

RESEÑA

14 BIENNIAL SCIENTIFIC MEETING OF THE INTERNATIONAL SOCIETY FOR COMPARATIVE PSYCHOLOGY

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La psicología comparada es una rama de la psicología que se dedica al estudio de fenómenos como el lenguaje, la cognición y el aprendizaje en animales no humanos. Alrededor de esta disciplina existen varias asociaciones de psicólogos comparativos que se dedican a la investigación en primates, delfines, abejas y hormigas entre otras especies; una de estas sociedades es la International Society for Comparative Psychology (ISCP) quien en el pasado mes de octubre, durante los días 9, 10 y 11 realizó su 14 Encuentro Biannual en la ciudad de Buenos Aires –Argentina. Este encuentro contó con el apoyo de la Agencia Nacional de Promoción Científica y Tecnológica (ANPCYT); el Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET-Argentina) y La Facultad de Psicología de la Universidad de Buenos Aires.

Durante estos días disfrutamos de tres conferencias centrales sobre los aspectos temporales del aprendizaje. El profesor John Staddon de la Universidad de Duke -Estados Unidos, en su conferencia denominada Timing and Choice, presentó un modelo económico-comportamental (Behavioral economic model –BEM) que describe cómo el reforzamiento y el interval-timing interactúan entre sí para determinar la elección. El profesor Alex Kacelnik de la Universidad de Oxford, Reino Unido, describió, en su conferencia Timing no Choice, el Sequential Choice Model (SCM), según el cual los animales asignan latencias o tiempos de aceptación a las opciones presentadas y que reflejarán las subsecuentes elecciones. Y por último el Profesor Peter Balsam del Bernard College y la Universidad de Columbia, Estados Unidos, habló acerca de los Mapas temporales y el aprendizaje asociativo y cómo este aprendizaje se da incluso después de grandes pausas entre

eventos.

Adicionalmente, se realizaron seis simposios sobre la evolución del aprendizaje y las tendencias actuales en el estudio de este fenómeno. Estos simposios mostraron la diversidad de especies en las cuales se está realizando investigación como sapos, ratas, primates, abejas, peces y tortugas entre otras.

Paralelamente a estas actividades se organizaron cuatro sesiones de posters donde, tanto psicólogos como estudiantes, expusieron los trabajos desarrollados en el campo de la psicología comparada en varios países del mundo, entre los cuales encontramos a: España con sus trabajos sobre la estructura social de las ballenas jorobadas y los mandriles; a Brasil con las investigaciones acerca de la expresión conductual del estro en las siervas y el estudio de la conducta exploratoria en los monos capuchinos; Argentina con los trabajos relacionados con el contraste sucesivo negativo en ratas y las discriminación olfativa en abejas; a Colombia con trabajos realizados en conducta de elección en ratas y comportamiento sexual en codornices japonesas.

El laboratorio de Aprendizaje y Comportamiento Animal de la Universidad Nacional de Colombia, contó con una alta participación en las diversas categorías de este evento; El profesor Arturo Clavijo realizó una presentación oral denominada Estimulación aversiva y exposición temprana a abundancia y escasez alimenticia en la sensibilidad al riesgo; varios estudiantes de pregrado y postgrado vinculado s a este laboratorio, también presentaron posters entre los cuales encontramos: Efecto del la interacción visual en el dilema del Prisionero en Ratas por Oswaldo Gamboa; Observaciones Comportamentales de Fray Juan de Santa Gertrudis en su viaje al Nuevo Reino de Granada por Alejandro Segura; Diferencias de Sexo en una tarea cooperativa por Natalia Ramírez y Catalina Serrano; Magnitud del reforzamiento sexual en la codorniz japonesa por Bibiana Montoya, Jonathan Buriticá, Miguel Puentes y Alejandro Baquero ; Habitación de la conducta sexual en la codorniz japonesa por Juan Carlos Riveros, John Solórzano y Carolina Támara; Efectos del nivel de la dispersión del alimento sobre la elección y los patrones de forrajeo por Diana Pérez y Maryed Rojas ; y finalmente, Adriana Saavedra con su trabajo sobre contraste sucesivo negativo en el comportamiento sexual de la rata macho.

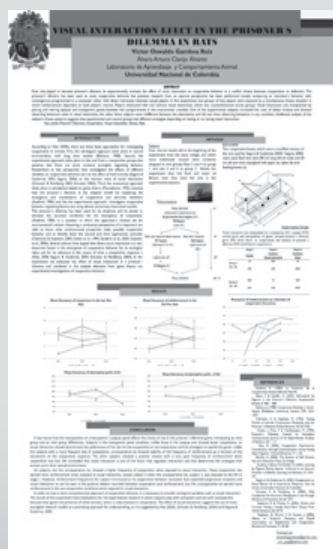
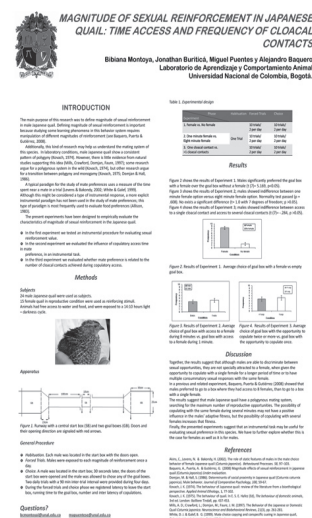
Finalmente, este evento fue una gran oportunidad para conocer los problemas de investigación abordados actualmente, las especies en las cuales se están realizando estudios, las diferentes metodologías utilizadas para abordar estos temas y sobretodo, conocer a los diferentes psicólogos y estudiantes no graduados del mundo y de Latinoamérica, especialmente, interesados en la investigación psicológica en animales no humanos.

Trabajos presentados por el Laboratorio de Aprendizaje y Comportamiento Animal

MAGNITUDE OF SEXUAL REINFORCEMENT IN JAPANESE QUAIL: TIME ACCESS AND FREQUENCY OF CLOACAL CONTACTS

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Divergences related to instrumental learning in vertebrates have been found mainly in the feeding behavior system; in the sexual behavior system this topic has been not studied in detail. Previous research in our lab has showed a non-paradoxical magnitude of reinforcement extinction effect when they were tested with copulatory access to one versus eight females. In a preference test, it found that male quail preferred to copulate with eight females over one female. In the first experiment, using a similar test, we evaluate the male quail's preference to copulate with one female during one minute versus one female during eight minutes. Subjects showed no preference between these two magnitudes. Total number of copulations was different in both situations also, in the eight minutes access time the highest number of copulations takes place during the first minute of exposition to the female. In a second experiment we tested the preference between one cloacal contact, in five minutes exposition to the goal box, and all cloacal contacts that could occur in five minutes access time. These results are discussed in relation to the mating system of this species and its abilities for time discrimination.



VISUAL INTERACTION EFFECTS IN THE PRISONER'S DILEMMA IN RATS

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Four rats played an iterated prisoner's dilemma to experimentally evaluate the effect of visual interaction on cooperative behavior in a conflict choice between cooperation vs. defection. The prisoner's dilemma has been used to study cooperative behavior, but previous research from an operant perspective has been performed mostly comparing an individual's behavior with contingencies programmed in a computer rather than with direct interaction between actual players. In this experiment, two groups of two players were exposed to a simultaneous choice situation in which reinforcement depended on both players' choices. Players interacted with and without visual interaction, which was counterbalanced across groups. Visual interaction was manipulated by placing and retiring opaque and transparent panels between the compartments in the instrumental chamber. One of the experimental subjects increased the ratio of defect choices and showed observing behaviors when in visual interaction; the other three subjects were indifferent between the alternatives and did not show observing behaviors in any condition. Additional analysis of the subject's choice patterns suggests that experimental and control groups had different strategies depending on having or no having visual interaction.

SUCCESSIVE NEGATIVE CONTRAST IN THE SEXUAL BEHAVIOR SYSTEM OF THE MALE RAT

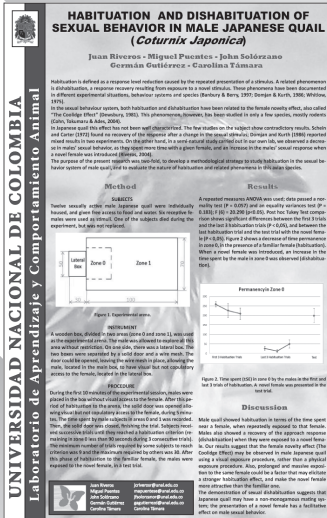
Adriana Saavedra*, Alba E. Mustaca**, Germán Gutiérrez*.

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Frustration in Successive Negative Contrast (SNC) has been broadly documented in the rat. The literature in the area has studied the role of a variety of environmental and physiological parameters, with important theoretical implications. However, the reported data have been taken in most of cases from the feeding behavior system, with some exceptions in avoidance learning (Cándido, et al. 1992), and a different approach about how sexual behavior affects feeding contrast (Freidin, et al. 2005) or how SNC affects sexual behavior (Freidin, et al. 2004). A Behavior Systems approach (eg. Timberlake, 1993) suggests that behavior is temporally and spatially organized, and that this organization is determined by the ecological particularities of each species. From this point of view, SNC would be studied taking into account what the animals do after devaluation, in addition to consummatory or instrumental responses. Using this approach, it has been showed that surprising devaluation does not evoke general activity but specific search repertoires in the rat (Pecoraro, et al. 1999). Classical studies about incentive value show that different types of sexual access have different effects on T and lineal mazes performance (e.g., Kagan, 1953), but there is no evidence about SNC itself. Considering that the sexual behavior system is not homeostatic, and is not directly related to immediate individual survival, this experiment studies how SNC occurs when a sexual reinforcer is involved, and would provide important information on the generality of this phenomenon in varied behavior systems.

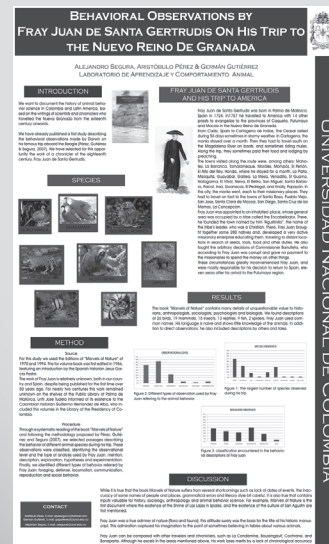




BEHAVIORAL OBSERVATIONS BY FRAY JUAN DE SANTA GERTRUDIS ON HIS TRIP TO THE NUEVO REINO DE GRANADA

Alejandro Segura, Aristóbulo Pérez & Germán Gutiérrez
Universidad Nacional de Colombia

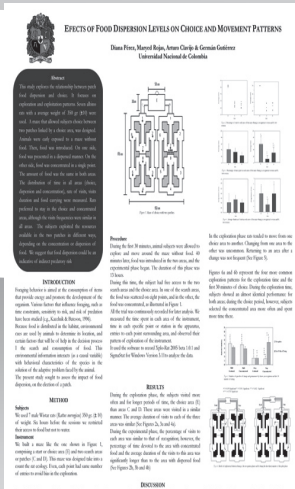
The general purpose of this line of research is to compile and analyze the behavioral descriptions of animal species by chroniclers and scientists who travelled South America during the conquest and colony. Fray Juan de Santa Gertrudis was a religious spaniard who in 1757 traveled as a missionary to the Nuevo Reino de Granada. From Cartagena de Indias to the Putumayo's wild territory, he observed all kinds of animals and exuberant vegetation. He remained 11 years in America and returned to Cádiz in 1768. Years later, he wrote his memories in 4 volumes, titled Maravillas de la Naturaleza [Marvels of Nature]. He described all he could see and believe about trees, animals, and on the lifestyle of the inhabitants of those regions. In his work we found descriptions of 21 species of birds, 13 mammals, 12 insects, 1 amphibian, 6 reptiles, 5 fishes, and 2 spiders. The language used by Fray Juan was naive and showed a limited knowledge of animals. However, this reading about animals provides a lot of information on what is currently known as ecology and diversity.



EFFECTS OF THE FOOD DISPERSION LEVELS ON DECISION AND MOVEMENT PATTERNS

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This study explores the relationship between patch food dispersion and choice. It focuses on exploration and exploitation patterns. Seven albino rats with an average weight of 350 gr (± 10) were used. It was designed a maze that allowed subjects choice between two patches linked by a choice area. Animals were early exposed to a maze without food. Then, food was introduced. On one side, food was presented in a dispersed manner. On the other side, food was concentrated in a single point. The amount of food was the same in both areas. The distribution of time in all areas (choice, dispersion and concentration), rate of visits, visits duration and food carrying were measured. Rats preferred to stay in the choice and concentrated areas, although the visits frequencies were similar in all areas. The subjects exploited the resources available in the two patches in different ways, depending on the concentration or dispersion of food. We suggest that food dispersion could be an indicative of indirect predatory risk.



SEX DIFFERENCES IN A COOPERATIVE TASK IN RATS

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How is the distribution of cooperative and individual responses of female and male rats that are exposed to a choice situation? This study answers this question in a partial way by exposing 4 Norway rats (2 males and 2 females) to a choice situation in which they can choose to work alone or in cooperation with another subject. In a first, phase A, subjects work with different sex partners (M-F and M-F). In the second phase, B, subjects work with same sex partners (M-M and F-F). In a third phase, conditions are reversed to A, and subjects work again with different sex partners. Each phase has three conditions. In condition 1, subjects receive 6 food units by working together and 1 food unit by working alone. In condition 2, subjects receive 1 food unit for choosing whatever option. And in condition 3, subjects receive 1 food unit by choosing to cooperate and 6 food unit by choosing to defect. Results show differences on the distribution of female and male rats' responses among individual and cooperative options. In addition, factors like the reinforcement quantity and partner's sex play an important role in the explanation of these differences.

