CJS392H1F/ SOC395H1F: Applied Statistics and Data Science in Jewish Studies
Syllabus (v. 9/15/2020)

Course Professor: Dr. Alexis Lerner
Session: Fall 2020
Email: alexis.lerner@mail.utoronto.ca or via Quercus

Lecture Location: Remote; Asynchronous with optional Synchronous Elements

Office Hours
Group Office Hours: Thursdays from 10:00-10:30 a.m. (EST)
Individual Office Hours: Thursdays from 10:30-11:00 a.m. (EST) or by appointment (10-minute intervals). Sign-up for individual office hours at: https://cjs392soc395.youcanbook.me

Course Links
Packback: https://questions.packback.ca
Canvas: https://q.utoronto.ca
Office Hours Link (Both Group and Individual): https://tinyurl.com/CJS392SOC395
(Zoom Meeting ID: 845 5118 2790
Zoom Meeting Passcode: 8XQEF3)

DESCRIPTION OF THE COURSE

What is data? Where does data come from? How can scholars use data to tell stories (and lies!)? This course offers an introduction to data science and applied statistics, with an emphasis on demystifying data through quantitative methods, research design and ethics, and digital humanities tools. The course teaches students how to read, evaluate, and plot data in tables, charts, and graphs, and includes a training in Tableau software. We will draw from datasets of interest within the interdisciplinary field of Jewish Studies, such as the Survey of Jews in Canada (2018), PEW Research Center's 'Portrait of Jewish Americans' (2013), the Anti-Defamation League's Global 100 Index (2019) on anti-Semitism, the USC Shoah Foundation Visual History Archive, and the Arolsen Archive (2019). No prior training in research methods or prerequisites are necessary for this course. Students will complete the course with the skills necessary to recognize bias in data, identify appropriate methods for different research puzzles, build and analyze datasets, and communicate stories using quantitative tools. There are no prerequisites for this course. **This course fulfills the Faculty of Arts and Sciences' Breadth Requirement Five (the Physical and Mathematical Universes).**

COURSE OUTCOMES

1. You will learn to identify the data best suited to their research puzzle and theory.
2. You will gain technical skills in downloading datasets, reading .csv / .xls files, and building datasets from archival or observational material.
3. You will learn to build arguments around data and discuss the limitations of a data source (and what it means for your study).
4. You will learn to illustrate the stories in their data using data visualization tools that will aid them in future research projects.

COURSE TEXTBOOK

This textbook is available online as an e-book, an online textbook, in paperback, and in hardcover from Indigo :

1. Wheelan, Charles. 2013. *Naked Statistics: Stripping the Dread from the Data.* W.W. Norton.

COURSE SOFTWARE

Please download the following software prior to the course:

1. Tableau, data visualization software available for Mac and PC.
    a. You will need to use your UofT email address to apply for a free, one-year student account at https://www.tableau.com/academic/students.
2. Packback, web-based, AI-supported discussion platform. **$25 CAD.** https://www.packback.co/

How to Register on Packback:

An email invitation will be sent to you from help@packback.co prompting you to finish registration. If you don't receive an email (be sure to check your spam), you may register by following the instructions below:

1. Create an account by navigating to https://questions.packback.ca and clicking "Sign up for an Account." Note: If you already have an account on Packback you can log in with your credentials.

2. Then enter our class community's lookup key into the "Looking to join a community you don't see here?" section in Packback at the bottom of the homepage. Community Lookup Key: **1fce93d6-4315-4baf-b4b8-1000fc959031**

3. Follow the instructions on your screen to finish your registration.

How to Get Help from the Packback Team:
If you have any questions or concerns about Packback throughout the semester, please read their FAQ at help.packback.co. If you need more help, contact their customer support team directly at help@packback.co.

For a brief introduction to Packback Questions and why we are using it in class, watch this video: vimeo.com/packback/Welcome-to-Packback-Questions

COURSE MATERIALS

The following reading materials will be used for this course:

1. Selected articles, book chapters, and multimedia available electronically via UofT library reserves (accessible via Quercus).
2. Video-recorded Holocaust testimonies available through the USC Shoah Foundation's Visual History Archive.

FORMAT AND REQUIREMENTS

Given the health risks related to the COVID-19 pandemic, this course will be held remotely and asynchronously. There will be no tutorials in this course. Students are responsible for reading the assigned material, watching lectures, participating in activities, and engaging with their peers using Packback, a cloud-based discussion board. Lectures and assignments presuppose familiarity with the readings, so it is advisable to complete reading assignments before the start of the week's lectures. There will be 3 live, or synchronous course sessions, over the course of the semester—these will be recorded and posted to Quercus.

Performance will be evaluated on the basis of the following requirements:

Participation	25%
Research Project	55%
Tests	20%

Participation (25% of final grade) consists of:

1. **Weekly Class Participation** (25%)
    - Participation is a requirement for this course, and the Packback Questions platform will be used for online discussion about class topics. Packback Questions is an online community where you can be fearlessly curious and ask open-ended questions to build on top of what we are covering in class and relate topics to real-world applications.

- **Your participation on Packback will count toward 25% of your overall course grade. There will be a Weekly Sunday at 11:59PM deadline for submissions. In order to receive your points per week, you should submit the following per each deadline period:**
  - **1 open-ended Question per week with a minimum Curiosity Score of 70, each worth 33.33% of each assignment grade**
    - Questions must engage course lectures, assigned readings, and/or assigned databases, but may connect these to current events if the student chooses. Students must cite sources in their questions and are invited to include *appropriate* visual content (e.g., YouTube videos, GIFs, embedded Twitter conversations). All of these will improve a student's curiosity score. Students are expected to produce questions that achieve a curiosity score of at least '70'. Questions that score higher than '70' will receive full credit; questions that score lower than '70' will not receive credit.
  - **2 Responses per week with a minimum Curiosity Score of 70, each worth 66.67% of each assignment grade**
    - In their responses to their peers, students are encouraged to respond with one 'counter-point' and one 'supporting point'. Students are welcome to respond to more than two questions each week. Students are expected to produce responses that achieve a curiosity score of at least '70'. Responses that score higher than '70' will receive full credit; questions that score lower than '70' will not receive credit.
- The student with the highest average curiosity score at the end of the semester will receive 1 bonus point.
- The student with the most 'sparks' at the end of the semester will receive 1 bonus point.
- Students are permitted to request an appeal; this must be done within two weeks of receiving a grade by sending one paragraph to the instructor about the received grade and why the student believes this grade to be in error.

Research Project

The top objective of this term paper is to learn how to turn archival and observational materials into a usable data-set, and to use that data to illustrate correlations, patterns, and stories in the primary materials. Each deliverable builds on the last, so it is of utmost importance that students complete each assignment fully and on time.

In particular, students will use **text mining and content analysis skills** learned in class to code one English-language, Holocaust survivor testimony from a pre-selected subset of the USC Shoah

Foundation's Visual History Archive (https://sfi.usc.edu/vha). I will provide guidance for these codes, and we will learn together how to read and use a codebook. Students will build collective datasets in a shared online spreadsheet. Finally, students will illustrate interesting findings—whether about their individual case, or in comparison with other cases.
Research Project (55% of final grade) consists of:

1. **Meta-Data Assignment** (10%)
    - Choose your interview from a list of pre-selected options. *Special requests will be possible; if you have some particular interest, please make an appointment at the beginning of the semester to discuss this with the professor.*
    - Provide a short-answer for each of the following four categories of questions:
        a. **The archive:** Who built it? Who are its subjects? What kind of information is available? How many cases does it have? How can a scholar subset the material in it? Does the archive or its use raise any ethical concerns? What are the pros and cons of this archive? (Bonus: What are some other archives that house similar material? Compared to the VHA, why might a scholar use this or another archive?)
        b. **The survivor:** What meta-data does the archive provide about this survivor? How long is the interview? Who conducted the interview? Where was it conducted and in which language? How was the interviewer trained to conduct this interview? What are some potential ethical problems of the interview, itself? Why might Shoah have decided to include photographs at the end?
        c. **Your research:** What do you think you will choose as your dependent, or target, variable? Where do you expect to see variation? What would be surprising? What interesting questions could you ask about the data (not *to* the interviewee)?
        d. **The implications of your research:** Why does your proposed question matter? What insights do you think you might be able to uncover? Why is this dataset a good match for your proposed question? What are the limitations of this dataset for answering your proposed question?

2. **Coding Assignment** (25%)
    - Use Codebook to code one VHA interview. You will be required to download and submit your dataset in .xls and .csv format to the professor (the .xls file will include both sheets, the .csv will have to be submitted as two separate sheets). We will discuss file and version management in class, which will prepare students to juggle multiple versions of their work successfully.

3. **Illustration Peer Review** (5%)
    - Students will complete a training in the data visualization software, Tableau. Students must download Tableau ahead of time so that they can follow along in the workshop (it is free for students). All students are required to submit an illustration that they have created, including a title, a key (if relevant), and a caption that explains the main features of the graph and highlights what the reader should take

away from the illustration. After submitting their illustration, students will be assigned two peer illustrations to review. Students will receive a grade and professor feedback *only after* they've successfully submitted both reviews. The entire peer review process will take place over Quercus. Feedback from the peer review process is to be incorporated into the final paper/ presentation.

4. **Reflection Paper OR Presentation** (15%)
    - In this assignment, students will answer the following question:

        *Do quantitative methods, organizational systems, and data visualization tools help scholars to learn **new** things about archival or observational materials?*

    - In their responses, students will be expected to address the content of the code by restating their dependent variable, their puzzle, and whether the data reinforced their theory. Papers and presentations are expected to utilize Tableau, which we will learn in class, to illustrate the data that you collected. Students are also encouraged to use feedback from the peer review process to improve your illustration for this paper/ presentation.
    - Students will be expected to discuss their experiences, noting the difficulties (whether technical, ethical, or theoretical) that they encountered and how they overcame them (or, if they did not overcome said boundaries, why they felt insurmountable), as well as their reflections regarding digital archive engagement and how the process can be improved (i.e. through automation).
    - Students are invited to do this in one of two ways:
        1. As a 5-7 minute video presentation, submitted asynchronously. Video presentations must include a title slide.
            a. *Sample tools for video production:* Record over PPT (https://support.microsoft.com/en-us/office/video-record-a-presentation-2570dff5-f81c-40bc-b404-e04e95ffab33); Snagit (https://q.utoronto.ca/courses/46670/pages/lecture-capture)
        2. As an 800-word essay (Times New Roman, 12 point font, right justified text, titled, dated, and page numbered)

Research Project Deliverable Schedule of Due Dates

Deliverable	Due Date
Meta-Data Assignment	10/18/2020
Coding Assignment	11/01/2020
Illustration Due for Peer Review	11/22/2020
Peer Reviews Due	11/29/2020
Paper or Presentation Due	12/13/2020

Tests (20% of final grade) consists of:

1. Pretest (5%)
2. Posttest (15%)

Both tests will have the same questions—a combination of multiple choice and short answer regarding key terms, data analysis, and best practices. The pretest will be given in the first week of class and the posttest will be given during the last week of class, with a goal of using the results to teach about experimental design and to assess learning over the course of the semester. The pretest will be graded based on participation and not correctness. The posttest will be graded based on correctness.

COURSE POLICIES

Extensions and Make-ups: No extensions or make-ups will be granted on written assignments and tests, unless students have acceptable reasons that are documented. If you are unable to turn in an assignment/or miss the test for medical reasons, you will need to **email me and also** declare your absence on ACORN on the day of the missed test or assignment due date.
For other reasons, such as family or other personal reasons, please contact your college registrar and have them email me directly. Assignments or tests from other courses scheduled for the same day or work commitments do not constitute acceptable reasons, so plan in advance accordingly.

Late Penalties: Unless otherwise noted, **all assignments are due on Sundays at 11:59 p.m., EST.** Assignments are to be submitted online through Quercus by the date that they are due. Late assignments will be penalized. The late submission penalty is 3% per late day, weekend days included. The cut-off time for the determination of the number of late days is 11:59 p.m. (EST). Late submissions will not be accepted once marked assignments have been returned to the class.

'Life Happens' Clause: I permit a one-time 'life happens' clause, which permits a student to request a 3-day extension without explanation or documentation. In order to use this, students must email the professor with the subject line 'Life Happens'. In the body of the email, the student needs to note the new deadline. The student does not need to provide an explanation for the extension request. Students are not penalized during these 3 days. After the 3 days have passed, penalizations accrue.

Plagiarism: All sources used in written assignments must be properly cited. Failure to acknowledge sources constitutes plagiarism—a serious academic offense. For more information, students should review "How Not to Plagiarize" and other advice on sources at www.writing.utoronto.ca/advice/using-sources.

Turnitin: Students will be required to submit their final course essay to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com website. Assignments not submitted through Turnitin will receive a grade of zero (0 %), unless a student instead provides, along with their position paper, sufficient secondary material (e.g., reading notes, outlines of the paper, rough drafts of the final draft, etc.) to establish that the paper they submit is truly their own.

Quercus and email: Students are expected to check their U of T emails and the course Quercus page regularly for posted course materials and announcements.

Calendar: Students are invited to subscribe to the course calendar by clicking on the Calendar Feed button on Quercus.

Appeals: Students who have concerns about the mark they receive are required to submit in writing their reasons for this, along with a copy of the marked work, no later than 2 weeks after assignments have been returned to the class.

On Equity, Diversity, and Inclusion: The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Notice of video recording and sharing (download and re-use prohibited): Synchronous meetings in this course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session. Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Do not download, copy, or share any course or student materials or videos without my explicit permission. I will remove the videos from hosted sites (e.g., Quercus) after the course ends.

Accessibility: If you require accommodations or have any accessibility concerns, please visit http://studentlife.utoronto.ca/accessibility as soon as possible.

RESOURCES

Writing Center: Students can attend workshops and arrange one-on-one appointments to discuss their writing projects: www.writing.utoronto.ca.

Crisis Lines: Students can access a list of free crisis lines at https://www.toronto.ca/311/knowledgebase/kb/docs/articles/311-toronto/information-and-business-development/crisis-lines-suicide-depression-telephone-support-lines-non-crisis-mental-health-services.html. These include crisis lines specific for suicide, LGBT-issues, depression, anxiety, and sexual assault. Some lines are anonymous and most are available 24-hours a day. The following is a list of phone numbers and websites that students may find useful:

- 24/7 Canada Suicide Prevention Service (CSPS) 1-833-456-4566
- 24/7 Crisis Text Line Canada: text CONNECT to 686868
- UofT Campus Community Police: 416-978-2222
- WalkSmart: 416-978-7233
- UofT Accessibility Services: 416-978-8060
- 24/7 Good2Talk (For depression, anxiety, resources): 1-866-925-5454
- LGBTIQ+ Community Trans Lifeline: 877-330-6366
- 24/7 Mental Health # for veterans and family members: 1800-268-7708
- Wounded Warriors (for vets): 1888-706-4808
- UofT Health and Wellness: 416-978-8030
- UofT Sexual Violence and Prevention Support Centre: 416-978-2266
- UofT Anti-Racism and Cultural Diversity Office: 416-978-1259
- UofT Sexual and Gender Diversity Office: 416-978-5624
- 24/7 General Distress HelpLine: 416-408-HELP (4357)
- Gerstein Centre (Mental Health Crisis): 416-929-5200
- 24/7 Assaulted Women's Helpline: 416-863-0511
- 24/7 Toronto Rape Crisis Centre: 416-597-8808
- Jewish Family and Child (Sliding Scale Therapy, Bereavement): 416-638-7800

Registrar's Office: Students are encouraged to contact their registrar promptly with any unexpected difficulties they may experience during the course.

COURSE SCHEDULE

Week #	Topic	Dataset	Event/ Deadline	Readings (See Section Below)
1 (9/15-9/20)	Basics of Empirical Research	Claims Conference Survey	Live Meeting #1: Class Introduction*	Zauzmer Washington Post Article, Wheelan Chapter 1, Claims Conference Website
2 (9/22-9/27)	What is/ are Data?	N/A	Select VHA Interview	Wheelan Chapter 2, Fujii Article, Carson Blogpost, Myers NPR clip
3 (9/29-10/4)	Why Data? How Data?	The Arolsen Archives		Wheelan Chapter 3, Shapiro Video, Stout NYTimes Article, Black Blogpost, YouTube About Archive
4 (10/6-10/11)	Puzzles and Research Questions	The Ivy Jew Debate	1. Meta-Data Due 2. Live Meeting #2: Data Analysis & Ivy Jew Debate*	Wheelan Chapters 4 & 7, Treisman NPR audio clip, Unz Article, blogs by Cowen, Hsu, and Gelman
5 (10/13-10/18)	Where Data Come From?	VHA		Luft Article, Weinraub NYTimes Article, Greenspan Article, VHA site
6 (10/20-10/25)	Quantification	Portrait of Jewish Americans	Live Coding Assistance*	Wheelan Ch 10, Saxe Article, Hirschfield Article, Code Switch, Jacobson Article, PEW Website
7 (10/27-11/1)	Data Cleaning	ADL Global-100	Install Tableau	Wickham, Wheelan Ch 8 & 9, Short Film, Harris Podcast, ADL website
8 (11/3-8)	Communicate Statistics	N/A	Coding Assignment Due	Cleveland Ch 2, Data Viz Guide, Data Visualization blog, Yao blog
Reading	Week is	11/9-11/13	No Class or	Office Hours
9 (11/17-11/22)	Data Analysis	Survey of Jews in Canada	Illustration Due for Peer Review	Wheelan Ch. 11 & 12, Null Hypothesis Blog, P-Values Video, Gelman Blog, Brym Article, website
10 (11/24-11/29)	Statistical Ethics	N/A	Peer Reviews Due	Gelman Article, Black article, Huff Intro, Lerner Article, TedTalk
11 (12/1-12/6)	Presentations	N/A	1. Papers/ Pres. Due 2. Posttest	N/A
12 (12/8-12/13)	Conclusion	N/A	N/A	Wheeler Conclusion

* Live Meetings are encouraged, but optional. They will take place using Zoom. They will be recorded and posted to Quercus for students unable to attend.

Readings

Week 1: Basics of Empirical Research (September 15)

Course Introduction and Pretest

Readings:

1. Zauzmer, Julie. 2018. "Two-Thirds of Millenials Don't Know What Auschwitz Is, According to Study of Fading Holocaust Knowledge." *Washington Post,* April 12, 2018.
2. Wheelan, Charles. *Naked Statistics*: *Stripping the Dread from the Data.* W.W. Norton and Company. Chapter One (pp. 1-14).
3. Browse Claims Conference Survey: http://www.claimscon.org/study/

Week 2: What is/ are Data? (September 22)

Types of Variables and What You Can Do With Them; Descriptive Statistics

Readings:

1. Wheelan. Chapter Two (pp. 15-35).
2. Fujii, Lee Ann. "Shades of Truth and Lies: Interpreting Testimonies of War and Violence," *Journal of Peace Research* 47, 2 (March 2010): 231-241.
3. Carson, Charles. 2008. "Is 'Data' Singular or Plural?" *Grammar Girl,* 3 October, 2008.
4. Myers, Steve. "NPR Listener Complains About Use of the Word 'Data.'" *Poynter,* 1 February, 2012.

Week 3: Why Data? How Data? (September 29)

Where does data come from and what can we do with it?

Case: The Arolsen Archives

Readings:

1. Wheelan. Chapter Three (pp. 36-57)
2. [Video] Shapiro, Paul. 2011. "Bad Arolsen." https://www.youtube.com/watch?v=cf-jfkh1lss.
3. Stout, David. 2006. "Germany Agrees to Open Holocaust Archives." *NYTimes.*
4. Black, Edwin. 2007. "Survivors Outraged at Holocaust Museum Over Bad Arolsen." *History News Network.*
5. To bring you up-to-date, here's a short YouTube video about Bad Arolsen's very recent (late 2019 and early 2020) partnership with Ancestry.com: https://www.youtube.com/watch?v=l42DhnDtgc0

Week 4: Puzzles and Research Questions (October 6)

Operationalization, Mechanisms, and the Problems of Causality

Case: The Ivy Jew Debate

Readings:

1. Wheelan. Chapters Four (pp. 58-65) and Seven (pp. 110-126)
2. Treisman, Rachel. "DOJ: Yale Discriminates Against Asian American and White Applicants in Admissions." *NPR*, 13 August 2020.
3. Unz, Ron. 2012. "The Myth of American Meritocracy." *The American Conservative*.

+ Unz's ripples across the blogosphere:

- Cowen, Tyler. 2012. "The Myth of American Meritocracy: How Corrupt Are Ivy League Admissions?" *Marginal Revolution.*
- Hsu, Stephen. 2012. "Information Processing: The Myth of American Meritocracy." *Information Processing*. November 27.
- Gelman, Andrew. 2013. "Ivy Jew Update." *Statistical Modeling, Causal Inference, and Social Science*. October 22.

Week 5: Where Data Come From? (October 13)

Archives, Interviews, Fieldwork

Case: The USC Shoah Foundation Visual History Archive

Readings:

1. Luft, Aliza. 2020. "How Do You Repair a Broken World? Conflict(ing) Archives after the Holocaust." *Qualitative Sociology* 43, 317–343.
2. Weinraub, Bernard. 1994. "Spielberg Recording Holocaust Testimony." *NYTimes.*
3. Greenspan, Henry. 2011. "Collaborative Interpretation of Survivors' Accounts: A Radical Challenge to Conventional Practice." *Holocaust Studies: A Journal of Culture and History* 17, 1 (Spring 2011): 85-100.
4. Spend a few minutes exploring the website for the Shoah Foundation VHA: https://sfi.usc.edu/vha. This is a good time to set up an account (free).

Week 6: Quantification (October 20)

Operationalization and Codebooks; Quantifying Identity

Case: PEW Portrait of Jewish Americans

Readings:

1. Wheelan. Chapter 10 (pp. 169-183).
2. Saxe, Leonard. "The Sky is Falling! The Sky is Falling! A Reanalysis of Last Year's Important PEW Study Contradicts Persistent Alarmism About 'Vanishing' American Jewry." *The Jewish Journal of Sociology* 57, 1-2 (2015).

3. Hirschfield, Brad. "What PEW's Jewish Poll Reveals About the Faithful—and Faithless: Judaism: As We Have Known From the Beginning, Is Not Simply a Religion." *Washington Post.* Oct 1, 2013.
4. "Members of Whose Tribe?" *NPR Code Switch.* https://www.npr.org/transcripts/602678381 [31-minute podcast]
5. Jacobson, Matthew Frye. 1999. *Whiteness of a Different Color: European Immigrants and the Alchemy of Race.* Harvard University Press. Pp 1-12.
6. 2013. "A Portrait of Jewish Americans: Overview." *PEW Research Center.* Pp 1-20.

Explore the website for the PEW Dataset:
http://www.pewforum.org/2013/10/01/jewish-american-beliefs-attitudes-culture-survey/#

Week 7: Data Cleaning (October 27)

Error Terms and Improving Data Quality

Case: ADL Global-100

Readings:

1. Wickham, Hadley. 2014. "Tidy Data." *Journal of Statistical Software* 59 (10): 1-21.
2. Wheelan. Chapters Eight and Nine.
3. *A Night at the Garden.* https://anightatthegarden.com/ [7 minute film]
4. Harris, Sam. "Anti-Semitism and its Discontents: A Conversation with Bari Weiss." *Making Sense Podcast. https://samharris.org/podcasts/173-anti-semitism-discontents/*
5. ADL Global-100 Survey Methodology

Explore the interactive ADL Global-100 Website: https://global100.adl.org/map

Week 8: Communicating Statistics (November 3)

Data Visualization and Tableau

Readings:

1. Cleveland, William. 1994. *The Elements of Graphing Data.* Hobart Press. Chapter Two. (pp. 22-118; skim and focus on illustrations/captions)
2. "Data Visualization: Chart Dos and Don'ts." *Duke University Libraries LibGuide.*
3. "Data Visualization." *Material.io.*
4. Yao, Nathan. "Real Chart Rules to Follow." *FlowingData.*

** Students must have installed Tableau on their personal computer prior to this week (it is free for students).**

Week 9: Data Analysis (November 17)

Regressions and *p*-values

Case: Survey of Jews in Canada

Readings:

1. Wheelan. Chapters 11 and 12.
2. "Null Hypothesis." *StatisticsHowTo.* https://www.statisticshowto.com/probability-and-statistics/null-hypothesis/
3. "*P*-values and Significance Tests." *KhanAcademy.* https://www.khanacademy.org/math/ap-statistics/tests-significance-ap/idea-significance-tests/v/p-values-and-significance-tests
4. Gelman, Andrew. "Abandon Statistical Significance." *StatModeling.* https://statmodeling.stat.columbia.edu/2017/09/26/abandon-statistical-significance/
5. Brym, Robert, Keith Neuman, and Rhonda Lenton. 2018. "2018 Survey of Jews in Canada Final Report." *Environics Institute for Survey Research.*

Explore the Survey of Jews in Canada dataset, housed by the Berman Jewish DataBank: https://www.jewishdatabank.org/databank/search-results/study/1043

Week 10: Statistical Ethics (November 24)

"There are three kinds of lies: lies, damned lies, and statistics."
– Prime Minister Benjamin Disraeli

How to Lie with Data (But Don't Do It!)

Readings:

1. Gelman, Andrew. "Ethics and Statistics: Open Data and Open Methods." *Chance.*
2. Black, Edwin. 2001. *IBM and the Holocaust: The Strategic Alliance Between Nazi Germany and America's Most Powerful Corporation*. New York: Crown. Introduction, available at: https://archive.nytimes.com/www.nytimes.com/books/first/b/black-ibm.html.
3. Huff, Darrell. 1954. *How to Lie with Statistics*. New York: W. W. Norton and Company. Read introduction and skim rest (check out the illustrations). Available at: http://www.horace.org/blog/wp-content/uploads/2012/05/How-to-Lie-With-Statistics-1954-Huff.pdf.
4. Lerner, Alexis. "The Ethics of Using Quantitative Methods to Study the Holocaust." Working Paper to be Distributed.
5. Wernicke, Sebastian. 2010. *Lies, Damned Lies, and Statistics*. TED Talks. https://www.ted.com/talks/lies_damned_lies_and_statistics_about_tedtalks.

Week 11: Student Presentations (December 1)

Posttest and Student Presentations

Week 12: Experiments and Conclusion (December 8)

Course Review and Analysis of Posttest

Reading:

1. Wheeler. Conclusion.