Political Inquiry
PSC 200: Winter 2020
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COURSE DESCRIPTION: Political Inquiry is an introduction to the logic of social science, conceptual foundations of research, methods used by political scientists, and writing in the discipline. This course seeks to help you improve your ability to evaluate arguments and information/evidence in political science.

Political science is a mixture of disciplinary and methodological approaches to the study of politics. Political scientists may study politics like historians, sociologists, psychologists, economists, anthropologists and even biologists. There is no one right way to study politics because “politics” is a multifaceted subject. Political Inquiry looks at some of ways that we study politics. The focus is on the question, “How do we know that?” This question is important for developing critical thinking skills because it encourages students to be skeptical about assertions of knowledge. What is the evidence for a claim? Is the evidence good? By “good” we do not mean evidence that it fits with what we believe, but rather that the evidence is reliable and valid, and can be used the way an author uses it to support claims.

Being able to evaluate information also is critical to citizenship and leadership. Our society produces massive amounts of information—not all of which is true. Citizens and leaders need to be able to evaluate the quality of information used to support arguments and to distinguish between logical and fallacious reasoning. Evidence matters (or at least it should, from a normative perspective).

“Political Inquiry” seeks orient students to ask questions about the evidence used to support arguments, how evidence was obtained, and to identify the strengths and limitations for different methods of political science research. Students taking this course should become more methodologically literate so that they can make a reasoned judgment about how much confidence they can put into the evidence behind an argument.

The first part of the class will focus on the logic of inquiry and social science as well as foundational concepts of research methods: what is an argument, a hypothesis, the distinction between correlation and causality, and the empirical requirements for establishing a causal relationship. Comparison is the critical factor that distinguishes social scientific research from other forms of scholarship or argumentation. Comparison is necessary to establish correlation, temporal sequencing, and ruling out alternative explanations.

The second part of the class will introduce students to some methods used in political science. The subjects include: Experimental Research, Narrative or interpretive analysis, Case Study, Interviews and Focus Groups, Survey Research, and Analysis of Existing Data (secondary source). It is important to realize that there are a great many variations of each of these methods. We will not address methods used in public law (case analysis), rational/public choice, or political theory generally though these are major approaches to the study of politics.
The discussion will focus on both the uses and limitations of each of these approaches, with an eye toward what the method can or cannot tell us about drawing causal inferences.

COURSE OBJECTIVES:

- Understand common errors of reasoning, cognitive processing of information, and political biases that distort casual thinking.
- Understand logic of inquiry in the social sciences.
- Understand the importance of comparison as a basis for assessing arguments and hypotheses.
- Identify and understand some of the methods used by political scientists to answer empirical questions about the relationships among political phenomena.
- Identify strengths and limits of the approaches to the study of political organization and behavior.
- Be able to distinguish between causation and correlation.
- Learn about methods of observation and measurement of political phenomena.
- Gain a basic ability to make a judgment about the quality of research and evidence used to support or oppose arguments and hypotheses.
- Communicate thoughts and ideas in a clear and effective manner.

COURSE REQUIREMENTS: The course will employ a seminar format in which we discuss assigned readings. I expect that you attend classes and read materials before class meets. The material of this course is different from anything you have studied before. Attendance is essential for understanding it. If you cannot prepare for class and attend regularly, you will struggle. Grades will depend on class discussion (10%), a midterm exam (15%), and five assignments (15% each).

Note: ONE rewrite is permitted for the five assignments. The grade for a revised paper will be the average of the grade for the first paper and the second paper (with some wiggle room for instructor discretion).

The work is quickly paced in this class. From weeks four to ten, you will have something due every week and possibly a revision of what you have written. That’s six graded tasks. The upside is that you will get a lot out of it, and you will not have a final.

The assignments are on D2L and at the end of the syllabus. One, how does an article illustrate the method for that week which will require familiarity with the method gained from the Monday readings and class discussion on Monday. Two, what are the strengths and weaknesses of the method in terms of: appropriateness of the method for the subject (could it be studied another way), in terms of validity and reliability of the evidence, and the extent to which the author can make a causal argument.

REQUIRED READINGS: all readings for this course are available through D2L. Note that the readings for each week are divided into two groups. The first articles are to be read for Tuesday’s class. The second set consists of examples of research using the particular method that we are discussing for that week. One of these articles will be used for your assignment due on Thursday of the relevant week.
OTHER CONCERNS:

Deadlines: I’m going to run this like law or graduate school--points are deducted for late work. Things will unravel quickly in this class if you fall behind on assignments. If you have a history of falling behind in classes, you might consider dropping this course (I mean it—about 20% of the students in prior sessions of this class have failed to complete the course). The subject matter of this class accumulates, so falling behind tends to be a permanent issue, leading to incompletes or a lousy grade.

I will work with any student outside of class as much as needed to keep up and understand the materials. This is the most labor intensive course that I teach and probably the most labor intensive course that you will take in college. That’s the cost. The payoff is knowing something about how to do research when you leave. It is excellent preparation for graduate or law school or for a career as an analyst of some sort. You will not be a master of research methods—that takes years to develop, but you will be further along than most.

Attendance and Participation: Attendance is required. You will be granted two absences—excused or not. After that, you will lose one-third of your participation grade for each absence thereafter. People who attend infrequently tend to do poorly in terms of mastering the material for the course. People who blow off classes generally do not complete the class. As with any class, you are paying a small fortune for this class, and you do not get the value of the course without class sessions. If you must miss class, you are responsible for the material covered that day.

Academic Dishonesty: Cheat and I’ll flunk you! That is my policy. Several activities constitute cheating. Copying material from another source (e.g., a book, a wiki, blog, or other student) without proper acknowledgment is cheating. So, be warned. Come see me if you have any questions.

Extra Credit and Extensions: No extra credit or extensions will be granted, except when a situation arises where an extension or extra-credit would be appropriate and it can be offered on an equal-opportunity basis to all students. Individual extensions extra-credit opportunities distort the baseline of evaluating every student by the same standard. Do not ask for an extra-credit opportunity to make-up for a poor performance on an earlier assignment. While you might think that such a request indicates your dedication to achievement in the course, in reality, the message received is quite different. Such requests are based on several implicit assumptions: 1) you are entitled for whatever reason to be treated differently, 2) you wish to be held to a different (lower) standard than the rest of the class, and 2) that the professor is willing to bend the rules and sacrifice objective standards of evaluation. Though this may not be your intent, that is the effect of such a request.

Phones and laptops: Learning to focus—and maintain focus, and learn are skills that are quickly diminishing in the age of iphones and laptops. Studies have shown that note taking on laptops (even having a laptop) in class is inversely related to retention of information. The act of writing notes, in contrast, has been found to relate positively to retention of information. So to help you learn and retain information, I am going to insist on a no-laptop/phone policy unless you have a medical condition (verified through student affairs) to warrant note taking on a laptop.

Learning Disabilities: Students with special learning needs are encouraged to discuss them with the instructor early in the course. Every attempt will be made to accommodate students with such needs.
The Dean of Students Office (DOS) helps students in navigating the university, particularly during difficult situations, such as personal, financial, medical, and/or family crises. Absence Notifications to faculty, Late Withdrawals, and Community Resource Referrals, support students both in and outside of the classroom. Additionally we have resources and programs to support health and wellness, violence prevention, substance abuse and drug prevention, and LGBTQ student services. Please feel free to contact us at http://studentaffairs.depaul.edu/dos/.

STANDARDS FOR GRADING: Your work will be evaluated according to the following criteria.

A: designates work of **extra-ordinarily high** quality; reflects thorough and comprehensive understanding of the issues at hand; arguments are clearly organized with supporting ideas and/or evidence. Student volunteers comments and participation indicates that the student is prepared at **all times** if asked to provide a summary of the assigned readings.

B: designates work of **high quality**; reflects a clearly organized but less than comprehensive understanding of the issues at hand; presents organized arguments that are supported by ideas and/or evidence. Student participates as above about **75%** of the time, and attends all class periods.

C: Designates work which **meets the minimal requirements** of the assignment; written work reflects adequate organization and development of ideas, but arguments are communicated in a superficial or simplistic manner. Student does not volunteer, but responds only to direct questions, remains silent during group discussions, and often cannot summarize readings if called upon.

D: Designates work of **poor quality** which meets the minimum requirements of the assignment, but demonstrates poor organization of ideas and/or inattention to development of ideas, grammar, and spelling; treatment of material is superficial and/or simplistic; may indicate that the student has not read assignments thoroughly. Student does not volunteer, cannot respond to direct questions, keeps silent during class discussions, and is unable to summarize readings if called upon.

F: Designates work of poor quality that **does not meet the minimum requirements** of the assignment or task; fails to reflect an understanding of the issues at hand; fails to present organized arguments or fails to adequately support arguments with ideas; or which is not handed in on time. Student fails to participate even minimally in class or group discussions. Student may be frequently absent and participation is inadequate (silent) when student attends.
TOPICS AND READING ASSIGNMENTS
(tentative and subject to modification)

Jan. 7 Orientation & Overview.

Jan. 9th—no class. Read for next week – see these
  • Nisbett and Ross, Human Inference: Strategies and Shortcomings of Social Judgment, ch. 1 &
    chapter summaries (especially biases in information recall and how that affects judgment)

Jan. 14 & 16: Inferential error and bias in casual observation
These readings identify flaws in casual (even informed) thinking. The flaws in everyday “reasonable”
thinking are considerable and result in a lot of bad logic and arguments. The idea of social scientific
inquiry is that we can have more confidence in what we think we know if we engage in systematic
observation, comparison, and interrogative inquiry—asking questions and attempting to disprove an
argument (a failure to disprove leaves us a bit of confidence in the hypothesis/argument). Philosopher
Karl Popper offered a rationale for scientific inquiry that goes like this. As human beings, we lack the
cognitive capacities to know or reason through everything, so relying on reason alone is susceptible to
incomplete, inaccurate, and biased conclusions. Also, as humans, we also lack the perceptual capacity
to observe everything so we cannot rely on observation alone to understand what is happening in our
world, much less what occurs elsewhere or at another time in history. Given that we necessarily have
incomplete knowledge, how much confidence can we have in what we think we know?

The social scientific approach is to be skeptical—we posit a hypothesis or argument that we can try to
disprove rather than to build a case for. If we subject our own argument to evidence, try to disconfirm
it, and fail to disconfirm it, then we can have more confidence in the argument. It does not mean that
the argument is true. We improve our understanding of the world by eliminating false or disproven
arguments (a serious problem given the tendency for motivated reasoning). A lot of what we think we
know is inaccurate or incomplete, so trying to eliminate false beliefs is progress. In common parlance,
we can’t know with certainty what is true, but with disciplined inquiry and skepticism, we can might be
able to figure out what is not true. Political science, as a discipline, builds knowledge by testing and
retesting repeatedly in different ways and with different evidence. When studies repeatedly show a
similar result, we gain confidence (not certainty) that something is probably true (or probably false when
repeated studies reject the argument. When studies produce mixed results, our confidence in the
argument declines. The approaches used in social science are not definitive, but they may be better than
casual thinking.

The readings identify common reasoning fallacies (such as argument ad hominem), cognitive
psychological biases of perception and memory recall that influence all people, and the particular biases
that we encounter when it comes to thinking about politics.

  • Dan Kahan, “The Politically Motivated Reasoning Paradigm,” Emerging Trends in Social &
    Behavioral Sciences, 1-24
  • John Bullock, Alan Gerber, Seth Hill, & Gregory Huber, “Partisan Bias in Factual Beliefs about
Jan. 21 & 23: Facts, Variables, Correlation v. Causation & the role of Comparison

There is an easy tendency to equate correlation with causation. Think of correlation as a systematically occurring (or recurring) coincidence. Because things coincide does not mean that there is a causal connection between them. There are four elements for establishing a causal relationship:

- **Correlation** which can be thought of as a systematic coincidence (necessary, but not sufficient)
- **Non-Spurious** - dependent variable is not caused by some other variable or variables
- **Temporal sequencing** - cause precedes effect, but note, anticipated reactions can confound
- **Theory** – need to have a logical reason to expect a relationship

**Comparison** is critical to establishing a causal relationship. For example, we make before-after comparisons to assess the impact or effectiveness of a policy. We may compare kinds of cases to see how they differ (e.g., Acemoglu & Robertson’s evaluation of the impact of culture and institutions looking at the communities along the Rio Grande river). Comparison is essential for establishing correlation, temporal sequence, and ruling out alternative explanations. And you have to have a theoretical or logical reason to expect a causal relationship.

There are various things that can help us avoid some of the common reasoning fallacies, including the level of analysis which can help us avoid the ecological and individual fallacies. We will also talk about some definitional subjects in research such as what a dependent and independent variable are, what it means to “control for” or rule out as an alternate explanation. “Control for” is another way of saying ceteris paribus (all other things being equal). This is about taking into account other relevant conditions to avoid making a spurious explanation. Not everything is going to be held constant or taken into account, but theoretically relevant explanations should be.

Finally, it is worth noting that there are different kinds of relationships such as the possibility of threshold effects, ceiling effects, diminishing returns, indirect effects, and bi-directional causality (which is quite frequent in politics where people can anticipate the reactions of others).

After all of this, we will begin to talk about hypotheses, propositions, and arguments—the kind of relationship we might expect to see between two variables given what we know (or think we know).

Jan. 28 & 30: Qualities of Evidence: reliability, validity, representativeness

In a world of information overload, we need to be able to distinguish between facts and alternate facts. Reliability means that the evidence or observations will stay the same in repeated observations. Validity means that we are observing what we think we are observing. While these seem obvious, it is not. A piece of information could be reliable but not valid, valid but not reliable, or neither at all. We will talk about face validity – does it appear valid at face value, but also the need to try different ways of observing or measuring something to make sure that we are observing what we think we are (a strategy called triangulation). We assess reliability mainly by observing or measuring something repeatedly. If the observations are similar in repeated attempts, then we may have a reliable measure. But, there is still the possibility of measurement error and there are potential biases in measurement strategies like surveys that generate reliable measures that are not valid (such as self-reported church attendance or whether a person voted, etc). Social science is a collective process, with multiple different ways to study the same questions. We gain confidence when multiple studies, using different methods and measures, point in the same direction.

There is also a need to know whether what we observe is representative of a broader class or category of things that we are trying to observe. From cognitive psychology, we know that the information that we – as human beings – routinely distort our perception of reality by paying more attention to vivid and concrete information while underestimating the representativeness of abstract information. Sampling is a big deal, because without a representative sample of observations, our conclusions may be biased.

- Frankfort-Nachmias and Nachmias, “Sampling and Sample Designs,” in Research Methods in the Social Sciences

Tuesday, Feb. 4th: Midterm Exam

Thursday, Feb. 6 Research Design & the role of comparison in evaluating causality

The strategy for answering a question is called a research design. The research design should integrate the different components of a study in a coherent and logical way to ensure that a research effectively addresses the research problem. Essentially a research design is the blue print the collection, measurement, and analysis of evidence. Very critically, your research problem determines the type of design you should use, not the other way around!

Feb 11 & 13: Experimental Research

We will begin our discussion of methods used in political science with experimental research because experimental research designs enable a researcher to get at causality better than other approaches. The limitation for political science is that little of what we are interested in can be subjected to an experimental research design.

Ideally, a research designs for establishing causal relationships requires comparison of observations within and across groups, before and after exposure to some treatment. Experimental research designs are the strongest method for establishing causal rather than correlational/coincidental relations. Experimental research designs are used often in communication studies, political psychology, political biology (e.g., much of what John Hibbing does). Short of experiments, there are efforts to answer questions using field experiments and quasi-experiment that try to simulate the experimental design in a real world setting, which can be done in survey research and policy analysis.


Reading options for Thursday (your paper is to draw on ONE of the following)

Assignment 1 is due on Thursday, Feb. 13th
Feb. 18 & 20: Narrative and Interpretive studies

There is a particular kind of analysis called narrative analysis, which is a systematic analysis of speeches, news articles, or other modes of communication. Another use of that term refers to a way of presenting an argument and evidence. In this meaning, a narrative or interpretative study tells a thematic story, using a theoretical argument to frame the presentation of facts/observations in a way that demonstrates the plausibility of the argument. Narratives are descriptive, often historical and/or theoretical. Narratives use pieces of information in a logical story to explain what is occurring—but that explanation is really an expert’s take on events and thus are an interpretation of information. Better narratives are rigorous and systematic, but they remain a theoretical interpretation of political phenomena. Narratives or interpretive studies are useful for subjects that are not amenable to study in other methods, but very limited as a means of assessing causal relations, hypotheses, arguments. Examples of this include historical studies, political culture, descriptive analyses in international relations, comparative politics, institutional analysis, constructivist approaches to political thought, critical theory, and more.

Narratives or interpretive studies are useful for presenting basic information—chapters in edited volumes used as textbooks often use this approach. Narratives are usually descriptive and present information in a way that illustrates a theoretical argument. Narratives are particularly useful for thinking about subjects that are not amenable to study in other methods, such as experiments or through survey research. It is important to realize, however, that narratives are very limited as a means of assessing causal relations, hypotheses, arguments.


Reading options for Thursday  (your paper is to draw on ONE of the following)

Assignment 2: Due on Thursday feb 20
Case studies are another very common research method used in political science. There is a great deal of variation in case studies (many of which might qualify as narratives). There are distinctions between descriptive case-study and comparative case study. Case studies focus on a single case of some subject, probe that case deeply and often descriptively. Comparative case studies go beyond this, to compare cases looking for similarities and differences, and thus gain more leverage on questions of causality. Case studies are used extensively in Comparative politics, public policy, presidential studies, and American political development (comparison of historical eras/cases)

- Jason Seawright and John Gerring, “Case Selection Techniques in Case Study Research,” *Political Research Quarterly* Vol. 61, No. 2 (June 2008), pp. 294-308

**Reading options for Thursday (your paper is to draw on ONE of the following)**


**Assignment 3: Due on Thursday Oct 31**
Feb 25th & 27th: Interviews and Focus Groups

Focus groups and elite interviewing are research designs for gathering in depth and qualitative information/observations with the ability to explore or probe for more information (and thus perhaps get evidence that goes beyond the preconceptions of the researcher). A focus group is a good way to gather together people from similar backgrounds or experiences to discuss a specific topic of interest. The group of participants is guided by a moderator who introduces topics for discussion and helps the group to participate in a natural discussion among themselves. Focus groups can be used in an exploratory way to determine how people think and talk about a topic, as a means of developing survey questions. Focus groups also can be used to explore the meanings of survey findings that cannot be explained statistically and assess the range of opinions/views on a topic of interest. Focus groups and interviews are useful as a low cost means of gathering information and exploring relationships by making observations of individuals. Elite interviews are useful when we are interested in government officials and others who are difficult to study in a systematic way through survey research.


Reading options for Thursday (your paper is to draw on ONE of the following)


Assignment 4: Due on Thursday Feb. 27
Mar. 3, 5, & 10th  Survey Research (sampling, question development)

Surveys or polls are a powerful means of gathering data about people in society. Traditionally, surveys have been very expensive, but online and mobile app surveys are reducing the costs greatly (albeit with tradeoffs). There are a variety of ways to administer a survey including: online surveys, email surveys, social media surveys, paper surveys, mobile surveys, telephone surveys, and face-to-face interview surveys. Critically, the value of surveys depends on the representativeness of the sample compared to the population of interest. A good representative sample is the sine qua non of survey research. That said, surveys vary a great deal in this regard, with many surveys being of lesser quality than others.


Reading options for Thursday (your paper is to draw on ONE of the following)


Some additional material on polling methods:

Assignment 5 is due Thursday, March 12th

NO FINAL EXAM

Any / All re-writes are due by Thursday, March 19th
Per class commentary, you are to write a two to three page paper on ONE of these studies. The paper is due via D2L.


Your paper should/must answer these questions.

1. What is the main research question being asked in the study?
2. What is the hypothesis (or hypotheses) offered by the author(s)?
3. What is the operational definition of the concepts in the hypothesis? (what is the author observing or measuring to test the relationship specified in the hypothesis).
4. Which variable is the dependent variable
5. What are the independent variables (and how is each measured)
6. How does the research design of the experiment or quasi-experiment compare to the ideal experimental research design (random assignment of subjects selected from a pool of subjects that is representative of a broader population; an experimental group; a control group; with pre- and/or post-test (or observation(s) of subjects in each group. Think about:
   7. The pool of subjects (are these representative of a broader population of interest)
   8. Are subjects randomly assigned or not to the experimental or treatment group and the control group (if any).

What are the results of the study? (what relationships did they find as significant?). Were any of the hypotheses disconfirmed?

What weaknesses in this study can you identify that might reduce your confidence in the authors’ inferences and conclusions?
Per class commentary,
  1. You are to revise your first paper, using the feedback I provided.
  2. You are to write a two to three page paper on ONE of these studies.
  3. Submit on D2L.


Your paper should/must answer these questions.

- What is the main research question being asked in the study?
- What is the author’s theoretical perspective (can you identify one???)
- What is the hypothesis or argument offered by the author?
- What evidence does the author use to support the main argument? What is the author observing or measuring to test the relationship specified in the hypothesis).
- Do you “buy” or accept the author’s argument?
- What are the strengths/weaknesses of the argument? Or use of evidence?
- What alternative explanations might exist for the evidence?
- What evidence, if any, is the author missing that might improve his/her interpretation (or case in support of the argument)
- What weaknesses in this study can you identify that might reduce your confidence in the authors’ inferences and conclusions?

What aspects of a causal relationship are absent (think correlation/comparison; temporal sequence; non-spuriousness; logic/theory
Per class commentary, you are to write a two to three page paper on ONE of these studies. The paper is to be submitted via D2L.


You can also opt to go “off the board” by identifying a chapter or article that uses a case study—but I need to see it and approve it before you write. You could use one from any of your other political classes.

Your paper should/must answer these questions.

- What is the main research question being asked in the study?
- What is the author’s theoretical perspective (can you identify one???)
- What is the hypothesis or argument offered by the author?
- What is the case selection method used by the author?
  - That is, does it match the criteria of any of the seven case-selection methods discussed by Seawright and Gerring? (discussing ambiguity is an option, but talk about this in terms of Seawright and Gerring’s classification scheme).
  - Given the case, selection method, how generalizable are the conclusions of the study?
- What evidence does the author use to support the main argument? What is the author observing or measuring to test the relationship specified in the hypothesis).
- Does the study:
  - Just illustrate a theory (confirmatory)
  - Test or evaluate a theory
- What are the strengths/weaknesses of the argument? Or use of evidence?
- What alternative explanations might exist for the evidence?
- What weaknesses in this study can you identify that might reduce your confidence in the authors’ inferences and conclusions?

What aspects of a causal relationship are absent (think correlation/comparison; temporal sequence; non-spuriousness; logic/theory
Political Science 200

Evaluation of a study using Interviews or Focus Groups

Due: Thursday, Nov 7

Per class commentary, you are to write a two to three page paper on ONE of these studies.


Your paper should/must answer these questions.

- What is the main research question being asked in the study?
- What is the author’s theoretical perspective (can you identify one???)
- What is the main hypothesis or argument offered by the author?
- What is the sample used by the author?
  - Does the sample seem like it would be representative of the population of interest (why or why not)
  - How generalizable are the conclusions of the study?
- What evidence does the author use to support the main argument? What is the author observing or measuring to test the relationship specified in the hypothesis.
  - Do the questions used in the survey seem to measure what the authors claim to be the case? (or is there a problem with the questions and the concepts the authors are referring to).
- Does the study:
  - Just illustrate a theory (confirmatory)
  - Test or evaluate a theory
- What are the strengths/weaknesses of the argument? Or use of evidence?
- What alternative explanations might exist for the evidence?
- What weaknesses in this study can you identify that might reduce your confidence in the authors’ inferences and conclusions?

What aspects of a causal relationship are absent (think correlation/comparison; temporal sequence; non-spuriousness; logic/theory
Per class commentary, you are to write a two to three page paper on ONE of these studies. Submitted via D2L

- W. Gaurav Sood and Shanto Iyengar. N.D. “Coming to Dislike your Opponents.”

Your paper should/must answer these questions.

- What is the main research question being asked in the study?
- What is the author’s theoretical perspective (can you identify one???)
- What is the main hypothesis or argument offered by the author?
- What is the sample used by the author?
  - Does the sample seem like it would be representative of the population of interest (why or why not)
  - Given the representativeness of the sample, how generalizable are the conclusions of the study?
- What evidence does the author use to support the main argument? What is the author observing or measuring to test the relationship specified in the hypothesis).
  - Do the questions used in the survey seem to measure what the authors claim to be the case? (or is there a problem with the questions and the concepts the authors are referring to).
- Does the study:
  - Just illustrate a theory (confirmatory)
  - Test or evaluate a theory
- What are the strengths/weaknesses of the argument? Or use of evidence?
- What alternative explanations might exist for the evidence?
- What weaknesses in this study can you identify that might reduce your confidence in the authors’ inferences and conclusions?

What aspects of a causal relationship are absent (think correlation/comparison; temporal sequence; non-spuriousness; logic/theory