Studies in History and Philosophy of Biological and Biomedical Sciences 55 (2016) 29–40

Contents lists available at ScienceDirect

Studies in History and Philosophy of Biological and Biomedical Sciences

journal homepage: www.elsevier.com/locate/shpsc

Between biomedical and psychological experiments: The unexpected connections between the Pasteur Institutes and the study of animal mind in the second quarter of twentieth-century France

Marion Thomas

University of Strasbourg, SAGE (UMR 7363), Faculté de médecine, DHVS, 4, rue Kirschleger, 67085 Strasbourg Cedex, France

ARTICLE INFO

Article history:
Received 8 October 2013
Received in revised form
15 September 2015
Available online 18 December 2015

Keywords:
Animal intelligence
French psychology
French biomedicine
Zoological garden
Paul Guillaume
Achille Urbain

ABSTRACT

This article explores the unexpected connections between the Pasteur Institute in French Guinea and the study of animal mind in early twentieth century France. At a time when the study of animal intelligence was thriving in France and elsewhere, apes were appealing research subjects both in psychological and biomedical studies. Drawing on two case studies (Guillaume/Meyerson and Urbain), and then, on someone responding negatively to those connections, Thétard, this article shows how the long reach of biomedicine (linked to the prestige of Bernard and Pasteur) impinged on French biology and played a role in the tortuous, if not unsuccessful fate of animal psychology in France in the second quarter of the twentieth century. It shows how attempts to use apes (and other zoo animals) to yield new insights on animal psychology faced heavy restrictions or experienced false starts, and examines the reasons why animal psychology could not properly thrive at that time in France. Beyond the supremacy of biomedical interests over psychological ones, this article additionally explains that some individuals used animal behaviour studies as steppingstones in careers in which they proceeded on to other topics. Finally, it illustrates the tension between non-academic and academic people at a time when animal psychology was trying to acquire scientific legitimacy, and also highlights the difficulties attached to the scientific study of animals in a multipurpose and hybrid environment such as the early twentieth century Parisian zoo and also the Pasteur Institute of French Guinea.

1. Introduction

In 1923, a distinguished pupil of Louis Pasteur, the bacteriologist Albert Calmette (1863–1933), former founder of the Pasteur Institute at Saigon, Indochina, was instrumental in establishing another overseas Pasteur Institute, this time in French Guinea. Situated in the heart of the African jungle, Pastoria—as the station was called—was mainly conceived to supply the Paris institute with apes for laboratory research in microbiology and pathology. Pastoria was also a place devoted to test vaccines, especially the famous BCG (Bacille de Calmette et de Guérin) vaccine against tuberculosis, on anthropoid apes.[1] In addition to these biomedical activities, Calmette remarked that "it [would be] extremely interesting to observe the intellectual development [of apes] […] and to learn how chimp intelligence [could be] improved." (Calmette, 1924, 14). Calmette also intended to educate generations of primates using modern teaching methods (Calmette, 1924, 14). The project of a "monkey college", as it was popularly described, very much inflamed the imagination of the press. They pictured something far beyond Calmette's actual plans: a training grounds where young

[1] After its safety and effectiveness in protecting young animals against tuberculosis was demonstrated, the BCG was used on newborn infants in France and then spread worldwide.

E-mail addresses: marion.thomas@unistra.fr, mcmthomas@wanadoo.fr.

http://dx.doi.org/10.1016/j.shpsc.2015.10.010
1369-8486/

chimpanzees and orangutans would be reared, taught to talk, read, write and think like human beings, and also given good manners.[2]

In the early 1920's, ape intelligence had already received a fair amount of scholarly attention. In France, a decade earlier, the zoologist Louis Boutan investigated the mind of an Indochinese gibbon and compared its language and intelligence with those of young children. Educated like a human infant, and subjected to psychological tests, the gibbon Pépée eventually proved able to open puzzle boxes, which showed it was capable of "embryonic reasoning" (Thomas, 2005, 449). This experiment was a smaller-scale materialization of Calmette's subsequent (and as we will see, unfulfilled) educational plans for his African apes. Yet Boutan's work was never properly acknowledged by his French peers; instead it was noticed on the other side of the Atlantic. In 1927, the American psychologist Robert Yerkes wrote to Boutan to express his great admiration of his work,[3] even calling Boutan a forerunner of his studies on the "ideational behaviour" of apes.[4] Indeed, in 1915, with a private colony of apes at his disposal, Yerkes started his first, systematic and long-term study of intelligent behaviour in nonhuman primates. Yerkes's work on the apes' ability to formulate or experience ideas also followed in the footsteps of German Gestalt psychologist Wolfgang Köhler's research on the intelligence of chimpanzees. In 1912, the Prussian Academy of Sciences and a private foundation established an experimental anthropoid station on Tenerife (Canary islands), designed for the study of ape behaviour. During the First World War, Köhler, the second director of the station, made his path-breaking experiments demonstrating the chimpanzee's ability to act with "insight". Also worth noting is that the initial research plan for the station stated that the chimpanzees should be approached as "untalented children with an extreme deficit attention"; they should be taught to play musical instruments, to understand human language (German), and deal with numbers, space and geometrical figures" (Rossianov, 2002, 292). Beyond the exploration of the ape mind also lurked educational concerns that were quite similar to those of Calmette when he developed his plan of establishing an ape training school at Pastoria. Last but not least, in the years 1913–1916, the Russian psychologist Nadia Kohts undertook comparative studies with her son Roody and the chimp Joni, focussing on the development of intelligence and the expression of emotions. Despite the gender issue and the fact that she published in Russian, Kohts was nonetheless known by her contemporaries: Yerkes corresponded with her over twenty years and even paid her a visit in Moscow in 1929. Kohts's work was also publicized in France in the late 1930's, including in the *Journal de Psychologie Normale et Pathologique*.

In the early twentieth century, the study of animal intelligence was experiencing a multifaceted surge in France and elsewhere.[5] In France, studies in animal psychology were mostly conducted on invertebrates; the main contributions concerned social insects and intelligent insect behaviour.[6] It appears that Calmette played a part in fulfilling the pressing need for a sustained vertebrate programme. His efforts ultimately inspired two remarkable

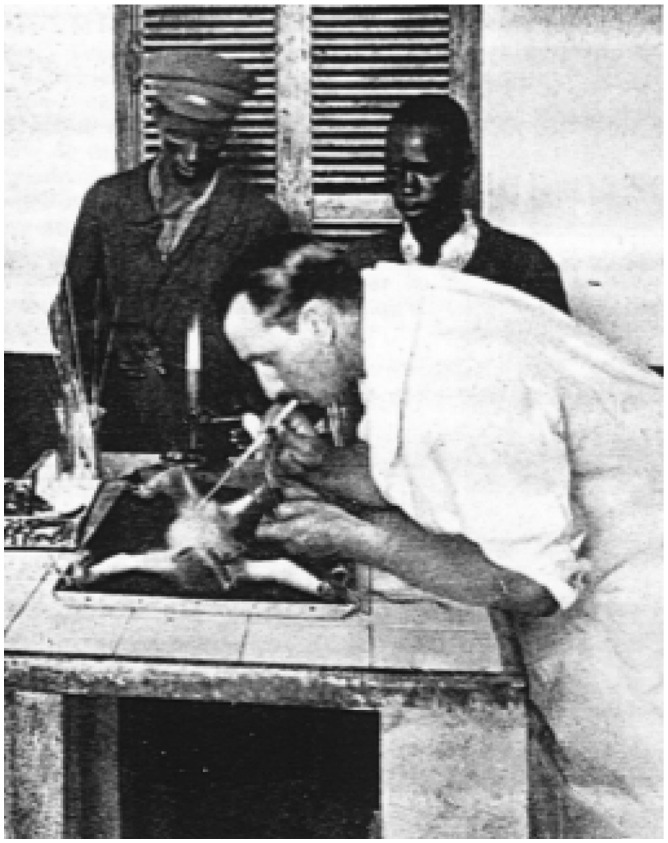

Fig. 1. Dr Wilbert with two assistants in his laboratory at Pastoria. Photograph from F. Honoré, Les "singeries" de l'Institut Pasteur à Kindia et à Paris. *L'Illustration*, 1927, *4390*, p. 407.

investigations into animal (including ape) behaviour as a well as a third investigation aiming to repudiate the influence of his "medical model".

In 1927, Calmette helped facilitating studies on primate psychology both at the Parisian Pasteur Institute and at the Ménagerie of the National Museum of Natural History (MNHN), where he had connections. Paul Guillaume (1878–1962) and Ignace Meyerson (1888–1983) were the two psychologists in charge of these studies. Being fervent advocates of Gestalt theory, Guillaume and Meyerson had to overcome material issues to reproduce Köhler's pioneering studies on the intelligence of chimpanzees in the two Parisian institutions., Guillaume and Meyerson, who were also supporters of a laboratory-based psychology, saw the study of ape intelligence not only as a means to introduce Gestalt theory in France, but also to contribute to the emergence of psychology as a scientific discipline. The Pasteur Institute seems again to have an influence on the fate of animal behaviour studies when, in 1931, the Pastorian veterinarian Achille Urbain (1884–1957) was appointed as joint-director of the Ménagerie of the MNHN. Two years later, Urbain would be appointed director of the Vincennes zoo, the first in France to integrate Carl Hagenbeck's revolutionary display of animals. Intimately connected to the foundation of the "modern" zoo, a chair for the ethology of wild animals was created in 1933. Surprisingly, animal psychology, which was expected to thrive thanks to this chair, experienced a false start. I show that—and consider a few reasons why Urbain, who was entrusted with this chair, was more inclined to studying dead animals than to investigating their psychology. Finally, I use the case of the animal tamer and animal popularizer Henry Thétard (1884–1968), who was not unknown to Urbain, as an example of a negative response to the Pastorian sway

[2] In 1924, the French experience in Pastoria had been publicised under the title: "French to establish model village, and training grounds for apes, in which civilising experiments will be tried out." *Chicago Tribune Ocean Times*. Reference quoted from Donna Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science*, London, Routledge, 1989, pp. 19–21.

[3] R. Yerkes to L. Boutan, 18 March 1927, Yerkes Papers, MS 569, series I, box 3, folder 49.

[4] "It seems that Boutan discovered from his observation of the gibbon what was revealed by my work with an orangutan", quoted in Yerkes & Yerkes (1929, p. 96).

[5] For an illuminating study of wonder animals and question of animal intelligence in France, see Lachapelle & Healey (2010).

[6] For more on the development of French animal behaviour studies, see Burkhardt (1994), Chavot (1994), Thomas (2003).