

CHAPTER 1: Introduction

Chapter Outline

Historical Background

- Aristotle: Empiricism and the Laws of Association
- Descartes: Mind-Body Dualism and the Reflex
- The British Empiricists
- Structuralism: The Experimental Study of Human Consciousness
- Functionalism: The Study of the Adaptive Mind
- The Theory of Evolution: Humans as Animals
- Behaviorism: The Study of Observable Behavior

Five Schools of Behaviorism

- Watson's Methodological Behaviorism
- Hull's Neobehaviorism
- Tolman's Cognitive Behaviorism
- Bandura's Social Learning Theory
- Skinner's Radical Behaviorism

Explanation of Opening Scenario

The first quote in the opening scenario to this chapter illustrates how Skinner did not ignore the fact that people have feelings. The second quote describes how Skinner's views have often been misrepresented. These two quotes will hopefully encourage students to ignore past biases about Skinner (and about behaviorism in general) as they begin reading the text.

Dr. Dee Assignment

See the preface for complete information about this assignment. For this first chapter, we've included a sample set of instructions that instructors may wish to adopt. In subsequent chapters, we provide only the sample letters plus the explanation for each.

Sample Instructions for Dr. Dee Assignment

Dr. Dee Assignment

The relationship concerns expressed in each of the following "lovelorn" letters can be related to one or more of the principles or concepts described in this chapter. Pretending that you are Dr. Dee, compose a behavioral-type reply to one of the letters in a manner similar to the *Advice for the Lovelorn* columns in text. Be sure to identify clearly the relevant behavioral principle or concept on which you have based your reply.

As an alternative to basing your assignment on one of these letters, you can instead compose an entire Dr. Dee column on your own (both the letter and the reply). For this option, you need not restrict yourself to romantic relationships, and may instead address issues involving friends, family members, or even pets. Again, be sure to identify clearly the behavioral principle or concept on which you have based your column. If you are basing the column on an incident involving someone you know, be sure to disguise the person's identity by altering some of the facts and by using a pseudonym for the person involved.

I. *Dear Dr. Dee,*

Is there anything that I can do to rekindle my feelings of affection for my girlfriend? I'm starting to wonder if I'm "falling out of love" with her, which is a shame since she's such a great person.

Help

II. *Dear Dr. Dee,*

I have a terrible time meeting women because I'm such a poor conversationalist. My friend says that I'm just a natural born introvert and there's nothing I can do about it. Is he right?

Shy Guy

Relevant concepts:

- I. Answers could make reference to the fact that feelings can be as much a function of behavior as behavior can be a function of feelings (30-31). Hence, behaving in a romantic way, such as by sending flowers or arranging for romantic evenings together, may rekindle the writer's feelings of affection for his girlfriend (32).
- II. This letter illustrates the danger of genetic explanations for behavior, which can easily lead to the assumption that nothing can be done to alter a particular behavior pattern (35-36). Even if the writer does have an inherited tendency toward shyness, chances are that he can still significantly improve his conversational skills through practice. The evidence concerning deliberate practice in the attainment of skills is therefore also of relevance (19-20).

Internet Resources

"Theoretical Early Roots of Behaviorism" by Robert H. Wozniak (1997):

<http://www.brynmawr.edu/Acads/Psych/rwozniak/theory.html>

This is an article describing the early roots of behaviorism in functionalism and growing criticisms of the method of introspection.

"Psychology as the Behaviorist Views It" by John B. Watson (1913):

<http://psychclassics.yorku.ca/Watson/views.htm>

This is the article that many consider to be the manifesto that launched the behaviorist revolution. (From York University Classics in the History of Psychology.) See also the introduction and commentary to this article below.

Introduction to: "Psychology as the Behaviorist Views it": <http://psychclassics.yorku.ca/Watson/intro.htm>

An introduction to Watson's classic work, written by Christopher D. Green. (From York University Classics in the History of Psychology.)

Commentary on "Psychology as the Behaviorist Views It":

<http://psychclassics.yorku.ca/Watson/commentary.htm>

A commentary on Watson's classic work, written by Robert H. Wozniak. (From York University Classics in the History of Psychology.)

On "Psychology as the Behaviorist Views It." by E. B. Titchener (1914):

<http://psychclassics.yorku.ca/Titchener/watson.htm>

The response by Titchener, the famous structuralist, to Watson's (1913) call to behaviorism. (From York University Classics in the History of Psychology.)

Hull's theory of behavior:

<http://psychclassics.yorku.ca/Hull/Conflict/>

<http://psychclassics.yorku.ca/Hull/Hierarchy/part1.htm>

<http://psychclassics.yorku.ca/Hull/Hierarchy/part2.htm>

Some articles outlining various aspects of Hull's theory. (From York University Classics in the History of Psychology.)

“Cognitive Maps in Rats and Men” by Edward C. Tolman (1948):

<http://psychclassics.yorku.ca/Tolman/Maps/maps.htm>

Tolman's most famous article. It includes a description of the latent learning experiment discussed on page 22 of the text. (From York University Classics in the History of Psychology.)

Classic articles in the history of behaviorism: <http://psychclassics.yorku.ca/topic.htm#behaviorism>

The complete list of classic articles in behavioral psychology at the York University site (some of which are listed above).

Betty the tool-making crow (with videos): <http://users.ox.ac.uk/~kgroup/tools/introduction.shtml>

Betty is one bright bird (see especially the video of Betty bending a wire to form a hook). This is a prime example of recent research in cognitive behaviorism or, more precisely, “comparative cognition.”

Tool use in animals: <http://www.pigeon.psy.tufts.edu/psych26/tools.htm>

This site lists several examples of tool use in animals, a topic of particular interest to those in the field of comparative cognition.

Albert Bandura: <http://www.ship.edu/~cgboeree/bandura.html>

This site provides links to information about the life and work of Albert Bandura.

The B. F. Skinner Foundation: <http://www.bfskinner.org/>

This is the official website of the B. F. Skinner Foundation. It includes a short biography of Skinner and a brief exposition of operant conditioning.

Precision teaching: <http://psych.athabascau.ca/html/387/OpenModules/Lindsley/>

As noted in the text, Skinner was very interested in applying behavioral principles to the improvement of education. This link will take you to an Athabasca University tutorial on the behaviorally-based method of instruction known as precision teaching.

Association for Behavioral Analysis: <http://www.abainternational.org/>

This is the official website of the Association for Behavioral Analysis.

Various Links to Behavior Analysis and Learning: <http://psych.athabascau.ca/html/aupr/ba.shtml>

From Athabasca University, this site contains a huge list of links to Internet resources on behavior analysis and learning.

Suggested Readings

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Upper Saddle River, NJ: Prentice Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of self-control*. New York: W. H. Freeman.

Bjork, D. W. (1993). *B. F. Skinner: A life*. New York: Basic Books.

Buckley, K. W. (1989). *Mechanical man: John Broadus Watson and the beginnings of behaviorism*. New York: Guilford Press.

- Hergenhahn, B. R. (1988). *An introduction to theories of learning* (6th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Hull, C. L. (1943). *Principles of behavior*. New York: Appleton-Century-Crofts.
- Malone, J. C. (1990). *Theories of learning: A historical approach*. Belmont, CA: Wadsworth.
- Skinner, B. F. (1938). *The behavior of organisms: An experimental analysis*. Acton, MA: Copley.
- Skinner, B. F. (1953). *Science and human behavior*. New York: Macmillan.
- Tolman, E. C. (1959). Principles of purposive behavior. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 2). New York: McGraw-Hill.
- Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological Review*, 20, 154–177.

Answers to Quick Quiz Items

Quick Quiz A

1. observed; measured; permanent; experience
2. classical; involuntary
3. operant; goal; voluntary
4. classical
5. operant
6. is followed by; produces

Quick Quiz B

1. Plato; heredity
2. Aristotle; learning
3. nature; nurture
4. contrast; contiguity
5. similarity; frequency
6. similarity
7. contrast
8. frequency
9. contiguity; classical

Quick Quiz C

1. involuntary; voluntary; free will; involuntary
2. Empiricists; Locke; experience; tabula rasa; blank slate
3. elements; association

Quick Quiz D

1. structuralist; introspection
2. functionalist
3. evolution; relevant; similar
4. conscious; introspection
5. functionalist; structuralist

Quick Quiz E

1. evolutionary adaptation; natural selection
2. 1) traits vary within and between species; 2) many traits are heritable; 3) organisms must compete for limited resources

3. heritable
4. reproductive
5. nature; nurture; inherited

Quick Quiz F

1. introspection
2. inference; deduction; observation
3. animal
4. natural; observable
5. parsimony; simpler
6. Morgan's Canon

Quick Quiz G

1. methodological
2. directly observed
3. internal (or mental)
4. S-R; stimulus; response
5. heredity; environment; heredity
6. few; love; rage; fear

Quick Quiz H

1. operationalized
2. physiological
3. intervening; mediate
4. S-R; stimulus; response

Quick Quiz I

1. cognitive; purposive
2. cognitive map
3. latent; performance
4. useless; rats
5. animal cognition; comparative cognition

Quick Quiz J

1. social learning (or social-cognitive); observational; cognitive
2. reciprocal determinism; environment; behavior; person
3. cognitive-behavioral; cognitive

Quick Quiz K

1. radical; environmental
2. private; covert
3. inference
4. precedes; follows; parallel
5. cannot
6. pseudo
7. counter; environmental

Quick Quiz L

1. Tolman; molar
2. respondent (or reflexive); classically; operant; consequences; flexible
3. expects; past experience
4. genes; genetic; operant
5. evolution; operant
6. cautious; pessimistic

Quick Quiz M

1. radical
2. experimental analysis; behavior analysis
3. applied behavior analysis

Answers to Study Question Items: See short-answer test items in the test bank.

Test Bank for Chapter 1

See preface for complete information about the test bank. Note that questions marked with a QZ, MD, or FN have been used in the ready-to-use review quizzes, midterm exam, and final exam, respectively, that have been provided in the appendix to this manual. Questions marked with WWW appear on the book companion website.

1. According to the text, the word “behavior” refers to any activity of an organism that can be
 - a) directly observed.
 - b) indirectly observed.
 - c) precisely measured.
 - d) both a and b> D 3
2. According to the text, learning is a _____ in behavior that results from some type of experience.
 - a) change
 - b) permanent change
 - c) relatively permanent change
 - d) conscious change> C 3
3. Classical conditioning is to _____ behavior as operant conditioning is to _____ behavior.
 - a) novel; voluntary
 - b) reflexive; voluntary
 - c) reflexive; novel
 - d) voluntary; reflexive> B 3-5
4. Suppose your friend smiles after you give her a compliment. As a result, you are now more likely to compliment her in the future. This is best described as an example of
 - a) classical conditioning.
 - b) cognitive learning.
 - c) observational learning.
 - d) operant conditioning.> D 3-5 QZ
5. Walking to school is to _____ conditioning as sweating in a frightening situation is to _____ conditioning.
 - a) operant; classical
 - b) classical; operant
 - c) cognitive; classical
 - d) cognitive; operant> A 3-5

6. Examples of behaviors that can be classically conditioned include
- anxiety.
 - salivation.
 - blinking.
 - all of these
- > D 3-4
7. In operant conditioning, behaviors are
- controlled by the events that precede them.
 - governed by the person's thoughts and feelings.
 - controlled by their consequences.
 - largely innate.
- > C 4-5

Historical Background

Aristotle and the Laws of Empiricism

8. Aristotle was a(n) _____ while Plato was a(n) _____.
- empiricist; nativist
 - structuralist; functionalist
 - functionalist; structuralist
 - nativist; empiricist
- > A 6
9. Jason thinks that great scientists are born and not made while Allison thinks that they have simply been given superior training. Jason is best described as a(n) _____, while Allison is best described as a(n) _____.
- functionalist; structuralist
 - empiricist; nativist
 - structuralist; functionalist
 - nativist; empiricist
- > D 6
10. Joseph once saw an accident in which a car had plowed into a big oak tree. Now, each time he drives by that tree, he is reminded of the accident. This is an example of Aristotle's law of
- frequency.
 - contrast.
 - contiguity.
 - similarity.
- > C 6
11. As I look at the spotlight, I am reminded of the sun. This is best described as an example of Aristotle's law of
- contiguity.
 - contrast.
 - proximity.
 - similarity.
- > D 6 QZ
12. Seeing someone who is very old makes me wonder what he or she looked like as a young person. This is an example of the law of
- frequency.
 - contrast.
 - contiguity.
 - similarity.
- > B 6 WWW

13. As I look at my messy apartment, I am reminded of my friend's ultra-clean apartment. This is best described as an example of Aristotle's law of
- contiguity.
 - contrast.
 - proximity.
 - similarity.
- > B 6
14. When Trish saw the lush green forest, it reminded her of the desert that she had visited last year. This is best described as an example of the law of
- contiguity.
 - similarity.
 - contrast.
 - frequency.
- > C 6
15. My neighbor so often mows his lawn on Sunday, that I can easily imagine the sound of his lawn mower even on a Sunday when he doesn't mow his lawn. This is best described as an example of Aristotle's law of
- contrast.
 - contingency.
 - frequency.
 - proximity.
- > C 7
16. We easily associate birds with trees and tires with cars. This is in keeping with Aristotle's law of
- contiguity.
 - contingency.
 - proximity.
 - similarity.
- > A 6-7
17. Aristotle's laws of _____ and _____ are still considered important aspects of learning.
- contiguity; proximity
 - frequency; similarity
 - contrast; contingency
 - frequency; contiguity
- > D 6-7 FN

Descartes: Mind-Body Dualism and the Reflex

18. This person suggested that at least some types of behavior are mechanistic, and can therefore be scientifically investigated.
- Aristotle
 - Descartes
 - Locke
 - James
- > B 8
19. Descartes believed that the behaviors of nonhuman animals are
- entirely operant.
 - entirely reflexive.
 - freely chosen.
 - partially reflexive.
- > B 8

20. "I am able to control only some of my behaviors." This statement best exemplifies _____ theory of human behavior.
- a) Descartes'
 - b) Plato's
 - c) Locke's
 - d) Titchener's
- > A 8
21. "A person is both a physical being and a spiritual being." The person whose philosophical assumptions are most in agreement with this statement is
- a) Aristotle.
 - b) Locke.
 - c) Descartes.
 - d) Skinner.
- > C 8 QZ
22. Who among the following most strongly believed that there is a fundamental difference between humans and animals?
- a) B. F. Skinner
 - b) René Descartes
 - c) William James
 - d) Clark Hull
- > B 8
23. An individual who believes that humans and animals are fundamentally different would most likely agree with the viewpoint of
- a) Clark Hull.
 - b) Ivan Pavlov.
 - c) René Descartes.
 - d) B. F. Skinner.
- > C 8

The British Empiricists

24. The notion that knowledge is almost entirely a function of experience was strongly promoted by
- a) René Descartes.
 - b) the British empiricists.
 - c) Plato.
 - d) all of these
- > B 8
25. The British empiricists promoted the notion that knowledge is almost entirely a function of
- a) heredity.
 - b) reflection.
 - c) experience.
 - d) divine intervention.
- > C 8
26. The term "tabula rasa" is most clearly associated with
- a) Edward Titchener.
 - b) John Locke.
 - c) René Descartes.
 - d) B. F. Skinner.
- > B 8 MD

27. The notion that the mind is a blank slate is most clearly associated with
- Edward Titchener.
 - B. F. Skinner.
 - René Descartes.
 - John Locke.
- > D 8
28. "All that we are is a function of what we have experienced." This statement most closely agrees with the point of view known as
- British empiricism.
 - mind-body dualism.
 - social learning theory.
 - structuralism.
- > A 8

Structuralism: The Experimental Study of Consciousness

29. Although _____ believed that the mind consists of various combinations of basic elements, it was researchers associated with the approach known as _____ who actually began to test that idea.
- the British Empiricists; Platonism
 - Plato; British Empiricism
 - the British Empiricists; Structuralism
 - Structuralists; Functionalism
- > C 9
30. This perspective holds that it is possible to understand the mind by identifying its basic elements.
- structuralism
 - behaviorism
 - nativism
 - empiricism
- > A 9
31. In the method of _____, experimental subjects try to accurately describe their inner thoughts and emotions.
- attentive vigilance
 - cognitive mapping
 - introspection
 - introversion
- > C 9
32. Judit is asked to report her precise thought patterns as she plans her next move in chess. This is an example of the method of
- cognitive perception.
 - attentive perception.
 - cognitive elucidation.
 - introspection.
- > D 9 FN
33. The structuralist emphasis on _____ helped establish psychology as a scientific discipline.
- inferences
 - systematic observation
 - observable behavior
 - unconscious processes
- > B 9

Functionalism: The Study of the Adaptive Mind

34. The functionalists believed that psychology should be the study of
- the elements of conscious experience.
 - mind-body dualism.
 - observable behavior.
 - adaptive processes.
- > D 10
35. "What purpose is served by our ability to dream?" This question would most likely be asked by a psychologist who follows the approach known as
- associationism.
 - structuralism.
 - mind-body dualism.
 - functionalism.
- > D 10 QZ
36. Which of the following approaches would most readily lead to the discovery of principles that have practical application?
- British empiricism
 - structuralism
 - functionalism
 - mind-body dualism
- > C 10
37. William James was a _____ while Titchener was a _____.
- behaviorist; functionalist
 - functionalist; structuralist
 - structuralist; functionalist
 - functionalist; behaviorist
- > B 9-10
38. Structuralism is to functionalism as _____ is to _____.
- James; Titchener
 - Titchener; James
 - Watson; Locke
 - Locke; Watson
- > B 9-10
39. One similarity between structuralism and functionalism is that both approaches
- made use of animal experimentation.
 - focused on overt behavior.
 - emphasized the study of adaptive processes.
 - utilized the method of introspection.
- > D 9-10 MD
40. Which school of psychology was the immediate predecessor to behaviorism?
- Functionalism
 - British empiricism
 - Structuralism
 - Gestalt psychology
- > A 10

The Theory of Evolution: Humans as Animals

41. The principle or mechanism that explains how species change across generations in response to environmental pressures is
- a) inheritance.
 - b) functionalism.
 - c) natural selection.
 - d) Darwinism.
- > C 11
42. Natural selection leads to
- a) inheritance.
 - b) changes in species across generations.
 - c) changes in species within a generation.
 - d) learning to adapt to the environment.
- > B 11
43. Natural selection leads to changes in a species because
- a) some individuals survive longer than others.
 - b) some individuals reproduce more than others.
 - c) traits are learned, rather than genetic.
 - d) none of these
- B 11
44. Which of the following are the three components of the principle of natural selection?
- a) traits vary within a population, there is competition for limited resources, individuals learn to adapt to their environment
 - b) there is competition for limited resources, traits are heritable, there is survival of the fittest
 - c) traits vary within a population, traits are heritable, some species live longer than others
 - d) traits vary within a population, traits are heritable, there is competition for limited resources
- > D 11
45. From an evolutionary perspective, the ability to learn is considered to be
- a) a non-genetic trait.
 - b) an invariant trait.
 - c) an adaptation.
 - d) all of these
- > C 11

Behaviorism: The Study of Observable Behavior

46. This person strongly criticized psychology for emphasizing the study of conscious experience.
- a) Titchener
 - b) Watson
 - c) Locke
 - d) James
- > B 12
47. According to Watson, a major problem with the study of internal events is that
- a) one has to make inferences that are often unreliable.
 - b) it requires a large number of subjects.
 - c) the role of genetic factors is often ignored.
 - d) it is too simplistic to produce anything of value.
- > A 12-13

48. One of the major difficulties with the structuralist approach to psychology was the fact that the method of _____ was unreliable.
- deduction
 - induction
 - contemplation
 - introspection
- > D 12-13 WWW
49. According to _____, a major problem with the study of internal events is that one has to make inferences that are often _____.
- Bandura; too simplistic
 - Watson; unreliable
 - Watson; too simplistic
 - Bandura; unreliable
- > B 12-13
50. In researching the causes of a behavior, behaviorists
- place equal emphasis on genetic and environmental factors.
 - place a stronger emphasis on the role of nurture over nature.
 - tend to be empiricists rather than nativists.
 - both b and c
- > D 14
51. Behaviorism is traditionally defined as a _____ approach to psychology that emphasizes the study of _____ on observable behavior.
- natural science; internal events
 - cognitive; environment influences
 - natural science; environmental influences
 - cognitive; internal events
- > C 14 WWW
52. Julianne thinks that her poor marks are the result of low self-esteem which in turn is due to an unconscious fear of success. James thinks that Julianne's poor marks are the result of insufficient studying. According to the law of _____, the explanation that is more likely correct is _____.
- parsimony; James'
 - perseverance; Julianne's
 - perseverance; James'
 - parsimony; Julianne's
- > A 14 QZ
53. The KISS rule in engineering ("Keep it simple, stupid") is one version of
- the law of redundancy.
 - the law of parsimony.
 - the law of effect.
 - the law of empiricism.
- > B 14 FN
54. Consider these two statements: (A) the dog salivates because it knows that I am about to give it a treat; (B) the dog salivates as a reflexive response to the smell of food. Which statement *violates* Morgan's Canon?
- A
 - B
 - both A and B
 - neither A nor B
- > A 14

And Furthermore: John B. Watson: Behaviorism's Controversial Founder

55. Following his banishment from a university position, Watson
- a) retired from psychology.
 - b) became the "pop" psychologist of his era.
 - c) applied the principles of conditioning to advertising.
 - d) both b and c.
- > D 15
56. Given Watson's behavioral leanings, it is interesting to note that he
- a) was quite uncomfortable with the discussion of feelings.
 - b) was extremely interested in the meaning of dreams.
 - c) hated animals.
 - d) all of these
- > A 15

Five Schools of Behaviorism

Watson's Methodological Behaviorism

57. Although extreme, Watson's methodological behaviorism played a valuable role in enabling psychology to
- a) focus more strongly upon human, as opposed to animal, behavior.
 - b) become more experimental in nature.
 - c) break free from the extreme mentalism of the times.
 - d) emphasize the role of biological factors.
- > C 17
58. Methodological behaviorism asserts that psychologists should study those behaviors that can be
- a) investigated in animal experiments.
 - b) directly observed.
 - c) indirectly observed.
 - d) all of these
- > B 17
59. Which school of behaviorism is most likely to consider reports about thoughts and feelings to be unscientific?
- a) radical behaviorism
 - b) methodological behaviorism
 - c) neobehaviorism
 - d) social learning theory
- > B 17
60. Which of the following theorists is most likely to be disgusted with a discussion about the psychological importance of daydreaming?
- a) Hull
 - b) Watson
 - c) Skinner
 - d) Bandura
- > B 17 MD
61. Recall the opening vignette to Chapter 1 in the textbook where, after making love, one behaviorist comments, "That was fine for you, how was it for me?" This joke is most descriptive of which school of behaviorism?
- a) methodological behaviorism
 - b) social learning theory
 - c) radical behaviorism
 - d) neobehaviorism
- > A 17

62. Which behaviorist would be least interested in your inner thought processes while solving a math problem?
 a) Skinner
 b) Tolman
 c) James
 d) Watson
 > D 17
63. Which of the following behaviorists would be least interested in conducting an experiment on a person's ability to form mental images?
 a) Skinner
 b) Hull
 c) Watson
 d) Tolman
 > C 17 WWW
64. "Daydreams cannot be scientifically investigated." This statement would most likely come from a
 a) methodological behaviorist.
 b) neobehaviorist.
 c) cognitive behaviorist.
 d) radical behaviorist.
 > A 17
65. Watson's specific theory of learning was
 a) based largely on operant conditioning.
 b) a stimulus-response theory.
 c) a cognitive-reflex theory.
 d) based largely on the study of innate patterns of behavior.
 > B 17
66. Watson's specific theory of learning was
 a) an S-R theory.
 b) derived largely from Pavlov's work on classical conditioning.
 c) both a and b
 d) neither a nor b
 > C 17 QZ
67. In an S-R theory, learning is believed to involve the formation of connections between _____ stimuli and _____ responses.
 a) general; general
 b) specific; specific
 c) observable; covert
 d) covert; covert
 > B 17
68. With respect to the nature-nurture debate, _____ shifted over time toward becoming an extreme proponent of the _____ perspective with respect to human behavior.
 a) Skinner; nurture
 b) Watson; nurture
 c) Skinner; nature
 d) Watson; nature
 > B 18 FN

69. Of the following behaviorists, who would be most likely to reject the assumption that genes play a strong role in determining differences in math ability?
- a) Watson
 - b) Bandura
 - c) Skinner
 - d) Tolman
- > A 18

And Furthermore: Deliberate Practice and Expert Performance

70. Researchers have discovered that expert performers
- a) usually show strong evidence of talent from an early age.
 - b) show superlative skills in many different fields of endeavor.
 - c) usually require at least 10 years of practice to become experts.
 - d) both a and b
- > C 19-21
71. Karen is an excellent tennis player. According to information presented in the text, Karen's ability is probably the result of
- a) excellent motor skills that were inherited from her parents.
 - b) high self-efficacy.
 - c) high self-esteem.
 - d) an extensive amount of deliberate practice.
- > D 19-21
72. On the basis of research findings, Ericsson and colleagues (1993) have argued that the most critical factor in determining expert performance is
- a) unstructured play.
 - b) deliberate practice.
 - c) innate ability.
 - d) a combination of a and c
- > B 19-21
73. In a study of expert performance, Ericsson and colleagues (1993) report that top level performers practice their craft
- a) no more than one or two hours per day.
 - b) eight or more hours per day.
 - c) only when they feel like practicing.
 - d) about 4 hours per day.
- > D 19-21
74. According to Ericsson and colleagues' (1993) study of expert performance, heredity may influence expert performance in determining
- a) innate ability.
 - b) the extent to which one becomes interested in a subject matter.
 - c) one's ability to endure the hard work that is required.
 - d) both b and c.
- > D 19-21 MD

Hull's Neobehaviorism

75. A major challenge to methodological behaviorism came from _____, who used intervening variables, usually in the form of hypothesized physiological process, to help explain behavior.
- a) Hull
 - b) Tolman
 - c) Skinner
 - d) Watson
- > A 21-22
76. Clark Hull believed that internal events can be included in a science of behavior given that they can be
- a) inferred.
 - b) directly observed.
 - c) operationalized.
 - d) described.
- > C 21-22
77. The 'middle man' or broker in a business transaction is analogous to what is called a(n)
- a) extraneous variable.
 - b) intervening variable.
 - c) independent variable.
 - d) confounding variable.
- > B 21-22
78. Neobehaviorism utilizes intervening variables, usually in the form of hypothesized _____, to help explain behavior.
- a) cognitive processes
 - b) fixed action patterns
 - c) physiological processes
 - d) unconscious conflicts
- > C 21-22
79. Which school of behaviorism would be most interested in the effect of thirst on behavior?
- a) neobehaviorism
 - b) radical behaviorism
 - c) purposive behaviorism
 - d) methodological behaviorism
- > A 21-22
80. Because I am hungry as a result of food deprivation, I walk quickly as I head to the cafeteria. This statement is most descriptive of _____ brand of behaviorism.
- a) Tolman's
 - b) Skinner's
 - c) Hull's
 - d) Bandura's
- > C 21-22
81. Which of the following behaviorists would be most interested in manipulating the degree to which a rat has been food deprived?
- a) Watson
 - b) Tolman
 - c) Bandura
 - d) Hull
- > D 21-22 QZ

82. Which of the following approaches to behaviorism views behavior as very machine-like, with specific responses becoming attached to specific stimuli?
- a) radical behaviorism
 - b) purposive behaviorism
 - c) social learning theory
 - d) neobehaviorism
- > D 21-22
83. Hull's model of behavior is quite similar to modern cognitive approaches that view humans as
- a) self-motivating.
 - b) animals that respond with fixed action-patterns that are not modifiable.
 - c) analogous to computers that process bits of information to produce responses.
 - d) more susceptible to social cues than to biological cues.
- > C 21-22
84. Which of the following behaviorists would probably be most interested in robotics, because of its focus on mechanistic aspects of behavior?
- a) Tolman
 - b) Skinner
 - c) Hull
 - d) Bandura
- > C 21-22 WWW

Tolman's Cognitive Behaviorism

85. Tolman's approach to behaviorism utilizes intervening variables, usually in the form of hypothesized _____, to help explain behavior.
- a) cognitive processes
 - b) fixed action patterns
 - c) physiological processes
 - d) unconscious conflicts
- > A 23
86. Tolman's 'molar' approach to behaviorism was inspired by the _____ approach of _____.
- a) holistic; Gestalt theorists
 - b) molecular; Hull
 - c) introspective; Titchener
 - d) methodological; Watson
- > A 23
87. A mental representation of one's surroundings is a
- a) spatial mentation.
 - b) spatial cognition.
 - c) cognitive map.
 - d) spatial heuristic.
- > C 24
88. Janice always gets lost whenever she deviates from the route that she normally takes when she drives home. Tolman would be most likely to say that she is suffering from a defective
- a) schema.
 - b) schemata.
 - c) cognitive map.
 - d) vestibular system.
- > C 24

89. When I visited Paris for a conference, I spent the first few days just wandering the streets. On the third day, when I had to meet a friend at the Louvre museum, I knew exactly how to get there. This is best described as an example of _____ learning.
- delayed
 - S-R
 - latent
 - observational
- > C 24 MD
90. Tolman and Honzik's (1930) maze study suggested that
- there is no distinction between learning and performance.
 - there is a distinction between learning and performance.
 - maze running in rats is a largely reflexive.
 - both a and c
- > B 24-26
91. "Learning can take place in the absence of reward." This statement most likely came from a
- methodological behaviorist.
 - neobehaviorist.
 - cognitive behaviorist.
 - classical behaviorist.
- > C 23-26
92. In _____, learning occurs even though there isn't any observable demonstration of that learning.
- operant conditioning
 - latent learning
 - classical conditioning
 - adjunctive learning
- > B 24
93. Which of the following behaviorists would emphasize the distinction between learning and performance?
- Skinner
 - Tolman
 - Watson
 - Hull
- > B 23-26 WWW
94. The field of study known as _____ could be considered a direct descendent of Tolman's approach to behaviorism.
- teleological behaviorism.
 - animal cognition.
 - humanistic psychology.
 - evolutionary psychology.
- > B 27

Bandura's Social Learning Theory

95. Which of the following theorists is most likely to explain behavior in terms of thoughts and feelings?
- Skinner
 - Hull
 - Tolman
 - Bandura
- > D 28-29

96. Observational learning is a particularly important aspect of
- purposive behaviorism.
 - Neobehaviorism.
 - social learning theory.
 - methodological behaviorism.
- > C 29
97. The social learning approach
- recognizes the distinction between learning and performance.
 - is more closely aligned to Tolman's approach than Hull's.
 - assigns an important role to self-referent thoughts.
 - all of these
- > D 28-29
98. Among the following, who is most likely to say that you go to the supermarket because you *expect* that food is available at the supermarket?
- a methodological behaviorist
 - a radical behaviorist
 - a social learning theorist
 - a neobehaviorist
- > C 28-29 MD
99. This behaviorist believes that our behavior is often strongly influenced by the beliefs we have about our own abilities.
- Bandura
 - Tolman
 - Hull
 - Skinner
- > A 28-29 QZ
100. The importance of "thinking before acting" is most consistent with the viewpoint of which behaviorist?
- Skinner
 - Hull
 - Tolman
 - Bandura
- > D 28-29 WWW
101. According to the notion of _____, behavior, environment and internal events (person variables) all influence each other.
- reciprocal determinism
 - interactive determinism
 - reciprocal inference
 - interactive inference
- > A 29
102. Tara complains that she is doing poorly in her classes because she isn't being taught well. The theorist most likely to regard this explanation as an oversimplification would be
- Skinner.
 - Bandura.
 - Tolman.
 - Hull.
- > B 29-30 FN

103. Bob believes that he has trouble studying because his parents neglected him as a child. The theorist most likely to regard this explanation as overly simplistic would be
- a) Watson.
 - b) Skinner.
 - c) Bandura.
 - d) Hull.
- > C 29-30

Skinner's Radical Behaviorism

104. According to Skinner, thoughts and feelings are
- a) impossible to study.
 - b) the ultimate causes of behavior.
 - c) private behaviors that also require explanation.
 - d) reflexes more than operants.
- > C 30
105. What is the position of Radical Behaviorism with respect to 'internal events' like thoughts and feelings?
- a) Internal events have no place in the science of behavior.
 - b) Internal events should be studied, but they should not be used as explanations for behavior.
 - c) Internal events are the basic units of explanation of any behavior.
 - d) Internal events are caused by behavior, but they do not cause behavior.
- > B 30
106. Who among the following would say that thoughts and feelings are a function of the environment and should be studied as such?
- a) Hull
 - b) Bandura
 - c) Skinner
 - d) Descartes
- > C 30 QZ

Skinner's View of Internal Events

107. "Thoughts are just another form of behavior and should be studied as such." The behaviorist most likely to have uttered such a statement is
- a) Hull.
 - b) Tolman.
 - c) Bandura.
 - d) Skinner.
- > D 30-31 WWW
108. Watson was a _____, while Skinner was a _____.
- a) radical behaviorist; methodological behaviorist
 - b) methodological behaviorist; radical behaviorist
 - c) neobehaviorist; radical behaviorist
 - d) radical behaviorist; neobehaviorist
- > B 17, 31 WWW
109. According to Skinner, _____ at describing their feelings.
- a) people are often quite inaccurate
 - b) people are often quite accurate
 - c) males are generally inaccurate, females are generally accurate
 - d) adults are generally accurate, children are generally inaccurate.
- > A 31

110. According to Skinner, feelings are often inaccurately described because, when parents teach children to label internal events,
- a) they can only make inferences about what the children are actually feeling.
 - b) they pay too little attention to this type of training.
 - c) they often punish children for accurately describing their feelings.
 - d) both b and c
- > A 31
111. Dr. Franzoi notices that one of her patients has great difficulty describing her emotions, possibly because she was severely neglected as a young child. The behaviorist who would be most interested in this matter would probably be
- a) Skinner.
 - b) Bandura.
 - c) Tolman.
 - d) Watson.
- > A 31
112. When we look for causal relationships between thoughts and behaviors, we need to recognize that thoughts and feelings sometimes
- a) follow a behavior.
 - b) precede a behavior.
 - c) occur parallel to the behavior.
 - d) all of these
- > D 31-32
113. Removing the magazines from your room so you won't be distracted by them while studying is an example of what Skinner called
- a) countercontrol.
 - b) counterdeterminism.
 - c) reciprocal control.
 - d) reciprocal determinism.
- > A 33
114. Skinner's notion of _____ is similar to Bandura's concept of reciprocal determinism.
- a) indeterminism
 - b) countercontrol
 - c) operant conditioning
 - d) counterconditioning
- > B 33
115. Skinner comes closest to the notion of free will in his concept of
- a) reciprocal determinism.
 - b) reciprocal control.
 - c) countercontrol.
 - d) counter determinism.
- > C 33 MD

Skinner's Approach as Molar

116. Skinner is similar to Tolman in that they both emphasized a _____ view of behavior.
- a) molecular
 - b) free will
 - c) cognitive
 - d) molar
- > D 35
117. I head to the cafeteria to get food. Among behaviorists, this is a relatively _____ explanation for behavior.
- a) molar
 - b) molecular
 - c) nondeterministic
 - d) existential
- > A 35
118. Past experience is to expectation as _____ is to _____.
- a) Skinner; Tolman
 - b) Skinner; Hull
 - c) Hull; Watson
 - d) Tolman; Watson
- > A 35

Skinner's View of Genetic Factors

119. Skinner _____ the role of genetic influences on behavior.
- a) basically ignored
 - b) adamantly rejected
 - c) clearly recognized
 - d) overemphasized
- > C 35
120. According to Skinner, behavior is ultimately the result of _____ influences.
- a) genetic
 - b) environmental
 - c) cognitive
 - d) both genetic and environmental
- > D 35
121. According to Skinner, operant conditioning is quite similar to the principle of
- a) homeostasis.
 - b) natural selection.
 - c) gravity.
 - d) relativity.
- > B 35-36 QZ
122. Operant conditioning constitutes a sort of mini-evolution of an organism's behavior in the sense that _____ responses become more frequent while _____ responses become less frequent.
- a) nonadaptive; adaptive
 - b) adaptive; nonadaptive
 - c) reflexive; operant
 - d) operant; reflexive
- > B 35-36

123. "That which works remains; that which doesn't work is eliminated." This statement reflects the principle of
- a) classical conditioning
 - b) natural selection.
 - c) operant conditioning.
 - d) both natural selection and operant conditioning.
- > D 35-36 FN
124. Changes in a species is to _____ as changes in an individual is to _____.
- a) classical conditioning; operant conditioning.
 - b) operant conditioning; classical conditioning.
 - c) natural selection; operant conditioning
 - d) operant conditioning; natural selection
- > C 35-36
125. John is having difficulty learning a new swim stroke. Fortunately for him, his swim coach is a
- a) nativist.
 - b) humanist.
 - c) behaviorist.
 - d) structuralist.
- > C 36
126. "Great athletes are made, not born." This statement most exemplifies the _____ approach to behavior.
- a) nativist
 - b) empiricist
 - c) humanist
 - d) existentialist
- > B 36
127. Behaviorists _____ the role of genetic factors in learning.
- a) have a growing appreciation for
 - b) reject
 - c) ignore
 - d) focus upon
- > A 36

Behavior Analysis and Applied Behavior Analysis

128. The science of physiology is to the practice of medicine as _____ is to _____.
- a) behavior analysis; applied behavior analysis
 - b) radical behaviorism; behavior analysis
 - c) behavior analysis; radical behaviorism
 - d) radical behaviorism; applied behavior analysis
- > A 37
129. Aircraft engineering is to physics as
- a) radical behaviorism is to applied behavior analysis.
 - b) applied behavior analysis is to behavior analysis.
 - c) behavior analysis is to applied behavior analysis.
 - d) behavior analysis is to radical behaviorism.
- > B 37

130. Philosophy is to science as _____ is to _____.
a) behavior analysis; radical behaviorism
b) radical behaviorism; applied behavior analysis
c) radical behaviorism; behavior analysis.
d) behavior analysis; applied behavior analysis
> C 37 MD
131. What is the relationship between 'radical behaviorism' and 'behavior analysis'?
a) Radical behaviorism is the philosophical basis for behavior analysis.
b) Behavior analysis is the philosophical basis for radical behaviorism.
c) Radical behaviorists conduct scientific research, and behavior analysts are practicing clinicians.
d) Behavior analysis is a science, while radical behaviorism is the application of that science.
> A 37
132. All of the following are major schools of behaviorism EXCEPT
a) ontological behaviorism.
b) neobehaviorism.
c) purposive behaviorism.
d) social learning theory.
> A 16-37
- And Furthermore: The Life of B. F. Skinner**
133. With respect to the use of punishment, Skinner believed that it
a) often creates more problems than it solves.
b) is an effective means of childhood management.
c) has little or no effect on children.
d) has little or no effect on adults.
> A 39
134. A strong trait of B. F. Skinner's that later became reflected in his brand of behaviorism was his
a) objectivity.
b) mysticism.
c) mathematical ability.
d) fear of emotions.
> A 39
135. Which of the following personal characteristics most directly influenced Skinner's work as a psychologist?
a) love of poetry
b) extreme emotionality
c) inventiveness
d) athleticism
> C 39 WWW
136. Skinner's book, *Beyond Freedom and Dignity*, proposed that
a) freedom and dignity are necessary characteristics of human existence.
b) society must be engineered to control human behavior for the better.
c) people must be taught to be free.
d) society has been over-engineered to the point where people have lost their dignity .
> B 41

137. Concerning his book, *Beyond Freedom and Dignity*, Skinner was severely criticized for
- proposing that government should be abolished.
 - rejecting the concept of free will.
 - rejecting the concept of an engineered society.
 - both b and c
- > B 41
138. Skinner's daughter
- grew up in an experimental chamber.
 - became mentally ill.
 - both a and b
 - neither a nor b
- > D 40
139. An invention of Skinner's that is likely to benefit greatly from the modern day availability of personal computers is
- programmed instruction.
 - whole language learning.
 - peer-based instruction.
 - distance education.
- > A 41-42

Fill-in-the-Blank Items

Most of these items are taken from or are very similar to the end-of-chapter test items in the text; the items at the end that are marked WWW are posted on the student resource website.

- Steven once became terribly ill while visiting Chicago. As a result, whenever he visits Chicago, he thinks of the illness he suffered at that time. Among the four laws of association, this is best described as an example of the law of _____.
> contiguity
- In considering the process of fantasizing, a psychologist who adheres to the approach known as _____ would be most concerned with understanding the adaptive value of fantasizing.
> functionalism
- When Tara saw the lush green lawn, it reminded her of just how dry the lawn had been the previous year. Among the four laws of association, this is best described as an example of the law of _____.
> contrast
- After struggling unsuccessfully to eliminate his test anxiety, Andres finally accepts that there are some aspects of himself that he can control and some that he cannot control. This conclusion is similar to that of the French philosopher _____ and his theory of _____ dualism.
> Descartes; mind-body
- In trying to understand her feelings for Juan, Pamela pays close attention to the sensations she feels each time she sees him. This is an example of the method of _____. This was a favorite method of research by psychologists who adhered to the approach known as _____.
> introspection; structuralism
- Jason once found \$20 while cleaning the apartment. As a result, he often cleans the apartment. This is an example of _____ conditioning.
> operant

7. "My cat never gets lost. It's like she has a blueprint in her mind of the exact layout of the entire town." This statement fits best with (name the behaviorist) _____'s brand of behaviorism known as _____.
 > Tolman; cognitive (or purposive) behaviorism
8. Descartes believed that the behavior of _____ is entirely reflexive.
 > animals
9. The law of _____ holds that simpler explanations are usually preferable explanations.
 > parsimony
10. The assumption that environmental events, observable behavior, and internal events all influence each other is called _____.
 > reciprocal determinism
11. Diane often gets lost when she drives around the city in which she lives. Tolman might say that she has a faulty _____.
 > cognitive map
12. Although Roberta just sits there throughout the lecture, she can afterwards repeat everything the professor said. This is an example of _____ learning, which illustrates the distinction between learning and _____.
 > observational (or latent); performance
13. Skinner's approach to the study of behavior is a _____ approach. In this sense, Skinner is quite similar to _____.
 > molar; Tolman
14. The behavioral science that grew out of the philosophy of radical behaviorism is called _____.
 > behavior analysis (or the experimental analysis of behavior)
15. The mental representation of one's spatial surroundings is called a _____.
 > cognitive map WWW
16. The results of Tolman and Honzik's (1930) experiment was regarded as a demonstration of _____ learning (or the distinction between performance and behavior).
 > latent WWW
17. Neal was recently bitten by a spider, and is now afraid of spiders. This is best seen as an example of _____ conditioning.
 > classical WWW

Short-Answer Items

Most of these items are end-of-chapter study questions from the text; those marked WWW are additional items from the student resource website.

1. Name and briefly describe the two fundamental forms of learning emphasized in this textbook.

Classical conditioning is the process by which certain inborn, involuntary behaviors come to be elicited in new situations. Operant conditioning involves the strengthening or weakening of a behavior as a result of its consequences. (3-5)

2. Describe the nativist versus empiricist approaches to knowledge. How would a nativist versus an empiricist explain how Picasso became such a great artist?

The nativist (nature) perspective assumes that a person's characteristics are largely inborn, while the empiricist (nurture) perspective assumes that a person's characteristics are mostly learned. A nativist would assume that Picasso's artistic talent is largely innate, while an empiricist would assume that his artistic talent is largely the result of learning. (6)

3. Name and briefly describe the four laws of association.

Law of Similarity: Events that are similar to each other are readily associated.

Law of Contrast: Events that are opposite from each other are readily associated.

Law of Contiguity: Events that occur in close proximity to each other in time or space are readily associated.

Law of Frequency: The more frequently two items occur together, the more strongly they are associated.

(6-7)

4. Outline Descartes' dualistic model of human behavior. In his view, what is the basic distinction between the behavior of humans and the behavior of animals.

Descartes' notion of mind-body dualism holds that some human behaviors are reflexes that are automatically elicited by external stimulation, while other behaviors are freely chosen and controlled by the mind. Animal behavior is entirely reflexive, while human behavior is a combination of reflexes and freely chosen behaviors. (8)

5. How did the British empiricists view the acquisition of knowledge and the composition of the conscious mind?

The British empiricists maintained that almost all knowledge is a function of experience. They also believed that the conscious mind is composed of a finite set of basic elements (specific colors, sounds, smells, etc.) that are combined through the principles of association into complex sensations and thought patterns. (8)

6. Describe the structuralist approach to psychology. Name and define the basic method by which the structuralists gathered data.

Structuralism assumes that it is possible to determine the structure of the mind by identifying the basic elements of which it is composed. Structuralists used the method of *introspection*, in which the subject in an experiment attempts to accurately describe his or her conscious thoughts, emotions, and sensory experiences. (9)

7. Describe the functionalist approach to psychology. Where did functionalists stand on the issue of animal experimentation, and what was their reasoning behind this?

Functionalists assumed that the mind evolved to help us adapt to the world around us, and that the focus of psychology should be the study of those adaptive processes. They believed, like Darwin, that humans evolved from other animals and that much of what we learn from other animals may be of direct relevance to humans. (10)

8. Describe Darwin's principle of natural selection. What are the three main components of the principle of natural selection?

The principle of natural selection states that individuals that are capable of adapting to environmental pressures are more likely to survive and reproduce than those that cannot adapt. The three components of natural selection are 1) variability of traits (e.g., some individuals are larger than others), 2) traits are heritable, or have a genetic basis, and 3) organisms must compete for limited resources. (11)

9. Define the law of parsimony and Morgan's Canon.

The law of parsimony holds that simpler explanations for a phenomenon are generally preferable to more complex explanations. Morgan's Canon holds that one should interpret an animal's behavior in terms of lower, more primitive processes (e.g., reflex or habit) than higher, more mentalistic processes (e.g., decision-making or imagination). (14)

10. Describe Watson's methodological behaviorism. How did Watson's position on the nature-nurture debate change over time?

Methodological behaviorism asserts that, for methodological reasons, psychologists should study only those behaviors that can be directly observed. Over time, Watson also became something of an extremist regarding the nature-nurture issue. In his original 1913 article, he emphasized the influence of both heredity and environment on behavior. Later, following extensive observations of human infants, he came to the conclusion that humans inherit only a few fundamental reflexes along with three basic emotions (love, rage, and fear). Everything else, he believed, is learned. (16-18)

11. Describe Hull's neobehaviorism. How does Tolman's cognitive behaviorism differ from it.

Hull's neobehaviorism is a brand of behaviorism that utilizes intervening variables, in the form of hypothesized physiological processes, to help explain behavior. Tolman's cognitive behaviorism is similar except that the intervening variables are usually in the form of hypothesized cognitive processes. (21-24)

12. Describe Bandura's social learning theory. Outline or diagram his concept of reciprocal determinism.

Social learning theory is a behavioral approach that strongly emphasizes the importance of observational learning and cognitive variables in explaining human behavior. According to the concept of reciprocal determinism, environmental events, observable behavior, and "person variables" (which include thoughts and feelings) are seen as having a reciprocal influence on each other. (28-29)

13. Describe Skinner's radical behaviorism. How does his approach to determinism differ from that of Bandura's?

Radical behaviorism emphasizes the influence of the environment on overt behavior, rejects the use of internal events to explain behavior, and views thoughts and feelings as behaviors which themselves need to be explained. Although Skinner might be seen as agreeing with some aspects of Bandura's notion of reciprocal determinism—in the sense that environmental events, internal events, and observable behavior are seen as capable of interacting with each other—he differs from Bandura in assuming that it is the environment that ultimately determines both external behavior and internal (private) behavior. (30-34)

14. In what way is operant conditioning similar to Darwin's principle of natural selection? Why was Skinner cautious about placing too much emphasis on genetic factors in behavior?

In the same way that the principle of natural selection specifies that adaptive characteristics are more likely to increase across generations within a species, operant conditioning specifies that adaptive behaviors (those behaviors that lead to reinforcers) are more likely to increase in frequency within an individual. Skinner believed that behavior was ultimately the result of the interaction of both genes and the environment. Nevertheless, he was cautious about emphasizing genetic factors insofar as assuming that a behavior pattern has been genetically determined often leads to a pessimistic attitude about the possibility of changing the behavior. Simply put, if one assumes that a maladaptive behavior pattern has been genetically determined, we tend to assume that it cannot be changed. By contrast, if one assumes that a maladaptive behavior pattern has been learned, we tend to assume that it can also be changed. (35-36)

15. What is the distinction between radical behaviorism, behavior analysis, and applied behavior analysis?

Radical behaviorism is the set of philosophical assumptions that underlie Skinner's approach to the science of behavior. behavior analysis (or the experimental analysis of behavior) is the basic science that grew out of radical behaviorism, and applied behavior analysis is a technology of behavior in which basic principles of behavior are applied to real world issues. (37)

16. Compare and contrast Watson's version of behaviorism with Skinner's. WWW

Watson's methodological behaviorism completely rejects the inclusion of internal events in the science of behavior and proposes that we should focus exclusively on observable behavior and the environment that surrounds it. Skinner believed that internal events can be included in a science of behavior, but only as a type of behavior that itself needs to be explained and not as explanations for behavior. Like Watson, Skinner emphasized the importance of the environment in determining behavior; unlike Watson, he was not as extreme an advocate of the nurture perspective. Nevertheless, he was wary of placing too much emphasis on genetic determinants of behavior, since this tends to lead to pessimistic assumptions about the possibility of changing maladaptive behaviors. Finally, Skinner's view of the learning process tends to be more molar and less machine-like than Watson's, who believed that all behavior could be explained in terms of stimulus-response connections. (16-18, 30-36)

17. Compare and contrast Tolman's cognitive behaviorism with Bandura's social learning theory. WWW

Tolman and Bandura agree on the usefulness of including internal mental events in their theorizing. They differ in that these internal events are purely hypothetical from Tolman's perspective, but quite real from Bandura's perspective. For Tolman, these internal events are utilized as intervening variables that mediate between the environment and behavior; for Bandura, these internal events reciprocally interact with overt behavior and the environment to determine behavior. Tolman almost exclusively studied rats, while Bandura's approach is much more focused on human behavior. Both Tolman and Bandura utilized a molar perspective in their study of behavior and emphasized the distinction between learning and performance. (23-30)

18. Compare and contrast functionalism with structuralism. WWW

Structuralism attempted to determine the structure of the mind by discovering the basic elements of which it is composed. Functionalism was concerned with investigating the adaptive significance of the mind, the assumption being that the mind evolved because it was in some way adaptive. Both structuralists and functionalists made use of the method of introspection, although functionalism was not averse to other methods of investigation, such as animal experimentation. (9-10)