

Thomas, R. K. (2012). Klüver, H. In *Encyclopedia of the history of psychological theories* (Vol. 1, pp. 606-607. New York, NY: Springer-Verlag

Manuscript Version. ©Springer-Verlag holds the Copyright

If you wish to quote from this entry you must consult the Springer-Verlag published version for precise location of page and quotation

Klüver, H.

Roger K. Thomas¹ 

(1) Department of Psychology, University of Georgia, Athens, GA 30602-3013, USA

 Roger K. Thomas
Email: rkthomas@uga.edu

Without Abstract

Basic Biographical Information

Klüver (1897–1979) was born in Schleswig-Holstein, Germany, and he died in Oak Lawn, Illinois. He immigrated to the USA in 1923, and became a naturalized US citizen in 1934. Before immigrating in 1923, Klüver had studied at the University of Berlin and had 3 years of graduate study at the University of Hamburg where his principal mentor was Max Wertheimer. Klüver received the Ph.D. degree at Stanford University in 1924. Klüver's first academic position was at the University of Minnesota where he became a friend and research colleague of Karl Lashley. From 1926 to 1928, Klüver was at Columbia University. He rejoined Lashley in 1928 at the Chicago Institute for Juvenile Research. Both joined the faculty at the University of Chicago in 1928 where Klüver remained until his death (Nahm and Pribram *1979*).

Major Accomplishments/Contributions

Initially, Klüver gained notice for his research comparing eidetic imagery with perceptual experiences under the influence of mescal where Klüver mostly experimented upon himself. Subsequently, and to some extent influenced by Lashley, Klüver began the research that culminated in his best-known book, *Behavior Mechanisms in Monkeys* (Klüver *1933*). The book is well remembered for Klüver's behavioral methods applied to sensory, perceptual, and learning mechanisms. Klüver did not work in the era after it became both acceptable and fashionable to speak of "animal cognition," but had he done so, he might have been one of its ablest innovators and severest critics. A subject of overriding interest to Klüver was that of stimulus equivalence.

His interest in equivalence is not easily summarized, but Klüver's view corresponded well with Henry Nissen's who wrote, "... all reasoning reduces to three processes, responsiveness to identity ... [and] ... difference, and, ... the balance, or relative weight given to each...." Substitute equivalence for identity and it summarizes what Klüver deemed important about equivalence.

Klüver's work with monkeys led to the theoretical contribution for which he is best known, the Klüver-Bucy syndrome. Before discussing that, when Stephen Polyak died (1955), the research for his monumental *The Vertebrate Visual System* was complete but the book was not ready for publication. Taking 2 years away from his own research, Klüver saw it through to publication. Klüver also provided some of the research that established that the striate cortex serves as the primary visual cortex, and he is remembered for developing neuro-histological methods, including an effective stain for white matter and the Klüver-Barrera method that combines in a single brain section one stain for the gray matter and another for the white matter.

Working with Paul Bucy, a neurosurgeon, and in a quest to understand the role of the temporal cortex in visual perception, temporal lobotomies were done on rhesus monkeys. Unanticipated, what became known as the Klüver-Bucy syndrome resulted (Nahm *1997*). The syndrome, which it may be noted has also been reported to occur fully in humans, added significantly to understanding the neural substrates of emotion. The syndrome had been observed earlier (1888) by Brown and Shafer who apparently failed to realize its significance. Most striking following the temporal lobotomies was a behavioral tameness rarely seen in these feral monkeys. Eventually, this tameness was attributed to the removal of amygdala, and some of the other syndrome components were eventually attributed to structures in the temporal lobe other than the cerebral cortex. Nevertheless, a significant perceptual deficit was attributable to the temporal cortex. It has been said that Klüver's research on striate cortex showed its role in the visual identification of objects, and his research on temporal cortex showed its role in knowing what the objects meant to the observer.

Klüver received so many high honors during his lifetime that only a select few can be mentioned here. He was a member of the American Academy of Arts and Sciences and of the National Academy of Sciences. He received the Gold Medal Award from the American Psychological Association in recognition of his scientific contributions, and he received an honorary Ph.D. degree from the University of Hamburg and honorary M.D. degrees from the University of Basel and the University of Kiel. Klüver also received the Karl Spencer Lashley Award in Neurobiology from the American Philosophical Association.

See Also

[Lashley, Carl](#)

References

Klüver, H. (1933). *Behavior mechanisms in monkeys*. Chicago: University of Chicago Press.

Nahm, F. K. D. (1997). Heinrich Klüver and the temporal lobe syndrome. *Journal of the History of the Neurosciences*, 6, 193–208.



Nahm, F. K. D., & Pribram, K. H. (1979). *Heinrich Klüver: May 25, 1897 – February 8, 1979*. Biographical Memoirs, National Academy of Sciences. <http://books.nap.edu/html/biomems/hkluver.pdf>