

REVIEWER A

This manuscript examines the effects of post-training exposure to novel objects on the expression of contextual fear conditioning. The context is a black compartment of a black/white box and the unconditioned stimulus is an electric footshock. The authors expose the rats first to an open field arena (5 days), and then, to familiarized objects in the same apparatus (3 days), to endow novel objects with differential appetitive properties when encountered after conditioning. They expect that these appetitive properties could attenuate the previously acquired contextual aversion by means of counter-conditioning. Thus, the experimental design can provide evidence for assessing this prediction, since it compares the influence of the presence or absence of these stimuli after conditioning, by observing the rats' tendency to approach toward the punished context in the test phase.

The results generally confirm such a prediction, in that the most fearful rats are those less exposed to novelty after conditioning.

But the group exposed to novel objects does not differ from that exposed to familiar objects, apparently disconfirming authors' main hypothesis. To explain this null finding, they argue that a novelty component is also present when the rats encounter a familiar object in a different context.

Some comments and suggestions follow:

1) The title could be changed: for example, "Exposure to novelty weakens conditioned fear in Long-Evans rats", or "Exposure to novel objects weakens conditioned fear in Long-Evans rats: a preliminary study".

2) A clear pattern of results across dependent variables and experiments is not obtained.

3) Similar statistical tests yield slightly different results.

4) The steps followed in the statistical analyses section appear somewhat arbitrary.

If the distributions of the dependent variables are skewed, log (or whatever) transformations could be applied to draw the data into a normal distribution, irrespective of whether non-transformed data are reported in the tables and figures to facilitate interpretation. In doing so, the authors could apply the statistical analyses in a more methodologically sound fashion. As a consequence, they should re-write the corresponding parts of the discussion to ensure that the conclusions fit the effects obtained following these re-analyses.

5) p. 4, paragraph 3, line 2: age should be explicitly indicated in "days".

6) p. 6, paragraph 2: "inch" should be "cm".

7) p. 8, paragraph 1: for the sake of clarity, the names of the four groups could be indicated (as they are in the tables and figures).

8) p. 10, paragraph 2, line 10: "LSD" should not be abbreviated the first time it appears in the text.

9) p. 11, paragraph 2, line 3: "twenty-fours hour" should be "twenty-four hours".

10) p. 14, paragraph 3, line 2: age should be explicitly indicated in "days".

11) p. 15, paragraph 1: the names of the three groups could be indicated (as they are in the tables and figures).

12) p. 27: in tables 1 and 2, the third column for “Total time ...” should be erased, since the same data are shown in figures 1 and 3 (respectively).

13) p. 29: “figure 2” should be erased, since the same data are shown in table 2.

14) p. 30: as a consequence, “figure 3” should be “figure 2”.

Raúl Aguilar
University of Málaga (Spain)

REVIEWER B

In the present article, the authors study how the preexposition to a novel object induce a reduction of a previous fear conditioning response in a passive avoidance task. In the experiment 1, this effect appears independently of the place (same or different) where the aversive passive take place. However, the inclusion of another group only with the exposition to the passive avoidance context would be interested and probably, it might had increased the basic effect. In the experiment 2, the exposition of a novel object in the passive avoidance arena induced a reduction of the aversive learning in comparison with the rats only exposed to the octagonal arena (control group). Part of this effect looks to be mediated by an extinction process. It looks clear in the LSD post hoc analyses of the time spend in the safe compartment (differences between extinction group and control group and absence of different between extinction group and novelty group).

The article is well write, the results and it interpretation are clear. This encourages me to consider his publication, opposite some aspect of it should be changed by the authors:

- An inclusion of a resume table with the behavioral process will be gratefully by the reader.

- In the legend of the three figures, might be included the significant differences (or not significant) obtained in the analysis.

- (Pg. 17, Second paragraph) Why is not present the Games-Howell post hoc analyses for the total time in the safe compartment?

Other minor changes:

- Pg. 22: Cursive letter for the papers of the references: Berlyne, 1950; Besheer & Bevins, 2000.

- Pg. 24: Cursive letter for the paper of the reference: Miltenberger, 2004.

- Pg. 25: Cursive letter for the papers of the references: Wilson, 1973; Wilkinson et al., 2006.

Ignacio Morón
University of Granada (Spain)