

**Evaluating Information and Analyzing Media**  
**Communication Studies 121**  
**Josh Pasek, Ph.D.**  
**Fall 2015**

**Class**

The course meets 11:30AM-1:00PM on Mondays and Wednesdays in 1020 School of Public Health 2. Labs meet in 1245 North Quad at your designated section times.

**Office Hours**

Professor Pasek: Mon 1:30 to 2:30 in 5413 North Quad or by apt. [jpasek@umich.edu](mailto:jpasek@umich.edu)

**Graduate Student Instructors**

<b>Name</b>	<b>Sections</b>	<b>Office Hours</b>	<b>@</b>	<b>Email</b>
Amy Dawson-Andoh	002, 003	M4-5 & by apt.	5336NQ	<a href="mailto:adawsona@umich.edu">adawsona@umich.edu</a>
Connie Hsiung	004, 005	M1:30-2:30 & by apt.	5356NQ	<a href="mailto:constahs@umich.edu">constahs@umich.edu</a>
Heidi Wong	006, 007	F1:30-2:30 & by apt.	5342NQ	<a href="mailto:hhwong@umich.edu">hhwong@umich.edu</a>
Kayla Douglas	008	M10-11 & by apt.	5356NQ	<a href="mailto:kayldoug@umich.edu">kayldoug@umich.edu</a>
Jana Wilbricht	009, 012	Tu11-12 & by apt.	5348NQ	<a href="mailto:janawil@umich.edu">janawil@umich.edu</a>
Ellen Wagner	010, 011	M3-4 & by apt.	5332NQ	<a href="mailto:ewags@umich.edu">ewags@umich.edu</a>

**Peer Mentor**

Jake Prosygniuk                      MW 4-5 in 5356NQ and F in 5386NQ (starting 9/21)

Please do not visit office hours for GSIs other than your own. Hours may be updated on Canvas.

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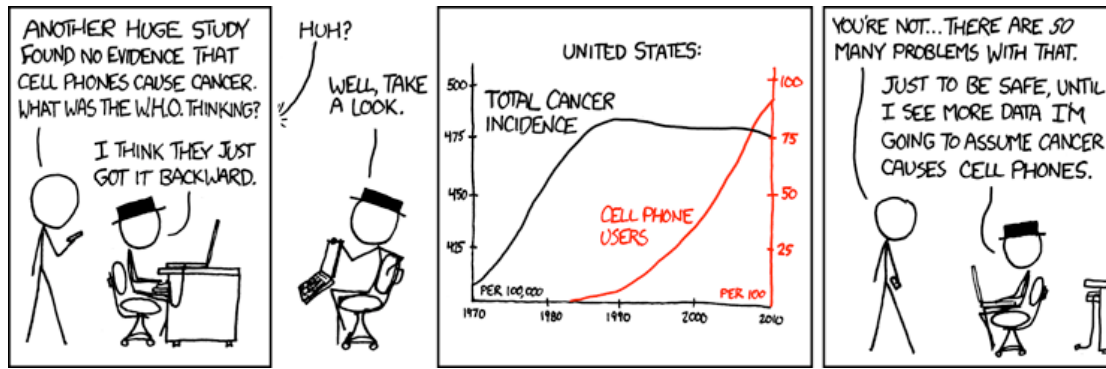
**Is Your Mobile Phone Giving You Cancer?**

Readers of the *New York Times* could point to seven headlines published during 2011 reporting, “Cellphone Use Tied to Brain Changes” (Feb 22), “No Cellphone-Cancer Link in Large Study” (Oct 20), and, “Cellphone Radiation May Cause Cancer” (May 31) among other related claims.

Does this seem somewhat contradictory? It should. Depending on whom you ask and when, the answer to the cellphone-cancer link might be existent, nonexistent, or a subject for continuing research.

In life, we are constantly exposed to claims about what is true and how the world works. Some of these claims come from trusted acquaintances, others stem from news reports, and additional assertions reach us through Facebook, casual conversations, and emails. We find ourselves in this constant stimulation environment without a single easy way to determine which of the things we hear are actually true, which may be misleading, and which are completely false.

Clearly, cellphone use cannot simultaneously cause cancer, not cause cancer, and possibly cause cancer. But how should we evaluate which of the studies reported by the *New York Times* was actually accurate? Sadly, most of the time we simply aren’t given enough information to weigh the evidence without looking at the studies themselves. Problematically, many people lack the training to read and understand original scientific research.



As the quantitative research literacy course in the Communication Studies curriculum, this course focuses on the core skills necessary to think through and critically evaluate scientific arguments and evidence. It offers basic tools for understanding results from the scientific study of human behavior, marketing data, and public opinion polls. By the end of the semester, you will have the tools to read and understand social science as it appears in the news and to differentiate between casual opinions and well-evidenced arguments.

Evaluating Media I explores the fundamentals underlying the development of knowledge, theories, and evidence, and the collection of data to describe society. The course works through explanations of how to conceptualize and enact research that studies people’s use of media through methods including experiments, surveys, and naturalistic observation.

In this course, you will be expected to understand some of the basic principles of scientific research. You will learn some of the different ways that scientific studies can be designed, that data can be collected, and that data can be analyzed when studying mass communication phenomena. These same skills are central to the interpretation and communication of marketing data and public opinion information. For each of these areas, we explore a variety of techniques and assess the assumptions that researchers make in using each of those techniques. From this, you will be able to recognize what we can and cannot conclude in our examinations. These skills will also help you when you encounter scientific information in real world settings.

### Course Learning Goals

By the end of 121, you will have a much deeper understanding of how knowledge is generated in both academic and nonacademic settings. This knowledge should enable you to critically read and evaluate research in the social sciences and the presentation of information in the news and in various workplaces. You should be able to pick up and read the vast majority of research articles in the social sciences and marketing research reports, understanding what the key concepts are, how they were assessed in the research, and the basic analytical tools that were used. You should also be able to render an independent judgment on the quality of academic work you encounter as well as claims about the nature of society (e.g. public opinion, product market shares, etc.). These skills are seminal both in the rest of your academic career and beyond.

More specifically, by the end of 121, you should be able to:

- Understand types of evidence and the sorts of knowledge they engender.
- Know the steps of the scientific method and how they are applied in social scientific research.
- Recognize how theories relate to hypotheses in the scientific tradition.
- Understand conceptualization and operationalization of key concepts in hypotheses.
- Know the types of sampling and what they imply about the generalizability of research results.
- Identify different types of study design and recognize what they can and cannot tell us about society.
- Assess the reliability and validity of an operationalization.
- Know what criteria are necessary to make a solid causal claim.
- Conduct simple statistical tests in Microsoft Excel.
- Evaluate the quality of evidence in social scientific research

### Course Materials

#### Required Texts:

Readings posted on the Canvas account.

Wrench, J. S., Thomas-Maddox, C., Richmond, V. P. and McCroskey, J. C. (2012).

*Quantitative Research Methods for Communication: A Hands-On Approach*. New York: Oxford University Press.

\* This book is an excellent resource, especially if you are struggling with any of the methods we discuss or are looking for additional information about how to run analyses in excel. You will not be tested specifically on anything from this book that is also not discussed in lecture. A copy is on reserve in the library.

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### Requirements

#### Grading

Research Reading Assessment (October 5)	5%	
Midterm Exam (November 4)	15%	<b>[EVENING EXAM]</b>
Final Exam (December 18)	20%	
Research Critique Paper (October 23)	15%	
Capstone Project (December 14)	20%	
Participation and Section	25%	

Participation and section grades are composed of the following parts:

Lecture Participation (Clicker)	5%
Section Participation	5%
Section Homework	10%
Section Quizzes	5%

## **Class and Workshop Meetings**

Students are expected to attend all classes and to have the reading assignments and paper assignments completed in advance of the assigned class. Students are also expected to participate in class and use clickers at designated times during lectures. Because laptops can be distracting, some areas of the classroom may be designated as laptop-free zones.

Workshops for this class meet on Wednesdays, Thursdays, and Fridays in 1245 North Quad. Workshops are led by Graduate Student Instructors (GSIs) and meet every week of the semester (except Thanksgiving break).

Unlike many other classes, the workshops in Comm 121 are not simply a forum for reviewing material discussed in lecture. Instead, they are designed to serve as an independent learning environment and an occasion to practice many of the concepts that are central to the course. This means that 1) there will be some required information that is only covered in lecture, not in the workshops, 2) there will be some required information that is only covered in workshops, not in the lecture, and 3) the content of the workshops will not always reflect exactly what was learned in lecture in each week.

## **Lecture Participation**

Each lecture contains clicker questions. The professor will present the question, you will submit answers with your clicker, and then the correct answers will be revealed and discussed. The reason we use clickers is to give you more examples and applications of the concepts we are learning about, engage you right away in using what you've learned, and provide you with feedback about how well you understand the course material. Please note: most students find exams are harder than the clicker questions, so be sure to use the practice exams even if you're getting all the clicker questions correct.

If you answer 75% of the clicker questions in a given day (correctly or incorrectly), you will earn credit for participating in lecture that day. **Failure to answer 75% of the questions for any reason—absence, forgotten clicker, dead batteries, et cetera—will be excused three times** (these excuses will be automatic, you do not need to notify us). After the third time, failure to participate in lecture will adversely affect your grade. In previous semesters, most students earned 100% in this category and those with higher lecture participation scores were far more likely to do well on exams and papers than those with lower participation scores (i.e., attending and participating in lecture are powerful learning tools). **Note: Excused lecture absences also fall under this provision unless the absence is for some long-term issue.**

## **Research Reading Assessment**

This first major assignment requires you to read a piece of research and answer a series of questions.

## **Papers**

Course papers require you to analyze and write clearly about analyses you have conducted. You will be graded on your writing, your use of the specified analytic techniques, as well as the extent to which you identify important class ideas. All papers for this class should use APA style (American Psychological Association, 2009) and you will need to be familiar with

the rules for writing and citation in this style (a good overview is available in Chapter 4 of the textbook as well as at <http://owl.english.purdue.edu/owl/section/2/10/>).

The research critique paper requires that you critique the way a journalist reported on a particular piece of research. The capstone project will require you to write up the results of your own analysis of some survey data. All papers need to be turned in on Canvas in advance of the class for which they are due. Late papers will be docked 3% for each day they are late and will NOT be accepted more than one week late.

### **Exams**

The exams require you to apply the concepts you have learned in class. Exams from past courses will be posted on Canvas. Exams will ONLY be offered on the designated day and time, there will be no alternate times for exams or makeup exams in this course. Please note that the midterm exam will be offered in the evening (the registrar couldn't avail enough space to have the exam during class time).

Because these learning goals are entirely based on skills and are focused on your ability to digest research, testing in the class is focused on how well you can apply the concepts we are learning. Most test questions are short answer questions that ask you to analyze or identify the central concepts in research reports. **Be aware that memorizing the definitions of key terms will NOT be sufficient preparation for these examinations.**

### **Homework**

There will be six homework assignments throughout the term. They will be assigned in section and will be due by the beginning of the following week's section.

## **Some Recommendations and Resources**

### **How to Succeed**

In this class, we provide a number of tools to help you learn how to understand, evaluate, and produce good social science. We will test you on your ability to do just that. Your success in the class will be highly dependent on how well you utilize the tools we offer. It is hypothetically possible to pass the class without attending all the lectures, but attendance in lecture has proven an incredibly accurate indicator of overall class performance. Similarly, because we test how well you can apply the concepts in the readings and in class, you will not need to memorize any of the specific examples used in the textbook. Nonetheless, if you understand how concepts are applied in those examples, you will be much more likely to be able to apply them in the papers and during the exams.

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## **Course Policies**

### **Students with Disabilities**

If you think you need an accommodation for a disability, please let the professor or your GSI know as soon as is feasible. Some aspects of this course, the assignments, the in-class activities, and the way we teach can be modified to facilitate your participation and

progress. As soon as you make us aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate accommodations. SSD (734-763-3000; <http://www.umich.edu/sswd>) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. The teaching team will treat any information you provide as private and confidential. Please note that we will not make any retroactive accommodations.

### **Absences from Section**

*Sickness.* If you are sick and will need to miss a lab/workshop section, please go to <http://www.lsa.umich.edu/advising/>. Click on the button that reads “What to do if You’re Sick” and complete the subsequent form. This will report your illness to all of your instructors. You must complete LSA’s form prior to your section time if you want to have an illness-related absence excused without a note from a doctor.

If you are sick for more than one class day, your absences will only be excused if you provide a doctor’s note in addition to filling out the LSA form.

*Religious holidays.* Within the first two weeks of the semester, please notify your GSIs of any religious holidays for which you will be absent. If a holiday is sufficiently important that you will miss class, you should know the dates in advance.

*Athletic and other university-related absences.* If you are travelling to represent the University of Michigan, someone on your team will provide you with the appropriate paperwork to distribute to your instructors.

*Other excusable absences.* For family emergencies, funerals, and other such absences, you will need to notify the office of the Assistant Dean of Student Affairs, who will be able to inform all of your instructors. In Fall 2015, the assistant to Assistant Dean is Debbie Walls; you can email her at [dwalls@umich.edu](mailto:dwalls@umich.edu). When you return to campus, bring documentation in support of your absence.

***Note: Unless a particular reason for being absent will cause you to miss multiple lectures or one of the first two lectures of the term, there is no need to notify us. Three lecture absences/clicker problems are already excused for each student.***

### **Grade Questions**

When any major assignment (paper or exam) is returned to you, you must wait at least 24 hours before contacting your GSI with any questions you have. This ensures that you have time to read over the feedback given you and understand the issues your assignment faced. We have found that students who take the time to wait approach their GSIs with more useful questions and receive more helpful answers. We also expect you to bring questions to your GSI first, as they are more directly involved in the grading process and are permitted to resolve any grading errors.

## **Academic Honesty**

A good student-teacher relationship operates on the basis of trust. From that basis, your professors and GSIs trust that you will do your utmost to complete coursework and to be honest with us if for any reason you are unable to fully meet a commitment to the class. We also trust your judgment that any advice you solicit from or offer to your peers will stay well outside the bounds of the University of Michigan's policies on plagiarism and cheating (see examples at <http://www.lsa.umich.edu/academicintegrity/>). That said, if any member of the teaching team encounters evidence that you have in any way, shape, or form copied material without attribution or collaborated to the point that the work you present is not entirely your own, we will immediately refer the incident to Esrold Nurse, the Assistant Dean for Undergraduate Education. Because plagiarism and academic dishonesty hurt *everyone* in the class, we have no compunction about failing students who are found to have been dishonest. Put simply, this class has a zero-tolerance policy. There will be no second chances for cheating.

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## **Additional Resources To Know**

### **Michigan Association of Communication Studies (MACS)**

The Michigan Association of Communication Studies (MACS) is a student organization at the University of Michigan for people who — are communication studies majors, want to be communication studies majors, or are even the slightest bit interested in communication studies and all that it entails. For more information, see [macsuofm.com](http://macsuofm.com).

### **Communication Studies Advising**

The Communication Studies department offers advising for students who are interested in joining the major or understanding its requirements. Learn more at [www.lsa.umich.edu/comm/undergraduate/](http://www.lsa.umich.edu/comm/undergraduate/)

### **Sweetland Center for Writing**

The Sweetland Center for Writing is a comprehensive center for improving student writing at all levels. They offer one-to-one tutoring for undergraduate students. Find them at [www.lsa.umich.edu/sweetland/](http://www.lsa.umich.edu/sweetland/)

### **Counseling and Psychological Services (CAPS)**

Counseling and Psychological Services offers counseling services, educational and preventive initiatives, training programs, outreach and consultation activities, and provide guidance on how to “do something” to fully contribute to a caring healthy community. CAPS can be contacted on their 24-hour crisis line, 734-996-4747 and online at [caps.umich.edu](http://caps.umich.edu).

### **MiTALK**

MiTALK offers mental health resources including online screenings for depression and anxiety, skill-building tools to help you manage stress and academic life, and digitally recorded workshops, lectures, and some relaxation exercises. The site is completely free of charge to U-M Students. Find them at [mitalk.umich.edu](http://mitalk.umich.edu).

### **Sexual Assault Prevention and Awareness Center (SAPAC)**

If you or someone you know has been harassed, assaulted, or stalked, you can receive confidential support and academic advocacy at the Sexual Assault Prevention and Awareness Center (SAPAC). SAPAC can be contacted on their 24-hour crisis line, 734-936-3333 and online at [sapac.umich.edu](http://sapac.umich.edu). Alleged violations can be non-confidentially reported to the Office for Institutional Equity (OIE) at [institutional.equity@umich.edu](mailto:institutional.equity@umich.edu). Reports to law enforcement can be made to University of Michigan Police Department at 734-763-3434.

## **Course Outline:**

### **PART 1 – Knowledge, Social Science, and Measurement**

Week of September 7<sup>th</sup>, 2013 (Week 1)

#### **Introduction to Evaluating Information and Analyzing Media**

This week we will briefly discuss the purpose of the course, the syllabus, and the expectations for the class. We will also discuss how we know things and the role that media play in our knowledge about the world. In the GSI-led workshops, we will be introducing the labs and the tools we will be using to conduct analyses.

1-September 9<sup>th</sup> – Course Introduction and Ways of Knowing

September 9<sup>th</sup>-11<sup>th</sup> – LAB 1: Workshop: Introduction to Workshop Labs and Excel

Week of September 14, 2015 (Week 2)

#### **Science and Social Science, and the Scientific Literature**

This week, we begin our exploration of social science. We discuss how our understanding of the social world can be examined using the scientific method. We focus on the roles of theory, hypotheses, and data as sources of this understanding. This week's workshop will focus on the tools necessary to find out what earlier researchers have done so that we can build on their work.

2- September 14<sup>th</sup> – NO CLASS: Rosh Hashanah

3- September 16<sup>th</sup> – Putting the Science in Social Science: Why Social Studies is More Than History (SS)

Reading: Wrench et al. Ch. 2 "Empirical Research"

September 16<sup>th</sup>-18<sup>th</sup> – LAB 2: Library Tools

Week of September 21<sup>st</sup>, 2015 (Week 3)

#### **Reading Research and Science in the Media**

On Monday, we go over methods for finding and evaluating the quality of research. We will also work through the ways scholars communicate their findings and the challenge of translating technical language and concepts into the types of scientific stories you see in the news. This week's workshop will aim to improve your reading skills, allowing you to practice finding the information you need in social scientific research without having to read entire articles in depth.

4- September 21<sup>st</sup> – Reading and Finding Research / Academic Research and The Media

Readings: Wrench et al. Ch. 4 "Searching for Previous Research and APA Style"

Offit, Paul A. (2008). "Science and the Media." In *Autism's False Prophets: Bad Science, Risky Medicine and the Search for a Cure* (pp. 156-175). New York, NY: Columbia University Press.

5- September 23<sup>rd</sup> – NO CLASS: Yom Kippur

\*Please watch the recoded Ethics lecture (on Canvas) on your own time



Reading: Wrench et al. Ch. 3 "Ethics"

September 23<sup>rd</sup>-25<sup>th</sup> – LAB 3: Parsing Papers and Sources and Evaluating Media Coverage of Academic Work

**\*\* LAB HOMEWORK 1 DUE THIS WEEK \*\***

Week of September 28<sup>th</sup>, 2015 (Week 4)

### **Ideas to Concepts to Questions**

If we want to test a scientific theory, we first have to figure out what that theory implies and how to address it specifically in our research. On Monday, we discuss data and the role that data play in allowing us to test theories and hypotheses. In particular, we focus on the importance of measurement and the role of quantitative data as a way to test theories and hypotheses that can help us understand the world. Wednesday explores conceptualization, where an idea or theory is translated into clear enough language that we can directly and unambiguously test it. We discuss ways to turn scientific theories into data we can use and practice some of these tools to do this in lab.

6- September 28<sup>th</sup> – Turning Social and Media Processes into Quantitative Data

Reading: Wrench et al. Ch. 6 "Variables"

7- September 30<sup>th</sup> – Conceptualization

Reading: Phinney, J. S., and Ong, A. D. (2007). Conceptualization and Measurement of Ethnic Identity: Current Status and Future Directions. *Journal of Counseling Psychology* 54 (3), 271-281.

September 30<sup>th</sup> –October 2<sup>nd</sup> – LAB 4: Conceptualization, Operationalization, and Measures

Week of October 5<sup>th</sup>, 2015 (Week 5)

### **Seeking Good Measures**

This week, we focus on operationalization and return to our hypotheses. Monday overviews the large process of producing measures for social scientific concepts: operationalization. We become familiar with the process of operationalization, and explore how operationalizations of different types can help us transition from hypotheses to data we can test. As we will see, not all operationalizations are equally good at addressing the variables we really want to measure. On Wednesday, we focus on the challenge of good measurement in the social sciences. In the social sciences, the measures we produce are frequently imperfect. This is true in part because of challenges in the question-and-answer process, but also because our operationalizations rarely map perfectly onto the concepts we wish to study. When we want to understand how well our measures relate to the concepts of interest, we assess on two overarching dimensions of measurement: reliability and validity. We will examine reliability in more depth in this week's labs.

8- October 5<sup>th</sup> – Operationalization

Reading: Wrench et al. Ch. 8 "Measurement"

**\*\* Research Reading Assessment DUE TODAY at 11:30AM \*\***

9-October 7<sup>th</sup> – Measurement Quality – Reliability and Validity

Reading: Wrench et al. Ch. 9 “Reliability and Validity” pp. 213-219; 228-241

## October 7<sup>th</sup>-9<sup>th</sup> – LAB 5: Reliability

Week of October 12<sup>th</sup>, 2015 (Week 6)

### **Combining Measures and Sampling**

We start this week by working through one approach for improving measurement, measuring the same thing with multiple items. On Wednesday, we introduce a key component in the design of any quantitative study—choosing a sample from which to collect data. Samples allow us to collect the data we need without having to talk to every single person or look at every single media source, saving both money and time while collecting data of equal quality. This week’s lab will explore validity, focusing on how combined measures can sometimes improve the validity of our operationalizations.

#### 9- October 12<sup>th</sup> – Combining Measures – Indexes and Typologies

Reading: Babbie, E. (2010) Indexes, Scales and Typologies. *The Basics of Social Research*. 5th ed. Wadsworth: USA. 167-169; 171-189; 196-198.

#### 10- October 14<sup>th</sup> – The Notion of Sampling

Reading: Wrench et al. Ch. 13 “Sampling Methods and Replication” (pp. 313-316, skim 316-327).

#### October 14<sup>th</sup>-16<sup>th</sup> – LAB 6: Validity

**\*\* LAB HOMEWORK 2 DUE THIS WEEK \*\***

Week of October 19<sup>th</sup>, 2015 (Week 7)

### **Sampling**

Figuring out what to study is one of the central challenges researchers encounter. This week we begin to discuss different ways of finding cases to study and explore the pros and cons of each approach. On Monday, we will be discussing probability samples, or samples based on randomness. On Wednesday, we consider non-probability samples, which are not random or generalizable, and talk about the kinds of conclusions you can draw from each type of sample and the errors you might expect to run into. This week’s lab will illustrate how sampling works.

#### 11- October 19<sup>th</sup> – Probability Samples

Reading: Wrench et al. Ch. 13 “Sampling Methods and Replication” (pp. 316-320)

#### 12-October 21<sup>st</sup> – Non-Probability Samples

Reading: Wrench et al. Ch. 13 “Sampling Methods and Replication” (pp. 320-327)

#### October 21<sup>st</sup>-23<sup>rd</sup> – LAB 7: Sampling

**\*\* PAPER 1 DUE FRIDAY OCT 23<sup>rd</sup> by 11:59PM \*\***

Week of October 26<sup>th</sup>, 2015 (Week 8)

### **Causality and an Intro to Surveys**

In Monday’s lecture, we step back to conclude the part of the course where we plan data collection by talking about how our hypotheses inform research design more generally and how we can use design to make claims about what causes what. Because causality is a central goal in many types of research, identifying when causal claims are strong or weak is important. We also discuss third variables, which comprise an additional part of our

hypotheses where we test proposals for how things are related. On Wednesday, we begin part 2, by considering surveys, one of the principal tools we have for understanding the social world. Surveys, like any method, require careful thought and planning in order to collect useful data. We explore the different types of surveys that can be conducted and their various uses. In this week's lab, we will generate hypotheses with third variables that we will use for our final projects.

13- October 26<sup>th</sup> – Third Variables and Causality

Reading: Höfler, M. (2005). "Causal inference based on counterfactuals." *BMC Medical Research Methodology*, 5: 28-39. doi:10.1186/1471-2288-5-28.

\*\* Note that this is a tough reading, we have annotated a version on the course page to make it a little easier to read. You will not need to know anything from this reading that is not also in the lecture.\*\*

14- October 28<sup>th</sup> – Types of Survey Research

Reading: Wrench et al. Ch. 10 "Survey Research"

October 28<sup>th</sup>-30<sup>th</sup> – LAB 8: Third Variables

\*\* LAB HOMEWORK 3 DUE THIS WEEK \*\*

## **PART 2 – Designing and Conducting Research**

Week of November 2<sup>nd</sup>, 2015 (Week 9)

### **Asking Good Questions and Designing Observational Studies**

On Monday, we conclude our look at surveys with a focus on survey questions and how researchers can ensure that their questions elicit the responses they desire. This information will be useful for our class survey, which is a key part of the capstone project. Observation is also an important method in communication. Communication researchers often want to make conclusions using textual data and marketing researchers regularly collect data on observed consumer behavior. Before the Exam, Wednesday's lecture will focus on methods for observing behavior and patterns, with a specific lens toward content analysis. We will practice writing survey questions in lab; word your questions well because they will become part of the survey for the capstone project.

15-November 2<sup>nd</sup> – Asking Survey Questions

Reading: Pasek, J. & Krosnick, J. A. (2010). "Optimizing Survey Questionnaire Design in Political Science: Insights from Psychology". In Leighley, J. E. (ed.) *The Oxford Handbook of American Elections and Political Behavior*. Oxford University Press: Oxford, UK. pp. 27-51.

[NOTE: SECTIONS 002 AND 003 WILL MEET ON NOV 2 DUE TO EXAM]

16-November 4<sup>th</sup> – Observational Data and Epidemiological Studies

Reading: Wrench et al. Ch. 11 "Content Analysis"

**\*\* Evening Exam TODAY 6-8PM \*\***

[Note: Exam will be in East Hall]

November 2<sup>nd</sup>-6<sup>th</sup> – LAB 9: Asking Survey Questions

Week of November 9<sup>th</sup>, 2015 (Week 10)

## Experiments

This week we delve into the world of experimentation. Specifically, Monday's class will focus on the logic of experimentation as well as some of the practical limits on experimental designs. We will look closely at the assumptions behind experimentation and conditions under which experiments can mislead. For Wednesday, we will examine how using the experimental method allows us to make claims toward causality or generalizability. In addition to discussing experimentation in lab, we will be taking a class survey that will provide the data for your final projects.

17-November 9<sup>th</sup> – The Virtues and Limits of Experimentation  
Reading: Wrench et al. Ch. 12 "Experimental Design"

18-November 11<sup>th</sup> – Causality vs. Generalizability in Experimentation  
Reading: Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*. Houghton Mifflin: Boston, MA. Ch. 1 "Experiments and Generalized Causal Inference" pp. 1-22.

November 11<sup>th</sup>-13<sup>th</sup> – LAB 10: Experimentation and Capstone Hypotheses  
\*\* LAB HOMEWORK 4 DUE THIS WEEK \*\*

## PART 3 – Learning From Data

Week of November 16<sup>th</sup>, 2015 (Week 11)

### Describing Quantitative Data

Monday's lecture will touch on a few additional methods for collecting social science data and begin to discuss how to present simple descriptive information about our data. On Wednesday, we finish discussing descriptive statistics and also consider how to use data to test the reliability and validity of our measures. In this week's lab, we will be turning our class dataset into a form that can be easily used for our analyses.

19-November 16<sup>th</sup> – Social, Economic, and Marketing Indicators; Describing Quantitative Data  
Reading: Wrench et al. Ch. 7 "Descriptive Statistics"

20-November 18<sup>th</sup> – Describing Data and Assessing Reliability and Validity  
Reading: Wrench et al. Ch. 18 "Correlation"

November 18<sup>th</sup>-20<sup>th</sup> – LAB 11: Cleaning, Recoding, and Describing Data  
\*\* LAB HOMEWORK 5 DUE THIS WEEK \*\*

Week of November 23<sup>rd</sup>, 2015 (Week 12)

### Comparisons Across Variables

We can use the data we have collected to test the quality of our measures as well as to begin testing our hypotheses. On Wednesday, we examine metrics of relations between variables that we can use to test hypotheses and determine "statistical significance." We explore these methods in additional depth during this week's lab.

21-November 23<sup>rd</sup> – Relations Between Variables  
Reading: Wrench et al. Ch. 15 "Chi-Square ( $\chi^2$ ) Test of Independence"

22 November 25<sup>th</sup> – GROUP WORK DAY - MEET INDIVIDUALLY WITH YOUR GROUPS, GSIs WILL BE AVAILABLE TO HELP YOU WITH YOUR PROJECTS

November 25<sup>th</sup>-27<sup>th</sup> – NO LAB: THANKSGIVING BREAK

Week of November 30<sup>th</sup>, 2015 (Week 13)

### **Data Analysis**

Hypotheses require that we know more than just how variables are distributed; we also need to know how they compare to one another. This week we focus on the relations between variables, the ways in which they map onto our hypotheses. Monday's lecture discusses focuses on how to more closely map correlations and crosstabs onto our hypotheses about how concepts relate. In particular, we will discuss how to test for mediation, moderation, and sources of spuriousness. On Wednesday, we discuss how statistical tools can help to solve more complex research questions and talk through how to assess whether data presented in research articles or in the news is accurate. Open lab periods will provide occasion for you to work on your final projects with the GSIs.

23-November 30<sup>th</sup> – Testing Hypotheses with Data  
Reading: Wrench et al. Ch. 14 "Hypothesis Testing"

24-December 2<sup>nd</sup> – Testing Complex Hypotheses  
Reading: Wrench et al. Ch. 19 "Regression"

December 2<sup>nd</sup>-4<sup>th</sup> – LAB 12: Correlations and Crosstabs  
\*\* LAB HOMEWORK 6 DUE THIS WEEK \*\*

Week of December 7<sup>th</sup>, 2015 (Week 14)

### **Generalizing and Concluding**

Monday's class will discuss the process of making generalizable statements about a group of people after a hypothesis has been tested. We will discuss what we can make of our analyses and the limits of what can be said based on the data. Wednesday we step back to review some of the key differences between quantitative methods and discuss some approaches to bridging multiple methods that frequently appear in both academic and marketing research.

25-December 7<sup>th</sup> – Discussions and Conclusions / Structuring Quantitative Research Papers  
Readings: Wrench et al. Ch 21 "Presenting Research" pp. 480-485.

Pasek, J. (2011). Writing the Empirical Social Science Research Article, A Guide For the Perplexed. *Psychology Teacher Network*, 21(4).

26-December 9<sup>th</sup> – Combining Quantitative Methods  
Reading: Sniderman, P. M. (2011). "The logic and design of the survey experiment: An autobiography of a methodological innovation." In Druckman, J. N., Green D. P., Kuklinski J. H., and Lupia A. *Cambridge handbook of experimental political science* (pp. 102-114). New York, NY: Cambridge University Press.

December 9<sup>th</sup>-11<sup>th</sup> – OPEN LAB

Week of December 14<sup>th</sup>, 2015 (Week 15)

**Pulling it All Together**

The final lecture of the semester will pull together the material you have learned and connect it to the main goal of the course—teaching you to be critical of the information around you, regardless of whether that source is academic or popular. This will help you as you proceed in your future Communication classes, but will also serve as a useful skill when you enter the job market in the future.

27-December 14<sup>th</sup> – How to Be a Critical Evaluator of Knowledge

**\*\* Capstone Project Due \*\***

**December 18<sup>th</sup> - 1:30PM-3:30PM - Final Exam**

[Note: some sections will not meet in regular lecture room]