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***Social Science Methods
in Accounting Research***

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Overview

- Scientific Laws
- Some Key Themes of Contemporary Philosophy of Science
- Some Philosophical 'isms'
- Some Questions to Ponder
- Causes and Conditions
- Methodology in Science
- The Reduction of Sciences
- Philosophy of Social Science
- Questions
- Necessary Truths
- Accounting Research
- Theories, Hypotheses and Models

Scientific Laws

- Laws as regularities
 - * Humean approach
- Laws as characterizations of powers or dispositions
 - * Ontological reluctance?
- Non-causal laws
 - * Thermodynamics

Key Themes of Contemporary Philosophy of Science

- Theory-ladenness of Observations
- Incommensurability of Theories
- Under-determination of Theory by Data:
Duhem-Quine Thesis
- Positivism
- Falsifiability (Popper)
- Paradigm Shifts (Kuhn)

Some Philosophical 'isms'

- Dualism
 - * The physical and the mental are two distinct categories of reality
- Realism
 - * There is an external world independent of mind to which our true statements correspond
- Monism
 - * There is only one basic category of reality
- Idealism
 - * All reality is in the mind
- Materialism
 - * All reality is material in character
- Immaterialism
 - * Objects are mere collections of qualities

Some Philosophical 'isms'

- Phenomenalism
 - * Physical objects should be analyzed in terms of sensations or perceptions
- Atomism
 - * The basic components of reality are atoms
- Platonism
 - * Forms or Ideas exist independently of human knowledge of them
- Nominalism
 - * Only particulars are real (not universals)
- Reductionism
 - * Any claim of the form “All A’s merely B’s”
- Constructivism
 - * Things ordinarily regarded as independent of human thought are really the product of human thinking

Some Philosophical 'isms'

- Skepticism
 - * Humans cannot attain knowledge
- Rationalism
 - * Reason is the source of all knowledge
- Empiricism
 - * Experience is the source of all knowledge
- Instrumentalism
 - * The purpose of a scientific theory is prediction
- Scientific realism
 - * Entities required by successful scientific theories are real and the theories are true
- Naïve realism
 - * The world is as it appears to our senses

Some Philosophical 'isms'

■ Foundationalism

- * Knowledge rests on a small set of certain truths

■ Positivism

- * A commitment to (empirical) natural science as the best – or only – means of attaining genuine knowledge
- * Came to the fore in the work of Auguste Comte
- * Frequently qualified in some way; e.g., Logical Positivism

Some Questions to Ponder

- What is a scientific law?
- What makes it a *law*?
- Who or what should obey scientific laws, and why?
- Does social science have scientific laws too?
- Is “Time pressure causes auditors to make more mistaken decisions” a *law*?
- What is a cause?

Causes and Conditions

- A cause is a necessary and sufficient preceding condition
 - * What does this mean?
 - * Why is it inadequate?
- What are:
 - * Singular causal statements
 - * General causal statements

Causes and Conditions

■ INUS Conditions

- * Insufficient but necessary parts of unnecessary but sufficient conditions
- * A is an INUS condition for P iff, for some X and Y, (AX or Y) is necessary and sufficient for P, A is not sufficient for P and X is not sufficient for P
- * Note that this does not say that A cannot be necessary (or unique)

Causes and Conditions

■ INUS conditions

- * A is at least an INUS condition iff A is an INUS condition, or AX is a minimal sufficient condition, or A is a minimal sufficient condition (and so is necessary and sufficient)

Causes and Conditions

■ 'A caused P' implies:

- * A is at least an INUS condition for P
- * A happened
- * X (if any) happened
- * No Y not containing A happened

Causes and Conditions

■ Causal fields

- * Region of application of a causal statement

- 'A caused P' expands to 'A caused P in relation to field F' and the implications above are predicated upon the presence of whatever features characterize F
- Use of causal fields avoids infinitely complex sets of conditions

Causes and Conditions

- The analysis of general causal statements is more complex
 - * Some are similar to singular statements, but we leave the details of X or Y unspecified
 - * Some are implicit statements of functional dependency (stronger than necessary and sufficient conditions)
 - * Some pick out necessary conditions (yellow fever virus) – ‘the cause’

Causes and Conditions

■ Necessity and Sufficiency

- * *S is a necessary and sufficient condition for T*
- * *Universal propositions*
 - ◆ All T are S
 - ◆ All S are T
- * *Not much use for singular causal statements*
 - ◆ Counterfactual conditions
 - ◆ Factual conditions
 - ◆ Telescoped arguments

Causes and Conditions

■ The Direction of Causation

- * Needed to distinguish A causing P from P causing A
- * Causal priority
- * Not identical with temporal priority
- * Linked with controllability?
- * Direction of explanation?

Causes and Conditions

■ Alternative approaches

- * No laws
- * Agency
- * Probability
- * Counterfactuals
- * Causation is real, and does not require a reductionist analysis

Causes and Conditions

■ Alternative approaches

- * Causes are fundamental
- * Causes are directly perceived
- * Salmon's causal forks

■ So:

- * Which is more basic: causal laws or causal relations
- * Are causes reducible?

Methodology in Science

- A review of by now familiar ideas
- The Problem of Induction
 - * Inductive support is circular
 - * Probability does not solve this on its own
 - * Falsification as an alternative
 - ◆ Has its own shortcomings
 - * Induction is rational by definition?
 - * Reliabilist defense?
 - ◆ Truth preserving but not necessarily truth preserving

Methodology in Science

■ The Problem of Induction

* Goodman's New Problem

◆ Projectible predicates

➔ Entrenched in our inductive practices

Methodology in Science

■ Laws of Nature

- * Humean analysis
- * Counterfactual conditionals
- * Wide-ranging generalizations
- * Inductively supported by instances
- * Systematization
- * Non-Humean alternative
 - ◆ Necessitating relationships
 - ◆ Metaphysical necessity v. epistemological a priority

Methodology in Science

- Instrumentalism v. realism
- Under-determination of Theory by Data
- The Pessimistic Meta-Induction
- Confirmation and Probability
 - * The Raven Paradox
 - * The Tacking Paradox

Methodology in Science

■ Explanation

- * The Covering Law Model
- * Are Explanations and Predictions different?
- * The Direction of Causation
- * Are all explanations of singular events causal?

The Reduction of Sciences

Physics →

Chemistry →

Biology →?

Psychology →?

Social Sciences

What is 'special' about people?

The Philosophy of Social Science

- Do social sciences, and should they, use the same methods as natural sciences?
- Naturalism
 - * Yes!
 - * But the task is to explain human action
 - * So we need a causal law to the effect that we always do what we believe will efficiently lead to what we desire
 - * Intentionality

The Philosophy of Social Science

■ Anti-naturalism

- * Rules not regularities
- * Folk psychology

■ Eliminativism

- * Aggregate generalizations about large-scale processes, agnostic on their psychological foundations

■ Teleology and function

■ Reflexive knowledge

The Philosophy of Social Science

- Explanation v. understanding
- Explanation
 - * Holism v. individualism
 - * Determinism
 - * Hypothetico-deductive method
 - * Explanations do not tell us *why*
 - ◆ Too sketchy
 - ◆ No causes
 - ◆ Not interpretive

The Philosophy of Social Science

■ Understanding

- * Interpretive
- * Double hermeneutic
- * Identifying intentions
 - ◆ Empathy
 - ◆ Explanatory understanding
 - ◆ Public meaning
 - ➔ Games
 - ◆ Moral conduct
 - ◆ Human freedom

The Philosophy of Social Science

■ Explanation and Understanding

* Rationality

- ◆ Complete consistent preferences
- ◆ Perfect information
- ◆ Perfect powers of computation
- ◆ Utility

* Coordination

* Cooperation

* Relativism

The Philosophy of Social Science

- Different concepts
- Different generalizations (transparency)
- Individualism v. holism
 - * Conceptual
 - * Metaphysical
 - * Explanatory
 - * (Ethical)
 - * Related but not equivalent

The Philosophy of Social Science

■ Conceptual individualism

- * All social concepts can be translated without remainder into psychological concepts

■ Metaphysical individualism

- * Social phenomena are merely (sets of) individuals in certain psychological states
 - ◆ Mereology

■ Explanatory individualism

- * Every explanatory chain containing a social fact at some point (backwards) becomes social-fact free and remains so

The Philosophy of Social Science

- Causal and non-causal explanations
 - * Do they apply equally to social science?
 - * Functional explanation
 - * Structural explanation
- Action
 - * Austere theories
 - * Prolific theories
- Are basic actions transparent?

The Philosophy of Social Science

■ Action explanations

* What kind of explanations are they?

- ◆ Causal
- ◆ Interpretive / hermeneutic
- ◆ 'Weakness of will'?

■ Norms, rules, conventions, tradition

■ Rationality

■ Social relativism

■ Methodology: paradigms and programmes

■ Values in social science

The Philosophy of Social Science

■ Special Sciences

- * Are special sciences fully reducible?
- * What is the unity of science and how can we account for it? How is it related to the generality of physics?
- * Bridge laws and physical laws
- * “There are special sciences not because of the nature of our epistemic relation to the world, but because of the way the world is put together: not all the kinds (not all the classes of things and events about which there are important, counterfactual supporting generalizations to make) are, or correspond to, physical kinds.” (Jerry Fodor)

Questions

- Papineau and the Raven Paradox (Elaine)
- The Tacking Paradox (Silvia)
- Coincidence in Gettier counterexamples
- Emergence, supervenience and Agency Theory (Elaine)
- Nonredundant items in INUS (Dave)
- Reliabilist Induction (Dave)
- Under-determination of Theory (Dave)
- Holism and evolution (Dave)

Accounting Research

- Is the primary goal of Accounting Research explanation or prediction?
- Are these the only two important choices?
 - * If so, why?
 - * If not, what alternatives matter?

Theories, Hypotheses and Models

- What is a theory / what are theories?
- What is theory?
- What are hypotheses?
- What are models?
- What do we test empirically?
- How are they related?
- What is the scientific method?