

CHAPTER HIGHLIGHTS

The chapter provides the student an appreciation for the contribution of research to the general growth of our knowledge about accounting. It shows how accounting research affects the standard-setting process in financial accounting.

The chapter focuses on the roles of deductive and inductive reasoning and how they relate to financial accounting. It is also important to stress that these methods are complementary and not an either/or orientation. It is important to stress that empirical research generally looks at fairly small, manageable types of questions. It thus can provide input to the standard-setting process. Making accounting rules, however, must still be seen as a normative function. The chapter also stresses that empirical research cannot be value-free. Values are embedded in the questions that are asked and the parameters that are used in attempting to measure phenomena.

Given the rise of formal approaches to theory and a concern for the process of measurement discussed in Chapter 1, the question arises as to whether accounting is an art or a science. A science might be defined as a discipline or area where considerable measurement problems exist. In the physical and natural sciences, there should be a high degree of consensus among measurers. This will be less the case in the social sciences simply because of the variability of human behavior. Nevertheless, they should come under the domain of science. Accounting could certainly move closer to the science realm as a result of the rise of scientific method and the concern for measurement.

The chapter also briefly discusses accounting research directions or trends. These are expanded throughout the text. The chapter closes with a look at the question, stemming from Kuhn, concerning whether a “scientific revolution” is occurring in accounting. At this time, the answer appears to be a fairly clear “maybe.” The included PowerPoint, *revolutions and paradigms.ppt*, references an article from *The Wall Street Journal*, that suggests the beginnings of a paradigm shift.

QUESTIONS

Q-1	Do you think that the work of a policy-making organization such as the FASB or the SEC is normative (value-judgment oriented) or positive (oriented toward value-free rules)? Discuss.
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It is unquestionably normative because judgments must be made in accordance with objectives or other criteria. While a standard-setting group may attempt to be neutral, it usually must decide among different positions, each of which will have its adherents. A standard-setting organization may use empirical research (which attempts to be descriptive or positive) as part of its input into the standard-setting process. Ijiri used the term “policy science” to describe financial accounting.

Q-2	<p>An individual who was appraising accounting education had the following premises (assumptions):</p> <ul style="list-style-type: none">• Accounting professors used to do more consulting with accounting practitioners than they do today.• Accounting professors have become more interested in research that is abstract and not necessarily practical. <p>He, therefore, concluded that accounting students are not as well prepared to enter the accounting profession as they used to be. Which type of reasoning was the individual using? What is your assessment of his conclusion?</p>
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The individual used deductive reasoning. The conclusion was not warranted from the premises because accounting professors generally teach “what is” as opposed to what research may say or imply.

Q-3	<p>In 1936 the United States was still suffering from the Great Depression. During the presidential election campaign, an extensive survey of voter attitudes was undertaken to find out whether the public preferred the incumbent, Franklin Delano Roosevelt, or the challenger, Alf Landon. The sample was gathered randomly from telephone book listings throughout the country. A preference was found for Alf Landon; however, Roosevelt won re-election by a huge landslide. What type of research was being conducted? Why do you think it failed to make an accurate prediction?</p>
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The method employed is inductive (empirical). The research failed because in 1936 a representative sample could not be gathered solely from people who had telephones because large segments of the population did not have telephones. The magazine (The Literary Digest) in fact failed as a result of its prediction that Landon would win; Franklin Delano Roosevelt won in a landslide. Interestingly, at about the same time pundits predicted that a telephone in every U.S. home was an impossibility. The reason being that the female population was insufficient to run the manual switchboards.

Q-4	<p>In accounting, deductive approaches are generally normative. Why do you think this is the case?</p>
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As long as there is a value judgment or normative type of premise in the system, the results must be normative. If the premises (assumptions or postulates) are purely descriptive, it is highly likely that the conclusions derived from the system will be trivial. Therefore, the real issue is one of how acceptable any normative premises can be made.

Q-5	A frequent argument is that inductive reasoning is value-free because it simply investigates empirical evidence. Yet some charge that it is not value-free. What do you think is the basis for this charge?
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As long as there are choices to be made, then research cannot be value-free. The choice of what one examines (question A versus question B) entails a value judgment. Parameters used in the research require value judgments. Furthermore, assumptions that may not even be stated are evidence that value judgments are being employed (the assumption that economic systems tend to move toward equilibrium is a value judgment, for example).

Q-6	Several years ago an author stated that corporate income could be scientifically ascertained, but any type of adjustment for inflation would be pure folly because measurements would tend to become very subjective. Do you agree with the author's appraisal? Comment in detail.
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The question pertains to an actual article that appeared in the early 1950s. The word "scientifically" was not defined in the article, so it is difficult to know what the author meant. The word was, however, undoubtedly being used to create an impression. The author appeared to be willing to sacrifice more economic reality ("faithful representation," as it would now be called) because of a presumed lack of objectivity in measurement. The position was not unreasonable, but the real issues were hidden because of the way the author phrased his belief.

Q-7	Of the four disciplines in the following list, which do you think qualify as sciences and which do not? State your reasons very carefully. Law Medicine Cosmetology Accountancy
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Cosmetology (barbers and beauticians) is concerned with a relatively frivolous subject matter; hence, it should not qualify. While law uses a system of precedence and deductive reasoning, the judge (not to mention the jury) ultimately employs judgments in making decisions. The lawyers, of course, have vested interests. Measurement is not directly applied except in a crude ordinal fashion. As the chapter states, accounting is moving somewhat toward the realm of science. Policy-making in accounting may use the results of research, but it is not a scientific endeavor itself. Medicine might fall into the category of an "applied science," because the results of scientific endeavor are used for particular purposes. There is a fair analogy between accounting and medicine, but accounting is certainly far cruder at this time.

Q-8	<p>Several occupations within two of the aforementioned disciplines are listed here. Which do you think come closest to being scientific?</p> <p>Accounting researcher Chief accountant for an industrial firm Medical researcher Doctor (general practitioner)</p>
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The accounting researcher and the medical researcher obviously come closest to being scientists, insofar as their work should be value-free (though this is not totally possible). They should be using formal research techniques to attempt to shed light on unanswered questions. Significant measurement problems are also present in work of this sort. Other researchers should arrive with similar results when they employ the same methods the original researchers used. However, replications should more easily come up in medical science than in accounting, because accounting is a social science where measurement pertains to human beings and their actions, choices, and values, and disagreement at basic research levels tends to be present.

The chief accountant and the general practitioner are *using* or applying the results of science as opposed to being scientists themselves. As a result, they fall more into the line of being *professionals*. Furthermore, the chief accountant undoubtedly is not neutral in his work: he is concerned with making his firm look as good as possible. The doctor should be concerned with maximizing the health of his patients as opposed to maximizing his or her own wealth.

Q-9	What are some of the pitfalls of empirical research?
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There are many pitfalls. Sample size relative to the universe being examined should be large enough to draw an inference with minimal chance of an incorrect conclusion. The parameters selected should be reasonable: for example what do we mean by “large firms” and “small firms.” Does the evidence that we examine really pertain to the hypothesis selected? Thus the presumed relationship between general price level adjusted income and reported historical cost income may or may not indicate something relative to a firm’s self perception of whether it may be subject to anti-trust action or other types of pressure if it is deemed to be large. We should also be careful of data manipulation possibilities: Watts and Zimmerman themselves determined the general price level adjusted incomes of the firms examined. It goes without saying that appropriate statistical tests and methods should be used.

Q-10	If Watts and Zimmerman are correct that managers of very large firms oppose accounting standards that would raise their income and favor those that would lower it, what policy implications would this have for a standard-setting organization such as the FASB?
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Managers of very large firms might fear possibilities such as antitrust action, excess-profits taxes, and adverse public opinion, which could unfavorably affect sales and profits. These same possibilities could affect FASB’s deliberations. Since one of the hallmarks of FASB deliberations is due process—listening to those who would be affected by accounting standards—it would be useful to understand firms’ motivations. If the FASB knows a lobbying firm’s intentions, it helps the FASB maintain its neutrality.

Q-11	What is the major difference in orientation between positive accounting theory and more overtly normative theories, such as the valuation approaches discussed in Chapter 1?
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The valuation approaches in Chapter 1 can each be viewed as a system. The choice of a valuation system (replacement cost over exit values, for example) is based on the value judgments (no pun intended) of advocates. Positive accounting theorists are making implicit value judgments in their examination and analysis of evidence. The questions and issues to be examined involve value judgments, as does the evidence examined (responses to FASB exposure drafts, income of firms, security prices, how FASB members vote, etc.), and parameters and statistical methods utilized (confidence intervals, regression analysis, ANOVA, and MANOVA).

Q-12	For a discipline to become a science, the results of experiments and research must be exact. Do you agree with this statement? Discuss.
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Not necessarily. Science involves complicated questions of measurement. At other times, there may be disagreement relative to hypotheses. Nevertheless, science is an open process that uses agreed-upon methods of measurement, so that over the long run, agreement begins to appear in terms of measuring and interpreting phenomena. During the process of working out solutions to problems, strong disagreement does occur. On rare occasions, a scientific revolution may occur and questions are addressed in new and unique ways until general agreement once again occurs.

Q-13	Why, in practical terms, is it impossible to separate deductive and inductive approaches to theoretical reasoning?
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Inductive work usually contains basic assumptions that are accepted without any further questioning. Deductive work usually contains assumptions based upon real-world referents that have been subject to at least a crude form of induction. The methods are cooperative rather than exclusive relative to each other in their operations.

Q-14	What is the relationship among scientific method, accounting research, and accounting policy making?
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Accounting research is an important input to the accounting policy-making process. Most research today uses formal methods of deriving generalizations (deductive or inductive approaches). The scientific method is, therefore, a formalized means for carrying out research.

Q-15	What are the two principal underlying assumptions of agency theory (positive accounting research)? Critique their role in constructing a theory of accounting.
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The two principal assumptions are that individuals act in their own best interest and that the firm is the locus or nexus of many competing types of contractual relationships. The former is virtually true by definition while the latter (which is, of course, dependent upon the former) is an

interesting assumption that is the cornerstone of the agency theory literature in accounting. There can be other views of the enterprise, such as Chambers' coalition view. This points out, once again, that positive research simply cannot shake off its normative underpinnings.

Q-16	The "uncertainty principle" of the famous physicist, Werner Heisenberg, states that physical phenomena cannot be precisely measured because the very act of measuring affects the phenomenon being measured. Which of the directions of accounting research discussed in the chapter does Heisenberg's uncertainty principle relate to most closely?
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The "uncertainty principle" clearly relates most closely to critical accounting. Critical accounting believes that by investigating a topic we literally help to shape the reality that we are investigating. It argues that there is an "observer effect." Other research approaches see a "reality" that investigators do not directly affect.

Q-17	Why do you think the term "deprival value" was used to name a specific type of replacement cost?
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Deprival value tries literally to measure the cost to the firm of not having (being deprived of) the particular asset.

Q-18	Of the following decision-model advocates discussed in the chapter (Chambers, Sterling, Solomons, Bell, and Ijiri), which one stands out as most unlike the others?
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Ijiri stands out because he is an advocate of historical cost adjusted for the change in the general price level. He chooses this approach because the prime purpose of financial statements, as he argues, is accountability. The other individuals advocate various types of current value systems.

Q-19	What is the difference between "accounting theory" and "accounting research?"
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Accounting research is an active process, the results of which can add to the "store" of accounting theory. This difference is very closely related to the economic concepts of "flows" (accounting research) and "stocks" (accounting theory).

Q-20	Why does the decision-model orientation to research accord more closely with the standard-setting function than any of the other research directions?
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The decision-model orientation attempts to prescribe valuation approaches on a "global" basis: exit value or entry value for example. If either of these approaches were instituted, the FASB would be involved with deriving rules for the selected valuation method. None of the other research approaches gets this close to the standard-setting process.

Q-21	If there has been a paradigm shift (scientific revolution) in accounting research, but not in accounting practice, what may this signify?
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It may indicate that accounting research and accounting practice are not in synchronization with each other. In the move toward empirical research in accounting (a paradigm shift in accounting research), one research problem which may have been overemphasized were studies of market efficiency. Practitioners (including financial analysts) were not carried away by this research (Chapter 8). In our opinion, practitioners were largely correct in this and other areas of research. However, research and practice may now be becoming more attuned to each other. For example, research on earnings management (chapter 12) may become very useful for standard-setters.

Q-22	In accounting behavioral research, student subjects have been frequently used as proxies for real-world decision makers. Does this lead to any potential problems?
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Using student subjects as proxies for real-world decision makers may lead to findings that may not generalize to the population. The students may have different values, analytical abilities, priorities, and life experiences that distinguish them from the real-world individuals making decisions. This is always a consideration when designing research projects and is usually identified as a limitation at article-end.

Q-23	Why do you think that <i>ethnographic research</i> (footnote 65) would be difficult to apply to organizations such as the SEC and FASB?
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Ethnography is a social science research method. Data collection consists of interviews, observations, and document reviews over an extended period of time, usually years or perhaps decades. Its roots are in anthropology and the social sciences, so an ethnography of the FASB or SEC would be akin to living with the natives. The synthesis of data collected result in a descriptive narrative, a portrait of the subject. In most business programs the current tenure paradigm is not compatible with the time required to gather data for an ethnography. The time required to produce high quality case studies is likely to be as close to an ethnography that we can expect.

CASES, PROBLEMS, AND WRITING ASSIGNMENTS

1.	Agency theory takes the view that the corporation is the locus or nexus of many competing and conflicting interests. List as many of these conflicting groups as you can and discuss in detail the nature of their conflicts with other groups.
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Among the conflicting groups would be management, auditors, shareholders, creditors, labor, and government.

Management desires to maximize its own income through bonus arrangements (which may mean that cash flows are diverted from shareholders) and will probably desire lower reported income if it fears government antitrust action, excess-profits taxes, or simply adverse public opinion. Shareholders generally want high cash dividends and price appreciation on their shares (the latter is at least perceived to stem from higher reported income).

Auditors want to maximize their income and minimize their risk. They prefer to avoid what might be perceived to be subjective judgments, hence, they have not favored rendering opinions on earnings forecasts, even if this might be very beneficial to users. They also prefer detailed standards in order to avoid pressure from management, which wants its own interpretation of standards. Creditors desire protection to maximize the probability of receiving interest and repayment of principal. Therefore, they desire protection from the possibility of shareholders “stripping” the firm through excessive dividends. This is often done by means of debt covenants in bond contracts, which may prevent payment of dividends if they are violated (maintenance of a maximum debt-to-equity ratio, for example). Management does not want bond covenants violated because of the potential adverse effect upon security prices.

Labor wants to maximize its wage return relative to the previous three groups. Government would certainly like to maximize tax collections from the other groups without creating unrest, minimize labor-management turmoil, and minimize harmful business actions such as polluting the environment.

2.	Using the article by Colin Lyas (“Philosophers and Accountants”) in <i>Philosophy</i> (January 1984, pp. 99–110), discuss and compare Sterling’s scientific approach to standard setting with the judicial or jurisprudential approach of Stamp.
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Lyas’s article is not particularly difficult to understand and dovetails neatly with the discussion in the chapter of the various directions in accounting research. Notice also that Lyas immediately refers to the public misperception of accounting as unambiguously objective and clear-cut in a similar fashion to the opening paragraph of Chapter 1 of this text.

Lyas sees Sterling as being in the “objectivist” school, whereby values exist separate and apart from those who are measuring them. From this viewpoint, Sterling would be in the same boat as agency theorists, a prospect that would not particularly please him. Lyas also sees Sterling’s position in favor of exit values as a “judgment” rather than a scientific hypothesis. Perhaps the key point is why exit values take precedence over replacement cost or entry values and how would we decide on whether the numbers that we do generate have a high enough degree of

verifiability, as discussed in Chapter 1. Perhaps Sterling's answer to which system to choose lies in his article entitled "Relevant Financial Reporting in an Age of Price Changes," *Journal of Accountancy*, February 1975, pp. 42-51.

Lyas raises basic questions such as who should have access to what information, a relativist orientation which would, to this extent at least, put Stamp in the camp of the critical accountants. Therefore, given values that are tentative and questions of who should have access to what information, Lyas is much more comfortable with Stamp's judgmental approach, which Lyas sees as being very compatible with a legalistic approach. It should also be mentioned that Stamp very definitely has a broad accountability approach to accounting information: many groups have a stake in accounting information, not just investors and creditors. Finally, the legalist approach of Stamp would not, in Lyas's (and Stamp's) view, lead to a total degree of arbitrariness in choice among accounting methods and other financial reporting.

CRITICAL THINKING AND ANALYSIS

1.	How can accounting move more toward becoming a science rather than an art? Discuss.
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One method would be to eliminate arbitrary choices among accounting methods in generally similar event situations (LIFO versus FIFO although income taxes are a problem here, different depreciation methods, and moving towards principles based accounting standards such as requiring all long-term leases to be capitalized).

Measuring real phenomena would help move accounting towards being a science. Even if current value systems might not be easily implemented, there are still factors where more realistic measures might be used. For example, with troubled debt restructuring, we still use the historical rate for discounting rather than the current rate. The latter should be able to be estimated with a fairly high degree of accuracy. Hence we gain usefulness with only a very small "giving up" of verifiability, a fairly clear-cut trade-off. To accomplish a movement toward measuring real phenomena, we may have to let go of conservatism.

CHAPTER 2

ACCOUNTING THEORY AND RESEARCH

LECTURE

Scientific Method

- Deductive
- Inductive

Art or Science?

A Scientific Revolution in Accounting

SCIENTIFIC METHOD

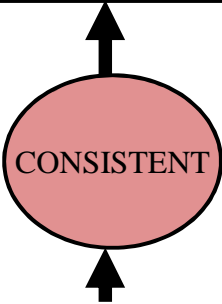
Refers to the formal procedures used to derive the laws and principles that govern the hard scientific disciplines

- Chemistry
- Physics
- Biology

Develops theory

- Explains observations
- Makes predictions

THEORY



TWO TYPES OF LOGIC

Deductive Reasoning

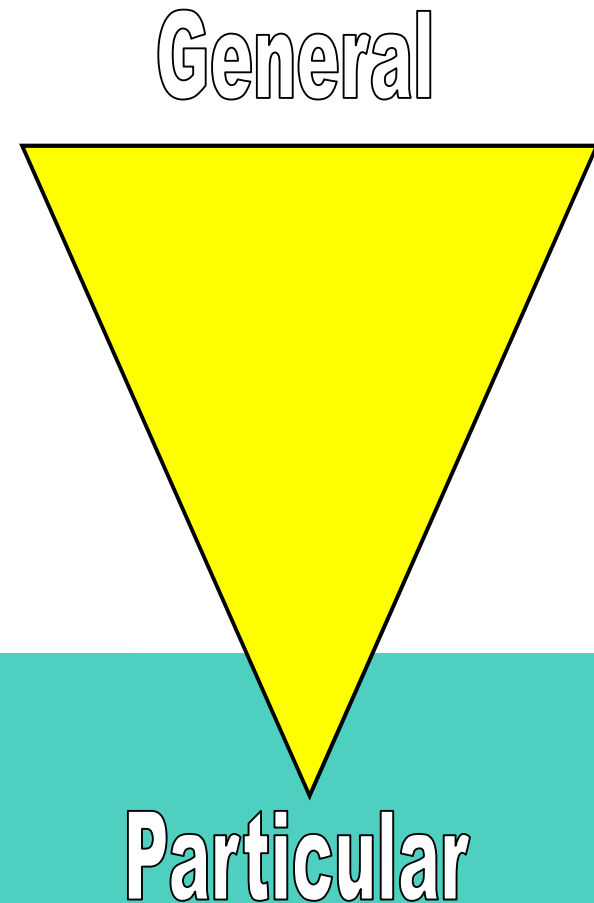
Inductive Reasoning

DEDUCTIVE REASONING

Moves from the general to the particular

Formalized axioms may be used to derive various rules of accounting

Limited use to date

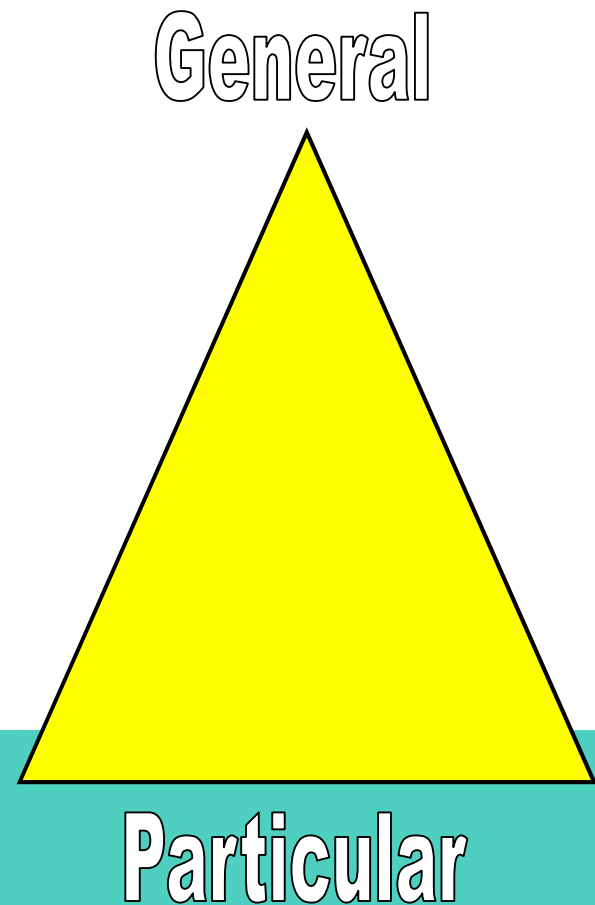


INDUCTIVE REASONING

Moves from the particular to the general

Examines sample data to make inferences about a population

More frequently used to date



WHY WERE CERTAIN SPECIFIC ACCOUNTING ALTERNATIVES CHOSEN?

Early inductive research ignored this question.

Positive Accounting Research focuses on understanding why alternative accounting alternatives are chosen

- Describes “what is”
- Does not say what “should be”

IN ADDITION TO THE DEDUCTIVE–INDUCTIVE CLASSIFICATIONS OF THEORIES, THERE ARE . . .

Normative (prescriptive) theories

Descriptive theories

Global theories

Particularistic theories

NORMATIVE (PRESCRIPTIVE) THEORIES

Tell us how the way things should be, not how they are. This is the exact opposite of descriptive theories.

Deductive systems are usually normative.

DESCRIPTIVE THEORIES

Tell us how things are, not how they should be. This is the exact opposite of normative theories.

Inductive systems are usually descriptive.

GLOBAL AND PARTICULARISTIC THEORIES

Deductive theories are sometimes global (macro) in content.

Inductive theories are usually particularistic (micro) in content.

- Inductive systems, because they are grounded in real-world phenomena, can realistically focus on only a small part of the relevant environment.
- Inductive research tends to examine rather narrowly defined questions and problems.

ACCOUNTING: ART OR SCIENCE?

Sterling (1975, 1979) points out that the arts rely heavily on the personal interpretations of practitioners.

Science relies on rigorously specified measurement procedures.

Where does accounting fit?

DIRECTIONS IN ACCOUNTING RESEARCH

Decision-Model Approach

Capital Market Research

Behavioral Research

Agency Theory

Information Economics

Critical Accounting

THE DECISION-MODEL APPROACH

Asks what information is needed for making decisions

Does not ask what information users want

Orientation is normative and deductive

CAPITAL MARKET RESEARCH

Efficient-Markets Hypothesis: Market prices reflect fully all publicly available information

Since information is rapidly reflected in security prices, there has been demand for increased accounting disclosure.

Significant body of research exists

BEHAVIORAL RESEARCH

Focus is on how users of accounting information make decisions and what information they need

Is descriptive or positive in its approach

Has shown gaps between the normative models and what is actually done by the users

AGENCY THEORY (ALSO CALLED CONTRACTING THEORY)

Individuals act in best self-interest

Enterprise is the intersection point for many contractual-type relationships

- Management
- Owners
- Creditors
- Government

Concerned with costs of monitoring and enforcing relations among the various groups

INFORMATION ECONOMICS

Focuses on the cost of producing accounting information

Is analytical/deductive in nature

CRITICAL ACCOUNTING

Based on two areas of accounting developed in the 1960s

- Public interest accounting
- Social accounting

Views accounting as having a key role in adjudicating conflicts between the corporation and social constituencies

A SCIENTIFIC REVOLUTION IN ACCOUNTING

A paradigm is a shared problem-solving view among members of a science or discipline.

In accounting, the shared paradigm has been historical costing, which is based on the concepts of realization and matching and other important tenets, such as conservatism, going concern, accounting entity, and time period.

There appears to be an evolutionary movement toward a wider use of current values.

LECTURE RECAP

Scientific Method

- Deductive
- Inductive

Art or Science?

A Scientific Revolution in Accounting

“Education’s purpose is to replace an empty mind with an open one.”

Malcom Forbes (1919–1990)