**Coding Scheme**

**If book has research method chapter, code research methods chapter. If book just has intro chapter, code intro chapter. Each category below is explicated with examples of what might be detected. It may be that the text explicitly or implicitly (i.e., in the context of something else) discusses the major issues. For coding, use the following general scheme. If you aren’t sure what the author’s stance is, mark unclear. Each category will have examples of the following coding scheme:**

0 – Not Discussed - i.e., authors do not mention or discuss the relevant issue

1 – Positive/Supporting Stance - i.e., authors mention the issue and take a supporting stance

2 – Negative/Opposing Stance - i.e., authors mention the issue and take an opposing stance

3 – Unclear - i.e., authors mention the issue but it’s unclear as to whether they support or oppose the issue

**Categories:**

1. **What constitutes science is controversial** 
   1. Provide differing definitions of what science is or is not
      1. Example: discussing how Freud viewed himself as scientific and contrasting that with Skinner
   2. Discuss some controversy around definitions and/or practices of science (i.e., how science is conducted)
      1. Example: some methods in science (e.g., animal testing), is controversial

**Coding:**

1 = Yes, it is controversial

2 = No, it is not

1. **Bad (Pseudo)science**
   1. Provide examples of pseudoscience and why they are (e.g., astrology, creation science, psychoanalysis)
   2. Discuss how pseudoscience doesn’t try to falsify, or...
   3. Discuss conclusions based solely on interpretation, bad/biased or very limited data

**Coding:**

1 = Yes, pseudoscience is important to consider

2 = No, it is not

1. **Second demarcation problem**
   1. Need to state that psychology (and/or other social sciences) is or is not different from other, “natural” scientific disciplines and why
      1. Example: Standards of evidence are different between the two
      2. Example: Humans are more difficult to study due to problems with reactivity and/or free agency
      3. Example: The use of statistics in psychology has moved it from a pre-scientific discipline to a scientific discipline

**Coding:**

1 = Psychology is different from natural sciences (if so, write why different, e.g., freewill, number of variables, etc.)

2 = Psychology is similar to other natural science

1. **Deductive Stance**
   1. Provide examples of...
      1. Moving from broad observations to specific observations
      2. Developing a general hypothesis and then trying to falsify it - remember, the only deductive logic is falsification
      3. Severe testing: looking for the most improbable thing that the theory excludes (e.g., if you want to test whether preachers swear, don’t look at them in the church); also valuing theories that exclude more (quantitative vs. more qualitative theories)
   2. In order to code supporting this stance they must make some statement suggesting that this is how science is or should be performed

**Coding:**

1 = Yes, science is deductive (if so, do they explicate problems with deduction, e.g., Quine-Duhem problem?)

2 = No, it’s not (if so, do they explicate problems with deduction, e.g., Quine-Duhem problem?)

1. **Inductive Stance**
   1. Provide examples of
      1. Moving from specific observations to general conclusions
      2. Developing a broad hypotheses based on exploratory data, case studies etc.
      3. Using some inductive inference rule
   2. In order to code supporting this stance they must make some statement suggesting that this is how science should be performed

**Coding**:

1 = Yes, science is inductive (if so, do they explicate problems with induction, e.g., no sound inference rule?)

2 = No, it’s not (if so, do they explicate problems with induction, e.g., no sound inference rule?)

1. **Ad Hoc Hypotheses**
   1. Discuss how scientists may attribute failures of experiments/theories after the fact to other factors
   2. Give examples of how ad hoc hypotheses prevented falsification
   3. Discuss how ad hoc hypotheses should be handled (i.e., Lakatos, more empirical content and some is corroborated)

**Coding:**

1 = Ad hoc hypotheses can be done appropriately (i.e., Lakatos)

2 = Ad hoc hypotheses should be avoided

1. **Verisimilitude/tentativeness of science**
   1. Do they describe scientific evidence as tentative
   2. Do they encourage students to be critical of scientific knowledge
   3. “Truth” with a lowercase ‘t’

**Coding**

1 = Scientific evidence has truth-likeness

2 = Scientific evidence is true with a capital ‘T’

1. **Evolutionary epistemology**
   1. Discuss cumulative nature of knowledge/science due to relevant/valid theories adapting/surviving error elimination as science progresses
   2. Discusses Popper, Campbell, Quine, and/or Skinner in relation to the role of evolution in science

**Coding:**

1 = Evolutionary epistemology is important

2 = Evolutionary epistemology is not important

1. **Theory ladenness of facts**
   1. Discuss how observations are only understood within a theoretical framework and gives examples
   2. Bi-directional relationship between science and theory (i.e., nomological net)

**Coding:**

1 = Observations are interpreted by way of theories

2 = Observations and theories are independent

1. **The role of theory in hypothesis formation**
   1. Theory influences what kind of questions are asked and gives examples
      1. Example: behaviorists are not going to form hypotheses about unconscious processes or other non-observable phenomena
   2. Discusses the nomological net

**Coding:**

1 = Theory should be involved in forming hypothesis

2 = Theory does not need to be involved in the formation of hypothesis, there is a blank slate, so to speak

1. **The role of competing theories (i.e., Lauden)**
   1. Are theories evaluated with respect to competing theories or by themselves?
   2. How competing theories advance science
   3. Horse-race studies?

**Coding:**

1 = Testing competing theories advances science

2 = Theories are evaluated by themselves

1. **Recognition of conceptual problems or just empirical**
   1. Are conceptual problems also important to solve
   2. Does science only progress by way of solving empirical problems

**Coding:**

1 = Conceptual problems, along with empirical problems, are important to solve

2 = Only empirical problems are important to solve

1. **Social constructsism (vs. natural kinds)**
   1. Discuss how constructs are socially and historically derived
      1. Example: Race, sexual orientation, etc. may not really be natural, representative categories
   2. Are they favorable to this view or not, or perhaps their view includes social constructs and natural kinds

**Coding:**

1 = Constructs in science are social constructs

2 = Constructs in science are not constructed, they are natural kinds

1. **Rhetorical views of science**
   1. Science can be used as a method of persuasion (i.e., Gross, Feyerabend)
   2. Rhetoric around nomological underdeterminism and/or semantic underdeterminism
   3. The implications of persuasive communication in scientific advancement
   4. Examples might include: publications from Ivy-league universities vs. state colleges, journal reputation, etc.

**Coding:**

1 = Science includes rhetoric

2 = Science is devoid of rhetoric

1. **Science includes biases (e.g., political influences) that are monopolistic (i.e., science can be bad)**
   1. Give examples of political influences/biases (e.g.,patriarchy, capitalism, Nazi trials)
   2. Discuss postmodernism or post-modernist views (e.g., feminism)
   3. Discuss role of ideology, values, and power in science (e.g., What gets funded? What questions are being asked?)

**Coding:**

1 = Science includes political influences

2 = Science is devoid of political influences

1. **Kuhnian paradigms**
   1. Knowledge is only interpreted within a certain paradigm
   2. Revolutions/paradigm shifts occur when a large quantity of anomalies arise
   3. As revolutions occur, new paradigms emerge and old data can not be interpreted in light of these new paradigms (i.e., paradigms are incommensurable)
   4. Provides examples of different paradigms in science (e.g., Newtonian vs. Einsteinian physics)

**Coding:**

1 = Science involves incommensurable paradigms

2 = Science doesn’t involve paradigms and science is cumulative

1. **Preparadigmatic** **science or a mature science**
   1. Do they explicitly say that psychology is a mature science or not
   2. Psychology has or does not have exemplares
   3. Gives examples of disagreements on fundamentals if at all (e.g., behavioral vs. psychoanalytic foundations)

**Coding:**

1 = Psychology is a preparadigmatic science

2 = Psychology is a mature science

1. **Anything goes (i.e., Feyerabend)**
   1. Do the authors give examples of other ways of knowing (e.g., art, literature)
   2. Do they talk about Feyerabend’s contribution to science

**Coding:**

1 = Other forms of knowledge are important to consider

2 = Science is the only viable way to garner knowledge