Friday May 13, 2011 Schedule for the Day

Am: Critical Reasoning

-- Comment's on Friday's Assignment

--Discussion of Today's Assignment

--Workshop on new material:

Pm: Continuation of Critical Reasoning workshop if necessary

Idea Fair and Preliminary Group Formation for Critical Exchange

Revised Schedule – changes in red—also printed in CR WS 7-1 5-13-11 (Today's work sheet)

WK 7 May 10 May 13	Am SR: Arguments from Controlled Experiments (Read: C&P Ch 9 to p 260.) Video: Prisoners of Silence Pm **ER: Virtue Ethics II : (Read handout on Virtue Ethics**	Am: CR :Explanation and Theories (Ch. 10) Pm More Explanation and Theories Idea Fair for Critical Exchange Topics
WK 8 May 17 May 20	Am Review of Theories Assessing Intelligent Design Read: Handouts Pm ER: A satisfactory moral theory? (Read: R&R Ch 13, handout on Deontology and Consequentialism)	Am: CR: Non-deductive arguments and Six Step procedure (Read: C&P Ch. 9 from p. 260 to end & Ch. 11) Pm ER: **Assessing Moral Arguments Read Handout**
WK 9 May 24 May 27	Am CR: Experts and You (Read: C&P Ch 12) Pm **ER: Ethical Reasoning and You**	Am Review for Exam II, **Take Home portion of Ethics exam Due** Pm Critical Exchange Preparation
WK 10 May 31 June 3	Am Exam II **plus Makeup exam** Pm Critical Exchange preparation	Critical Exchange: Portfolio Due

Discussion of Chapter 9 Exercise 9.1 #2,#4,#6,#8,#10

Indicate whether these passages contain a faulty move from correlation to cause. If so, state your criticism. If you are claiming that a correlation might be due to an X-factor, say what this X-factor might be, and explain how it could account for the correlation.

2. There is a correlation between heavy consumption of coffee and heart attacks. So coffee drinking causes heart attacks.

Argument in "standard form" for correlation to cause—Not part of exercise

(1) There is a correlation between heavy consumption of coffee and heart attacks

(likely) Heavy consumption of coffee causes heart attacks

Both heavy consumption of coffee and heart attacks might be joint effects of the same underlying cause—for example, a compulsive, hard-driving personality.

4. There is a significant correlation between going to the hospital and dying, so hospitals are important causal factors in the occurrence of deaths.

Argument in "standard form" for correlation to cause—Not part of exercise

(1) There is a correlation between going to the hospital and dying

(likely) Going to the hospital causes dealth.

Going to the hospital and dying have an underlying cause—namely, some disease or injury that might account for both. There are, however, a variety of hospital-contracted infections that could in fact cause an elevated death rate for certain classes of patients.

6. **An article in the *Seattle Times* (April 24, 2003) cites a study by the American Cancer Society of more than 900,000 people nationwide for 16 years. The article says that the study provided "the first definitive understanding of the role of obesity in causing cancer." It indicated that men in the highest weight category (a Body Mass Index—BMI—score above 30) were 52 percent more likely to die from cancer than those of normal weight (BMI 18.5–24.9), and women in the highest groups were 62 percent more likely to die from cancer.**

Argument in "standard form" for correlation to cause—Not part of exercise

(1) There is a correlation between obesity and cancer

(likely) Obesity causes cancer.

Given the variety of studies underlying the correlation, the move to causation is probably justified, though it possible that at least for some types of cancer, obesity does not directly cause the cancer, but prevents early diagnosis by making it harder for patients to discover lumps or makes patients less likely to go to their doctor because they expect adverse comment about their obesity.

8. **A survey by the Sleep Disorder Clinic of the VA Hospital in La Jolla, California (involving more than 1 million people) revealed that people who sleep more than ten hours a night have a death rate 80 percent higher than those who sleep only seven or eight hours. Men who sleep less than four hours a night have a death rate 180 percent higher, and women with less sleep have a rate 40 percent higher. This might be taken as indicating that too much and too little sleep cause death.**

Argument in "standard form" for correlation to cause—Not part of exercise

(1) There is a correlation between sleeping too little or too long and an increased death rate.

(likely) Sleeping too little or too long causes an increased death rate

People might stay up late engaged in activities that lead to death. It would not be the absence of sleep but these accompanying activities that caused the elevated death rate. People who sleep more might already be sick, and this cause of both increased sleep and, ultimately, death, is the real culprit.

10.

Ear Hair Linked to Heart Attacks[6]

Boston (UPI)—Dark hair in and around the hole leading into a person's inner ear indicates they may be at greater risk of having a heart attack, a Boston University doctor said yesterday.

A study of 43 men and 20 women found that those people with ear hair often had heart attacks. The findings were published as a letter to the editor in the *New England Journal of Medicine*.

People with a crease running across their ear lobe, it had been shown in earlier studies, also may be more likely to have heart attacks. The latest study found 90 percent of all people studied with both traits have had a heart attack.

(Hint: What might the "X-factor" be?)

Argument in "standard form" for correlation to cause—Not part of exercise

(1) There is a correlation between an ear crease as well as dark ear hair and heart attacks

(likely) An ear crease as well as dark ear hair causes heart attacks

The ear hair, ear crease and propensity to heart attack might spring from some linked biological basis. The increase in ear hair and crease, it has been speculated, is a symptom of decreased circulation in the earlobe as a result of arteriosclerosis—the real cause of both the crease (perhaps the ear hair) and the heart attack.

Justifying to move from correlation to cause: The controlled Experiment

(1) Treatment with AcneX is correlated with reduced acne-related skin problems.

(likely) Treatment with AcneX causes reduction in acne-related skin problems.

Controlled "True" Experiment (before–after design)[11]

	Initial examination (pretest)	*Experimental intervention*	*Outcome examination (posttest)*
Experimental Group (randomly assigned)	*Condition of skin determined*	*Treatment with AcneX*	*Reduced acne-related skin conditions*
Control or Comparison Group (randomly assigned)	*Condition of skin determined*	*No treatment*	*No change in acne-related skin conditions*

Random Assignment vs Random Selection

In fully controlled experiment especially in the social sciences, randomness plays a role in two way.

(1) We randomly **assign** participants to an experimental and comparison (control) group from some sample of potential participants.
(2) This sample of potential participants should be randomly **selected** from the population to which the experimenter wishes to generalize.

An extended sense of "validity"

A correlation (association)to cause argument has

Internal validity if it is justified by a controlled experiment with **random assignment**
and
External validity if participants are **randomly selected** from the population to which the argument generalizes

(1) Treatment with AcneX is correlated with reduced acne-related skin problems.

(likely) Treatment with AcneX causes reduction in acne-related skin problems.

Prisoner's of Silence: "Study on effects of Facilitator knowledge and Level of Assissence on Output "

(1) In the study, facilitator knowledge was correlated with FC response
(likely) facilitator knowledge caused the FC response

Table I. Information on Subjects with Autism

Subject	Age	Gender	Cognitive functioning level	Language level
1	23	Male	Moderate MR	Speaks unclearly in short sentences
2	25	Male	Profound MR	Uses vocabulary under 10 words
3	14	Male	Severe MR	Uses vocabulary under 10 words
4	45	Female	Severe MR	Uses vocabulary under 10 words
5	28	Male	Profound MR	Uses sounds and gestures
6	36	Male	Profound MR	Speaks unclearly in short sentences
7	31	Female	Profound MR	Speaks unclearly in short sentences
8	51	Female	Severe MR	Uses vocabulary under 10 words
9	31	Female	Severe MR	Limited use of manual signs or pictures
10	28	Male	Severe MR	Limited use of manual signs or pictures

Experimental Design

	Experimental intervention	Outcome
Experimental Condition	Facilitator unaware	No successful FC responses
Control Condition Participants acted as their own control	Facilitator Aware	Some successful FC responses

(1) In the study, facilitator knowledge was correlated with FC response
(likely) facilitator knowledge caused the FC response

Table II. Correct Subject Responses for Three Levels of Support and Two Facilitator Knowledge Conditions

	No help		Medium support		Full support	
	Aware	Unaware	Aware	Unaware	Aware	Unaware
1	12 0	12 0	12 0	12 0	12 2	12 0
2	12 0	12 0	12 0	12 0	12 6	12 0
3	12 0	12 0	12 3	12 0	12 8	12 0
4	12 0	12 0	12 0	12 0	12 6	12 0
5	12 0	12 0	12 0	12 0	12 1	12 0
6	12 0	12 0	12 0	12 0	12 7	12 0
7	12 0	12 0	12 0	12 0	12 0	12 0
8	12 0	12 0	12 0	12 0	12 7	12 0
9	12 0	12 0	12 0	12 0	12 12	12 0
10	12 0	12 0	12 0	12 0	12 10	12 0
Totals	0	0	3	0	59	0

Expected Results with non-autistic participants

(1) In the study, facilitator knowledge was correlated with FC response (likely) facilitator knowledge caused the FC response

Results from the abstract

Results revealed no cases of correct responding independent of facilitator knowledge of correct answers. Additionally, facilitator control was apparent in numerous cases in which typed output matched stimuli to which the facilitator, not the subject, had been exposed. Results suggest that clinical and educational use of the procedure should be curtailed pending further experimental investigation.

A more elaborate Experimental designed

(1) In the study, use of FC and facilitator knowledge interacted to produce different FC responses

---

(likely) FC and facilitator knowledge (complexly) caused the FC response

Example of FC validation study

Bebko, et. Al *in Journal of Autism and Developmental Disorders* 1996

In the simplest case participating autistic individuals saw one of five pictures from a set, and was asked to point to the one that was the same from an arrangement of all five in others words were used either as individual stimulus or as part of the set of five
The stimuli were from among 480 3x4 inch colored photographs of familiar object and corresponding words
Total of 96 Trials per student (over 3 weeks)

There were four conditions in this method, representing the permutations of the two dimensions: a facilitated/independent dimension and a facilitator informed/not informed dimension. On half the trials the facilitator looked away as the single stimulus was shown to the student (facilitator not informed); on the other half the facilitator saw the stimulus. Both situations, however, facilitators could see the display of five stimuli while facilitating the students' response. Also, some trials were conducted with FC and some without (ie., the student was asked to point independently with facilitator in close proximity.

The student participants were 5 girls (25%) and 15 boys (75%) from four classrooms of a regional program specializing in autism, and for whom consent was obtained. They ranged in age **from** 6 to 21 years (M = 13). FC was introduced to the students in two cohorts of 9 and 11 students, with the training of staff and introduction of FC separated by 5 months for the two cohorts.
Developmental and

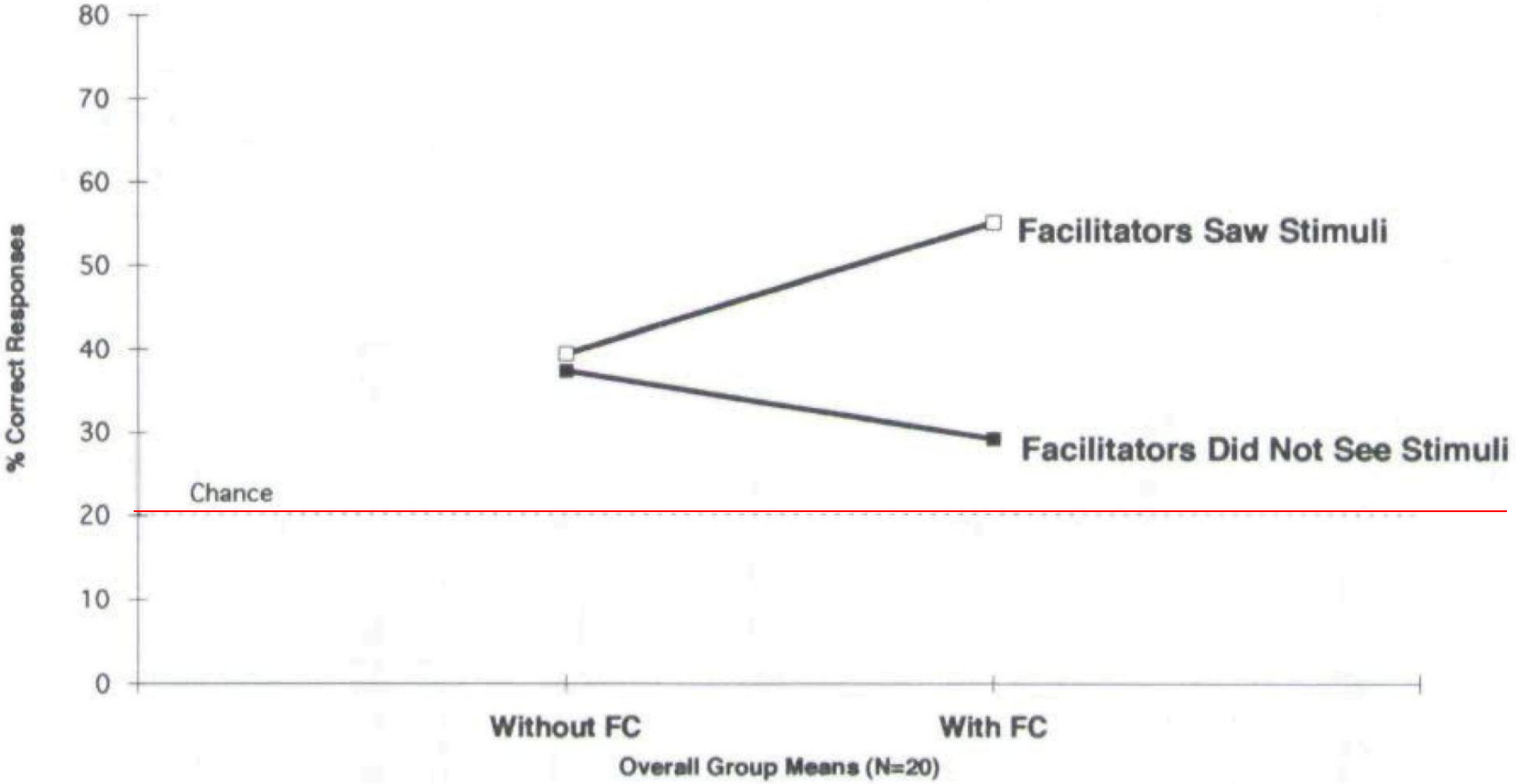


Fig. 1. Setwork design. Group data illustrating the interaction effect of the use of facilitated communication and facilitator knowledge on performance.

Scores in this method were the percentage of trials on which students pointed to the one of five pictures (or words) which corresponded to the picture (or word) which had been shown previously. Scores were computed separately for each of the four conditions (FC/informed, FC/not informed, no FC/informed, no FC/not informed) and are shown in Figure 1, across participants. A 2×2 ANOVA indicated that the interaction was significant, $F(1, 76) = 6.36, p = .0138$, with performance in the FC/informed condition significantly greater than in the other three conditions, which did not differ.

Statistical significance. Unlikely probability = .0138 that interaction effect shown was merely the result of sampling error

Report of Results in the abstract

Findings differed across methods, but there was little clear support for the validity of FC in enhancing communication over communication that students produced independently. Significant facilitator influence of responses was found, but was far less extensive than in other studies. However, an "abdication" pattern of responding was found for some students, in which high performance observed with independent responding was lessened *on trials when FC was introduced. That is, these students may become more passive communicators when FC is used. The complex detected and undetected influences in the process of communication through facilitation are discussed, as well as risk factors in the use of FC*

Review of Criticisms of Arguments from Correlation to Cause

Most common criticisms for the nonexpert:

- *Joint effect of an underlying cause.* Some underlying factor is shown to be directly or indirectly responsible for the items correlated. That is, the apparent relation is spurious.
- *Wrong direction.* The correlation is shown to support a causal inference in which cause and effect are the opposite of what has been claimed.

Additional criticisms, often requiring actual research:

- *Coincidental correlation.* When it is implausible that there could be a connection between the items correlated, so that the correlation is likely to exist only for a limited period of time, or the correlation is not found in additional studies, the correlation is probably accidental.
- *Genuine but insignificant cause.* Other factors are shown to be of greater importance in producing the effect in question.
- *Causal complexity.* It is shown that factors correlated are not related to each other in a straightforward way. Other factors might be involved, and several criticisms might apply at once.

Problems with Generalizing Causal Claims: Segue to Theories

(1) Exposure to computer-assisted reading instruction is correlated with improvement in reading.

(likely) Computer-assisted reading instruction causes improvement in reading.

Controlled Experiment Without Random Assignment

	Initial examination (pretest)	*Intervention*	*Outcome examination (posttest)*
Experimental Group: Self-selected from available subjects	*Reading score on a standardized test—measurement of other factors*	*Computer-assisted instruction in reading*	*Reading score on another version of the standardized test—possible re-measurement of other factors*
Control or Comparison Group: Self-selected from available subjects	*Reading score on a standardized test—measurement of other factors*	*No special instruction—traditional methods*	*Reading score on another version of the standardized test—possible re-measurement of other factors*

In the absence of a “true” experimental design that can help rule out X-factors We often need to appeal to Theory

The Claim that computer-assisted instruction is the sole (or most important) cause of change in the previous example depends on background assumptions

For example, it depends on having a “TV culture”

More generally we need a theory of learning that helps us pick out relevant factors that might affect our results.

A second way Theories are important to justifying cause claims

In the previous example we have assumed that the outcome could be measured. For example by a standardized reading test. Such an assumption about a measuring instrument depends on an appeal to a theory about its operation. This is most obvious in the natural sciences, but it applies to social science "instruments" as well. When doubt can be raised about measuring instruments such as a survey research questionnaire or an IQ test, it may be difficult to justify a generalization based on their use. The question whether the instruments used to measure a certain property adequately do so is said to concern *construct validity:* Does an IQ test adequately measure intelligence or a poll question adequately determine whether a person has a certain belief or attitude? A specific procedure or protocol for measurement is often called an *operational definition*.

It's Just a Theory

The Fact Theory Distinction

. **Which of the following are statements of fact and which are statements of theory?**

1 Most redheads have light complexions.
2 Leon Trotsky was killed as a result of a conspiracy.
3 Lung cancer is correlated with heavy cigarette smoking.
4 Some diseases are caused by germs.
5 The incumbent has an advantage in U.S. politics.
6 Mankind appeared on the earth as a result of evolution from nonhuman animals.
7 Atoms consist of electrons, protons, and neutrons.
8 Matter can be transformed into energy in amounts approximated by the formula $E = mc^2$.
9 Whatever causes gratuitous harm is morally wrong.

A deductive argument is valid if and only if it is impossible for all the premises to be true and the conclusion false

Empirical Theories: The First Steps

What is an empirical theory?

Empirical Theories explain why patterns or regularities occur.

Some examples: Theory of disease, theory of evolution,
theory about a crime or criminal behavior.

The key to identification a theory is asking "What explains what? "

An explanation answers the question "Why did something happen?"

Identify the theory-statement (the one that does the explaining) and the regularity statement (the pattern that is being explained)

1. a. Engine blocks containing water with no antifreeze tend to crack in very cold weather. **Regularity statement**
   b. Water expands when it freezes. **Theory-statement**

2. a. Among college students in the 1970's and 1980's, women were less likely to smoke marijuana than men. **Regularity statement**
   b. American society is less tolerant of women engaging in deviant behavior that it is of men, which tends to constrain deviant behavior in women. **Theory-statement**

3. a. The judge, prosecutor, and defense attorney form a workgroup that carries out shared goals such as disposing of its caseload **Theory-statement**
   b. In the United States, a high percentage of criminal defendants plead guilt in plea bargains. **Regularity statement**

The statements that make up the theory can often be recognized in prose passages by certain clues: (1) the presence of indicator words, such as ***because, accounts for***, or ***explains***, (2) a broader scope, and (3) specialized or technical language.

In small group use these techniques to analyze the following passages, pick out what is explained as well as the theory or theories that are put forward to do the explaining.

1. During the 1980s, numerous banks and savings and loans in the United States have failed. Between 1981 and 1984, over 150 failed, and the number has increased since that time. Before that time, since the Great Depression, the number of bank failures for a typical three-year period has been much lower than 150. Why this recent increase in failures? One reason that has been suggested is that banks have been largely deregulated, resulting in less-conservative practices by bankers willing to take risks.

WHAT IS EXPLAINED: Why so many banks are failing.
THEORY: Deregulation has resulted in bankers taking more risks

2. Bruce poured some sulfuric acid over some zinc in the chemistry lab and hydrogen gas was released. This reaction is captured by the formula:

$$H_2SO_4 + Zn \rightarrow ZnSO_4 + H_2$$

sulfuric acid + zinc yields zinc sulfate + hydrogen gas

WHAT IS EXPLAINED: Why hydrogen gas was released.

THEORY: sulfuric acid + zinc yields zinc sulfate + hydrogen gas

3. Natural Selection is an immensely powerful yet beautifully simple theory that has held up remarkably well, under intense and unrelenting scrutiny and testing, for 135 years. In essence, natural selection locates the mechanism of evolutionary change in a "struggle" among organisms for reproductive success, leading to improved fit of population to changing environments. (Struggle is often a metaphorical description and need not be viewed as overt combat, guns blazing. Tactics for reproductive success include a variety of non-martial activities such as earlier and more frequent mating or better cooperation with partners in raising offspring.) Natural selection is therefore a principle of local adaptation, not of general advance or progress **(Hint: Look for a theory that explains why the members of a species often have different characteristics at one time than their ancestors at a previous time and this improves the fit of the population to changing (local) environments.)**

WHAT IS EXPLAINED: evolutionary change that improves the fit of the population to changing (local) environments.

THEORY: Natural selection occurs, that is, there is a struggle among organisms for reproductive success (including a variety of non-martial activities such as earlier or more frequent mating or better cooperation with partners in raising offspring)

Prisoners of Silence Theory
Doug Biklen's Theory

What is explained : the (unexpected) responses for severely autistic subjects using "keyboard" based facilitated communication techniques

What does the explaining:

The Theory: (many) severely autistic subjects are *prisoners of silence.* They are individuals of normal(even extraordinary) intelligence trapped in a body that does not work normally so that they can communicate only with facilitation.

Techniques for understanding and Criticizing Empirical Theories

Four criticisms of Empirical Theories that even a non-expert might use

1. There is a plausible alternative theory
2. The theory makes doubtful predictions.

} *First-stage criticisms*

3. Defense against doubtful predictions is *ad hoc*.
4. The theory is untestable.

} *Second-stage criticisms*

Review of criticism of *Prisoners of Silence* Theory
First Stage Criticism

The Initial Theory Being Evaluated

(Many) severely autistic subjects are *prisoners of silence.* They are individuals of normal (even extraordinary) intelligence trapped in a that does not work normally so that they can communicate only with facilitation

Criticism 1: Plausible Alternative Theory

Responses are being (unintentionally) caused by the facilitators

Regularities Being Explained

The (unexpected) responses of severely autistic subjects using "keyboard" based facilitated communication techniques

Criticism 2: Theory makes (doubful) predictions about possible Regularities

Subjects will be able to communicate what they know, even if the facilitator does not know it

Initial Theory Being Evaluated

Suicide is caused by detachment from a social group or "anomie." When we are members of a group with well-defined norms, we have a sense of belonging and knowing expectations of the groups.

Plausible Alternative Theories

Regularity 1 could be explained by pointing out that Catholicism (especially in the nineteenth century) strongly disapproved of suicide.

Regularity 2 could be explained by the fact that many people live alone because they have serious problems, e.g., alcoholism or serious mental disorders

Regularities Being Explained by Both Initial Theory and Alternatives

1. Catholics have lower (recorded) suicide rates than Protestants.

2. Married persons living with a spouse have a lower (recorded) suicide rate than people living alone.

Predicted Regularities That Might Not Occur

The initial theory predicts that youths living at home should have a lower suicide rate than other segments of society.

There would be a relatively high suicide rate for those who move to a new social setting so that they are in transition between two sets of norms and expectations.

Initial Theory Being Evaluated

Younger Americans are reacting in a perfectly rational manner to their circumstance.

Plausible Alternative Theories

The regularity could be explained by the (four) alternative theories mentioned:

i. TV watching has produced cynicism
ii. Reagan/Bush presidencies fostered government-bashing
iii. Breakdown of the traditional family
iv. Incessant political scandals

Others might be added, such as: economic prosperity has fostered a more individualistic(libertarian) attitude that is suspicious of collective political action.

Regularities Being Explained by Both Initial Theory and Alternative Theories

Generation X is politically apathetic.

Predicted Regularities That Might Not Occur

If the initial theory is true, candidates that explicitly mentioned the issues cited in the passage would get a larger percentage of the Generation X vote.

If, as the theory suggests, Generation X acts particularly rationally, then we would not expect the risky investment in housing and high accumulation of personal debt that generation X exhibited later in life.

Techniques for understanding and Criticizing Empirical Theories

Four criticisms of Empirical Theories that even a non-expert might use

1. There is a plausible alternative theory
2. The theory makes doubtful predictions.

} *First-stage criticisms*

3. Defense against doubtful predictions is *ad hoc*.
4. The theory is untestable.

} *Second-stage criticisms*

Review of criticism of *Prisoners of Silence* Theory

Second Stage Criticism

3. Defense is ad hoc

4. Theory is untestable

Doug Biklen defended in theory against criticism by offering two explanations of failure of the **predicted regularity** that subjects will be able to communicate what they know, even if the facilitator does not know it

1. The test was a confrontational situation and the subjects of the test were unable to communicate as usual in an emotionally supportive way (Biklen 1990) video
2. The subjects had "word finding problems" that resulted in communication of the wrong word for the object in question.

Is this defense ad hoc?

If tests such as those described in the video don't "test" the Prisoner of silence theory what would? Is it really testable?

In small group. The following passages contain response to criticism of theories. In each case indicate (i.) the theory being defended, (ii) the criticism (evidence) against which it is being defended, (iii) how the original theory is modified, and (iv) briefly discuss whether the defense appears to be *ad hoc*.,

1. Defense of Psi Theory

(i) Theory: Psi phenomena (true psychics) exist.

(ii) Criticism: Psychics don't break the bank in Las Vegas casinos (make a notable difference to casino profits).

(iii) Defense: Few psychics would be expected to be good, consistent gamblers, and we probably won't find out about those few who did win from casinos.

(iv) The defense does seem *ad hoc.* Great success at gambling would seem to be a good way at gaining popular (if not scientific) support for the position. The opportunity for quick wealth would surely be an incentive for many psychics to become good, consistent gamblers.

In small group. The following passages contain response to criticism of theories. In each case indicate (i.) the theory being defended, (ii) the criticism (evidence) against which it is being defended, (iii) how the original theory is modified, and (iv) briefly discuss whether the defense appears to be *ad hoc*.,

2. Defense of Darwinian Processes in evolution

(i) Theory: Darwinian evolutionary theory.

(ii) Criticism: Transitional evolutionary forms ("missing links") are extremely rare.

(iii) Defense: Darwinian theory should be altered by a nongradualistic theory of evolution in which there are long periods of stasis (no change) and short periods of rapid evolutionary change.

(iv) The response need not be seen as *ad hoc* depending on how well the nongradualist account can be supported.

The following passage raises questions about Testability. Describe whether, and if so, how the following theories might be tested.

1. Personal Space

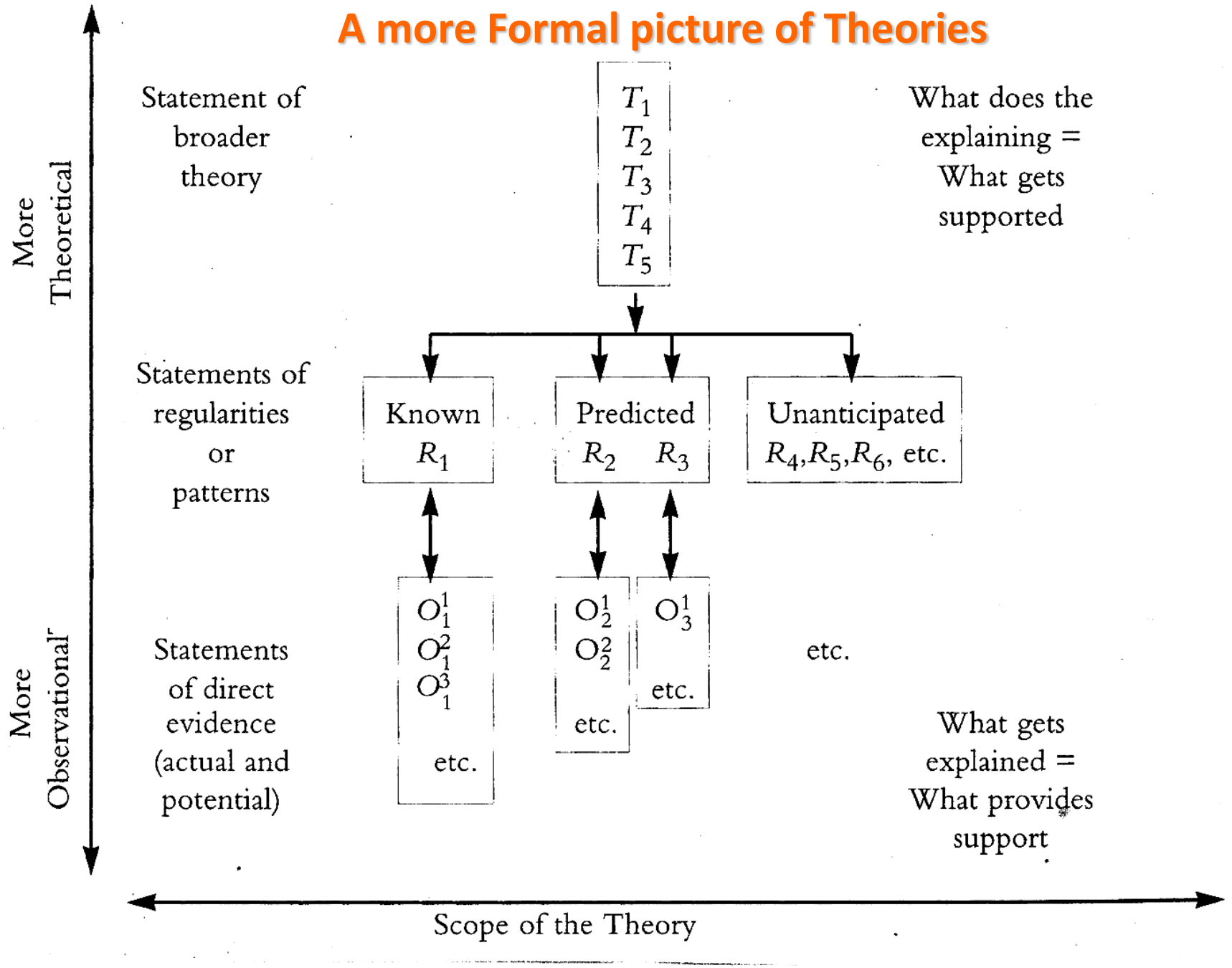
We might test the theory that personal space exists (or that it is tied to various characteristics) by determining whether people consistently react (for example, move away or say something) whenever another person (especially a stranger) enters the region.

2. Divine creation of fossils

It is unclear how we could test the theory that God created the world with the (misleading) fossils in it since any evidence (or at least any fossil evidence) is irrelevant. It is not clear what other kind of evidence would be relevant unless there was evidence that all techniques for dating fossils had been altered as well.

It's Just a Theory?

A more Formal picture of Theories



Regularities

Theory

PBS Educators Web Site Definitions

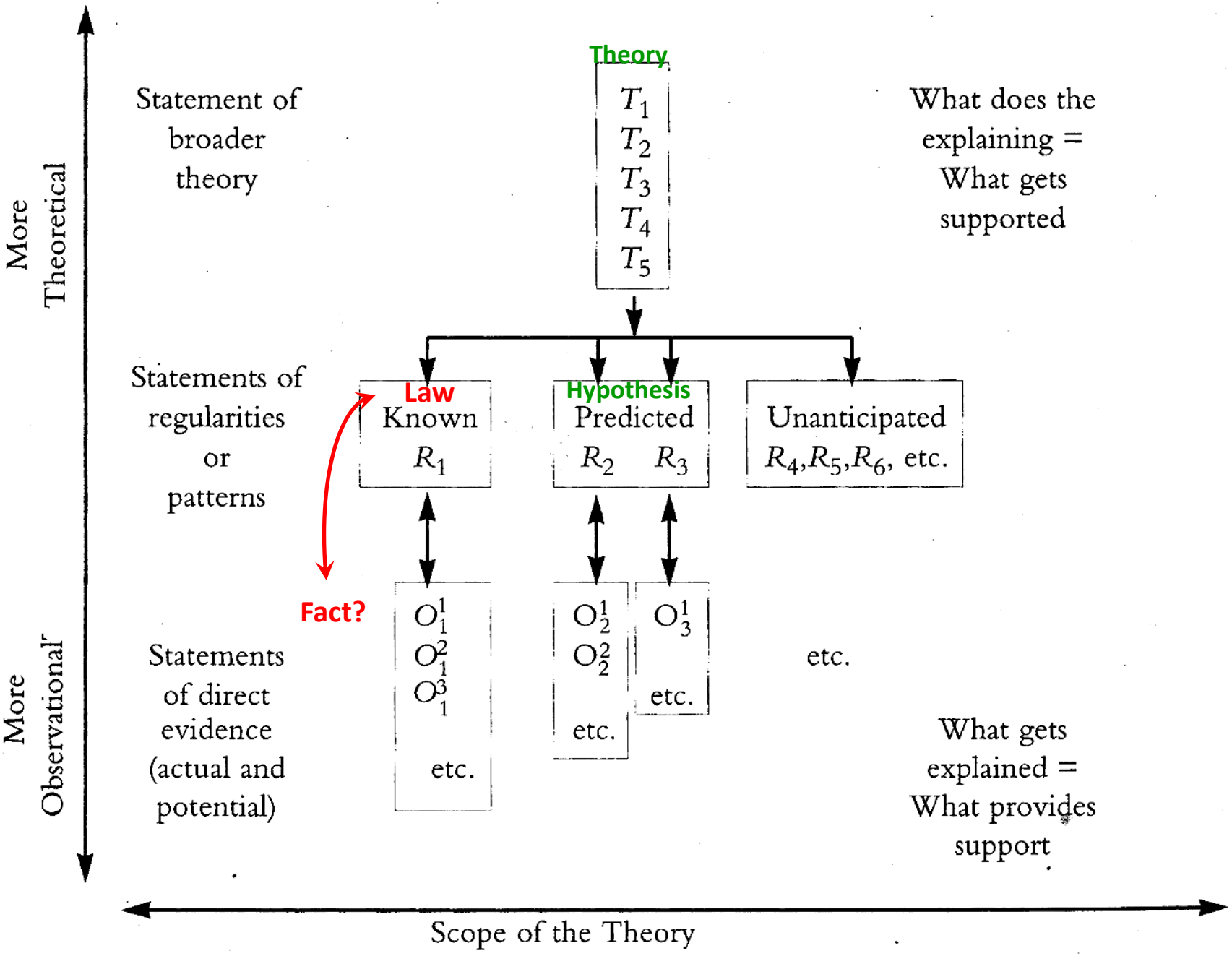
Fact: An observation that has been repeatedly confirmed. For example, there are 23 pairs of chromosomes in human cells.

Law: A descriptive generalization about how some aspect of the natural world behaves under stated circumstances. For example, one of Newton's laws of motion that states that for every action, there is an equal and opposite reaction.

Hypothesis: A testable statement about the natural world that can be used to build more complex inferences and explanations. It explains why something occurs. For example if the tomato plants in your garden did not produce as many fruits as the year before, one hypothesis might be that the excessive number of rainy days in the current year interfered with the pollination of the tomato flowers.

Theory: In science, a well-substantiated, overarching explanation of some aspect of the natural world that can incorporate facts, laws, inferences, and tested hypotheses. For example, the cell theory states that cells are the basic unit of all living organisms and that all new cells arise from the division of pre-existing cells.

Evolution: Online Course for Teachers: Session 1- Explain Part B



A more Formal picture of Theories

Critical Exchange Idea Fair—See C&P p. 336-338 for details

Preparation for the Exchange

1. After today's idea fair form and meet as a four-person team to decide on a specific topic concerning which there are two positions—roughly for and against.
2. Decide which two members will take the affirmative side and which two the negative side in presenting arguments on the issue. It is not necessary to take the side you feel initially inclined to support. Sometimes it is a better learning experience to argue for the other side.
3. After some brainstorming and background reading, the team should develop two arguments on the affirmative side and two arguments on the negative side. The arguments should be briefly stated and tightly structured, so that they can be displayed in a PowerPoint presentation or a handout sheet for the audience.
4. As a team, discuss possible criticisms of the arguments and use them to improve the arguments on each side. In particular, be prepared to use the techniques discussed in program to criticize these argument.

Timing for the Critical Exchange --- 30 minutes maximum

1. ***Affirmative team.*** **Each member takes about 3 minutes to present one argument in favor of the proposition being discussed. Explain what is meant by each premise and why it is reasonable to believe that premise.**

2. ***Negative team.*** **Each member takes about 2 ½ minutes to criticize the arguments that have been presented, applying the techniques of criticism learned in class.**

3. ***Negative team*****. Each member presents an argument opposing the proposition in question (3 minutes each).**

4. ***Affirmative team.*** **Each member criticizes the negative team's arguments (2 ½ minutes each).**

5. ***Concluding presentations*****. Having considered all arguments and criticisms, each member states where she or he really stands on the issue. Replies to criticisms and additional reasons can be brought up at this time. (3 minutes)**

6. ***Class comments*****. Class members who have been listening to the exchange are allowed to make comments or address questions to the participants. (5 minutes)**

Topics mentioned in the text:

abortion, capital punishment, casual sexual relationships, name change at marriage, drug legalization

Previous years

Equal rights for women, medical marijuana, genetic engineering, population control, embryonic stem cell research, universal health care, capital punishment, Cultural appropriation, wiretapping, mandatory minimum sentences, animal rights, immigration, men's rights, cloning

Topics listed on University of San Diego applied ethics site—linked on our web site.

Abortion, Academic Integrity, Animal Rights, Death Penalty and Punishment, Environmental Ethics, Euthanasia, Gender and Sexism, Poverty and Welfare, Race (racism) and Multiculturalism, sexual orientation, World Hunger

Other topics "in the air"

Generational ethics, climate change, deficit reduction, limitation of government power, limitation of corporate power,


That's All Folks