

### Box Study Guide Questions: Chapter 2

1. What is wrong with referring to “inner causes” in attempting to explain behavior?

**Answer:** The problem is not that inner causes cannot be true but that they are likely to be difficult to observe and study. This difficulty may encourage us to be casual in assigning properties to inner causes because it will be difficult for someone to prove us wrong.

2. Define and provide examples of neural, psychic, and conceptual inner causes.

**Answer:** Neural inner causes use the nervous system as a convenient explanation without clear evidence of its actual role (e.g., nervous breakdown, etc.). Psychic inner causes lack the physical dimensions of neural causes, instead referring features of behavior to a corresponding feature of the “mind” or an inner “personality.” Conceptual inner causes are the most common and they have neither neurological nor psychic dimensions. These include general qualities such as intelligence, habits, and abilities. Explanations in these terms are not really causes but redundant descriptions of the same observed facts.

3. What is the Dead Man’s Test?

**Answer:** Ogden Lindsley developed this “test” for making sure that what teachers were targeting for measurement was really behavior. The rule is simply, if a dead man can do it, it isn’t behavior.

4. Explain the reasons why it is useful to conceptualize thinking as a behavior, even though there is no obvious movement.

**Answer:** This approach has the advantage of encouraging researchers and practitioners to approach thinking in the same way that they approach more obvious human activity. From this perspective, thinking is a behavior influenced by antecedent and consequent events, as described by the three-term contingency. This approach is especially important because the culture has taught us to view thinking as controlled by the mind, a view that is incompatible with scientific investigation.

5. Describe two reasons why traits are not useful concepts for a science of behavior.

**Answer:** Traits are often used not just as summaries of behavior but as causes for the same behavior. The colloquial conception of behavior also assumes that traits are somehow inherent qualities in each individual’s personality.

6. What are the three stages of theory building that Skinner described?

**Answer:** The first stage involves identifying the basic data. The second stage focuses on expressing relations among these data. The third stage goes beyond observable relationships to unobservable concepts. These unobservable concepts must not be simply invented, they must emerge from a sound database describing functional relations in the subject matter.

7. How does the approach to explaining unobservable concepts taken by the natural sciences differ from that often found in cognitive psychology?

**Answer:** The natural science approach to unobservable concepts urges us to explain the observable facts of behavior with reference to variables in the physical world, which the natural sciences understand pretty well, before inventing a nonphysical world of the psyche which is often found in cognitive psychology.

8. Describe the scientific attitude of parsimony.

**Answer:** Parsimonious scientists prefer simple and well-established explanations based on the observable facts of behavior before turning to a more complex and less well-understood explanation for behavior.

9. How is the scientific attitude of parsimony relevant to how behavioral scientists approach a definition of behavior?

**Answer:** Behavioral scientists follow this strategy because they have learned over the years that it makes science more efficient. Instead of offering fanciful explanations of some event, scientists cautiously insist on trying to explain the event in terms of laws that they already understand.

10. Distinguish between pure and quasi-behavioral research.

**Answer:** Pure behavioral research uses methodological practices that preserve the fundamental qualities of behavior in undisturbed and uncontaminated form. Pure behavioral research requires identifying relationships at the level of the individual.

Quasi-behavioral research is based on data that originated with observations of behavior but whose methods prevent the data from representing its fundamental qualities fully and without distortion or contamination. Quasi-behavioral research may permit aggregating the data from different individuals when attempting to identify relationships.

11. What are the limitations of quasi-behavioral research?

**Answer:** Quasi-behavioral research only allows for a more superficial examination of the data. By aggregating the data, the investigator is prevented from finding a clear answer to more analytical questions that require understanding what is happening at the level of the individual participant. This in turn does not allow the investigator to argue that the study identified the

reasons for the aggregate outcome or to suggest that the grouped data represent the effects observed for each individual.