Editorial [1]

With this issue we close our third volume. Without a doubt this has been possible due to the gradual but enthusiastic collaboration we have received from some investigators, mostly in the area of behavior analysis, but also in interbehaviorism. Another very important factor is the level of acceptance from our readers and site visitors, which has sensibly increased from our last number according to data provided by Google Analytics. We knew from the beginning that our job would face some hurdles given that our journal only seeks to freely disseminate knowledge to contribute to advancement of behavioral science. Contrary to other publication arrangements, Conductual does not have an office or paid employees; thus, expenses are reduced to the cost an internet domain and access to a server. In accordance with Journal policy, all members of the Editorial Board are volunteers.

In addition to being indexed on Google Scholar, we have gradually had our web page incorporated by other indexing services. This we do as long as it doesn't undermine journal policy, given that in some cases we would otherwise incur in monetary charges that would be passed on to our authors and readers. This lays outside of the academic criteria relevant to the dissemination of knowledge. In following Conductual policy, on October 27th we were formally registered in the Directory of Open Access Journals (DOAJ), a sign that we are moving in the right direction.

This number incorporates 5 articles and a book review. The first article by Javier Vila and Alberto Monroy is a systematic replication of Reynolds' (1961) original work on attention, using human subjects. The authors describe how some attempts at direct replication have not supported Reynolds results and wonder if the results explain stimulus control in terms of functional differences and similarities between the unattended SD and SΔ. The authors conducted two experiments. In the first one, four psychology students served as subjects, who were previously trained with a circle (geometric SD) and a Mayan glyph (non-geometric SD). During training, a discriminated avoidance situation was implemented as a virtual temple about to crumble, using two SD and two SΔ on a multiple VI 4s-Ext schedule. In the first environment a right triangle was presented with a Mayan glyph on each vertex. In the second environment, an equilateral triangle was presented with the same Mayan glyph on each vertex. After the training, an extinction phase was implemented with each SD and SΔ without the target area.

Results from the first study showed stimulus control by both the geometric and non-geometric SD, with the latter being stronger; this supports Reynolds (1961) except that in the present study all participants responded more to the same dimension of the non-geometric SD. In their discussion, the authors assert that one of Reynolds' weaker points was not taking into account the dimensions (form or color) responsible for some SD acquiring greater discriminative control than others.

Four students served on the second experiment under similar conditions, except that the color of the nongeometric SD remained the same and only its shape was changed. Results showed that the escape response became under stimulus control, but this time the control exerted by the geometrical stimulus (angle) was greater than that of the nongeometric SD. The factors responsible for the greater control after training remain unclear and, to date, this phenomenon has not been related to Pavlovian overshadowing.

[1] Reference for this editorial on Web is: http://conductual.com/content/editorial-vol-3-no-3-0

The second article in this number by Maryed Rojas, Luis Alfaro and Vladimir Orduña deals with the variables that influence the optimal distribution of foraging behavior by rats in an operant simulation. This type of preparations translate to the laboratory the functional elements present in the foraging situation (essentially, choice between alternatives patches and changeover cost) in order to model the effects of a number of variables and obtain precise measurements in the controlled operant environment.

The authors start from one of the most classical theories in the foraging literature, the theory of marginal utility (MUT) which, briefly, predicts that the amount of time allocated to an alternative will depend on 1) the amount of energy it provides and 2) the cost involved in accessing it. Such basic predictions have been supported in ethological studies as well as operant simulations that use schedules of reinforcement to represent varying amounts of energy (reinforcers) provided by the alternatives, and procedures such as changeover delay to simulate traveling costs.

Starting with this premise, and considering that experimental psychology has shown that animals can learn to adapt to sequences of events in phenomena such as behavioral contrast and sequential learning, the authors contribution is that predictability of the traveling cost can affect the time on an alternative and other related parameters such as the number of obtained reinforcers, giving-up-time (GUT), and the probability of leaving an alternative after reinforcement.

To test this idea, a four-phase design was used with four Wistar rats. During the first two phases the predictions of the MUT were replicated with fixed traveling cost (FI 10s) and high traveling cost (FI 120s); the subjects spent more time on the component providing the most energy (a 2s progressive interval schedule that increases by 25% after each reinforcer (PI 2-25%) compared to the component providing the least amount of energy (PI 2-50%); similarly in the high cost condition, the patch residence time was higher.

Once the preparation was validated, during phases 3 and 4 the predictability of traveling cost was evaluated. During phase 3 high and low cost trials were presented randomly (unpredictably), while during phase 4 an alternating sequence (high, low, high, low…) was used. The results showed that while in phase 4 (predictable condition) the relationships between value and traveling cost were not changed (as in phases 1 and 2), during phase 3 (unpredictable condition) traveling cost (FI 10 or FI 120) had no effect: the subjects spent similar amounts of time on the rich and lean alternatives, regardless of traveling cost.

According to the authors, these results (in addition to other dependent variables explored) suggest that the capacity to predict future consequences affects the selection of optimal foraging strategies, and suggest that the degree of predictability of the various alternatives should be further investigated.

The third article is by Nathaly Ossa, Andy Pham, Martha Pelaez and Philip Lazarus. This was a study with school-age children in which the effect of self-monitoring and feedback on math performance was assessed. These authors point out that the joint application of self-monitoring and feedback has been widely used with favorable results on academic activities, above other methods like simple repetition and tutoring. Thus, four children who showed serious difficulty on math class were selected to participate in the study. Using curriculum based measurement in mathematics (M-CBM) an intervention combining self-monitoring and feedback techniques was implemented with the four children.

The authors found that the intervention had only a modest effect on math task performance and important individual differences. Although the results are not conclusive, given that factors other than the

intervention might have influenced the results, the authors still recommend using self-monitoring and performance feedback because they are efficacious and easy to implement in the classroom.

The fourth article by Pedro Romero and Florente López is a study on mother-baby interactions, an area in which time series analysis has been used to identify and track dyadic behavioral patterns which can occur with periodic cyclical or stochastic structure. This aspect has spurred a fair amount of discussion regarding which is the characteristic pattern in the rhythm of interactions, given the observed differences between babies who are younger and older than six months. In younger babies cyclical periods are observed while a stochastic non cyclical pattern is more common in older babies. In addition, evidence of patterns with more than one peak or significant period has prompted the identification of pseudo-cyclical patterns. For this reason, the authors indicate that the available evidence and analyses are not sufficient to identify a characteristic pattern particularly in children older than six months. Thus, a study was conducted on forty dyads involving nine-month old babies.

The data showed a periodic cyclical structure, with periods longer than 60s. Also, these interactions occurred with lower frequency. Romero and López point out that these results show that the rhythms of the interaction are synchronic, meaning that each element of the dyad is responsive to the behavior of the other. Another issue brought up by the authors is that the rhythmic coordination occurs with the participation of both the mother and child, a novel finding that in our view resembles adult interactions. Nevertheless, the authors indicate that their study does not eliminate the controversy over which model better describes the rhythms of interaction or the patterns of social exchange, and that perhaps the discussion should not focus on the type of rhythm (periodic or stochastic) but instead on acknowledging that both forms of rhythmic interaction characterize mother-child interactions that maximize opportunities for coordination and reciprocal adaptation. Therefore, future research should focus on identifying contextual variables of the interaction.

Finally, this number includes a review of Science of Psychology: An Interbehavioral Survey. Julio Varela and Diana Delgado author this review of the book written 40 years ago by Jacob R. Kantor & Noel W. Smith, and recently translated into Spanish. This major work offers a full scope of the theory which is based fundamentally on Aristotle. The analysis of diverse phenomena uncover logic and conceptual shortcomings of traditional psychology such as the confound between events and the constructs used to describe them, the incorrect use of concepts from other disciplines, and the influence of a dualistic view of men.

The book is made up of 31 chapters divided in five sections. Section one deals with events and psychological science, a brief historical note, and the analysis of psychological interactions. Section two introduces the concepts of interbehavioral history, evolved versus innate, psychological development, and personality. Section three covers attention, perception, implicit behavior, knowledge and intelligence, feeling interactions, emotion, recall-forgetting and memory, learning, experimental learning, thinking, linguistic and symbolic interbehavior, imagination, alternative states, hypnotic behavior, maladjustment, and interbehavior in organismic and institutional settings. Section four describes the philosophical system upon which interbehaviorism is based, basic rules of science, and the interbehavioral system and postulates. This aspect is practically nonexistent in many psychological theories and it is dealt with more in depth in Kantor's Interbehavioral Psychology, translated into Spanish in 1978. In section five the authors discuss the relationship between psychology and mathematics, physics, chemistry, biology and anthropology. The reviewers portray the book as written in accessible language, containing many examples from daily life, while at the same time revealing Kantor's vast knowledge of literary, musical, and graphic arts.

Finally, we want to once again thank Elias Robles Sotelo for his contribution in translating this Editorial into English.

December 1st 2015