

# **History of Psychology**

## Session 6: Gestalt Psychology

Rui Mata, Center for Cognitive and Decision Sciences  
October 28, 2024

# Session information

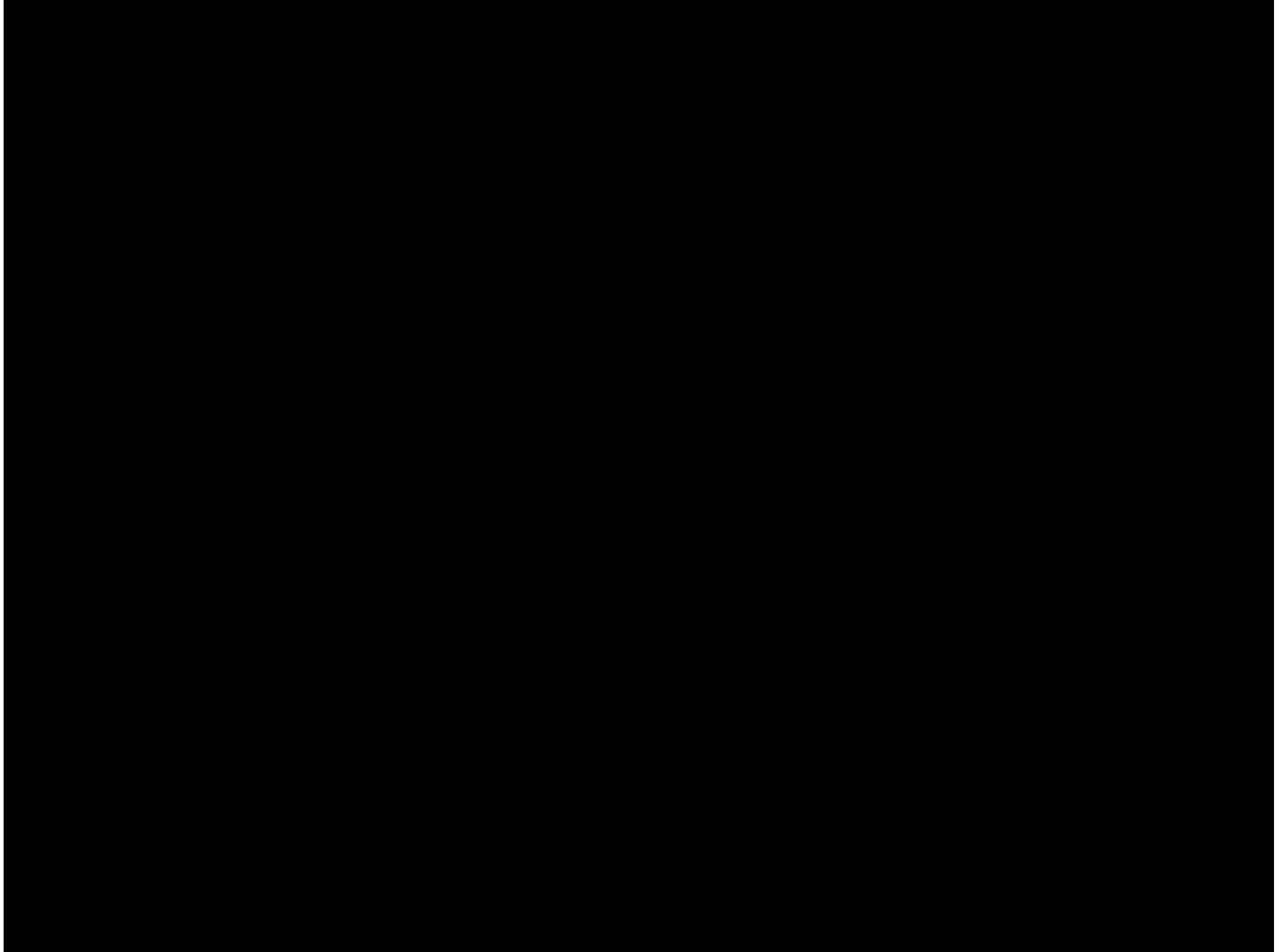
Sessions take place Mondays, 8.15-9.45, Chemie, Organische, Grosser Hörsaal OC.

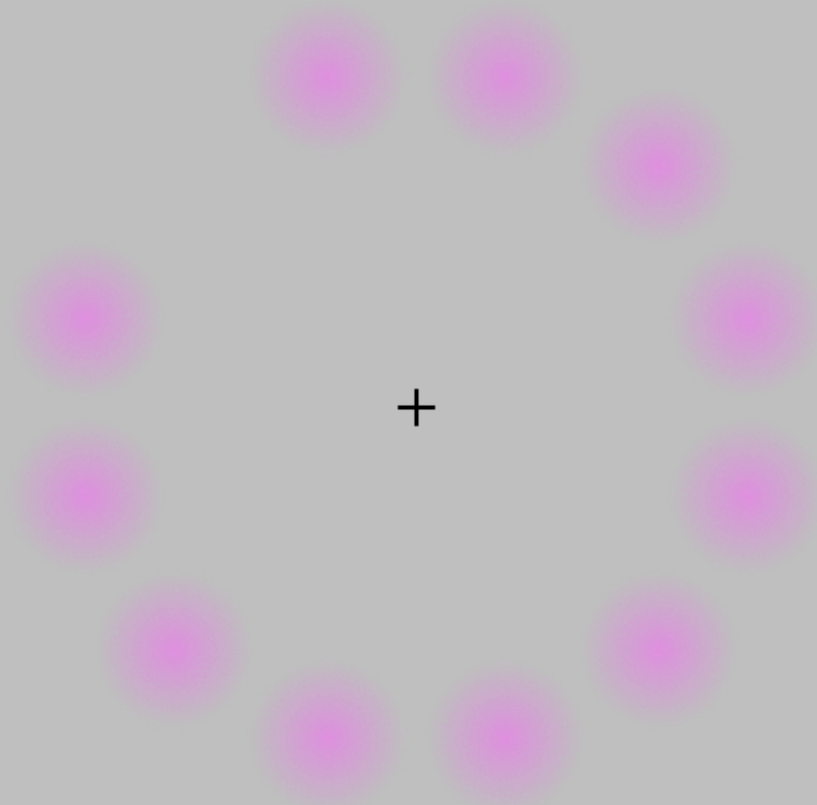
#	Date	Topic	Instructor
1	23.09.2024	Session 1: Introduction	Tisdall
2	30.09.2024	Session 2: Pre-psychology	Mata
3	7.10.2024	Session 3: The birth of psychology	Mata
4	14.10.2024	Session 4: Psychoanalysis	Mata
5	21.10.2024	Session 5: Behaviorism	Mata
6	28.10.2024	Session 6: Gestalt psychology	Mata
7	4.11.2024	Session 7: Cognitive psychology	Mata
8	11.11.2024	Session 8: Psychology today	Tisdall
9	18.11.2024	Session 9: Psychotherapy research	Tisdall
10	25.11.2024	Session 10: Psychological testing	Tisdall
11	2.12.2024	Session 11: Decision science	Tisdall
12	9.12.2024	Session 12: What kind of science is psychology?	Mata

# Learning Objectives for Today

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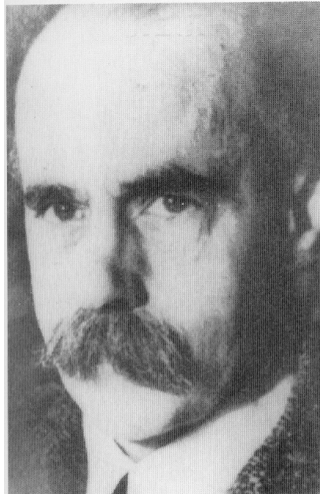
- Identify the origins of Gestalt psychology in research on perception
- Identify core concepts of Gestalt psychology (multistability, laws of grouping, insight)
- Discuss the opposition to the structuralist and behaviourist schools





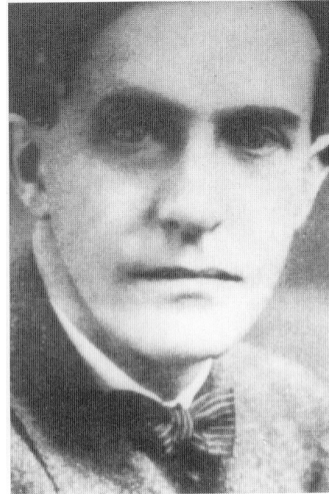
# Gestalt Psychology

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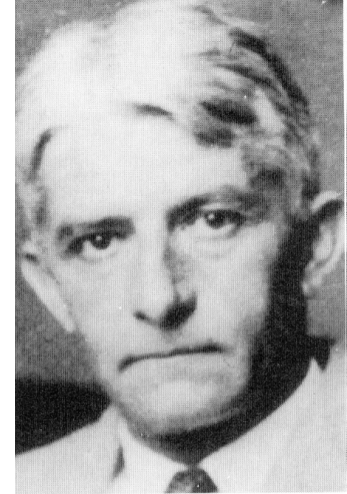
Max Wertheimer  
(1880-1943)

Wertheimer published a paper *Experimental Studies on the Perception of Movement* (1912) describing the **phi phenomenon** (i.e., the apparent movement caused by alternating light positions). Wertheimer illustrated this phenomenon on an apparatus that utilized two discrete lights on different locations. Although the lights were stationary, flashing the lights at succeeding time intervals (which were systematically varied) caused participants (including Koffka and Köhler!) to perceive the light as moving.



Kurt Koffka  
(1886-1941)

Koffka exposed american psychologists to Gestalt psychology in 1922 in his article entitled: *Perception: An Introduction to the Gestalt-Theorie*, which appeared in *Psychological Bulletin*.



Wolfgang Köhler  
(1887-1967)

Köhler investigated thinking and reasoning in chimps. He was a critic of both of structuralism and behaviorism.

# Gestalt Psychology: Perception

**Thesis:** The central principle of gestalt psychology is that the mind forms a global whole with self-organizing tendencies. This principle maintains that when the human mind (perceptual system) forms a percept or gestalt, the whole has a reality of its own, independent of the parts. In this sense, it contrasts with structuralism which aimed to understand specific independent elements of sensation and perception.

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October, 1922

“The whole is different than the sum of its parts”

## THE PSYCHOLOGICAL BULLETIN

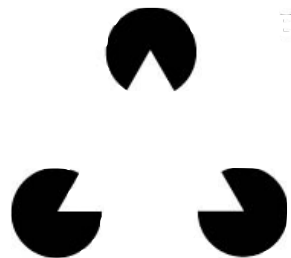
PERCEPTION: AN INTRODUCTION TO THE  
*GESTALT-THEORIE*.

BY KURT KOFFKA  
*Giessen*

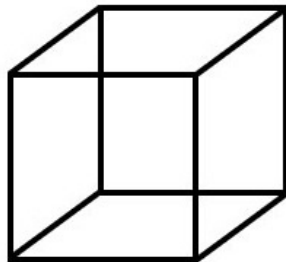
When it was suggested to me that I should write a general critical review of the work recently carried on in the field of perception, I saw an opportunity of introducing to American readers a movement in psychological thought which has developed in Germany during the last ten years. In 1912 Wertheimer stated for the first time the principles of a *Gestalt-Theorie* which has served as the starting point of a small number of German psychologists. Whenever this new method of thinking and working has come in touch with concrete problems, it has not only showed its efficiency, but has also brought to light startling and important facts, which, without the guidance of this theory, could not so easily have been discovered.

The *Gestalt-Theorie* is more than a theory of perception: it is even more than a mere psychological theory. Yet it originated in a study of perception, and the investigation of this topic has furnished the better part of the experimental work which has been done. Consequently, an introduction to this new theory can best be gained, perhaps, by a consideration of the facts of perception.

Reification



Multistability



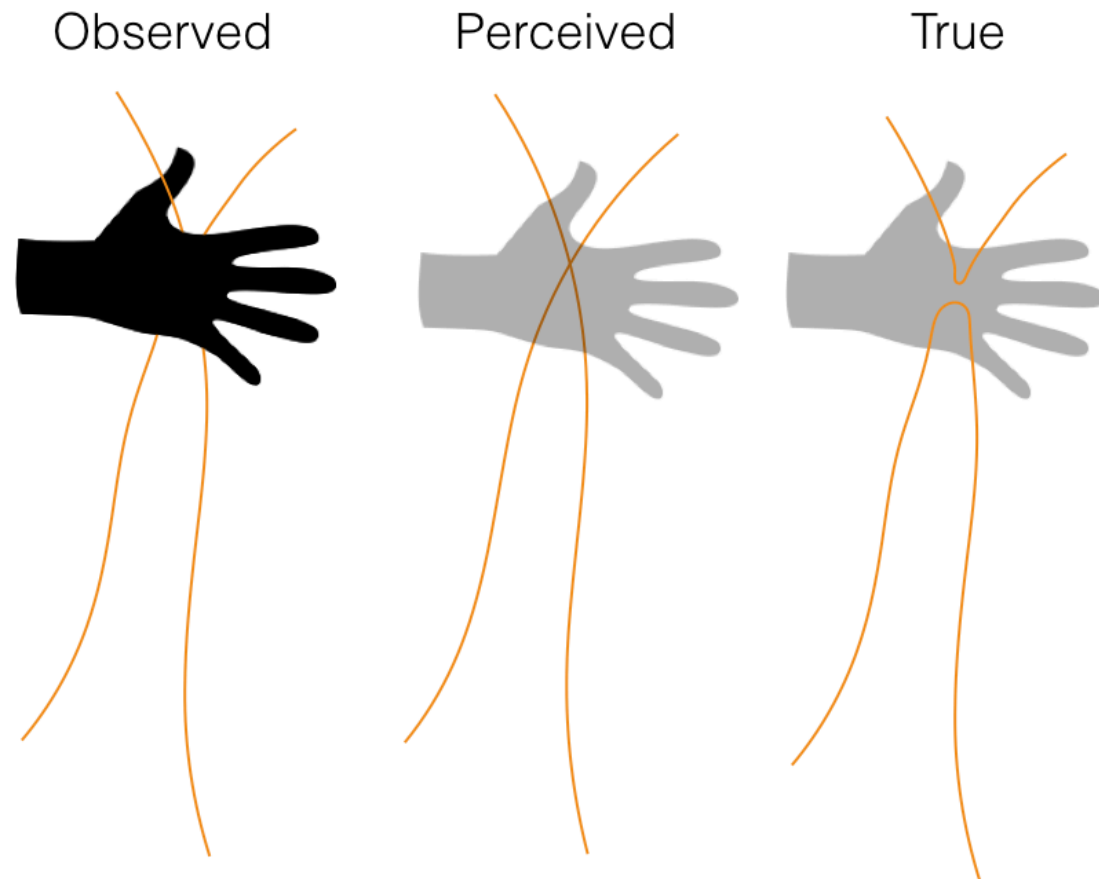
Laws of  
Grouping



**Methods:** A combination of experimental manipulation of relevant stimulus factors and observation of behaviour or self-report (introspection).

# Gestalt Psychology: Perception (examples)

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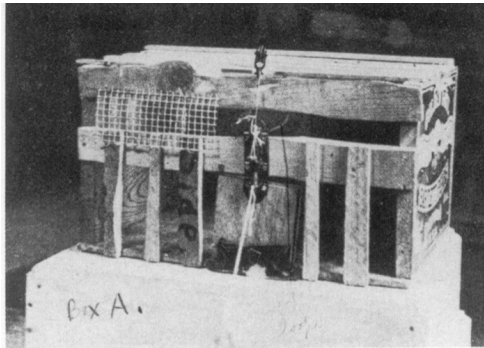
Barnhart, A. S. (2010). The exploitation of Gestalt principles by magicians. *Perception*, 39(9), 1286–1289. <http://doi.org/10.1068/p6766>



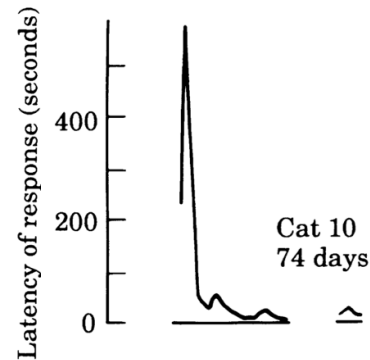
# Gestalt Psychology: Higher-order Thought

## Law of effect vs. Insight

### Origins of Behaviorism



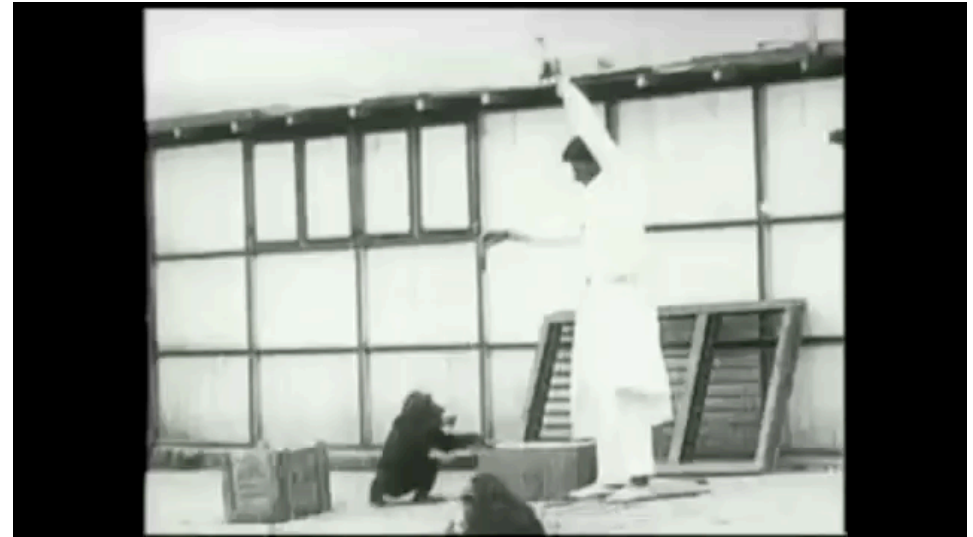
One of the four puzzle boxes used by Thorndike in the research for his doctoral thesis. From Boakes (1984).



### Law of effect

Edward Thorndike, american psychologist conducted research on animal learning using puzzle boxes, that is, apparatuses in which trapped animals could press or pull levers to escape. In 1905, Thorndike proposed the law of effect that states that “responses that produce a satisfying effect in a particular situation become more likely to occur again in that situation, and responses that produce a discomforting effect become less likely to occur again in that situation.”

[https://en.wikipedia.org/wiki/Law\\_of\\_effect](https://en.wikipedia.org/wiki/Law_of_effect)



### Insight

Wolfgang Köhler was director of the Prussian Academy of Sciences anthropoid research station, Tenerife, Canary Islands, where he wrote a book on problem solving titled *The Mentality of Apes* (1917). In this research, Köhler observed how chimpanzees solve problems, such as that of retrieving bananas when positioned out of reach by using, for example, stacked wooden crates as makeshift ladders. Köhler concluded that the chimps had not arrived at these methods through trial-and-error (which Thorndike had claimed to be the basis of all animal learning), but rather that they had an insight, in which, having realized the answer, they proceeded to carry it out in a purposeful manner.

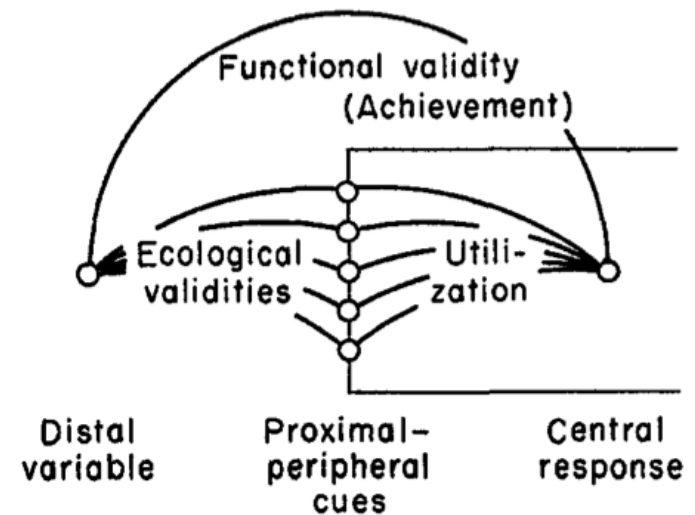
<https://en.wikipedia.org/wiki/Insight>

# Gestalt Psychology: Impact



Egon Brunswik  
(1903-1955)

Brunswick proposed the **lens model** which describes the link between characteristics of the world and individual's perception of these characteristics.



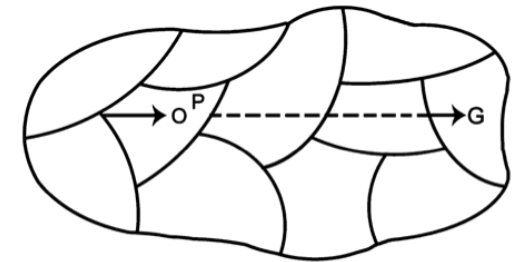
Egon Brunswik (born in Budapest, studied in Vienna, later emigrated to USA) argued that psychology should give as much attention to the properties of the organism's environment as it does to the organism itself. He asserted that the environment with which the organism comes into contact is an uncertain, probabilistic one, however lawful it may be in terms of physical principles. Adaptation to a probabilistic world requires that the organism learn to employ probabilistic uncertain evidence (proximal cues) about the world (the distal object). His work has influenced psychology of perception (cf. Roger Shepard) and judgment and decision making (cf. Ken Hammond). His focus on the environment also led him to argue for the need to use representative designs in psychology (i.e., naturalistic sampling of stimuli)

# Gestalt Psychology: Impact



Kurt Lewin  
(1890-1947)

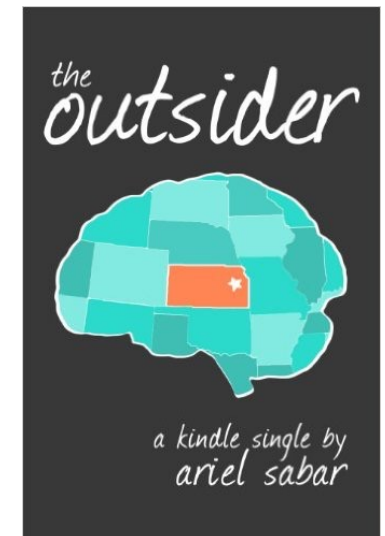
Lewin proposed **field theory**, which states that a person's life is made up of multiple distinct spaces, which the person has to travail in order to achieve his/her goals.



Kurt Lewin (born in Germany but emigrated to the United States) was a psychologist, known as one of the modern pioneers of social, organizational, and applied psychology. Lewin proposed that human behavior is always a function of the person in their environment and which he summarised in a simple equation:

$$B = f(P, E)$$

Lewin's work influenced and encouraged many (social) psychologists to consider how behaviour is embedded in social context (cf. Roger Barker's biography and his goal of studying the "naturally occurring behavior of free-ranging persons").



# Gestalt Psychology doesn't make it to the Top 10

## ***Historians' and Chairpersons' Rankings of the Importance of All-Time and Contemporary Psychologists***

Historians <sup>a</sup>			Chairpersons <sup>b</sup>		
Rank	Individual	Rank points	Rank	Individual	Rank points
All-time rankings					
1	Wundt, W.	189	1	Skinner, B. F.	508
2	James, W.	167	2	Freud, S.	459
3	Freud, S.	156	3	James, W.	372
4	Watson, J.	108	4	Piaget, J.	237
5	Pavlov, I.	79	5	Hall, G. S.	216
6	Ebbinghaus, H.	69	6	Wundt, W.	203
7	Piaget, J.	51	7	Rogers, C.	192
8	Skinner, B. F.	46	8	Watson, J.	188
9	Binet, A.	46	9	Pavlov, I.	152
10	Fechner, G.	46	10	Thorndike, E. L.	124

Korn, J. H., Davis, R., & Davis, S. F. (1991). Historians' and chairpersons' judgments of eminence among psychologists. *American Psychologist*, 46(7), 789–792. doi: 10.1037/0003-066X.46.7.789

# Summary

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- **Gestalt Psychology:** foundations in perception and experimental methods; rejection of a focus on atomic elements (structuralism); goal of describing general laws of perception
- **Köhler:** concept of insight and expansion of focus to cover learning and reasoning; rejection of the law of effect (trial-and-error) as a general principle of psychology
- **Impact:** laws of perception and motto “the sum is different/more than the sum of its parts” are well known and still applied today; principle of insight may have contributed to questioning the reach of behaviorism; general influence on other psychologists (Brunswick, lens model includes a focus on the environment; Lewin, field theory, includes both individual and environmental variables); overall little focus on mechanist explanations...