

Gestalt Theory of Learning

Insightful Learning

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Where Does Gestalt Fit?



Thorndike

Trial and error



Pavlov

Classical
conditioning



Skinner

Operant
conditioning



Gestalt

Insightful
learning



Earlier theories: learning is a response to a stimulus. **Gestalt:** learning is understanding the whole situation.



What Is Gestalt?



Gestalt is a German word meaning **whole, form or shape**



The whole is greater than the sum of its parts



We learn by seeing **relationships** in the whole situation



Think of a song

Single notes are only sounds. Together, they become a melody.



Gestalt Principles of Perception



Proximity

Close things look like a group



Similarity

Alike things seem related



Closure

The mind fills in the gaps



Continuity

The eye follows a smooth path



Figure–Ground

We separate object from background

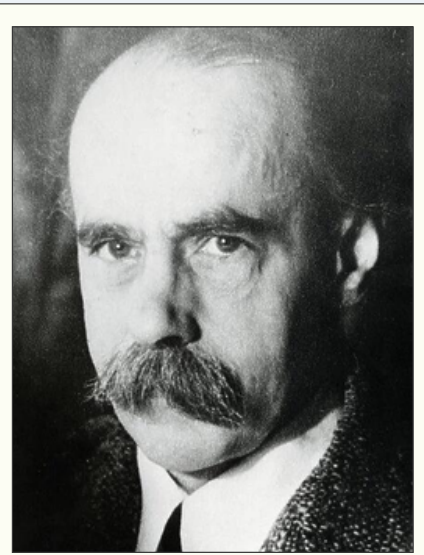


Pragnanz

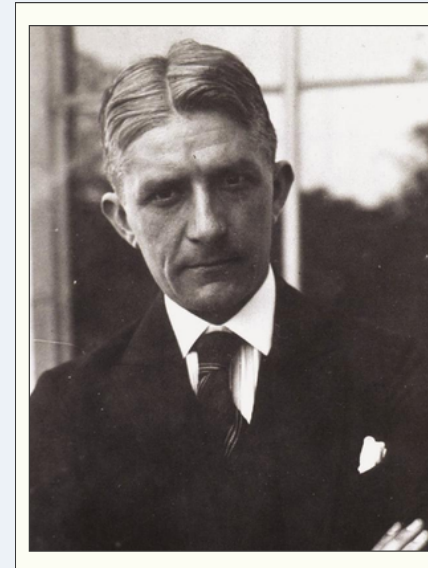
We prefer simple, complete forms



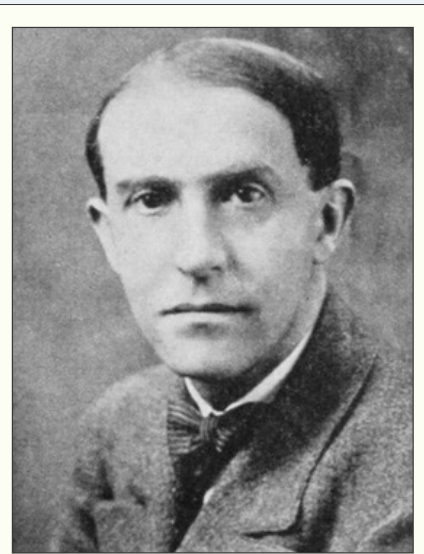
The Gestalt Psychologists



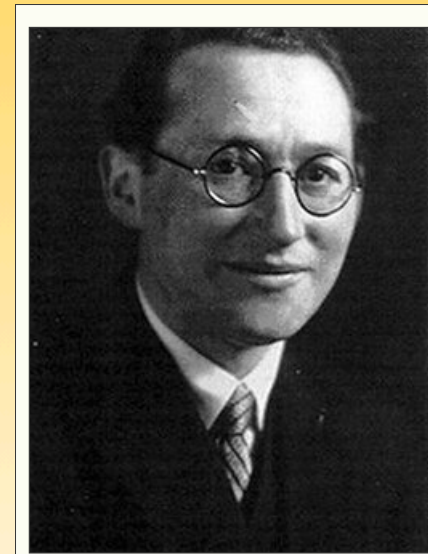
Max Wertheimer
Founder of Gestalt
school (1912)



Wolfgang Köhler
Insight learning in
chimpanzees



Kurt Koffka
Gestalt ideas in child
development



Kurt Lewin
Field theory: person
and environment



Insightful Learning

Insight is the sudden understanding of the parts of a problem that makes the **solution clear**, without blind trial and error.



Sudden

The solution appears in a flash



'Aha!' moment

The feeling of 'I have found it'



Understanding

Seeing how the parts relate



Köhler and His Chimpanzees

1913–17

Experiments on
Tenerife, Canary
Islands

9

Chimpanzees of
different ages

1925

English edition of The
Mentality of Apes

Tools used: boxes, poles and sticks

Star learner: Sultan, the most intelligent chimp

Finding: problems solved intelligently, not by blind trial and error



Experiment I: Box and Banana

1

Setup: a banana hangs from the roof; a box lies in the cage

2

Attempt: jumping again and again fails

3

Insight: Sultan stops, looks, places the box under the banana and climbs





Experiment II: Joining the Sticks

1

Setup: banana lies outside the cage, out of reach

2

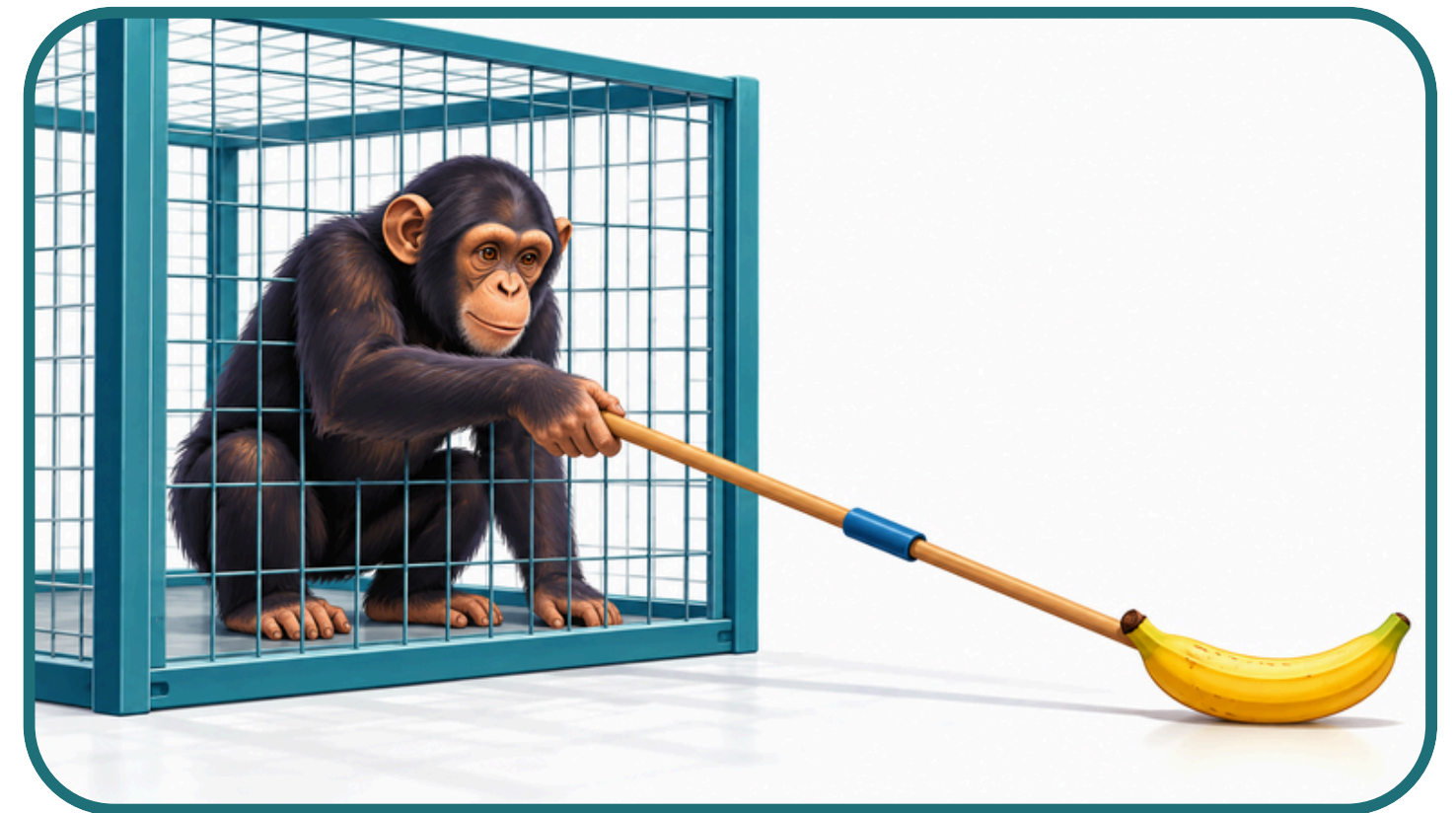
Tools: two sticks; one is hollow at one end

3

Attempt: each stick used alone fails

4

Insight: he fits the sticks together and pulls in the banana





Experiment III: Stacking Boxes

1 Setup: the banana hangs much higher

2 Problem: two or three boxes are needed

3 Challenge: each box must be placed carefully on the other

4 Insight: the chimp builds a stable stack and reaches the banana





Stages of Insight Learning

1

Preparation

Study the problem and try first ideas. Sultan jumps and fails

2

Incubation

The mind rests, no visible progress. Sultan stops and looks around

3

Illumination

The sudden 'Aha!': the box can be a stepping platform

4

Verification

The idea is tested and confirmed. He climbs and gets the banana



Characteristics of Insightful Learning



Sudden: the solution comes in a flash



'Aha!' feeling of discovery



Based on understanding, not repetition



Perceives the whole situation



Uses past experience



Depends on intelligence, age and maturity



Needs a purpose or motive



Can be transferred to new situations



Educational Implications



Whole → parts

Show the big picture first



Less rote

Avoid blind trial and error



Problem solving

Give puzzles and 'why?' tasks



Clear purpose

Learners should know why they learn



See relations

Link new ideas with old ones



Active thinking

Learning is an intelligent task



How Can Teachers Promote Insight?



Ask guiding questions instead of giving answers



Give learners time to think and reflect



Use models, diagrams and concept maps



Encourage discussion and 'what if' thinking



Praise understanding, not memorising



In the Classroom



Science

Show a complete flower first, then name its parts



Mathematics

Let learners tile a rectangle and discover $\text{area} = l \times b$



Language

Read the whole story first, then study words and grammar



Social Science

Show the map of India first, then zoom into states



Contributions of Gestalt Theory



Learning became an intelligent, thinking activity, not blind fumbling



Shifted focus from behaviour to mental processes



Highlighted understanding and problem solving



Supports meaningful learning, not rote



Influenced modern cognitive psychology



Criticism of Gestalt Theory



'Insight' is vague and hard to measure



Based mostly on animals; limited proof for humans



Ignores practice: insight may come from past learning



Sudden solutions may follow hidden trial and error



Lacks strict experimental control and precise laws



Does not explain how insight actually happens



Trial and Error vs Insight

Basis	Trial and Error	Insight
Approach	Blind, random attempts	Understanding the whole situation
Solution comes	Slowly, step by step	Suddenly: 'Aha!'
Repetition	Needed again and again	Not necessary
Example	Thorndike's cat in a puzzle box	Köhler's chimp, Sultan

Thank You



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