

- I. A. **(Individual)** review the answers for the assignment Answers at End  
B . **(In small group)** discuss any items that you found difficult  
C. **Plenary**

II **Brief Review** of empirical theories and “Prisoners of silence” (Powerpoint Presentation)

III. **Second State Criticism of theories.**

A. **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. Psi refers to a wide range of fascinating and controversial phenomena that include ESP ('mind reading'), psychokinesis ('mind over matter'), psychic healing and precognitive dreams.

*Why aren't psychics breaking the bank in Las Vegas casinos?*

For a given psychic to make any notable differences in long-term casino profits, they would have to (a) understand the strategies of each game they play, (b) consistently play according to those strategies, (c) stop when they are ahead, and (d) consistently apply strong, reliable psi. Over the long term casino profits are predictably stable, but given that some psi effects are known to be genuine, in principle a good, consistent psychic (who knows how to play the casino games) might make some money by gambling. In addition, many people applying weak psi may cause small fluctuations in casino profits, but testing this would require analyzing an enormous amount of casino data, and such data is difficult to obtain. Adapted from the Psi Web site.

2. The extreme rarity of transitional forms in the fossil record persists as the trade secret of paleontology. The evolutionary trees that adorn our textbooks have data only at the tips and nodes of their branches; the rest is inference. Yet Darwin was so wedded to gradualism that he wagered his entire theory on a denial of this literal record .Paleontologists have paid an exorbitant price for Darwin's argument. We fancy ourselves as the only true students of life's history, yet to preserve our favored account of evolution by natural selection we view our data as so bad that we almost never see the very process we profess to study...The modern theory of evolution does not require gradual change. In fact, the operation of Darwinian processes should yield exactly what we see in the fossil record It is gradualism that we must reject not Darwinism.

The history of most fossil species includes two features particularly inconsistent with gradualism:

1.*Stasis.* Most species exhibit no directional change during their tenure on earth. They appear in the fossil record looking much the same as when they disappear; morphological change is usually limited and directionless.

2. *Sudden appearance.* In any local area, a species does not arise gradually by the steady transformation of its ancestors; it appears all at once and "fully formed." Stephen Jay Gould, *The Panda's Thumb*, (New York: W.W. Norton, 1980) pp. 181-2.

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

- (1) Suppose we theorize that individual organisms have a personal space, a kind of "shell" surrounding them that is especially "intimate" and provokes "strong" generally negative reaction

when another organism enters it. For example, human beings often react negatively when another (particularly a stranger) is "too" close. On this view, the boundary of their personal space is the distance at which they become uncomfortable and will typically move back a little or otherwise react to express their discomfort, so as to remove the errant individual from their personal space. The size of the personal space might vary by individual, gender, cultural background, context, and other characteristics.

2. How are fossils to be explained? One early defender of the Biblical account, a nineteenth-century naturalist named Philip Henry Gosse, suggested that God created the earth with the fossils already in it (Cited in Daisie Radner and Micheal Radner, *Science and Unreason*)



**Assignment for Tuesday May 20** Review: Ch. 10,. **Submit: Exercise 10.3**  
b, e #2 b, d; **Exercise 10.4** #2, (#3 or #4)

**Answers to Assignment for today** Check your own assignment. Put a check  $\checkmark$  next to answers that are similar, an **X** next ones that miss the mark, and a question mark **?** next to any that are problematic

**Exercise 10.1** b,d,f #2b, g, h, i; **Exercise 10.2** #2, #4, #5

- 1b. Statement 1 explains statement 2. 1d. Statement 1 explains statement 2 ; 1f. Statement 2 explains statement 1.
- 2b. What is explained: Why Black Americans and members of labor unions tend to vote for Democrats and why businesspeople and religious fundamentalists tend to vote for Republicans.  
Theory: Americans see themselves as members of primarily one group or another, and they tend to vote for parties that have historically represented the interests of groups of which they see themselves as members and that have an ideology similar to theirs.
- 2g. What is explained: Why there has been a temperature increase of about .5 degrees over the last 100 years. Theory: The earth is subject to continual temperature oscillations (climate does not stay the same for long).  
The theory is put forward as an alternative to the Greenhouse Gas theory, which is meant to explain significant temperature increases. The author contends that the increase is not as significant as the Greenhouse Gas theory predicts. Her theory accounts for changes in temperature as normal oscillation rather than the buildup of "greenhouse" gases.
- 2h. What is explained: Why the public interest group developed in America.  
Theory: Change in the civil rights movement made white activists available to take up other causes. Formation of public interest groups took advantage of their social concerns and organizational talents organizational talents.
- 2i. What is explained: Why the Christian faith obtained (so remarkable) a victory (that is, why it spread and became established in much of Europe and the Mediterranean).  
Theory: There were five underlying causes: (a) a more inviting but nevertheless inflexible and intolerant zeal, (b) the doctrine of future life (immortality), (c) miraculous power ascribed to the primitive church, (d) pure and austere morals, and (e) connection to politics within the Roman Empire.

**Exercise 10.2 #2, #4 Passage 2**

**Initial Theory Being Evaluated**

Thwarted expectations cause frustration. Frustration creates aggression. (Better conditions raised expectations, which, when they were unsatisfied, led to frustration and, in turn, aggression.)

**Explained by Both Initial Theory and Alternatives.**

In Africa and Asia, earliest revolts against colonialism took place in countries with the best (not worst) social and economic conditions. In the United States, racial and labor conflicts occurred more often in places where the social and economic conditions were better.

**Regularities Being Alternative Theories**

An oppresses people will rebel when they have a chance of success. .The resources necessary for success are available only when conditions are better. Better conditions are more likely to spawn leadership for revolution or revolt.

**Predicted Regularities that Night not Occur.**

The initial theory would predict that employees who were promoted along rapidly at first but then quit moving upward would be unruly. The initial theory would also predict that students who did well on tests early in the semester but then did worse would be unruly. (This might well be the case.)

**Passage 4**

**Initial Theory Being Evaluated**

Identification theory: Infants develop a sexual attraction to the opposite-sex parent. At age 5 or 6 they renounce this attraction and identify with the same-sex parent.

**Regularity Being Explained by Both Initial Theory and Alternative**

Young children acquire a sense of being male or female.

**Alternative Theory**

Social learning theory: Children develop a sense of being male or female through imitation and by being rewarded or punished for appropriate or inappropriate gender behavior.

**Predicted Regularity that Does Not Seem to Occur**

Identification theory predicts gender identity forming at age 5 or 6. The passage states that children have a sense of being male or female by age 3.

*Passage 5:*

Gottman's criticism of the theory that active listening and validation enhance a relationship: The theory makes a doubtful prediction. If it were true, then couples who use such techniques would be more likely to stay together than couples who do not. This was not the case for the couples that Gottman studied.

Markham's defense of the theory: In the passage, Markham is quoted as saying "When active listening is taught, it is not because happy couples use it. We use it to help couples disrupt the negative patterns that predict divorce." This can be seen as a defense against the apparently-damaging evidence in Gottman's study. According to Markham, couples who use active listening are already in troubled marriages and are using this technique as damage control. So the theory of active listening would not predict that couples who use it are more likely to stay together than

the broad class of all couples who do not use this technique. The only comparison that would be fair to the theory, Markham could claim, would be between couples in troubled marriages who use the technique and couples in troubled marriages who do not.

New theory that could explain why couples tend to be happy when the male partner gives in: One theory would be that the female partner is more likely to show good judgment concerning what the couple should do. Another theory would be that women care more than men about what the couple should do.