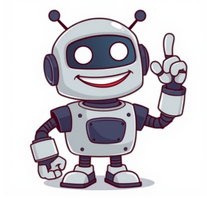
I'm not a robot



Also found in: Thesaurus, Medical, Acronyms, Encyclopedia, Wikipedia. (kŏg′nĭ-tĭv)adj. Of, characterized by, involving, or relating to cognition: "For the person experiencing cognitive decline, the slow loss of coherent speech will be compounded by a declining ability to draw conclusions" (Joanne Koenig Coste).American Heritage® Dictionary of the English Language, Fifth Edition. Copyright © 2016 by Houghton Mifflin Harcourt Publishing Company. Published by Houghton Mifflin Harcourt Publishing Company. All rights reserved. ('kɒgnɪtɪv) adj (Psychology) of or relating to cognitionCollins English Dictionary – Complete and Unabridged, 12th Edition 2014 © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003, 2006, 2007, 2009, 2011, 2014 ('kɒg nɪ tɪv) adj. 1. of or pertaining to cognition. 2. of or pertaining to the mental processes of perception, memory, judgment, and reasoning, as contrasted with emotional and volitional processes. [1580–90; < Medieval Latin] Random House Kernerman Webster's College Dictionary, © 2010 K Dictionaries Ltd. Copyright 2005, 1997, 1991 by Random House, Inc. All rights reserved. Adj.1.cognitive - of or being or relating to or involving cognition; "cognitive psychology"; "cognitive style"Based on WordNet 3.0, Farlex clipart collection. © 2003-2012 Princeton University, Farlex Inc. когнитивныйкогнитологкогнитологическийCollins Spanish Dictionary - Complete and Unabridged 8th Edition 2005 © William Collins Sons & Co. Ltd. 1971, 1988 © HarperCollins Publishers 1992, 1993, 1996, 1997, 2000, 2003, 2005 ['kɒgnɪtɪv] adj [development, skill, error, process] → cognitif/iveCollins English/French Electronic Resource. © HarperCollins Publishers 2005 adj powers, faculties → kognitivCollins German Dictionary – Complete and Unabridged 7th Edition 2005. © William Collins Sons & Co. Ltd. 1980 © HarperCollins Publishers 1991, 1997, 1999, 2004, 2005, 2007 ['kɔgnɪtɪv] adj (frm) → cognitivo/aCollins Italian Dictionary 1st Edition © HarperCollins Publishers 19952. rel. al proceso mental de comprensión. English-Spanish Medical Dictionary © Farlex 2012English-Spanish/Spanish-English Medical Dictionary Copyright © 2006 by The McGraw-Hill Companies, Inc. All rights reserved. Want to thank TFD for its existence? Tell a friend about us, add a link to this page, or visit the webmaster's page for free fun content. Link to this page: But the hardest problems are those that arise concerning ways of being "conscious." These ways, taken together, are called the "cognitive" elements in mind, and it is these that will occupy us most during the following lectures.Cognitive Assessment & Training Market, By Component (Solution, Services), By Assessment Type (Classroom Learning, Corporate Learning, Brain Training, Clinical Trials, Research), By Application (Corporate, Healthcare), By Vertical - Forecast till 2023 The cognitive approach in psychology focuses on how we think, learn, remember, and solve problems. It sees the mind like a computer, processing information through mental processes such as perception, memory, and decision-making. This approach helps us understand behavior by examining internal thought patterns. Cognitive psychology became prominent in the mid-1950s, driven by several important factors: Dissatisfaction with the behaviorist approach, which emphasized observable behaviors rather than internal mental processes. The development of improved experimental methods that allowed internal mental processes to be scientifically studied. The rise of computer technology and artificial intelligence, which provided a valuable metaphor and analytical framework for understanding human cognition. As a result, psychology shifted focus away from behaviorism (conditioned behavior) toward rigorous laboratory investigations of internal cognitive processes and human information processing. Cognitive psychologists view the mind as an information processor, similar to how computers handle data. They study how we take in information, store it, process it internally, and use it to guide our actions. To better explain these internal processes, cognitive psychologists develop theoretical models. These models illustrate how various cognitive functions – including perception, attention, memory, language, thinking, and consciousness – interact and operate together inside our minds. The behaviorist approach only studies external observable (stimulus and response) behavior that can be objectively measured. They believe that internal behavior cannot be studied because we cannot see what happens in a person's mind (and therefore cannot objectively measure it). However, cognitive psychologists consider it essential to examine an organism's mental processes and how these influence behavior. Cognitive psychology assumes a mediational process occurs between stimulus/input and response/output. These are mediational processes because they mediate (i.e., go-between) between the stimulus and the response. They come after the stimulus and before the response. Instead of the simple stimulus-response links proposed by behaviorism, the mediational processes of the organism are essential to understand. Without this understanding, psychologists cannot have a complete understanding of behavior. Examples The mediational (i.e., mental) event could be memory, perception, attention or problem-solving, etc. Perception: how we process and interpret sensory information. Attention: how we selectively focus on certain aspects of our environment. Memory: how we encode, store, and retrieve information. Language: how we acquire, comprehend, and produce language. Problem-solving and decision-making: how we reason, make judgments, and solve problems. Schemas: Cognitive psychologists assume that people's prior knowledge, beliefs, and experiences shape their mental processes. For example, the cognitive approach suggests that problem gambling results from maladaptive thinking and faulty cognitions, which both result in illogical errors. Gamblers misjudge the amount of skill involved with 'chance' games, so they are likely to participate with the mindset that the odds are in their favour and that they may have a good chance of winning. Therefore, cognitive psychologists say that if you want to understand behavior, you must understand these mediational processes. This assumption is based on the idea that although not directly observable, the mind can be investigated using objective and rigorous methods, similar to how other sciences study natural phenomena. Controlled experiments The cognitive approach believes that internal mental behavior can be scientifically studied using controlled experiments. It uses the results of its investigations to make inferences about mental processes. Cognitive psychology uses highly controlled laboratory experiments to avoid the influence of extraneous variables. This allows the researcher to establish a causal relationship between the independent and dependent variables. These controlled experiments are replicable, and the data obtained is objective (not influenced by an individual's judgment or opinion) and measurable. This gives psychology more credibility. Operational definitions Cognitive psychologists develop operational definitions to study mental processes scientifically. These definitions specify how abstract concepts, such as attention or memory, can be measured and quantified (e.g., verbal protocols of thinking aloud). This allows for reliable and replicable research findings. Falsifiability Falsifiability in psychology refers to the ability to disprove a theory or hypothesis through empirical observation or experimentation. If a claim is not falsifiable, it is considered unscientific. Cognitive psychologists aim to develop falsifiable theories and models, meaning they can be tested and potentially disproven by empirical evidence. This commitment to falsifiability helps to distinguish scientific theories from pseudoscientific or unfalsifiable claims. Empirical evidence Cognitive psychologists rely on empirical evidence to support their theories and models. They collect data through various methods, such as experiments, observations, and questionnaires, to test hypotheses and draw conclusions about mental processes. Cognitive psychologists assume that mental processes are not random but are organized and structured in specific ways. They seek to identify the underlying cognitive structures and processes that enable people to perceive, remember, and think. Cognitive psychologists have made significant contributions to our understanding of mental processes and have developed various theories and models, such as the multi-store model of memory, the working memory model, and the dual-process theory of thinking. Cognitive psychologists use the information processing model to explain how humans think, learn, and behave. This model views humans as active processors of information, similar to how computers work – by handling information in a series of clear, structured stages: Computer-Mind Analogy The human mind is often compared to a computer in cognitive psychology. Just as computers receive data (input), store and process it internally, and then produce an output, our minds follow similar steps: Taking in information from the environment, storing and transforming this information, and then using it to guide our behavior. This analogy highlights that cognition involves systematic stages (input, storage and processing, and output), and has been strongly influenced by developments in computer science. It provides a helpful framework for understanding complex mental processes. Cognitive psychology has been influenced by developments in computer science, and analogies often exist between how a computer works and how we process information. We first take in information through our senses, such as sight, sound, and smell. Perception allows us to interpret and understand sensory data. Attention helps us selectively focus on important aspects and filter out distractions. Example: At a crowded party, your ability to concentrate on a single conversation while ignoring background noise illustrates how attention selectively filters sensory input. 2. Storage and Processing (Memory and Thinking) Once perceived and attended to, information moves into memory systems for storage and transformation: Short-term memory temporarily holds information for immediate use. Long-term memory allows information to be stored permanently or for long periods. Cognitive processes like encoding (changing information into meaningful form), thinking, reasoning, and problem-solving actively transform this information. Example: When studying, connecting new information with existing knowledge helps encode it deeply into long-term memory. 3. Output (Decision-Making and Behavior) Finally, processed information guides decisions, actions, or new ideas: The mind retrieves relevant information from memory. It then uses this stored knowledge to choose appropriate responses and guide behavior. Example: Remembering safety instructions during an emergency or solving problems using strategies learned in the past are practical demonstrations of decision-making based on stored cognitive information. Limitations of the Information Processing Model Like computers, human minds also have processing limitations. Our ability to handle information is restricted by cognitive capacity, meaning we can only attend to and process a limited amount of information at a given time. When overloaded, cognitive functions may slow down or become impaired, affecting memory, decision-making, and problem-solving abilities. The Role of Schemas A schema is a "packet of information" or cognitive framework that helps us organize and interpret information. It is based on previous experience. Cognitive psychologists assume that people's prior knowledge, beliefs, and experiences shape their mental processes. They investigate how these factors influence perception, attention, memory, and thinking. Schemas help us interpret incoming information quickly and effectively, preventing us from being overwhelmed by the vast amount of information we perceive in our environment. Schemas can often affect cognitive processing (a mental framework of beliefs and expectations developed from experience). As people age, they become more detailed and sophisticated. However, it can also lead to distortion of this information as we select and interpret environmental stimuli using schemas that might not be relevant. This could be the cause of inaccuracies in areas such as eyewitness testimony. It can also explain some errors we make when perceiving optical illusions. Famous Experiments 1. Memory: Peterson & Peterson's Experiment (1959) Peterson & Peterson conducted a classic experiment to explore the duration of short-term memory. Participants were given meaningless three-letter combinations (trigrams, e.g., "XQF") to remember. After intervals ranging from 3 to 18 seconds, during which they had to count backwards to prevent rehearsal, participants were asked to recall the trigrams. Results showed that after 18 seconds, recall accuracy dropped sharply, with only about 10% accuracy. This experiment demonstrated how quickly short-term memory decays without active rehearsal, providing strong evidence for distinct short-term and long-term memory processes. Peterson & Peterson's (1959) short-term memory experiment demonstrated rapid memory decay, highlighting why actively rehearsing information (like repeating a phone number) helps transfer it into long-term memory. 2. Attention: The Stroop Effect The Stroop effect illustrates automaticity and attentional interference vividly. In this classic cognitive experiment, participants try naming the ink color of words rather than reading the words themselves for example, the word "red" printed in blue ink. Participants consistently find it difficult and slower to name the ink color when it conflicts with the word's meaning. This occurs because reading words is an automatic process that interferes with the task of color naming, demonstrating cognitive interference and the limited capacity of attention. The Stroop Effect clearly illustrates automatic processing and attentional interference. Try naming the ink color of the word "BLUE" printed in red—your slowed response highlights how automatic reading can interfere with simple tasks. 3. Perception and Attention: The Cocktail Party Effect The cocktail party effect is a classic example of selective auditory attention. In a noisy environment, such as a crowded party, you can still hear and focus on a single conversation while ignoring others. Remarkably, if someone across the room mentions your name, you will often instantly notice, even without consciously attending to it. This effect illustrates the brain's powerful but selective ability to filter sensory input and highlights cognitive mechanisms of attention. The cocktail party effect explains why you might suddenly notice your name spoken at a noisy gathering, even if you weren't consciously listening—demonstrating selective auditory attention at work. 4. Attention and Memory: Andrade (2009) – Doodling and Memory In Andrade's (2009) classic cognitive study, participants listened to a boring telephone message containing names of people attending a party. Half were asked to doodle (shade in shapes) while listening, and the other half simply listened without doodling. Results showed that participants who doodled remembered significantly more names from the message than those who didn't doodle. This study demonstrates that doodling often seen as mindless or distracting – can actually help improve attention and memory, because it prevents the mind from wandering, keeping listeners slightly engaged and more focused. 5. Schemas and Memory: Bartlett's "War of the Ghosts" Study Frederic Bartlett's "War of the Ghosts" experiment demonstrated how memory can be reconstructed based on schemas—mental frameworks built from experience. Participants read an unfamiliar Native American folktale and later recalled it repeatedly over time. Bartlett found that participants' recollections became shorter, distorted, and reshaped to fit their cultural expectations, clearly illustrating how schemas influence memory recall and lead to memory distortions. Bartlett's "War of the Ghosts" study revealed how people reconstruct memories to fit their own cultural expectations and schemas, emphasizing the reconstructive nature of memory. 6. Eyewitness Memory: Loftus and Palmer's Car Crash Study Elizabeth Loftus famously showed how eyewitness memories can be distorted by language and suggestion. In one study, participants watched a video of a car accident and were then asked how fast the cars were going when they either "hit" or "smashed" into each other. Participants given the word "smashed" estimated higher speeds and were later more likely to recall broken glass (which was not present), demonstrating how schemas and wording can significantly alter memory recall. Loftus and Palmer's car crash experiment highlighted how eyewitness memories can be distorted by suggestion, showing that subtle changes in wording can reshape memories of events. Cognitive psychology helps us understand how memory and learning work. Using this knowledge, psychologists recommend effective study techniques such as: Spaced Repetition: Instead of cramming the night before an exam, spread out your study sessions over several days or weeks. Studying information multiple times over spaced intervals helps your brain store information better, allowing you to remember it longer. Retrieval Practice: Regularly test yourself by using flashcards, practice questions, or recalling facts from memory rather than just re-reading your notes. Actively retrieving information strengthens connections in your brain, making the knowledge easier to access later. Interleaving: Mix different types of problems or topics during study sessions instead of repeatedly practicing one skill at a time. For instance, when studying math, alternate between algebra, geometry, and statistics questions. This helps your brain distinguish between concepts more effectively and improves long-term learning and problem-solving skills. Elaboration: Explain ideas in detail and connect new information to what you already know. For example, after reading about a new concept, try summarizing it in your own words, or relate it to your personal experiences or prior knowledge. This deeper processing helps your brain form stronger, longer-lasting memory connections. In simple terms, cognitive psychology offers scientifically-backed techniques that help students study smarter – not harder – by enhancing memory, understanding, and long-term learning. How Negative Thinking Patterns Lead to Anxiety Cognitive psychologists have shown that negative thinking patterns can play a key role in the development and maintenance of anxiety. These unhelpful thought patterns shape how we interpret situations, leading us to perceive more threats or problems than truly exist. Catastrophic Thinking: People with anxiety often anticipate worst-case scenarios. For example, a small mistake at work or school may lead to the exaggerated belief that they will lose their job or fail a course. This creates a heightened state of worry and stress. Selective Attention to Threats: Anxious individuals tend to overly focus on negative aspects of situations while ignoring positive or neutral information. For instance, when giving a presentation, they might only notice audience members who look bored, ignoring those who seem interested. Negative Self-Beliefs: Anxiety frequently involves negative self-talk, such as "I'm not good enough," "I can't handle this," or "Everyone thinks I'm awkward." These beliefs increase self-doubt, reduce confidence, and elevate stress and worry. The Vicious Cycle of Anxiety: These negative thoughts don't just cause anxiety – they maintain it. Anxiety reinforces itself in a self-perpetuating cycle: Triggering Event: Something stressful occurs (e.g., an upcoming test or social interaction). Negative Interpretation: The event is perceived negatively or catastrophically. Anxiety and Physical Symptoms: Negative thoughts trigger anxiety and physical responses (e.g., increased heart rate, sweating, nervousness). Avoidance or Safety Behaviors: To reduce anxiety, the person may avoid the situation, reinforcing the belief that they can't handle it, making anxiety worse next time. Therapy: CBT Cognitive Behavioral Therapy (CBT) helps individuals identify and challenge negative thought patterns. By learning to recognize distorted thoughts, individuals can replace them with more realistic, positive beliefs, reducing anxiety and increasing resilience over time. Cognitive psychology forms the basis of Cognitive Behavioral Therapy (CBT), a practical and widely-used therapy method. CBT focuses on how our thoughts affect our feelings and actions. For instance: Anxiety and Panic: CBT helps people recognize anxious thoughts (like expecting the worst) and teaches them how to replace those with calmer, more realistic thoughts. This makes anxiety easier to handle. Phobias: For fears like spiders, heights, or public speaking, CBT guides individuals to gradually face these fears safely, changing how they think about them. Over time, this reduces the fear response. Depression: CBT helps people notice and challenge negative thoughts about themselves (such as "I'm not good enough") and replace them with more balanced and positive thinking patterns, helping to lift their mood. In everyday language, CBT gives people the skills to reshape their thinking, helping them feel better emotionally and manage life's challenges more effectively. Everyday Decision-Making: Overcoming Biases and Heuristics Every day, we make countless decisions – what to eat, which products to buy, how to respond in social situations. Cognitive psychology shows us that our decision-making isn't always logical or rational; instead, it's often influenced by mental shortcuts called heuristics and unconscious biases. Recognizing and overcoming these biases can help us make better, more rational decisions. Heuristics are mental shortcuts we use to make decisions quickly without much effort. While they can be helpful, they often lead to mistakes or biased thinking. Cognitive biases are systematic errors in thinking that affect our judgments and decisions, typically due to heuristics or emotional factors. Common Biases and How to Overcome Them Here are some frequent cognitive biases and heuristics, along with practical ways to minimize their impact: 1. Confirmation Bias This is the tendency to favor information that supports what you already believe, while ignoring or discounting information that contradicts your beliefs. How to overcome it: Actively seek out opposing viewpoints. Consider evidence objectively, rather than emotionally. Ask yourself: "Could the opposite perspective be true?" 2. Availability Heuristic We often judge how likely something is based on how easily we remember similar examples or how vivid recent events are in our minds. For example, we may overestimate risks of rare events because of dramatic news coverage. How to overcome it: Seek out accurate statistics and facts rather than relying solely on memory. Remind yourself that emotional, dramatic, or recent events might skew your perception of risk. 3. Anchoring Bias This occurs when your initial impression or first piece of information overly influences your final decision. For example, if a product initially has a high listed price, you'll perceive any discount from that price as a better deal than it might actually be. How to overcome it: Gather multiple sources of information before making decisions. Delay judgments until you've considered all relevant information. Four Approaches to Cognitive Psychology Cognitive psychology is a broad field with multiple perspectives used to study the human mind. There are four main approaches: 1. Experimental Cognitive Psychology This approach involves carefully controlled lab experiments to study how we think, remember, perceive, and learn. Researchers use tasks and experiments to observe behaviors (like reaction times or accuracy rates) and then infer what's happening in our minds. For example, studies testing memory recall under different conditions use this method. 2. Computational Cognitive Science This approach creates computer models or simulations to represent how our minds process information. Researchers build algorithms and software that mimic human cognitive functions like learning, memory, or problem-solving. These models help test theories about how mental processes might operate, offering insights that can later be tested experimentally. By clearly understanding these four distinct approaches, readers gain a fuller appreciation of cognitive psychology's diverse methods and perspectives in studying human thought and behavior. 3. Cognitive Neuroscience Cognitive neuroscience combines psychology with brain science, using tools such as brain scans (MRI, PET scans) to see how brain structures and activities relate to mental processes. For example, neuroscientists might use brain imaging to explore which parts of the brain activate during decision-making or language tasks. 4. Cognitive Neuropsychology This approach studies individuals who have brain injuries or disorders to understand normal cognitive functioning. By observing what happens when certain brain areas are damaged (like in cases of amnesia or aphasia), psychologists can better understand how healthy brains process memory, language, and perception. Weaknesses 1. Behaviorist Critique B.F. Skinner criticizes the cognitive approach. He believes that only external stimulus-response behavior should be studied, as this can be scientifically measured. Therefore, mediation processes (between stimulus and response) do not exist as they cannot be seen and measured. Behaviorism assumes that people are born a blank slate (tabula rasa) and are not born with cognitive functions like schemas, memory or perception. Due to its subjective and unscientific nature, Skinner continues to find problems with cognitive research methods, namely introspection (as used by Wilhelm Wundt). behaviorism vs cognitive psychology Behaviorism focuses on observable behaviors, emphasizing that behavior is learned through interactions with the environment via conditioning (e.g., classical and operant conditioning). It avoids discussing mental processes, arguing they can't be scientifically measured. Cognitive psychology, however, examines internal mental processes such as thinking, memory, and decision-making. It considers how individuals process and store information, highlighting mental activities as central to understanding behavior. In essence, behaviorism prioritizes external behaviors and environmental stimuli, whereas cognitive psychology emphasizes internal thought processes and mental representations. 2. Complexity of mental experiences Mental processes are highly complex and multifaceted, involving a wide range of cognitive, affective, and motivational factors that interact in intricate ways. The complexity of mental experiences makes it difficult to isolate and study specific mental processes in a controlled manner. Mental processes are often influenced by individual differences, such as personality, culture, and past experiences, which can introduce variability and confounds in research. 3. Experimental Methods While controlled experiments are the gold standard in cognitive psychology research, they may not always capture real-world mental processes' complexity and ecological validity. Some mental processes, such as creativity or decision-making in complex situations, may be difficult to study in laboratory settings. Humanistic psychologist Carl Rogers believes that using laboratory experiments by cognitive psychology has low ecological validity and creates an artificial environment due to the control over variables. Rogers emphasizes a more holistic approach to understanding behavior. The cognitive approach uses a very scientific method that is controlled and replicable, so the results are reliable. However, experiments lack ecological validity because of the artificiality of the tasks and environment, so they might not reflect the way people process information in their everyday lives. For example, Baddeley (1966) used lists of words to find out the encoding used by LTM. However, these words had no meaning to the participants, so the way they used their memory in this task was probably very different from what they would have done if the words had meaning for them. This is a weakness, as the theories might not explain how memory works outside the laboratory. 4. Computer Analogy The traditional metaphor compared human cognition directly to a computer: Input → Processing → Output Linear, systematic processing of information Memory viewed as storage, similar to hard drives However, this metaphor faced criticism for being overly simplistic, not accounting for the complexity and flexibility of human cognition. The original computer metaphor has evolved into a more sophisticated, dynamic view of the brain, heavily inspired by modern AI algorithms. Cognitive psychology now increasingly emphasizes parallel processing, adaptive learning, predictive capabilities, and semantic understanding – reflecting a more accurate, realistic model of human cognition informed by contemporary technology. Parallel distributed processing (connectionism): Human cognition is now often compared to neural networks, resembling parallel distributed processing, rather than linear steps. Neural networks in AI consist of interconnected nodes (neurons) that process information simultaneously and adaptively, similar to how neurons function in the human brain. Adaptive learning and flexibility: Google's search algorithms and AI systems are constantly learning from user behavior, adapting results based on billions of interactions. Similarly, the brain continually learns from experience, dynamically reorganizing neural pathways—this mirrors AI's ability to adjust processing in real-time. Predictive processing: Current AI systems (like predictive text or recommendation systems) actively predict user needs based on past behaviors. The human brain similarly engages in predictive processing, continually anticipating sensory input and adjusting cognitive processes accordingly. Big data and pattern recognition: Modern AI and search algorithms rely heavily on analyzing vast amounts of data to recognize complex patterns. The human brain is equally skilled at rapidly recognizing patterns, categorizing information, and learning from experience to guide decisions efficiently. Context and meaning (semantic understanding): AI advancements now allow systems to understand context and meaning, rather than merely keywords. Google's algorithms (e.g., BERT and RankBrain) demonstrate semantic understanding, capturing subtleties of language. Similarly, the human brain effortlessly grasps meaning and context, using memory, inference, and complex cognitive schemas. 5. Reductionist The cognitive approach is reductionist as it does not consider emotions and motivation, which influence the processing of information and memory. For example, according to the Yerkes-Dodson law, anxiety can influence our memory. Such machine reductionism (simplicity) ignores the influence of human emotion and motivation on the cognitive system and how this may affect our ability to process information. Early theories of cognitive approach did not always recognize physical (biological psychology) and environmental (behaviorist approach) factors in determining behavior. However, it's important to note that modern cognitive psychology has evolved to incorporate a more holistic understanding of human cognition and behavior. Strengths 1. Importance of cognitive factors versus external events Cognitive psychology emphasizes the role of internal cognitive processes in shaping emotional experiences, rather than solely focusing on external events. Beck's cognitive theory suggests that it is not the external events themselves that lead to depression, but rather the way an individual interprets and processes those events through their negative schemas. This highlights the importance of addressing cognitive factors in the treatment of depression and other mental health issues. Social exchange theory (Thibaut & Kelly, 1959) emphasizes that relationships are formed through internal mental processes, such as decision-making, rather than solely based on external factors. The computer analogy can be applied to this concept, where individuals observe behaviors (input), process the costs and benefits (processing), and then make a decision about the relationship (output). 2. Interdisciplinary approach While early cognitive psychology may have neglected physical and environmental factors, contemporary cognitive psychology has increasingly integrated insights from other approaches. Cognitive psychology draws on methods and findings from other scientific disciplines, such as neuroscience, computer science, and linguistics, to inform their understanding of mental processes. This interdisciplinary approach strengthens the scientific basis of cognitive psychology. Cognitive psychology has influenced and integrated with many other approaches and areas of study to produce, for example, social learning theory, cognitive neuropsychology, and artificial intelligence (AI). 3. Real World Applications Another strength is that the research conducted in this area of psychology very often has applications in the real world. By highlighting the importance of cognitive processing, the cognitive approach can explain mental disorders such as depression. Beck's cognitive theory of depression argues that negative schemas about the self, the world, and the future are central to the development and maintenance of depression. These negative schemas lead to biased processing of information, selective attention to negative aspects of experience, and distorted interpretations of events, which perpetuate the depressive state. Therapy By identifying the role of cognitive processes in mental disorders, cognitive psychology has informed the development of targeted interventions. Cognitive behavioral therapy aims to modify the maladaptive thought patterns and beliefs that underlie emotional distress, helping individuals to develop more balanced and adaptive ways of thinking. CBT's basis is to change how people process their thoughts to make them more rational or positive. Through techniques such as cognitive restructuring, behavioral experiments, and guided discovery, CBT helps individuals to challenge and change their negative schemas, leading to improvements in mood and functioning. Cognitive behavioral therapy (CBT) has been very effective in treating depression (Hollon & Beck, 1994), and moderately effective for anxiety problems (Beck, 1993). Issues and Debates The cognitive approach holds an intermediate position between free will and determinism. On one hand, cognitive psychology suggests that our mental processes, such as thinking, perceiving, and remembering, are shaped by experiences and cognitive schemas. These schemas and past experiences influence how we interpret and respond to the world around us, implying a level of determinism—our cognitive patterns often guide behavior in predictable ways. On the other hand, cognitive therapies, especially Cognitive Behavioral Therapy (CBT), emphasize that individuals have the capacity to consciously recognize and change their thought patterns. CBT encourages clients to actively challenge negative or distorted thinking, demonstrating that we have significant control—or free will—over our cognitive processes. Thus, while cognitive psychology acknowledges the influence of deterministic factors, it also highlights our potential for active self-directed change. The cognitive approach adopts an interactionist stance, recognizing that both nature (innate biological factors) and nurture (environmental experiences) shape human cognition. Cognitive psychologists acknowledge that certain cognitive abilities, such as language acquisition, involve innate biological predispositions – humans seem naturally "wired" to acquire language. However, environmental factors and learning experiences significantly influence how these innate cognitive abilities develop. For example, although we have a natural capacity for language, the specific language we learn, its grammar, and vocabulary depend entirely on our environmental experiences. Therefore, cognitive psychology suggests that cognitive processes result from an interaction between genetic predispositions and experiential learning. The cognitive approach typically leans toward reductionism, as it often simplifies and isolates cognitive processes to study them effectively in controlled laboratory conditions. For example, cognitive psychologists may investigate memory processes independently from perception, emotion, or social context to understand memory's mechanisms in detail. While this approach offers precise control and clearer results, it can sometimes lack ecological validity, meaning it might not fully reflect how cognition naturally functions in everyday life, where mental processes typically occur simultaneously and interactively. To address this limitation, modern cognitive psychology increasingly aims to integrate more holistic perspectives by examining how different cognitive functions and environmental contexts interact in real-world scenarios. The cognitive approach is predominantly nomothetic, meaning it aims to establish general laws and universal principles about how cognitive processes operate across most or all individuals. Rather than deeply exploring individual differences, cognitive psychologists typically seek broad explanations applicable to everyone – for instance, general models of memory, perception, or problem-solving strategies. Although this approach provides widely applicable theories that help understand common human cognitive functioning, critics argue it might overlook the unique cognitive differences between individuals shaped by personality, culture, or life experiences. Recently, there has been a growing interest in incorporating idiographic approaches – focusing on individual differences and detailed case studies – to complement these general cognitive theories and provide a richer, more personalized understanding of cognition. History of Cognitive Psychology Wolfgang Köhler (1925) – Köhler's book "The Mentality of Apes" challenged the behaviorist view by suggesting that animals could display insightful behavior, leading to the development of Gestalt psychology. Norbert Wiener (1948) – Wiener's book "Cybernetics" introduced concepts such as input and output, which influenced the development of information processing models in cognitive psychology. Edward Tolman (1948) – Tolman's work on cognitive maps in rats demonstrated that animals have an internal representation of their environment, challenging the behaviorist view. George Miller (1956) – Miller's paper "The Magical Number 7 Plus or Minus 2" proposed that short-term memory has a limited capacity of around seven chunks of information, which became a foundational concept in cognitive psychology. Allen Newell and Herbert A. Simon (1972) – Newell and Simon developed the General Problem Solver, a computer program that simulated human problem-solving, contributing to the growth of artificial intelligence and cognitive modeling. George Miller and Jerome Bruner (1960) – Miller and Bruner established the Center for Cognitive Studies at Harvard, which played a significant role in the development of cognitive psychology as a distinct field. Ulric Neisser (1967) – Neisser's book "Cognitive Psychology" formally established cognitive psychology as a separate area of study, focusing on mental processes such as perception, memory, and thinking. Richard Atkinson and Richard Shiffrin (1968) – Atkinson and Shiffrin proposed the Multi-Store Model of memory, which divided memory into sensory, short-term, and long-term stores, becoming a key model in the study of memory. Eleanor Rosch's (1970s) research on natural categories and prototypes, which influenced the study of concept formation and categorization. Endel Tulving's (1972) distinction between episodic and semantic memory, which further developed the understanding of long-term memory. Baddeley and Hitch's (1974) proposal of the Working Memory Model, which expanded on the concept of short-term memory and introduced the idea of a central executive. Marvin Minsky's (1975) framework of frames in artificial intelligence, which influenced the understanding of knowledge representation in cognitive psychology. David Rumelhart and Andrew Ortony's (1977) work on schema theory, which described how knowledge is organized and used for understanding and remembering information. Amos Tversky and Daniel Kahneman's (1970s-80s) research on heuristics and biases in decision making, which led to the development of behavioral economics and the study of judgment and decision-making. David Marr's (1982) computational theory of vision, which provided a framework for understanding visual perception and influenced the field of computational cognitive science. The development of connectionism and parallel distributed processing (PDP) models in the 1980s, which provided an alternative to traditional symbolic models of cognitive processes. Noam Chomsky's (1980s) theory of Universal Grammar and the language acquisition device, which influenced the study of language and cognitive development. The emergence of cognitive neuroscience in the 1990s, which combined techniques from cognitive psychology, neuroscience, and computer science to study the neural basis of cognitive processes. References Andrade, J. (2010). What does doodling do?. Applied Cognitive Psychology: The Official Journal of the Society for Applied Research in Memory and Cognition, 24(1), 100-106. Atkinson, R. C., & Shiffrin, R. M. (1968). Chapter: Human memory: A proposed system and its control processes. 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Episodic and semantic memory. In E. Tulving & W. Donaldson (Eds.), Organization of Memory (pp. 381-403). Academic Press. Wiener, N. (1948). Cybernetics or control and communication in the animal and the machine. Paris, (Hermann & Cie) & Camb. Mass. (MIT Press). Why Your Brain is Not a Computer Cognitive Psychology Historial Development Olivia Guy-Evans, MSc BSc (Hons) Psychology, MSc Psychology of Education Associate Editor for Simply Psychology Olivia Guy-Evans is a writer and associate editor for Simply Psychology, where she contributes accessible content on psychological topics. She is also an autistic PhD student at the University of Birmingham, researching autistic camouflaging in higher education. Saul McLeod, PhD Editor-in-Chief for Simply Psychology BSc (Hons) Psychology, MRes, PhD, University of Manchester Saul McLeod, PhD., is a qualified psychology teacher with over 18 years of experience in further and higher education. He has been published in peer-reviewed journals, including the Journal of Clinical Psychology. View synonyms for cognitiveof or relating to cognition"Collins English Dictionary — Complete & Unabridged" 2012 Digital Edition © William Collins Sons & Co. Ltd. 1979, 1986 © HarperCollins Publishers 1998, 2000, 2003, 2005, 2006, 2007, 2009, 2012cognitively adverbcognitivity nounnoncognitive adjectiveOrigin of cognitive1First recorded in 1580–90; from Medieval Latin cognitivus, equivalent to Latin cognit(us) "learned, known" (cognition) + -ivus -iveExamples are provided to illustrate real-world usage of words in context. Any opinions expressed do not reflect the views of Dictionary.com.These improvements are linked to gains in cognitive performance.Read more on Science DailyThe company also casts its approach as a potentially faster way to get to artificial general intelligence, which some people describe as similar to human-level cognitive ability.Read more on The Wall Street Journal"The brain may be repurposing these ubiquitous forms of cellular memory to support cognitive memories."Read more on Science DailyAmong them, 95 showed cognitive impairment at the start of the study, and 20 healthy individuals served as demographically matched controls.Read more on Science DailyThe human brain repeatedly reuses the same cognitive "blocks" across many different situations, combining and recombining them to form new patterns of behavior.Read more on Science Dailycognitioncognitive behavioral therapyBrowse#aabbccddeeffgghhiijjkkllmmnnooppqqrrsstuuvvwwxxyyzzAboutCareersContact usCookies, terms, & privacyHelpFollow usGet the Word of the Day every day!© 2025 Dictionary.com, LLC connected with mental processes of understandinga child's cognitive developmentcognitive psychologyThey are studying the links between cognitive and linguistic development in young children.This is both a cognitive and an emotional process.Oxford Collocations DictionaryCognitive is used with these nouns: deficitdevelopmentdisability…See full entryWord Originlate 16th cent.: from medieval Latin cognitivus, from cognit- 'known', from the verb cognoscere 'get to know'. See cognitive in the Oxford Advanced American DictionarySee cognitive in the Oxford Learner's Dictionary of Academic English Cognitive function refers to mental processes related to attention, learning, memory, reasoning, decision-making, and more.Staying healthy with a good diet and regular exercise can help improve cognitive skills. 'Cognitive' is a term used in psychology to describe anything related to thinking, learning, and understanding. So when you hear people talk about cognitive skills or processes, they are referring to different aspects of how the brain works—things like remembering information, learning new things, paying attention, and processing all of the information you encounter each day. Cognitive abilities are something you use each and every day. For example, when you are learning a new instrument, you are using your cognitive skills to learn the basics of music theory, pick up melodies, learn the notes, and put that information together to produce music. 'Cognitive' refers to the mental processes involved in gaining knowledge and comprehension. Some of the many different cognitive processes include thinking, knowing, rem

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