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A critical evaluation of Eugene Nielen Marais's contribution to the study of primate behaviour with specific reference to the evolution of consciousness

By:

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A dissertation submitted to Faculty of Science, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Science.

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DECLARATION

I declared that this dissertation is my own unaided work. It is being submitted for the Degree of Master of Science in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

Signature of candidate:

Date:

ABSTRACT

The South African author and amateur scientist Eugen Nielen Marais (1871-1936) is most notably recognized for his major contribution to the propagation and motivation for the independent establishment of the Afrikaans Language. However, he is seldomly acknowledged for his scientific endeavours in the fields of Primatology and Evolutionary Theory as applied to Psychology. The few authors that did provide analysis of Marais's scientific contribution were somewhat biased and assessed his work either in an extremely positive, hagiographic manner or in very negative terms and generally, in both cases, with relatively little historical distance. These diverging assessments are the starting point in the present thesis in which the aim is to try to decipher what was the scientific validity of Marais's scientific contributions within the scientific context of his own time (first half of the twentieth century) and how do his contributions relate to the contemporary science.

To achieve this aim a historical analysis was carried out based on an extensive historical overview of the relevant scientific disciplines - Primatology and Evolutionary Psychology, and their predecessors.

The analysis shows that Marais made a pioneering contribution to Primatology in his method of his non-captive, long-term observations of the non-human primates in their natural habitat. The effectiveness of this method was instrumental in accurately identifying the life history of the Chacma baboon (*Papio ursinus ursinus*). However, from the present perspective Marais's descriptions and observations were often superficial, anthropocentric and anecdotal. Marais makes another pioneering contribution to Evolutionary Psychology, through his reliance on Darwinian theory, tending towards an absolute adaptationist view. Additionally, Marais did not confine his analysis and interpretation of the evolution of consciousness to non-human primate studies but rather undertook a wide range of animal studies to achieve his results. The results were used to explain the evolution of consciousness. Moreover, Marais only

anticipates the recently developed discipline Evolutionary Psychology in the use of Darwinian principles, subsequently his ideas differed significantly especially when relating to the prevalence of instincts in humans as well as content-domain specificity with regard to the function of these instincts and also the individual causal memory.

In conclusion, Marais's method of primate studies, although not acknowledged at the time, was novel and ground-breaking. His application of Darwinian theory to the study of the evolution of psychological attributes was equally pioneering, especially in the times when Darwinian version of evolutionary theory was in crisis. His results and conclusions were not always correct from the present perspective but display the ideas and lines of development that characterise modern disciplines of Primatology, Evolution studies and Psychology.

In this thesis I argue that Marais was not a scientific hero who changed or could have changed the face of Primatology, Evolutionary Biology and Psychology, if his writings were not neglected. He was, however, a self-educated scientist, who in spite of many difficulties, made important contributions to the above disciplines and should be acknowledged as one of the pioneers.

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DEDICATION

I would like to dedicate this thesis to my parents Anthony Joseph Billings and Sadia Billings. They have been a pillar of support throughout my analysis and they never questioned my ability during the tough times. For this I will always be grateful and I hope that this dissertation will bring them much pride.

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