



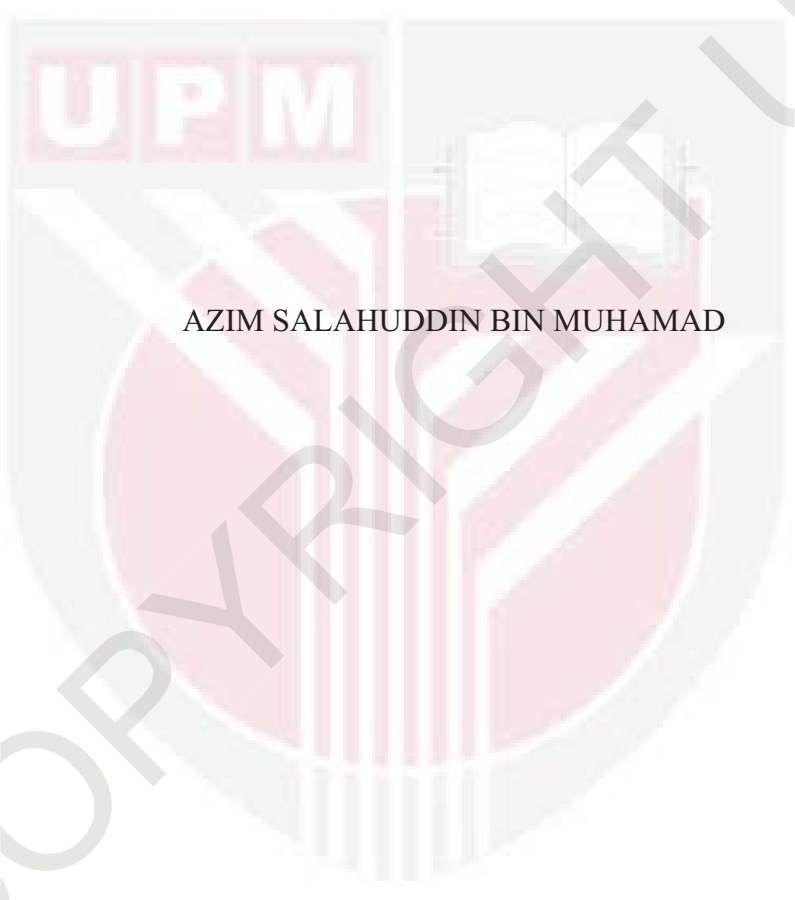
UNIVERSITI PUTRA MALAYSIA

SELF RECOGNITION IN A YOUNG CHIMPANZEE

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SELF RECOGNITION IN A YOUNG CHIMPANZEE

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SELF-RECOGNITION IN A YOUNG CHIMPANZEE

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A project paper submitted to the Faculty of Veterinary Medicine, Universiti Putra
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CERTIFICATION

It is hereby declared that we have read this project paper entitled “self-recognition in an infant chimpanzee”, by Azim Salahuddin bin Muhamad and in our opinion, it is satisfactory in terms of scope, quality, and presentation as partial fulfilment of requirement for the course VPD4999 – Final Year Project

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CONTENTS

TITLE	i
CERTIFICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
ABSTRAK	vi
1.0 INTRODUCTION.....	1
2.0 LITERATURE REVIEW.....	3
2.1 Cognitive function	3
2.2 Animal self-recognition	4
2.3 Animal that have passed self-recognition	5
2.4 Animal that have failed self-recognition.....	6
2.5 Mirror test	6
2.6 Mark test	7
3.0 Methods and Materials.....	9
3.1 Animal.....	9
3.2 Experiment set up and equipment.....	9
3.3 Ethogram, mirror test and sampling.....	10
3.4 Data Analysis	12
4.0 RESULTS	13
4.1 Pre-test in front of the mirror (baseline mirror-directed behaviour)	13
4.2 Pre-test (baseline self-directed behaviour) in front of mirror	14
4.3 Open-Mirror Test (Mirror-Directed Behaviour)	15
4.4 Open-Mirror Test (Self-Directed Behaviour)	16
4.5 Mark test (mirror-directed behaviour)	17
4.6 Mark test (Self-Recognition Behaviour).....	18
4.7 Comparison of mirror test and mark test behaviour.....	19
5.0 Discussion.....	21
5.1 <i>Open-mirror test</i>	21
5.2 <i>Mark test results</i>	21
6.0 Conclusion	23
7.0 Recommendations	23
APPENDICES	28

LIST OF TABLES

	Page
Table 1: Mirror-directed behaviour	10
Table 2: Pretest on open mirror test	13
Table 3: Pretest in front of the mirror (self-recognition behaviour)	15
Table 4: Open-Mirror Test (Mirror-Directed Behaviour)	16
Table 5: Open-Mirror Test (Self-Directed Behaviour)	16
Table 6: Mark test (mirror-directed behaviour)	17
Table 7: Mark test (Self-Recognition Behaviour)	18

LIST OF FIGURES

Figure 1: Pretest on open mirror test	14
Figure 2: Pretest in front of the mirror (self-recognition behaviour)	15
Figure 3: Open-Mirror Test (Mirror-Directed Behaviour)	16
Figure 4: Open-Mirror Test (Self-Directed Behaviour)	17
Figure 5: Mark test (mirror-directed behaviour)	18
Figure 6: Mark test (Self-Recognition Behaviour)	19
Figure 7: Cumulative mirror-test behaviour	19
Figure 8: Cumulative mark-test behaviour	20
Figure 9: location of the mirror	28
Figure 10: Julie the female chimpanzee	29
Figure 11: Preparation of the site	29
Figure 12: Paint used for mark test	30

ABSTRACT

An abstract of the project paper presented to the Faculty of Veterinary Medicine in partial fulfilment of the course VPD4999 – Project.

SELF-RECOGNITION IN A YOUNG CHIMPANZEE

by

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March, 2016

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Animal cognition refers to the mental capabilities and the memory of an animal. The cognitive function also provides the evidence of self-awareness, which describe as to distinct of oneself as an individual separate from the environment and other individuals. The mirror self-recognition (MSR) test or mark test is a behavioural technique introduced by psychologist, Gallup, G. in 1970s which to determine whether non-human possess the ability of self-recognition. Therefore, the objective of this study is to measure and analyse the self-recognition of a young chimpanzee. Animal was selected (n=1; *Pan troglodytes*) from Zoo Negara Malaysia and the acrylic mirror (60x84cm: A1 size) was placed outside of the cage. The animal also was marked with odourless non-toxic white paint for MSR test. Open mirror and mark test behaviour were recorded using a video camera for a week and all data were analysed using the ethogram procedure. Theoretically, animal that are

considered to be able to recognize themselves in a mirror typically through four stages of behaviour such as social responses, physical inspection, repetitive behaviour and realization of seeing themselves. Result showed that the animal has positive MSR in an open mirror test. However, the animal does not show self-recognition towards the mark, which indicates to negative MSR. Several factors such as bar cage, insufficient lighting, and reduce in mark colour may cause the animal not to act towards the mark. Therefore, further research is needed to understand the real capability of the chimpanzee in recognising itself. The understanding of cognitive ability as an effort to help the animals such as management and in program to re-establish populations of endangered or threatened species.

Keyword: mirror self-recognition, chimpanzee (*Pan troglodytes*), mark test

ABSTRAK

Abstrak daripada kertas projek dikemukakan kepada Fakulti Perubatan Veterinar bagi memenuhi sebahagian daripada keperluan kursus VPD 4999 – Projek

PENGENALPASTIAN DIRI BAGI SEEKOR CHIMPANZEE MUDA

oleh

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Kognisi haiwan merujuk kepada kemampuan mental dan memori seekor haiwan. Fungsi kognitif juga memberikan bukti kepada kesedaran diri, dimana ia menggambarkan perbezaan seseorang sebagai seorang individu lain dari persekitaran dan individu yang lain. Ujian pengenalan diripada cermin (MSR) atau ujian tanda ialah teknik kelakuan yang diperkenalkan oleh Gallup, G. Pada tahun 1970an untuk menentukan samada seekor haiwan memiliki keupayaan untuk mengenali diri sendiri. Oleh itu, objektif kajian ini adalah untuk mengira dan menganalisa kesedaran diri dan seekor chimpanzee muda. Seekor chimpanzee telah dipilih ($n=1$, *Pan troglodytes*) dari Zoo Negara, Malaysia dan sebuah cermin akrilik telah diletakkan diluar sangkar. Haiwan tersebut juga telah ditanda menggunakan cat putih yang tidak berbau dan tanpa toksin. Tingkahlaku terhadap ujian cermin dan ujian tanda telah direkod menggunakan kamera video selama seminggu dan kesemua data telah dianalisa

menggunakan prosedur etogram. Secara teori, haiwan yang mengenali dirinya sendiri mestilah menjalani empat tahap tingkah laku iaitu respon sosial, pemeriksaan fizikal, tingkahlaku yang berulang-ulang dan sedar mereka melihat dirinya sendiri. Keputusan menunjukkan haiwan cimpanzi tersebut mempunyai kesedaran diri yang positif terhadap cermin di dalam ujian cermin tetapi haiwan tersebut tidak menunjukkan kesedaran diri terhadap ujian bertanda. Beberapa faktor yang menyebabkan haiwan berikut tidak menunjukkan tingkahlaku terhadap ujian bertanda antaranya ialah palang pada sangkar, kekurangan pencahayaan, dan warna penandaan yang pudar. Oleh itu, kajian yang lebih mendalam perlu difahami untuk memahami kemampuan sebenar seekor cimpanzi di dalam kesedaran diri. Kefahaman dan kesedaran terhadap kebolehan kognitif haiwan adalah usaha untuk menolong haiwan dalam pengurusan dan memantapkan kedudukan populasi haiwan yang terancam.

Kata kunci: pengenalan diri terhadap cermin, cimpanzi (*Pan troglodytes*), ujian bertanda

1.0 INTRODUCTION

The traditional explanation of organisms' ability to distinguish their own body in a mirror is that they have an essential cognitive capacity for processing mirrored information about the self (Gallup, 1982). It is divided into three categories that are cognitive, memory and learning.

The cognitive is where the process where the knowledge and understanding is developed in the brain. In addition, the memory is where the capacity to recall previously experience sensation, information, data and ideas whereas the learning is an activity or process of gaining knowledge or skill by studying, practicing, being taught, or experiencing something.

The justification of this study is to contribute to help the animal in re-establishing the population. Around the world, chimpanzee become one of endangered animal as listed in the International Union for Conservation of Nature (IUCN). This may due to high levels of exploitations, loss of habitat and habitat quality due to expanding human activities. Secondly, the awareness to the complexity of the social life of the chimpanzee as chimpanzee lives in a group. The hierarchy and ranking of each of the animal is different and this may result in different of self-awareness. Thirdly, the emergence of self-awareness of a young chimpanzee and to see the development of behaviour of the animal in captive environment. The development of the chimpanzee is different from the age itself.

The chimpanzee or in scientific term known as *Pan troglodytes* is a great ape that live in the rain forest of Africa from Sudan and Tanzania in the East of Senegal

and Angola in the West. Their height is approximately three to five feet and weighing up to 200 pounds.

Considering the number of inadequate research in Malaysia, regarding the physiological status of wild animals and their conservation, the objectives of this study are to measure the ability of a young chimpanzee (*pan troglodytes*) in self-recognition for better understanding in program to re-establish the populations of endangered or threatened species.

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