21st Conference of the European Society for Cognitive Psychology

Tenerife, Spain

25-28 September 2019

Wednesday 25th

17:50-19:30 pm

Meeting Room: Tenerife

Wolfgang Köhler in Tenerife (1913-1920): A tribute to a pioneer in cognitive psychology

A symposium convened by
Michel Denis
CNRS / Université Paris-Saclay, France
and
Carlos J. Álvarez
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The European Society for Cognitive Psychology has honoured Tenerife to being the venue of its 21st Conference. One century ago, the island of Tenerife was also the birthplace of one of the most daring research programs ever launched at the junction of primatology and psychology. Wolfgang Köhler collected a set of quite novel behavioural data that attested for the capacity of apes at solving problems and developing genuine thought processes. Köhler's work further inspired longstanding research efforts and initiatives in primatology and comparative psychology, prefiguring issues to be taken in charge by cognitive psychology decades later, including those related to young children's cognitive development. The symposium offers an exceptional opportunity of paying tribute to Wolfgang Köhler and presenting the results of a set of recent research programs in direct line with the spirit of Köhler's original scientific endeavour.

Introduction to the symposium

Carlos J. Álvarez
On behalf of the ESCoP-2019 organising committee

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Köhler's years in Tenerife: Portrait of a man of science

Michel Denis
CNRS / Université Paris-Saclay, France

In 1913, Wolfgang Köhler left Frankfurt, where he had spent four years with Max Wertheimer and Kurt Koffka working out the basic tenets of the Gestalt theory. He moved to Tenerife to become director of the anthropoid research station founded a few years ago by the Prussian Academy of Sciences. It is here, at the Casa Amarilla, nearby Puerto de la Cruz, that he collected a considerable amount of evidence for non-human primates' problem solving and insight capacities, which he reported in his landmark book, "The Mentality of Apes". Whereas Köhler's dedication to primate research did not follow up in his further years back in Germany, then in the United States, his unique experience in Tenerife reflects the portrait of an exceptional scholar open to adventurous scientific challenges and innovative research methods, which have proven to be continuously inspiring for generations of cognitive psychologists.

Wolfgang Köhler's contribution to modern Comparative Psychology: Illustration with studies on abstract reasoning in baboons

Joël Fagot
CNRS / Aix-Marseille Université, France

It was during World War I that Wolfgang Köhler wrote the first edition of his famous book "The Mentality of Apes", when he was on Tenerife Island. That book was a turning point in animal psychological research. First, by showing that chimpanzees can exhibit intelligent behaviours in complex but accessible situations, Köhler contributed a response to "association theorists", like Edward Thorndike, who denied forms of reasoning in animals. Second, Wolfgang Köhler took the idea of Darwin that the difference between human and animal intelligence is a matter of degree, not of kind, and examined the "intelligent acts" of chimpanzees for gaining some general knowledge on the mental processes shared by human and non-human primates, paving the way to modern Comparative Psychology. In this tribute to Wolfgang Köhler, I shall present a series of laboratory studies that demonstrate – in line with Köhler's pioneer studies on chimpanzees – forms of abstract thinking in baboons.

The role of others in primate social cognition

Stefanie Keupp
University of Warwick, UK

Wolfgang Köhler not only studied chimpanzees' instrumental problem solving and tool use but also their social-cognitive abilities. In the last decades, researchers of comparative cognition followed Köhler's approach to introduce new "problems" in the animals' environments to study the motivations and cognitive processes underlying their social behaviour. My research focuses on comparing how different primates use social information in their surroundings and their propensity to cooperate in joint activities. While humans have a strong motivation to cooperate with and compare themselves to others from very young age, competition plays a substantial role in non-human primates' social behavior and cognition. For example, when working concurrently on a task, human adults adapted their performance to the performance of a co-actor whereas long-tailed macaques were only interested in others' performance when the setting was competitive.

Insight and intuitive physics: Köhler on implicit knowledge

Juan-Carlos Gomez
University of St. Andrews, UK

One of the key contributions of Köhler's pioneering work on the intelligent behaviour of chimpanzees were the notions of insight and intuitive physics — the idea that the intelligent behaviour displayed by apes revealed some form of non-verbal "understanding" of the mechanics of the physical world irreducible to associative learning. In this paper I will review, first, the historical influence of this notion on the conceptions of intellectual development of Piaget and Vygotsky; and, building upon this, I will discuss its continuing relevance for the unresolved debates about the nature of animal and infant minds and their relation to the problem of "implicit knowledge" in current psychology and cognitive science.

Moment of truth: Can we trust our insights?

Amory H. Danek
Heidelberg University, Germany

The dawn of insight research dates back to Wolfgang Köhler's groundbreaking work on chimpanzee cognition. Köhler and the other Gestalt psychologists had postulated the infallibility of insight, yet this assumption was never systematically investigated. Their basic idea was that restructuring processes, as instances of "good thinking", inevitably lead to a better Gestalt, improving the original view of a problem and thus making it solvable. This view is reflected in Köhler's analogies with physical systems that converge towards stable states to form a dynamic equilibrium. However, it has only recently been shown that solutions with self-reported Aha! experiences are actually more likely to be correct than those where this feeling of epiphany is missing. A synthesis of recent studies shows that this intuitive sense of success holds across different task domains. Possible implications for creativity and problem solving will be discussed.