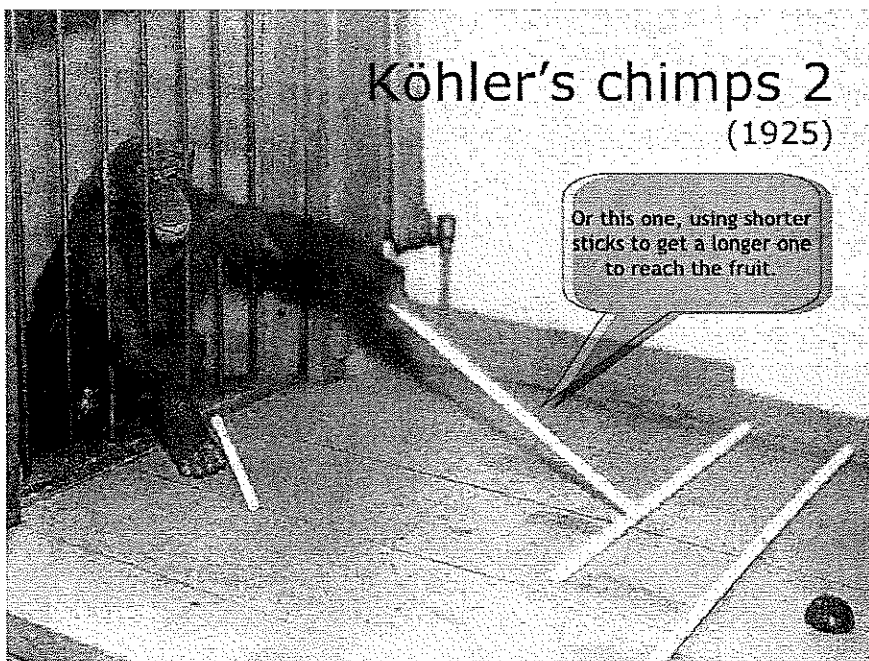


MODULE 35 SOLVING PROBLEMS AND MAKING DECISIONS

PROBLEM SOLVING: STRATEGIES AND OBSTACLES

- **ALGORITHMS** are step-by-step procedures that guarantee a solution.
- Nature resorts to **HEURISTICS** when algorithms take too long. This is a simpler thinking strategy based on judgments.
- **INSIGHT** is a sudden realization of a problem's solution; contrasts with strategy-based solutions. Before the AHA! Insight moment, the frontal lobes are active and a burst of activity in the right temporal lobe occurs.
- Wolfgang Kohler and Sultan (chimpanzee)... Sultan was to use problem solving skills to reach the fruit by using first a short stick to pull in the long stick in order to reach the fruit.



- **CONFIRMATION BIAS** is a tendency to search for information that supports our preconceptions and to ignore or distort contradictory evidence.
- **MENTAL SET** is a tendency to approach a problem in one particular way, often a way that has been successful in the past.
- As a perceptual set predisposes what we perceive, a mental set predisposes how we think; sometimes this can be an obstacle to problem solving, as when our mental set from our past experiences with matchsticks predisposes us to arrange them in two dimensions.

FORMING GOOD AND BAD DECISIONS AND JUDGMENTS

- Normally, we follow our **INTUITION**, our fast, automatic unreasoned feelings and thoughts using automatic information processes.
- A **REPRESENTATIVENESS HEURISTIC** is judging the likelihood of things in terms of how well they seem to represent, or match, particular prototypes; may lead us to ignore other relevant information.
- An **AVAILABILITY HEURISTIC** is estimating the likelihood of events based on their availability in memory; if instances come readily to mind (perhaps because of their vividness), we presume such events are common.
- **OVERCONFIDENCE** is the tendency to be more confident than correct – to overestimate the accuracy of our beliefs and judgments. History is full of leaders who were more confident than correct.
- Our overconfidence in our judgments is startling; equally startling is our tendency to cling to our beliefs in the face on contrary evidence. **BELIEF PERSERVERANCE** is clinging to one's initial conceptions after the basis on which they were formed has been discredited. Prejudice persists in this case.
- **FRAMING** is the way an issue is posed; how an issue is framed can significantly affect decisions and judgments. Framing is a powerful persuasion tool on people's decisions.
- Intuition can be perilous, especially when we overfeel and underthink, as we do when judging risks.

BE ABLE TO ANSWER: The availability heuristic is a quick-and-easy but sometimes misleading guide to judging reality. What is the availability heuristic?

PRACTICE FRQ: Name and define two problem-solving strategies. Next, explain an advantage each has over the other.