OBJECTIVE

Develop Anderson’s foundation for critical relativism.
AGENDA

- How are concepts used in the social sciences?
- Kuhn’s descriptive philosophy of science
- Laudan’s critique of Kuhn
- Wittgenstein and Anderson’s critical relativism
WHAT DO CONCEPTS REPRESENT?
There are two general approaches to the use of concepts (Blumer 1969, *Symbolic Interactionism: Perspective and Method*, pgs. 147-148):

- **Definitive**
- **Sensitizing**
DEFINITIVE


- Refers precisely to what is common to a class of objects; a clear statement in terms of attributes or fixed benchmarks.

- The key is precise articulation; conceptual understanding does not change across contexts.
Used when precise definition is needed for operationalization and measurement.
**Square:** a closed figure, four sides, sides equal in length, and four equal angles.
• Used in math and the natural sciences;

• Social sciences emulate the hard sciences.
• Social sciences really struggle with this.

• There are not 400 different definitions for “square” but there are for “attitude.”
TWO ASSUMPTIONS:

1. **Obdurate reality**—a clear knowable reality “out there” that is empirically verifiable.

2. **Correspondence theory of truth**—concepts mirror obdurate reality.
The normative view of science (how science “should” operate) argues that science is a march toward truth (the mirror gets progressively clearer).
Think of the concept “atom” -- the smallest component of an element having the chemical properties of the element, consisting of a nucleus containing combinations of neutrons and protons and one or more electrons bound to the nucleus by electrical attraction; the number of protons determines the identity of the element.
HERE CONCEPTS REPRESENT THINGS IN THE WORLD.
SENSITIZING

• Referred to as the *prototypical theory of concepts* (Ozanne and Murray 1994, *Marketing Education Review*, pgs. 28-33).

• Provides a general sense of reference and guidance in approaching exploration and discovery.

• Whereas definitive concepts provide prescriptions of what to see, sensitizing concepts suggest directions along which to look.
Used when precise definition may not work or may be limiting (complex concepts where it is not clear what they correspond to).
SOCIAL STRUCTURE:

The stable pattern of social relationships that exists within a particular group; provides a social web of support that connects each of us to the larger society.
LANGUAGE GAME

Social structure

- society
- stable
- pattern
- social
- relationships
- Well-being
- survival
- individuals
- web
- connects
- family
- survival
- society
- stable
- pattern
- social
- relationships
- Well-being
- survival
- individuals
- web
- connects
- family
• Social sciences also really struggle with this.

• Often encouraged or taught to use a definitive approach.
TWO ASSUMPTIONS:

1. *Linguistic reality*—refers to the contextual embeddedness of knowledge; it is the language itself that creates meaning and understanding.

2. *Coherence theory of interpretation*—does the concept cohere to other concepts in the language game.
HERE CONCEPTS REPRESENT WEBS OF SIGNIFICATION.
Kuhn’s paradigm of paradigms
BACKGROUND

• Born in 1922, completed a Ph.D. in physics from Harvard in 1949, taught a course in the history of science at Harvard from 1948 to 1956.

• Taught at UC-Berkeley, Princeton, and MIT in the history and philosophy departments.

• While at Berkeley he wrote his most influential book: The Structure of Scientific Revolutions (1962).

• Died in 1996.
Kuhn was a historian and believed that the way scientists describe their use of science is largely a rational reconstruction of the way science ought to be done.

It is in this sense that he was reacting to the normative view of science.
NORMATIVE VERSUS DESCRIPTIVE
• **Communalism**—the common ownership of scientific discoveries.

• **Universalism**—according to which claims to truth are evaluated in terms of universal or impersonal criteria.

• **Disinterestedness**—according to which scientists are rewarded for acting in ways that outwardly appear to be selfless.

• **Organized skepticism**—all ideas must be tested and are subject to rigorous, structured community scrutiny.
By following these norms the scientific community creates a transparent openness, which ultimately enables scientific work to be cumulative, progressing toward knowledge claims that have ever greater veracity.
Kuhn was asking the question, “Why not describe the way science is actually done, warts and all?”
• By saying this, he in no way wanted to devalorize science.

• Instead, he was thinking that if we describe the actual day-to-day processes of science, we might better understand it, and ultimately do it better.
The way science is done should be an empirical question.

How does the scientific community solve problems? How are discoveries made? How do scientists work together day-to-day?

Kuhn wanted to understand the whole process; taking into account that scientists are human, working in a cultural context, struggling to be successful, and managing careers.
FAMOUS FOR:

1. Incommensurability
2. Normal science
3. Paradigm shift
There are no universal claims we can now make which will resolve debates about aims.

Methodological debates can be resolved by selecting a common aim.

Theoretical debates can be resolved by selecting a common method.
These ideas set the stage for his descriptive theory of science, beginning with the concept “paradigm.”
PARADIGM

- Object of consensus
- Shared habits
- World view
- Language game
- The optic or lens
- Tool of investigation
NORMAL SCIENCE

• The slow articulation of the paradigm.

• Jigsaw puzzles are meant to be solved, here we have model problems and model solutions.

• Dogmatic in the sense that opinions become settled or a system of principles are authoritatively laid down.

• “This is the way we do things…”

• “First, find a gap in the literature…”
Under conditions of normal science researchers agree on foundational issues such as:

- The social context of testing theory
- The important concepts
- Key variables
- Measurement issues and operationalization
- Approach to analysis
- The premier journals
- The leaders of the field
- The format and structure of an article
- Together, they talk the talk and walk the walk
Go to the same conferences, organize the same types of studies, work with the same people from the same schools, tell your doctoral students the same “meaningful” stories, keep in touch with email...

One learns the foundational issues from paradigm exemplars.
ANOMALIES

• Kuhn believed that within any single discipline, there is usually a dominant paradigm.

• Problems arise for the dominant paradigm when things that are important to the paradigm can not be explained.
• At first, researchers will agree on ad hoc modifications of the current paradigm, which will explain away the anomaly.

• Or they may blame the initial conditions of data collection, the social context of the test, or the organization of the research (assuming that the theory must still be true).
CRISIS AND IDIOSYNCRASIES

- Eventually, anomalies start to swarm the paradigm, weakening it and leading to crisis.

- The dominant paradigm begins to lose legitimacy, it becomes decentered.
• A pre-paradigmatic phase begins where creative individuals propose original ideas. Here, innovators are marketing their approaches in a struggle to gain converts.

• Many of these ideas may lead to the construction of a new paradigm.
PARADIGM SHIFT

• The paradigm that emerges as dominant should be able to explain everything the previous paradigm could explain, plus the anomalies.

• However, this is not always the case, marketing plays an important role.

• Once young researchers begin to shift to the new paradigm (for all kinds of reasons) the approach gains momentum.
Return to normal science.
dogmatic

idiosyncratic
OUT-KUHNING KUHN!
SCIENCE AND VALUES

THE AIMS OF SCIENCE AND THEIR ROLE IN SCIENTIFIC DEBATE

LARRY LAUDAN
In *Science and Values*, Larry Laudan identifies a number of anomalies in Kuhn’s paradigm of paradigms.

These include:

- Science is not hierarchical.
- There is no pre-paradigmatic phase for most fields.
- Most fields do not have just one dominant paradigm.
- Fields have multiple paradigms that may co-exist and tolerate each other, even argue with each other, over long periods of time.
- There are ways of criticizing aims leading to new approaches.
BACKGROUND

- B.A. in physics, University of Kansas, 1962
- M.A. in philosophy, Princeton, 1964
- Ph.D. in philosophy, Princeton, 1965
- Professor Laudan has taught all over the world
- Professor of Philosophy at Virginia Tech 1981-1987
INCOMMENSURABILITY ASSUMES A HIERARCHICAL VIEW OF SCIENCE:

- There are no universal claims we can now make which will resolve debates about aims.
- Methodological debates can be resolved by selecting a common aim.
- Theoretical debates can be resolved by selecting a common method.
THE RETICULATED MODEL OF SCIENTIFIC RATIONALITY
“Where the reticulated picture differs most fundamentally from the hierarchical one is the insistence that there is a complex process of mutual adjustment and mutual justification going on among all three levels of scientific commitment” (Laudan 1984, p. 62)
The triadic network of justification suggests that aims, methods, and theories are intertwined in relations of mutual dependency.
Self report techniques

Information processing models

Understand mental process
Observation

Respondent and operant conditioning

Behavior modification
Ethnography

Consumer culture theory (CCT)

Understand acculturation
There are no paradigm shifts from this perspective; there is only the gradual emergence of new research traditions.
“To understand a word or concept, it must be set in its linguistic context, and it must always be remembered that every word may figure in many different contexts. Words only have meaning, then, within language-games, within modes of human activity, governed by systems of rules. The language-game is the whole, consisting of language and the actions into which it is woven. A word or a concept, in short, is not a picture of anything. It has no fixed meaning.”
PARADIGMS OR RESEARCH TRADITIONS

• Are language-games.
• Are held together with words, think of coherence versus correspondence.
• May be unreflected.
• Are learned through a socialization process by working with paradigm exemplars.
• Getting a Ph.D. is learning the language-games so that you can play.
THIS MEANS...

- Language-games are, at least in part, taken for granted.
- Similar to any other custom or tradition.
- The way we investigate phenomena may be the result of convention rather than logic, philosophy, or scientific justifications.
Science is a cultural process.
SO WE NOW HAVE ALL FOUR PIECES OF THE PUZZLE.
If the discourses or language-games that allow researchers to interpret reality are unreflected or presuppositional, then we need to reflect deeply on what they are and make them explicit. Only then can we be hard-headed in our research. We should excavate our deep-seated language games.
“A critical relativist demands to know a program’s methodological, ontological, metaphysical, and axiological commitments before he or she is willing to grant epistemic authority to its knowledge products. Most importantly, critical relativists want to know a program’s realizable cognitive (and social) aims before they are willing to give it serious consideration. Different aims may require very different programs of research.”
IN CONCLUSION...
SCIENCE IS A CULTURAL PROCESS:

• There is no true or correct perspective; commit to that approach that is most interesting to you and live it to the limit.

• Getting a Ph.D. is a socialization process, learning the language-games, customs, traditions, and practices of your field.

• It is important to work with paradigm exemplars and slowly become integrated into the appropriate social network.
SCIENCE IS A POWERFUL METHOD:

• Research traditions as reticulated models of aims, theories, and methods allow us to investigate phenomena in amazing detail.

• Reflect carefully on your assumptions, in what ways are your aims, methods, and theories working together in consistent ways to help you solve problems.

• Always be able to justify your choice of aim, theory, and method. All of your choices should be defendable within the context of your assumptions.