

## **Basic Experimental Psychology in Chile: A richly diverse field**

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This special issue showcases a collection of nine articles that illustrate the rich diversity of experimental psychology research that is currently being carried out in Chile. This compilation of studies was born out of an initiative of the Basic Experimental Psychology Division of the Chilean Scientific Society of Psychology (Capítulo de Psicología Experimental Básica de la Sociedad Científica de Psicología de Chile, SCP), seeking to contribute not only to basic psychology but also to the development of evidence-based applied psychology, such as psychotherapeutic treatments. Some of these works result from international collaborations with researchers from countries such as EEUU, Spain, Netherlands, and Mexico, including authors who have been referents in their respective fields due to their significant contributions to scientific psychology. In addition, these nine studies illustrate how experimental psychology in Chile avails itself of a wide diversity of techniques and methods, ranging from behavioral observation to electrophysiological techniques and computational modeling, applying them to a wide variety of areas, including behavioral, cognitive, evolutionary, and social approaches.

The first papers in this issue are dedicated to behavioral studies of learning by conditioning. Through three experiments with rats, San Martín et al. ask about the effect of D-cycloserine (DCS) on simple operant conditioning. DCS is a partial agonist at the glycine recognition site of the glutamatergic receptor N-methyl-D-aspartate (NMDA), helping learning and memory. Its use has been proposed in treatments, such as exposure therapy for some anxiety disorders. In their study, San Martín et al. observed an effect of DCS on response

extinction, associated with shorter times for response extinction. However, they did not observe any effect on response recovery, suggesting that it is not possible to conclude that DCS is an effective drug for all learning processes. In another paper, Alfaro et al. explore the effect of extinction cues on the recovery of extinguished responses in Pavlovian conditioning and whether this effect is the same in humans and non-human animals. With this aim, the authors performed a meta-analysis of various Pavlovian conditioning studies regarding the magnitude and sources of variance of the effect of extinction cues on response recovery. They observed that extinction cues' effect in reducing response recovery is greater for the spontaneous recovery response and in non-human animals.

In the following papers, we can feature techniques from experimental research in cognitive science. In a study of category learning, Marchant and Chaigneau apply a category learning experiment with probabilistic feedback, to evaluate and compare prototype and exemplar models, both based on similarity, and the associationist model. To compare the different models, Marchant and Chaigneau apply computational modeling, observing that the best fitting model to explain category learning is the associationist. In another paper, Pinto et al. study the phenomenon of habituation (decreased response to a stimulus) by repeating the presentation of stimuli using the Event Related Brain Potentials (ERPs) technique. For this purpose, Pinto et al. conduct a systematic review observing the effects of repetition intervals in early components such as P1, N1, P2, N2, and P3. Specifically, they found that these components are attenuated with short repetition intervals, with an optimum 500 ms interstimulus interval as the most robust effect.

The study of human interactions is also present in this special issue, contributing to the comprehension of the social mind. Rubio et al. study the relationship between prosocial behavior and the Theory of Mind (ToM), one of the important social skills to achieve mutual comprehension in human interactions. ToM is considered as the capacity to know one's and the other's mental states, such as beliefs, desires, or intentions, among others. Two different orders of ToM have been proposed. One, and the less complex, is the first-order ToM, related

to the capacity to infer the other's mental states ('I believe that you believe'). In contrast, the second order, and more complex, is associated with the capacity to infer another person's mental states concerning a third person ('I believe that you believe that someone believes'). In the study of the development of ToM and prosocial behavior, Rubio et al. analyze the relations between first- and second-order ToM and prosocial behavior in participants ranging in age from three to seven years. The authors observed that the complexity of prosocial behavior depends on ToM's order. Specifically, they found that first-order ToM skills predict basic help behaviors (instrumental help), while second-order ToM skills are related to more complex cooperative behaviors (like the ability to engage autonomously in cooperative games).

On the socio-affective level, this special issue presents two papers that address interpersonal relationships from an explanatory framework of evolutionary psychology. Fernández et al. study jealousy in friendship. In their work, they propose that jealousy is an affective reaction that has evolved to occur when there is a threat of losing a meaningful or valuable relationship to the person with whom they are mentally coordinated. For this purpose, Fernández et al. carried out a study in which participants had to imagine one of three conditions. In the first condition, participants had to imagine their best friend hanging most of their time with a new friend; in the second condition, they had to imagine their best friend mentally coordinated with a new friend; and finally, in the third condition, they had to imagine their best friend spending most of his/her time with a new friend and mentally coordinated with him/her. Fernández et al. observed that participants presented higher levels of jealousy when they imagined their best friend mentally coordinated with a new friend, compared to when they imagined that they were hanging more time with them, being this effect greater in women. Continuing in the field of interpersonal relationships, but in the context of romantic couples, Pavez et al. propose that mate preferences have evolved in mate selection guiding sexual reproduction. In line with this, the similarity between partners and attractiveness have been proposed as two possible mate preferences in the paper presented here. Pavez et al. measure similarity and attractiveness from the

body fat percentage, body mass index, and facial asymmetry. In addition, they measure self-perceived attractiveness (attractiveness and mate value) and analyze their relationship with satisfaction, trust, and long-term relationship maintenance. In their study, Pavez et al. found no relation between the degree of similarity and the maintenance of long-term relationships. Nevertheless, they observed that for women, their self-reported attractiveness affected relationship satisfaction; while for men, the physical attractiveness of their partners affected both trust and relationship satisfaction.

Finally, the last two papers present group studies within social psychology. A phenomenon observed in social psychology is the legitimization of disadvantaged status in socially disadvantaged groups. In line with this, Jiménez-Moya et al. explore how disadvantaged groups face social injustice when the group itself legitimizes it, studying the influence of the reliability of the norm of legitimacy related to the size of the ingroup sample that endorses the norm. Jiménez-Moya et al. note that members challenge the ingroup when the sample that legitimizes the disadvantage is small; whereas, when the size of the sample that legitimizes the norm in the ingroup is large, members are less likely to confront legitimization. Lastly, Landabur and Wilson present a study concerning the effect of different types of representations on intergroup attitudes. Specifically, they compared the effect of dual versus common identity on attitudes toward foreigners. In their study, Landabur and Wilson observe that the most positive attitudes towards foreigners are more related to dual identity, suggesting that people do not necessarily have to give up their ingroup identity to reduce intergroup bias, but rather integrate this ingroup identity with a collective identity.

The studies reported here represent just a small sample of the ongoing research by an increasing number of research groups, where increasingly young researchers are being trained. This special issue highlights both the diversity of the field of Chilean experimental psychology and the strong connections with researchers abroad. This snapshot of the

current practice of experimental psychology in Chile points to a promising future for this field in years to come.

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