Contents

KO	JIS OF COGNITIVE PSIGNOLOGI
1.	Origins of psychology: The philosophers of the mind
	The historical roots of psychology: Atomism. Empiricism. Critique of Empiricism. Connectionism. The laws of association. Using association to explain complex thought processes. To solve a syllogism. Memory and association.
2.	The birth of the new science
	From the armchair to the laboratory: Introspectionism: The psychology of conscious experience. The Introspectionist program. Successes of the Introspectionist program. Difficulties. Evidence of unconscious processes.
3.	Behaviorism
	The science of behavior: Freedom of method. Freedom of subject matter Completeness. Associationist roots. Behaviorist contributions to psychology: The experimental analysis of learning. Classical conditioning. Instrumental conditioning. Behaviorist theories of thought: Thought as implicit speech. Hullian theory of thought. Critique of Behaviorism, or: Far too much of a good thing: Too much Empiricism. Too much objectivity.
4.	Gestalt psychology
	Form-qualities: Organized wholes. The Phi phenomenon. Principles of organization. Nativism. Goals. Köhler's apes. Set and functional fixity.

SECTION I

DEV	ELOPMENTS IN PSYCHOLOGY 75
5.	Child development I: The infant looks at the world
	Piaget. What the infant sees. The sensorimotor period: Intersensory coordination. Sensorimotor accommodations.
6.	Child development II: From reflexes to scientific thought 92
	Adapting and organizing. Periods of development. From the sensorimotor period to the preoperational period. The preoperational period. Egocentrism. A theory of conservation of quantity. The period of concrete operations. From concrete operations to formal operations.
7.	Early theories of language and meaning
	Theories of meaning: Meaning and reference. Association theories of meaning. Classical conditioning theories: Mediation theory. Skinner's analysis of language. Critique of Skinner's system.
8.	The impact of the computer on psychology
	The development of the computer. Information-processing models: Examples of information-processing models in psychology. Computer simulation and artificial intelligence: Heuristic search and the Logic Theorist. Exhaustive search. LT versus the British Museum Algorithm. LT's advantage—Heuristic search.
	CTION III SEARCH IN COGNITIVE PSYCHOLOGY 151
9.	Modern approaches to language 153
	Grammar as a model of human language processes. Artificial intelligence research on language understanding: ELIZA—A computer therapist. Dialogue 1. Dialogue 2. SHRDLU. Dialogue 3. Understanding larger language units: Story grammars.
10.	Problem solving I: Searching for solutions
	What is a problem? Understanding and representation. The Mutilated Checkerboard—A hard problem. The Matchmaker: A trivial problem or the Multilated Checkerboard revisited. The essential aspects of a representation. Problem solving as search. Methods of search. Planning methods.
11.	Problem solving II: Representations, plans, and ill-defined problems
	Constructing problem representations. Selective attention in the construc- tion of representations. Making use of prior knowledge. Ill-defined prob-

	ill-defined?
12.	Creativity 215
	Part 1: An informal definition of creativity. Are people the only creative animals? Is creativity inherited? How is creativity related to IQ? Identifying creative individuals. Part 2. The nature of the creative process: A traditional view. A critique of the traditional view. What is the nature of a creative art? A theory of creativity judgments. Can an individual become more creative?
IND	EXES
Nan	ne index 247

Subject index

250

lems. Initial statement of the shop design problem. What makes a problem