THE JAPANESE JOURNAL OF PSYCHONOMIC SCIENCE

Edited and published by
THE JAPANESE PSYCHONOMIC SOCIETY
President: Keichiro TSUJI (Chukyo University)
Editor-in-Chief: Masako JITSUMORI (Chiba University)

--- Editors ---
Shigeru ICHIHARA (Tokyo Metropolitan University)  Tadashi KIKUCHI (University of Tsukuba)
Shoichi SHINOHARA (Gakushuin University)  Seiji YAMAGAMI (Senshu University)
Hirokazu YOSHIMURA (Hosei University)

--- Associate Editors ---
J. ABE  J. GYOBA  Y. HAKODA  J. KAWAGUCHI  E. KIMURA
S. NAKAJIMA  Y. NAKAJIMA  N. OSAKA  S. SHIGENO  T. TOSIMA

--- CONTENTS ---

Original Articles
Yukio MIZUHARA: Implicit learning in an invariant learning task
  Effects of an invariant and memory of stimuli ........................................... 129
Yuko MASAKURA and Makoto ICHIKAWA: Factors to improve impression of a
  noisy environment by presenting music ..................................................... 139
Hisashi MASUDA and Chikako FUJITA: Effects of script familiarity of words on
  component letter recognition ...................................................................... 151
Shoko KUNITA and Kazumitsu CHUJO: The effect of study task on hit rates of high
  frequency items in recognition: Does phonemic processing eliminate the frequency
  effect in recognition? ............................................................................... 161

Review Articles
Mizuho KITAMURA: The study on spacing effect and selective attention in central and
  incidental learning—An experimental examination using semantic cues .............. 170
Tomomi TAKEZAWA: Perception of the distance of human figures in photographs ... 177
Naoki YAMAGISHI: Behavioral variability and operant conditioning .................. 183

Lectures
Forum: Various approaches to feelings and emotinal expressions in experimental psychology ... 201
Naoto SUZUKI: Psycho-physiological approach to emotion
  Undoing effect of positive emotions ......................................................... 202
Takahiro KIRITA: When people pronounce a phrase laughingly
  A study of laughter from cognitive psychology perspective .......................... 207
Senji TANAKA and Soshichi UCHII: A sense of fairness in the capuchin monkey
  and emotional bases of morality—A brief prospect of "evolutionary ethics" ......... 213

Other
Takao SATO: The plan for a new psychology certification by the Japanese union of
  psychological associations ................................................................. 218

Abstracts of Presentations
The 23rd Annual Meeting ........................................................................... 220
Announcements ......................................................................................... 252

THE JAPANESE PSYCHONOMIC SOCIETY
c/o International Academic Printing Co., Ltd.
4-4-19 Takadanobaba, Shinjuku-ku, Tokyo, 169-0075, JAPAN