International Economics A Heterodox Approach 3rd edition Berg Solutions Manual

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CHAPTER 2

INTRODUCTION TO HETERODOXY

CHAPTER SUMMARY

In the United States today, the *orthodox* paradigm in the social science discipline of economics is the neoclassical paradigm. All other paradigms, such as those advanced by institutionalists, Marxists, Keynesians, behavioralists, libertarians, Austrians, structuralists, dependency theorists, and other social scientists are assigned to heterodox economics.

This chapter explains heterodoxy, the approach taken by this textbook. Heterodox economics embraces alternative paradigms, plus the neoclassical paradigm, because it recognizes the limits of any particular model; it applies different models under different circumstances and to compare the results of different models for any given set of circumstances. The concept of holism underlies all of heterodox economics because, like holism, it embraces models that are *systemic*, *dynamic*, and *multi-disciplinary*. Holism explicitly addresses the complexity of human existence within the interdependent economic, social, and natural systems.

Holism clashes directly with neoclassical economics and its scientific reductionism, its limited focus on only "economic" issues, and its widespread use of the "all other things equal" assumption to justify its static equilibrium models. A reading of the heterodox economics literature reveals at least 20 more fundamental ideas that persistently guide the thinking of most heterodox economists, and this chapter details these ideas. Because heterodox analysis uses alternative models, dynamic analytical frameworks, and recognizes the complexity of systems, heterodox economists' policy prescriptions are usually much less specific than the policy prescriptions suggested by orthodox economists. In recognition of uncertainty within a complex system, such as our economic, social, and natural system, heterodox economists are likely to invoke the *precautionary principle* in a case such as this where some of the possible outcomes are truly catastrophic.

This chapter also contains a sociological examination of the culture of the field of international economics and reveals why the intellectual bias of international economics often causes it to fail to provide relevant and convincing analyses of our internationally integrated economy. The discussion of the three spheres of human existence and economic modeling in the previous chapter, plus this chapter's discussions of holism and Bourdieu's sociological analysis of culture complete the justification for our heterodox approach to international economics.

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CHAPTER 2 SUGGESTED HOMEWORK/EXAM QUESTIONS AND PROBLEMS

1. What are the three benefits from dealing with strangers outside your immediate group or clan? Why do societies often forego these benefits?
2. Discuss the role of institutions in a modern economy. Give examples of institutions that have served to enable people to capture the gains from dealing with strangers.
3. Explain why the scientific is seen as instrumental in accelerating the process of technological progress.
4. Can the scientific method uncover absolute truth?
5. Why do you think it may be hard to **not** follow an orthodox paradigm in a particular field of research?
6. What is scientific reductionism? What relevance does it have in the discussion of economic models?
7. Was Léon Walras' model of the economy holistic? Discuss.
8. Explain Pierre Bourdieu's concepts of field, habitus, doxa, and symbolic violence. How do these concepts clarify the continued dominance of neoclassical analysis despite its failure to anticipate or explain the 2007–2008 Great Recession?

ANSWERS TO CHAPTER 2 SUGGESTED HOMEWORK/EXAM QUESTIONS AND PROBLEMS

1. By cooperating with others, they can achieve (1) higher levels of specialization; (2) reduction in risks from unpredictable adverse outcomes; and (3) faster expansion of knowledge. By cooperating, humans have achieved all three types of benefits. Today's high standards of living would be impossible without extensive cooperation among strangers. However, human interactions are also characterized by theft, slavery, threats, oppression, murder, and all types of fraud and dishonesty. See the text, section 1.2.3, for some insights into why human interaction can fail. You might also introduce your own ideas here. There is also the issue of institutions; society can set rules and norms of behavior that can overcome the urges to steal, threaten, defraud, etc.
2. The answer to this question is in section 1.2.4. See especially the quote by Douglass North.
3. Fundamentally, the scientific method involves a strict procedure consisting of rigorous steps such as these:
    i. Observe some world phenomenon.
    ii. Use reason to invent a hypothesis (an untested theory or model) that consistently explains what you observe.
    iii. Use this hypothesis to predict specific outcomes.
    iv. Perform experiments in which you generate specific outcomes or make additional observations of real world outcomes to test whether the generated outcomes or observed random outcomes are consistent with the outcomes predicted by your hypothesis.
    v. Accurately record your procedures and clearly show your results so that they could be understood and replicated by others.
    vi. If your test results are inconsistent with your hypothesis, abandon your hypothesis or modify it and return to step iii.
    vii. If your experiments and observations consistently confirm your hypothesis, your hypothesis becomes a theory.
    viii. Communicate the results to others or use them yourself for further experiments to test further hypotheses.

    The scientific method serves to keep research and development objective, thus preventing false ideas from gaining traction. More importantly, it guarantees progress by maintaining only hypotheses supported by evidence while systematically eliminating hypotheses that are not supported by evidence. Hence, because unsupported hypotheses are abandoned and only proven hypotheses are maintained, knowledge must

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improve over time. Forward progress is guaranteed only when new hypotheses are built on the proven hypotheses, not when they are built on false or unsubstantiated ideas.

Note that the scientific method gives a very precise definition for the term *theory*. Unlike the popular use of the word *theory* as referring to a *vague* or *fuzzy idea*, in science a theory means "confirmed hypothesis." It is an idea fully supported by overwhelming evidence. A theory is a proven conceptual framework that consistently and accurately explains observed facts. This also means that an idea or, more accurately, a hypothesis can become a theory only if it is *falsifiable*. That is, we must be able to confront a hypothesis with real evidence so that we can objectively decide whether the hypothesis accurately describes what we actually observe. For example, the often-stated prediction that a continual expansion of the money supply in excess of the growth of economic activity will cause inflation is close to being considered an economic theory because we have been able to observe a very large amount of evidence across many countries and time periods that confirms the prediction. Furthermore, the hypothesis that excessive money growth causes inflation could have been falsified by observing actual prices and measures of economic activity.

4. The repeated verification of a hypothesis, and its designation as a theory, often tempts us to conclude that we have uncovered *truth*. However, we must be careful to avoid talking about *absolute truth*. Realistically, all theories based on solid evidence and objective experimentation may still be falsified as we learn more and engage in further scientific activity. An interesting example is Isaac Newton's theory of gravity. Newton's theory that gravitational force between two objects is directly proportional to the bodies' mass and inversely proportional to the square of the distance between them was confirmed repeatedly by a great amount of evidence. In fact, the basic formula continues to be very useful for most practical applications. However, in the nineteenth century, more accurate instruments found that there were some discrepancies, such as the observed fact that the planet Mercury did not orbit quite the way Newton's theory would suggest. Albert Einstein's theory of relativity did a better job of explaining the universe, and soon his hypothesis was accepted by most scientists to be a theory. However, recent experiments using a set of satellites orbiting the Earth uncovered some slight variations in their predicted orbits that were not predicted by either Newton's theory of gravity or Einstein's theory of relativity. There seems to be more forces in the universe than previous theories could explain, and we are back to testing new hypotheses.

   To many people it is discouraging that the scientific method has not yet revealed the absolute truth about everything in the universe, which is an understandable reaction given our evolution and our intelligence geared toward finding creative solutions to life's problems. We must remember, however, that it has only been over the past several centuries that humanity has accepted and consistently applied the scientific method to many areas of human endeavor. Our knowledge has expanded at a speed never before experienced. Nevertheless, we remain very far from absolute truth. We humans will have to be content with our ability to think, reason, and organize our lives so that we can continue gaining knowledge. On further thought, this is an absolutely exciting future for a species distinguished by an exceptional ability to think.

5. You might refer to Keynes' quote at the beginning of the chapter. The sociological justification of heterodox economics provides good insight into the power of culture, or what Bourdieu termed symbolic violence.

6. Scientific reductionism assumes that we can understand the whole by learning about its parts, one part at a time. In effect, scientific reductionism accepts that the whole is the straightforward sum of its parts. Economists use scientific reductionism when they develop a set of assumptions for their models. They assume that certain sets of social/economic phenomena remain the same so that they can measure an increase or decrease of another phenomenon and thus supposedly establish cause and effect. The economist's version of scientific reductionism as exemplified in a model's assumptions is not valid if there

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are good reasons to suspect that the interactions between the components of the system determine the outcomes of the overall system. In other words, some things do not remain the same. The system that is being modeled is dynamic, not static. Is it any wonder why economic models often do not explain very well? Holistic scientists, on the other hand, avoid scientific reductionism and argue that to understand a complex process or system, one must understand not just the parts, but also how the parts interact. They endeavor to eliminate unrealistic assumptions and realize that systems are dynamic.

7. Walras modeled the economy as a huge system of equations, each representing one of the economic system's many markets in which transactions simultaneously occur. In a sense, Walras' model is holistic because it shows every part of the economy related to every other part. Ironically, Walras' elaborate simultaneous equations model probably discouraged economists from adopting a true holistic approach to analyzing economic issues and economic development. For practical reasons, Walras' mathematical model specified the system as a set of equations with fixed parameters that did not permit the relationships among the component parts to vary. In other words, it was a static system. And he was never able to find a mathematical solution to his system, so he intuitively reasoned that if all markets automatically tend to move toward their respective equilibria, then the entire system would also automatically move towards an overall stable equilibrium.

See the section of the chapter entitled "A Sociological Justification for Heterodoxy". Habitus refers to the dominant attitudes and dispositions of people in a field. Specifically, habitus is a set of subjective but persistent perceptions, customs, conventions, norms, and forms of outward behavior and expression. The habitus determines both a person's personal disposition and how others judge her within the field. A person develops the subjective dispositions and takes on the attitudes of the habitus in order to be successful in the objective field he participates in.

Doxa is the complex set of beliefs that effectively explain the reality of one's field. Doxa are the fundamental, but mostly unproven, set of beliefs that a person comes to rely on for survival within a particular field. Doxa is the justification for the patterns of human thinking and action that people come to accept as normal and appropriate. Bourdieu specifically states that one's doxa serves to rationalize, justify, and, therefore, legitimize the subjective habitus necessary to successfully participate in the particular objective arrangement of their field.

Cultural capital consists of acquired behavioral characteristics, material goods, and formal institutional certifications that give a person status in a specific field or in society in general. Cultural capital also includes objects, such as a musical instrument, an office, or an intellectual's library of books. Bourdieu calls this objectified cultural capital, and it is important for solidifying a person's status in a field or broader society. Institutionalized cultural capital are institutional recognitions of cultural capital held by individuals, such as diplomas, awards, certifications, and other official credentials. All this capital can be employed to exercise symbolic violence against those with less social capital, that is, those who do not match and conform to the dominant habitus and doxa.

Mainstream orthodox economists routinely engage in symbolic violence, which forces those interested in being successful in their fields to give in and follow the culture.

CHAPTER 2 MULTIPLE-CHOICE QUESTIONS

For each question, select the statement that best answers the question or completes the sentence.

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1. In most economics departments of universities in the United States today, the orthodox paradigm in economics is the:
   a. Marxist paradigm.
   b. institutionalist paradigm.
   c. neoclassical paradigm.
   d. structuralist paradigm.

2. This textbook defines heterodoxy as:
   a. a multi-paradigmatic approach.
   b. economic multi-culturalism.
   c. the willingness to observe issues from multiple perspectives.
   d. All of the above.
   e. None of the above.

3. Heterodox economics adheres to the principle of:
   a. scientific reductionism.
   b. scientific holism.
   c. marginalism.
   d. All of the above.
   e. None of the above.

4. Holism is the explicit recognition that:
   a. the component *parts* of the *whole* cannot be understood in isolation.
   b. the functions of individual components of a system can be analyzed without knowing the whole environment in which they exist.
   c. the "all other things equal" assumption justifies scientific reductionism.
   d. the whole system can be modeled as the sum of its parts.

5. The concept of holism has been applied in which of the following fields?
   a. Sociology
   b. Physics
   c. Ecology
   d. All of the above.
   e. None of the above.

6. In the late nineteenth century, mainstream economists in the United States and Britain increasingly embraced:
   a. scientific reductionism.
   b. holism.
   c. communism.
   d. spiritualism.

7. Léon Walras' late nineteenth-century model of the economy consisted of:
   a. a system of equations that represent the demand and supply sides of the many markets in which transactions simultaneously occur.
   b. a small number of equations representing the aggregate behavior of a few groups.
   c. a single equation linking total output to the principle inputs such as labor and capital.
   d. a verbal explanation of how the distribution of income would become gradually less equal.

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8. The British economist John Maynard Keynes is most famous for his:
   a. 1956 article explaining his growth model that linked output to investment.
   b. 1776 *Wealth of Nations*, the book that marks the origin of the field of economics.
   c. 1936 *General Theory of Employment, Interest, and Money*, which effectively created the field that is today known as macroeconomics.
   d. 1867 *Capital*, the book that predicted the eventual demise of capitalism.

9. Neoclassical economists:
   a. tend to view the economy from the dynamic perspective of evolving systems.
   b. focus on the optimal allocation of a fixed set of scarce resources.
   c. have developed an elaborate modeling structure that supports Keynes' idea that aggregate supply and aggregate demand must be kept in balance through active macroeconomic policy.
   d. All of the above.
   e. None of the above.

10. Neoclassical economists' efforts to match aggregate economic outcomes to microfoundations resulted in:
   a. unrealistic microeconomic models of individual behavior.
   b. simplistic aggregate functions that could be linked to micro models of individual behavior.
   c. linear models that permitted the aggregation of individual micro functions.
   d. All of the above.
   e. None of the above.

11. Holism differs from neoclassical economics because of the latter's:
   a. effective embrace of the scientific method.
   b. focus on all three spheres of human existence rather than just economic issues.
   c. use of the "all other things equal" assumption.
   d. use of static equilibrium models.

12. Among the fundamental ideas that are often embraced by heterodox economists is:
   a. humans simultaneously live in economic and social spheres; nature can be ignored.
   b. objectivity requires that researchers' own cultures be respected and permitted to shape research.
   c. complexity requires that it be assumed away in favor of simplified models.
   d. All of the above.
   e. None of the above.

13. Among the fundamental ideas that are often embraced by heterodox economists is:
   a. environmental consequences of economic activity must be internalized.
   b. mathematics is required in economic analysis.
   c. economic policy must ignore the distribution of income, which is a social issue.
   d. All of the above.
   e. None of the above.

14. Among the fundamental ideas that are often embraced by heterodox economists is:
   a. they make selective use of multiple models rather than relying on one paradigm.
   b. culture influences economic thought.
   c. the fallacy of composition distorts human thinking.
   d. All of the above.
   e. None of the above.

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15. The French sociologist Pierre Bourdieu:
    a. provided a coherent framework for analyzing the co-existence of cultures.
    b. called for a "sociology of sociology."
    c. developed a detailed conceptual framework that enables social scientists to break down the components of the cultures and subcultures according to the influence they have on the behavior of an individual.
    d. All of the above.
    e. None of the above.

16. Pierre Bourdieu wrote that when people embrace the subculture that permeates the *field* they identify with, they:
    a. adopt certain attitudes and dispositions.
    b. effectively reject society's dominant culture.
    c. they are no longer in need of a doxa.
    d. All of the above.
    e. None of the above.

17. The French sociologist Pierre Bourdieu defined doxa as:
    a. a fundamental, deep-founded, mostly unproven set of beliefs that a person comes to rely on for survival within a particular field.
    b. the "half-baked ideas" that Douglass North claimed that people latch onto in order to deal with their lack of a full understanding of their complex existence.
    c. the justification for the patterns of human thinking and action that people come to accept as normal and appropriate.
    d. All of the above.
    e. None of the above.

18. When a holder of cultural capital uses it to gain some advantage over someone who holds less cultural capital, Bourdieu calls this:
    a. cultural competition.
    b. discrimination.
    c. symbolic violence.
    d. All of the above.
    e. None of the above.

19. James Lovelock's (1972) famous Gaia hypothesis states that:
    a. the planet Earth functions as a large homeostatic organism that actively adjusts its "internal" natural conditions.
    b. the paleontological record suggests that Mother Earth occasionally drives a very large proportion of species into extinction at the same time.
    c. all species inevitably perish because they grow too dominant.
    d. Earth should be treated like a living organism.

20. Microfoundations are:
    a. the rules that guide human behavior, similar to institutions.
    b. a logically consistent set of models called for by neoclassical economists to explain how individual consumers and producers generated observed macroeconomic outcomes.
    c. fundamental assumptions about how a social system operates.
    d. what Keynes based his macroeconomic analysis on.

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21. Which of the following statements correctly describes heterodox economics?
    a. A set of models that are very similar to those used in mainstream economic analysis.
    b. A set of ideas, perspectives, and models that completely rejects the neoclassical approach to economic analysis.
    c. An approach to economic analysis that embraces the dynamic, inter-disciplinary, and systemic perspectives of holism.
    d. All of the above.
    e. None of the above.

22. Which of the following describes an economist who follows a specific economic paradigm?
    a. An institutionalist.
    b. A Marxist.
    c. A Keynesian.
    d. All of the above.
    e. None of the above.

23. Which of the following statements refers to the concept of holism?
    a. The whole is the sum of its parts.
    b. If you understand the workings of each part separately, you will understand the whole system.
    c. You can predict the outcome of the whole system by knowing the function of its parts.
    d. All of the above.
    e. None of the above.

24. A hypothesis:
    a. is not falsifiable.
    b. is synonymous with a *theory*.
    c. must be robustly confirmed by experiments and evidence before it becomes a theory.
    d. can be refuted, but a theory cannot.

25. The holistic approach is most compatible with:
    a. the scientific method.
    b. the Gaia hypothesis.
    c. the Medea hypothesis.
    d. the scientific method.

26. Holistic models are:
    a. systemic.
    b. dynamic.
    c. multi-disciplinary.
    d. All of the above.
    e. None of the above.

27. Which of the following include fundamental ideas of heterodox economics?
    a. A system may have multiple equilibria, or no equilibrium at all.
    b. In the face of complexity, economists should embrace the precautionary principle.
    c. Human welfare cannot be accurately represented by an aggregate welfare function.
    d. Complexity must be explicitly recognized; it cannot be assumed away.
    e. All of the above.

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28. Which of the following statement(s) is(are) true?
    a. Heterodox analysis seldom justifies collective actions by government.
    b. Heterodox models demonstrate prominence of individuals in making decisions that make for efficient market outcomes.
    c. Neoclassical models require the use of mathematics; verbal models cannot capture neoclassical ideas.
    d. Heterodox analysis recognizes complexity, uncertainty, and catastrophic non-linear outcomes, which validates the precautionary principle.

29. Which of the following statement(s) is(are) true about Pierre Bourdieu's concept of symbolic violence?
    a. Symbolic violence often does not manifest itself in overt forms, such as exploitation, oppression, harassment, or even physical violence.
    b. People who are the object of symbolic violence are often complicit in their own subordination.
    c. Symbolic violence is based on cultural capital.
    d. All of the above.
    e. None of the above.

ANSWERS TO CHAPTER 2 MULTIPLE-CHOICE QUESTIONS

1(c), 2(d), 3(b), 4(a), 5(d), 6(a), 7(a), 8(c), 9(b), 10(d), 11(b), 12(e), 13(a), 14(d), 15(d), 16(a), 17(d), 18(c), 19(a), 20(b), 21(c), 22(d), 23(e), 24(c), 25(a), 26(d), 27(e), 28(d), 29(e).

ANSWERS TO CHAPTER 2 End-of-Chapter Problems AND QUESTIONS

1. *The maintenance of constant body temperature by endothermic animals, such as mammals and birds, in response to changes in external temperatures, is one form of homeostasis. Exothermic animals like reptiles and some sea creatures survive in changing environments by letting their body temperatures change with the external temperature and then mitigating body temperature changes by adjusting their behavior. One disadvantage of internal regulation is that it takes more energy. Snakes eat once a week or less; mammals and birds spend the greater part of their lives seeking food. Is human society endothermic or exothermic? Write a brief essay to answer this question.*

This is a somewhat conjectural question in that it asks you to think about something that requires speculation about the future. You might bring up the chapter's discussion in the Gaia and Medea hypotheses, where one projects a benign stable equilibrium and the other hypothesizes a potentially destructive spiral away from a historic stable level. Remember, this question asks you to predict whether human society, a very complex system, is endothermic or exothermic. Will the human social system adjust its internal "temperature" to match changes in the natural environment or will it change its "behavior" in accordance with shifts in its natural environment?

2. *Why is holism more scientific than scientific reductionism?*

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The basic answer here is that scientific reductionism assumes "everything else is constant" while examining some subset of parts of a system. Seeking relationships that are influenced by the whole system under such an assumption almost guarantees the relationship will not be accurately measured or understood; hence, scientific reductionism violates the scientific requirement that hypotheses be examined in an objective and unbiased manner.

3. *Describe scientific reductionism. Have you ever engaged in scientific reductionism? Which of your college courses engage in scientific reductionism? What would such courses look like if they embraced holism?*

Scientific reductionism assumes that we can understand the whole if we understand the parts that make up the whole. In effect, scientific reductionism accepts that the whole is the straightforward sum of its parts. Holistic scientists, on the other hand, argue that to understand a complex process or system, one must understand not just each part, but also how the parts interact. The question is open-ended after you first describe scientific reductionism.

4. *Describe the scientific method. Do economists follow the scientific method? Can you find examples of the scientific method in economics? Can you find violations of the scientific method in economics?*
    - Fundamentally, the scientific method consists of a strict procedure consisting of a rigorous series of steps such as these:
        i. Observe some world phenomenon.
        ii. Use reason to invent a hypothesis (an untested theory or model) that consistently explains what you observe.
        iii. Use this hypothesis to predict specific outcomes.
        iv. Perform experiments in which you generate specific outcomes or make additional observations of real world outcomes to test whether the generated outcomes or observed random outcomes are consistent with the outcomes predicted by your hypothesis.
        v. Accurately record your procedures and clearly show your results so that they could be understood and replicated by others.
        vi. If your test results are inconsistent with your hypothesis, abandon the hypothesis or modify your hypothesis and return to step iii.
        vii. If your experiments and observations consistently confirm your hypothesis, your hypothesis becomes a theory.
        viii. Clearly communicate the results to others and use them yourself for further experiments to test further hypotheses.

The scientific method serves to keep research and development objective, thus preventing false ideas from gaining traction. More importantly, it guarantees progress by maintaining only hypotheses supported by evidence while systematically eliminating hypotheses that are not supported by evidence. Hence, because unsupported hypotheses are abandoned and only proven hypotheses are maintained, knowledge must improve over time. Forward progress is guaranteed only when new hypotheses are built on the proven hypotheses, not when they are built on false or unsubstantiated ideas.

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5. *The popular definition of the word "theory" does not match the scientific definition of a theory. Explain the difference.*

A scientific theory is a hypothesis that has been thoroughly and consistently supported by scientific (objective and unbiased) experiments, tests, and observable evidence. The popular sense of the word often refers to unproven and unsubstantiated ideas, more like what scientists call a hypothesis or, worse, an illogical and unsupported belief.

Note that the scientific method gives a very precise definition for the term *theory*. Unlike the popular use of the word *theory* as referring to a *vague* or *fuzzy idea*, in science a theory means "confirmed hypothesis." It is an idea fully supported by overwhelming evidence. A theory is a proven conceptual framework that consistently and accurately explains observed facts. This also means that an idea or, more accurately, a hypothesis can become a theory only if it is *falsifiable*. That is, we must be able to confront a hypothesis with real evidence so that we can objectively decide whether the hypothesis accurately describes what we actually observe. For example, the often-stated prediction that a continual expansion of the money supply in excess of the growth of economic activity will cause inflation is close to being considered an economic theory because we have been able to observe a very large amount of evidence across many countries and time periods that confirms the prediction. Furthermore, the hypothesis that excessive money growth causes inflation could have been falsified by observing actual prices and measures of economic activity.

6. *What is the purpose of replication in science? (Why does step iv of the scientific method prescribe that a scientist performs many experiments or observes large amounts of real world outcomes under a variety of circumstances in order to avoid conclusions driven by unseen forces not taken into consideration in your hypothesis, observations, and experiments?) Explain why a single experiment or observation is not sufficient to "prove" a relationship.*

This question asks you to discuss what statisticians refer to as "robustness," which is the consistent finding of support or rejection across a great variety of experiments, statistical tests, data sets, alternative circumstances, etc. Robustness is related to the holistic concept of complex systems in which many variables influence every other variable in complex ways, so that any one specific case under one specific set of circumstances relating to the state of the rest of the system cannot definitively prove any single relationship.

7. *Explain the potential implications of failing to observe each step of the scientific method.*

This answer can address many issues, but you should certainly include things like bias in gathering evidence, bias in how experiments are conducted, selection bias in gathering observations, inaccuracies in the data used as evidence, biased interpretation of the results of experiments, poor recording of the experiments, results, and procedures, among other things. You might also address the role that

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paradigms play in designing the way a hypothesis is tested and its validity decided; heterodoxy, with its multiculturalism and alternative paradigms, is less likely to frame an issue in a restrictive manner that effectively rules out important evidence and experiments. In short, heterodoxy is more likely to generate robust evidence.

8. *The nineteenth-century French economist Frédéric Bastiat wrote: "Between a good and a bad economist this constitutes the whole difference—the one takes account of the visible effect; the other takes account both of the effects which are seen, and also those which it is necessary to foresee." Explain what Bastiat meant with reference to the concept of holism described in the chapter.*

Bastiat essentially says that people tend to judge the whole by just a few of its parts. People often fail to take into consideration the "broader picture." An accurate assessment of globalization requires that we look at all the changes, direct and indirect, that the growth of international trade, international investment, and international migration cause throughout all economies of the world. Any partial view of globalization is destined to leave the wrong impression. You should discuss holism and its systemic and inter-disciplinary approaches to economic analysis. Also, heterodoxy and its explicit call for examining multiple paradigms should be discussed.

9. *Explain precisely how the "sociology of economics" leads to the conclusion that heterodox economics is less likely to generate biased conclusions than orthodox neoclassical economics. (Hint: review Bourdieu's arguments and concepts, and fit both descriptions of heterodox economics and neoclassical economics into Burdieu's framework for analyzing culture.)*

The answer to this question should be based on the section of the chapter entitled "A Sociological Justification for Heterodoxy." Heterodoxy is less likely to be constrained by a single culture, which can easily prevent the rigorous adherence to the scientific method.

10. *Review the 21 fundamental themes of heterodox economics. Are there additional ideas that do not fit neatly into the neoclassical paradigm and should, therefore, be added to the field of heterodox economics? Explain.*

This is an open-ended question. Feel free to add issues lying well outside the mainstream of economics; think outside the box!

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