a tool for learning stat concepts but to develop a sense and insight regarding application of statistics in a journalistic context

• Class designed to be holistic, integrative and current

Nick Kristoff (NY Times) noted at a dinner attended by the Miami Univ. Provost and JRN director: (paraphrased) "… we don't have enough people in the NY TIMES newsroom who know how to tell stories with complex numbers … so they avoid over these stories or tell them haphazardly…"

4) Learning Objectives

1. Critically assessing assertions
   Students should be able to incorporate quantitative measures of uncertainty in understanding assertions, such as those found in popular media.

2. Communicating with quantitative concepts
   Students should be able to interpret graphs and multiple visual displays of information and data.
   Students should be able to communicate quantitative information in written or graphical forms.

3. Qualitative dimensions of inquiry
   Students should have strategies for making decisions in the face of uncertainty and incomplete data.
   Students should be able to write narratives interpreting quantitative data and their meaning.

5) Course Logistics – visitors, example assignments, projects

5.1 Grading

1. Class discussion [10%] – includes bringing news stories to class for general discussion
2. Short writing exercises/illustrations of current classroom topics from the media [10%] – includes 1-page contact report for any visitor to class
3. News & numbers portfolio [25%] – reviewed at Midterm at end of the class
4. Two major individual stories based on faculty research projects [20%]
5. Critically edit and peer review other stories [10%]
6. Group project – for these we can partner with a publication [25%]

5.2 Example Assignments

1. Write a story lead based on visit by external guests

• Steve Watkins - Business Courier of Cincinnati – executive compensation and changing economic landscape
• Ken McCall - Dayton Daily News – foreclosures, political donations
• Rose Marie Ward (KNH) – alcohol abuse among young adults
• Gary Scott (WMUB director of news) – radio news and numbers
• Jim Tobin (JRN) – reporting on medical and technical information

2. Generate alternative display for graphic included in Newsweek story
3. Produce a two-paragraph story to interpret an Am. J. of Public Health story
4. Reaction paper to radio program "Giant Pool of Money" (This American Life)
5. Stories produced by each of 5 teams (2 forms – newsprint, web, radio). Needs to include a quantitative element.
6. Porfolio of bad and good news stories

5.3 Projects

Story 1: Effectiveness of alcohol programs on campus
Story 2: Study abroad program trends
Story 3: Recycling efforts
Story 4: Personal finance/Investing options for college students
Story 5: Faculty residing in Oxford

Researchers question value of AlcoholEdu
By *Ida Lieszkovszky, Jessica Gephart and Nidhi Subarraman*
Published: Friday, May 1, 2009 - **Updated:** Sunday, February 14, 2010 23:02
This article was completed in collaboration with John Bailer and Richard Campbell's Journalism/Statistics 380 class: News and Numbers.

According to research findings, 60 percent of students at Miami University who drink claim they have no intention of curbing their alcohol consumption in the next six months.
http://www.miamistudent.net/2.8199/researchers-question-value-of-alcoholedu-1.1148318

OBSERVATION:
Most included a PRINT version + …
   WEB (with links to maps, tables, other stories)
   RADIO (with interviews and a script produced for review)
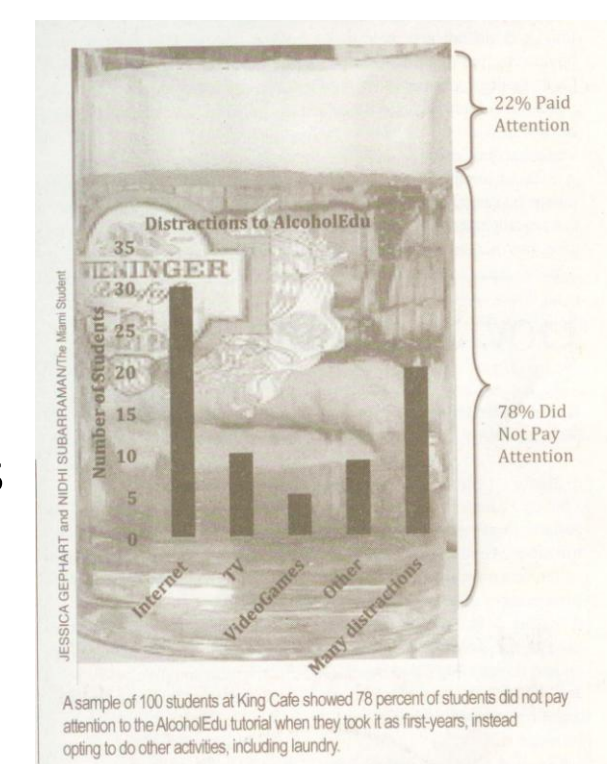
6) Lessons learned (and still learning)

Successful first pass based on quality of products and feedback

Why did it work better than we expected?
- Upper-level HONORS class populated with 6 journalism majors (including current/former editor of student paper) plus students for many divisions (A&S, Bus., Eng., Ed.)
- Two seasoned instructors who were honest about the experimental nature of the class and the students embraced the class

Challenges and changes?
- didn't spend as much time on reviewing story writing for journalism. This put more pressure on the JRN students in each team.
- Consuming numeric information in the media vs. producing media with numeric information (may did a bit better with the former vs. latter)
This class provided a great opportunity for the students to interact with faculty with different backgrounds who would often debate about story structure.
It wasn't what we anticipated; it was better.

7) Challenges and changes

News and numbers might be the key QL class for humanities students – translates to potential high demand!

Could we scale this up? Not sure.

Future offerings? capstone experience for JRN and STA students.

How do you make bigger classes feel intimate? How do you teach writing about quantitative information to larger collections of students?

8) How might we offer this in the future?

Earlier projects and external visitors.

Earlier training in writing news - "inverted pyramid" (diff. story-telling models) – "summary lede (hard news format)" vs. "feature/narrative lede (soft news format)"

Scale up with student assistants? – e.g. Intro class with 90 students (15 UAs=undergraduate assistants + 2 professors)- normally taught with classes of 24. UA got credit and led small discussion groups.; did first read /edit of stories (took parallel capstone class)

9) How was the course received? Would we be tempted to do this again?

Students responses -
Course would help improve research and writing skills?
Either quite a bit (7/12) or a great deal (1/12)

Course rating?
very good (8/12) or excellent (3/12)

Recommend to other students?
Definitely yes (5/12) or probably yes (5/12)

Engaging other learners?
Excellent (8/12) or very good (3/12)

Comments:
• Interesting b/c diff. bkgs of instructors; - STA and JRN teacher think differently but fields complement each other;
• better understanding of how look at numbers and how they are presented in the media;
• course more like a workplace than other courses;

• Students demonstrated critical review of the use of statistics in the media

• They produced quality stories with sensible graphical and tabular displays.

• Descriptive statistics was the emphasis of the stories consumed and produced (may be different if more science reporting added to the class)

• (the editor of the student paper and I discussed having a stat data practicum class serve as on-call consultants to the *Miami Student* – stay tuned).

• We strongly recommend such collaborations for the richness of the experience that will result for student and professor alike.