

# **DOG'S UNDERSTANDING OF HUMAN NONVERBAL SOCIAL GESTURES: STUDY CASE OF K9 UNIT IN POLDA METRO JAYA**

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**DEPARTMENT OF BIOLOGY  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
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BOGOR  
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## ABSTRAK

INTAN ANGGRAENI PUTRI. Pemahaman Anjing terhadap Gestur Sosial Nonverbal Manusia: Studi Kasus Unit K9 Polda Metro Jaya. Dibimbing oleh TRI HERU WIDARTO dan PUJI RIANTI.

Anjing memiliki banyak peran dalam kehidupan manusia selama ratusan tahun. Penelitian sebelumnya memperlihatkan anjing memiliki kemampuan kognitif sosial untuk berkomunikasi melalui gestur. Studi ini mengukur kemampuan anjing deteksi dari unit K9 Polda Metro Jaya (PMJ) untuk menggunakan isyarat gestur pada uji pilihan dua objek. Gestur yang diuji antara lain penunjuk jari, arahan mata, dan menjulurkan lengan. Anjing tidak diberikan gestur apapun dipilih sebagai kontrol. Subjek adalah empat ekor anjing Labrador-retriever, dengan rentang usia 2 sampai 10 tahun, aktif sebagai anjing deteksi tim K9 PMJ, baik jantan dan betina. Hasil penelitian mengindikasikan bahwa anjing mampu mengartikan komunikasi melalui gestur. Gestur meningkatkan akurasi pemilihan, dimana gestur menjulurkan lengan memiliki akurasi tertinggi. Gestur tidak berpengaruh pada waktu reaksi. Jenis kelamin hanya berpengaruh pada waktu reaksi menggunakan gestur lengan menjulur. Pengalaman kerja anjing tidak berpengaruh pada hasil studi. Hasil studi dapat dipertimbangkan dalam peningkatan metode latihan dan seleksi dari anjing pekerja.

Kata kunci: anjing deteksi, gestur manusia, isyarat komunikatif, kognitif sosial, pilihan dua-objek

## ABSTRACT

INTAN ANGGRAENI PUTRI. Dog's Understanding of Human Nonverbal Social Gestures: Study Case of K9 Unit in Polda Metro Jaya. Supervised by TRI HERU WIDARTO and PUJI RIANTI.

Dogs have served numerous purposes in human life. Previous studies showed that dogs have excellent social cognitive abilities to use gestures as communicative cues. This study measured the detection dogs of K9 unit Polda Metro Jaya (PMJ) ability to use human gestures as cues through two-object choice task experiments. The experiment used finger-pointing, gazing, and arm reaching. Control is carried out by not making any gestures. Subjects were four Labrador-retriever, with an age range of 2 to 10 years old, and in active deployment of detection dogs in K9 PMJ, in both males and females. The results indicated that the subject dogs could infer communicative intentions through gestures. Gestures raised their accuracy significantly above chance, with arms reaching and yielding the highest accuracy. Gestures did not affect reaction time. Sex was found to affect reaction time in arm reaching cue. Dogs' work experience did not affect their accuracy and reaction time. These results should be considered when enhancing training and selection methods for working dogs.

*Keywords:* communicative cues, detection dogs, human gestures, social cognition, two-object choice



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# **DOG'S UNDERSTANDING OF HUMAN NONVERBAL SOCIAL GESTURES: STUDY CASE OF K9 UNIT IN POLDA METRO JAYA**

**INTAN ANGGRAENI PUTRI**

An Undergraduate Thesis  
Intended to Acquire Bachelor Degree  
In Study Program of Biology

**DEPARTMENT OF BIOLOGY  
FACULTY OF MATHEMATICS AND NATURAL SCIENCES  
IPB UNIVERSITY  
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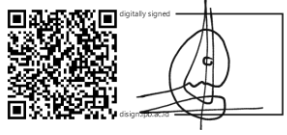
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The author hopes this work will be helpful in advancing animal cognition science.

Bogor, June 2024

*Intan Anggraeni Putri*

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