

CH. 6: ATTENDING - STUDY QUESTIONS

Introduction

1. Is the fact that different people behave in different ways in the same environment inconsistent with the idea that behavior is guided by the environment? Explain.
2. Why is the term "attention" not a technical term in the analysis and interpretation of behavior? Cite specific reasons for this, using the term *nominal fallacy* in your answer.
3. Critique the following statement: "Joe didn't remember what Jane said because he wasn't paying attention to her."

An Approach to Attending

- 4a. Four types of accounts are given for why we fail to "pay attention". These are failures to s_____, s_____, the d_____ history, c_____, and c_____ s_____.
- 4b. Be able to give an example that illustrates each of these cases. The example can be either a laboratory or a real-life example. Can you think of an example from your own behavior that illustrates any of these cases?
5. Discuss performance in the Stroop task as an example of attentional deficits due to concurrent discriminative stimuli.

Sensing and Attending

6. Is sensing a stimulus a passive process or does the learner's behavior affect sensing? Give an example of your own construction to support your answer.

Observing Responses

7. Define and give an example of an o_____ r_____.
8. Summarize the procedure and findings from the study of observing responses in pigeons. What is the observing response in this situation and why does it meet the definition of such a response? (See **Figure 6.3.**)
9. Under what conditions are observing responses acquired? What sort of evidence supports this conclusion?

Stimulus Discrimination and Attending

10. Describe a situation in which the term "attention" is often used but which is simply a result of discrimination (differential) training? Use the term *blocking* in your answer.

Selective Attending

11. What is *base-rate neglect*? How does the example of science and English majors who take a Shakespeare course illustrate this phenomenon?

12. Carefully go through the experiment on base-rate neglect in which a disease is diagnosed from observations of various symptoms. Pay particular attention to how base-rate neglect is an emergent effect of selection by reinforcement (see **Figure 5.2**). Do you understand how a symptom could become blocked to a greater extent by other symptoms when the disease is common disease instead of a rare disease? (Hint: What are the discriminative stimuli in this study? Relate these symptoms to the discriminative stimuli used in a blocking experiment.)

Heightened Attending

13. Show how the experiment with pigeons illustrates that the same process that reduces the ability of a stimulus to guide behavior in the base-rate-neglect study can increase the ability of a stimulus to guide behavior in the study of heightened attending. (Hint: Show how blocking contributes to the outcome of both studies.)

Contextual Discriminations and Attending

14. Construct an example of "attention" that illustrates a *contextual discrimination*. Indicate what serves as the context in your example; what is the *discriminative stimulus*; what is the *discriminated response*?

Dichotic Listening

15. Describe the main features of a dichotic listening procedure Use the terms *shadowed* and *unshadowed* in your answer. Is this procedure ecologically valid? Explain your answer.

Guidance of verbal responses

16. Describe the major conclusions from dichotic listening experiments. Support your answer with findings from both the shadowed and unshadowed message.

Guidance by stimuli from the unshadowed message

17. Under what conditions do stimuli presented in the unshadowed message guide behavior? Give evidence (i.e., experimental findings) to support your answer.

Interpretation of the Role of Context on Attending

18. Do contextual discriminations only affect the guidance of behavior by verbal stimuli? Your answer should include an experimental demonstration of guidance by visual stimuli.

Adaptive network interpretations

19. Follow the adaptive-network interpretation illustrated in **Figure 6.4**. Satisfy yourself that discrimination processes acting through adaptive networks can potentially provide an interpretation of attentional phenomena.

20. As described in the subsection entitled *Networks and neuroscience*, what are some of the similarities and differences between adaptive neural networks and the nervous system? Your answer should include the distinction between experimental analysis and scientific interpretation. Is there any evidence at the neural level for contextual discriminations?

Concurrent Guidance and Attending

21. In general, under what conditions will discriminated operants interfere with each other? Give an everyday example to illustrate your answer.

22. What is a *divided attention procedure*? Relate this procedure to your answer to the preceding question. Is divided attention an ecologically valid procedure?

Divided "Attention"

23. At what points in the mediation of an environment-behavior relation may interference occur? Be able to give evidence to support each part of your answer.

Interference in divided attention tasks

24. Describe the *Stroop task*. What are some factors that affect performance in the Stroop task? Be able to explain how these factors exert their effects.

25. Referring to **Figure 6.5**, carefully follow the neural-network interpretation of performance in divided-attention tasks.

Experience and divided attention tasks

26. After reading the studies on the effects of extended practice carried out by Ulrich Neisser and his colleagues, summarize the procedures and major findings of this work?

27. What is the major conclusion that you draw from this work? Use the term *fading* in your answer. Make certain that the important elements of the procedure are mentioned.

Limits on Attending

28. Explain the statement: "The subjects in the preceding experiments were reading and copying in qualitatively different ways after training with the fading procedure."

29. In general, what conditions exist in the nervous system when two tasks cannot be performed simultaneously?

Concluding Comments

30. In your own words, what are the four major points made in this section. Be able to cite information from this chapter to support each of these points.