

PEOPLE FOR
THE ETHICAL
TREATMENT
OF ANIMALS

July 6, 2023

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Dear President Kelliher and Professor Evans:

Thank you in advance for your time. I am writing in reference to a November 29, 2021, letter sent to President Kelliher from my colleague, Dr. Katherine Roe, chief of the Science Advancement and Outreach division at People for the Ethical Treatment of Animals (PETA), regarding the use of live rats in “Learning and Behavior” undergraduate course (PSYC 331) at Simpson College. **On behalf of PETA U.S.—PETA entities have more than 9 million members and supporters worldwide—and based on the information below, we urge you to replace the use of animals in PSYC 331 with effective, non-animal teaching methods that are the best-practice standard used at other universities.**^{1,2}

Asking Students to Exploit or Kill Animals Shortchanges Their Education

Regarding the killing of unadoptable animals used in PSYC 331,³ Professor Evans had stated that, “[n]one of us really like talking about that too much,” but that avoiding animal use for this course would, in his opinion, “be shortchanging the students that take the class.”⁴ Please note that there are numerous engaging and cost-effective, non-animal methods available to teach students the objectives of PSYC 331. These methods are appropriate for teaching undergraduate^{5,6,7} and graduate^{8,9} students of psychology and neuroscience. Comparative studies have

¹Gilchrist, D. Sniffy the virtual rat: Operant conditioning chamber [Videos]. YouTube. Accessed July 5, 2023. <https://www.youtube.com/@itsdrgilchrist/search?query=Sniffy>

²Riley, HH. NSC/PSY3120 Learning and Behavior Lab Syllabus, Policies, and Procedures. Accessed July 5, 2023. https://baylor0-my.sharepoint.com/:w/g/personal/tanish_singh1_baylor_edu/ESJerYbBEWVikgCyzr6X270BgOKkd7qOSgg9GUFOudmIZA?rttime=4je5Pk_y2kg

³Allen L. Lab rats serve as a vital feature for Simpson psychology students. *The Simpsonian*. June 23, 2023. <https://thesimpsonian.com/32112/lifestyles/features/lab-rats-serve-as-a-vital-feature-for-simpson-psychology-students/>

⁴Social principles: The natural world. The United Methodist Church. June 27, 2019. Accessed June 23, 2023. <https://www.umc.org/en/content/social-principles-the-natural-world>

⁵Bish JP, Schleidt S. Effective use of computer simulations in an introductory neuroscience laboratory. *J Undergrad Neurosci Educ*. 2008;6(2):A64-A67.

⁶Evert DL, Goodwin G, Stazvener AJ. Integration of computer technology into an introductory-level neuroscience laboratory. *Teach Psychol*. 2005;2(1):69-73.

⁷Griffin JD. Technology in the teaching of neuroscience: Enhanced student learning. *Adv Physiol Educ*. 2003;27:146-155.

⁸Sheen J, Sutherland-Smith W, Thompson E, et al. Evaluating the impact of simulation-based education on clinical psychology students’ confidence and clinical competence. *Clin Psychol*. 2021;1923125.

⁹Naude L, Botha A. It’s a virtual child! Postgraduate students’ experiences in a developmental psychology class. *Perspect Educ*. 2017;35(1):54-65.

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found that students taught with these and other non-animal approaches learned as well as or better than their peers who used animals.¹⁰

American Psychological Association Encourages the Use of Non-Animal Training Methods

The American Psychological Association's (APA) "Guidelines for Ethical Conduct in the Care and Use of Nonhuman Animals in Research" states, "Consideration should be given to the possibility of using non-animal alternatives. Some procedures that can be justified for research purposes may not be justified for educational purposes."¹¹ In its "Resolution on the Use of Animals in Research, Testing, and Education," the APA mandates that "the development and use of complementary or alternative research or testing methodologies, such as computer models, tissue, or cell cultures, be encouraged where applicable and efficacious."¹²

Experts and Students Oppose the Use of Animals in Education

Studies show that, depending on the procedure, as many as 60% of psychology students oppose the use of animals in psychology education,¹³ and the majority of psychologists and psychology students believe that live-animal experimentation should not be required in undergraduate Psychology courses.¹⁴ Similarly, the growing majority of college-aged adults are opposed to all experiments on animals.¹⁵ Employing non-animal educational tools creates an inclusive, engaging, and safe learning environment for all students, including those uncomfortable with animal experimentation.

Animal-Free Biological and Medical Training Tools Offer Myriad Benefits

Below are several examples of interactive approaches that allow students to design and conduct experiments, observe animal behavior in simulated and real world scenarios, and collect and analyze data—all without exploiting or killing animals.

- **Sniffy the Virtual Rat¹⁶**: This engaging, interactive software provides students with a virtual laboratory in which they can explore operant and classical conditioning through experiments that demonstrate most of the major conditioning phenomena discussed in textbooks on the psychology of learning. It has been field-tested at several colleges and universities for use in animal-behavior courses, and was used as a successful replacement for live animals in undergraduate neuroscience courses.¹⁷
- **(AI)², Inc.'s CyberRat Operant Laboratory Simulations Program¹⁸**: CyberRat is a digital, fully interactive video of a real animal in a laboratory. Its database contains more than 1,600 behavioral video clips seamlessly played back in unique sequences using stochastic algorithms. Student recordkeeping and data archives are maintained to give

¹⁰Patronek GJ, Rauch A. Systematic review of comparative studies examining alternatives to the harmful use of animals in biomedical education. *J Am Vet Med Assoc.* 2007;230(1):37-43.

¹¹Dunbar G, Higa J, Jones T, Kaminski B, Panicker S. Guidelines for ethical conduct in the care and use of nonhuman animals in research. American Psychological Association Committee on Animal Rights Research and Ethics. 2012:1-9.

¹²American Psychological Association. Resolution on the use of animals in research, testing, and education. 1990. <https://www.apa.org/science/leadership/care/animal-resolution.pdf>

¹³Cunningham PF, Randour ML. Alternatives to the use of animals in education. *Psychology Teacher Network.* 1998;8(4):8-11.

¹⁴Cunningham PF. Animals in psychology education and student choice. *Soc Anim.* 2000;8(2):191-212.

¹⁵Goodman JR, Borch CA, Cherry E. Mounting opposition to vivisection. *Contexts.* 2012;11(2): 68-69.

¹⁶Sniffy the Virtual Rat. Accessed July 5, 2023. <http://www.sniffythevirtualrat.com/>

¹⁷Alloway T, Wilson G, Graham J. *Sniffy the virtual rat pro version 2.0.* Wadsworth Cengage Learning; 2005.

¹⁸(AI)² Inc. CyberRat. Accessed June 15, 2023. <https://www.ai2inc.com/HomeProducts/cyberrrat.html>

instructors easy access to student progress summaries. When used in introductory psychology laboratories, CyberRat “serves as a functional supplement and/or total replacement for various live animal laboratory exercises using rats.”¹⁹ It is otherwise described as “as close to an actual behaving animal as you can get,”²⁰ offering “a near perfect illusion of being a single animal that quite realistically demonstrates basic operant conditioning phenomena embedded in a flow of natural behaviors.”²¹

- **The Learning Simulator**²²: The Learning Simulator is an open-source software that simulates learning in humans and other animals, including the acquisition and extinction of behavior, learning of behavioral sequences, and various social-learning scenarios.²³ It is used for research in scientific publications^{24,25,26} as well as in teaching at the master’s program in ethology at Stockholm University, the veterinary program at the Swedish University of Agricultural Sciences, and the psychology department at Brooklyn College, City University of New York.²⁷
- **SuperLab 6**²⁸: SuperLab is a general-purpose experiments generator for setting up and running psychology experiment in the areas of perception and attention, memory, reasoning, perceptual representation and representation of meaning. This platform includes support for text, picture, audio, video, and gaze tracking components. SuperLab can be used as a teaching tool and to conduct research.²⁹ Yet, its user-friendly interface does not require any programming skills.
- **Neuronify**³⁰: Neuronify is an educational simulation software used in laboratories and classrooms for interactive learning about neuronal networks. It provides a low entry point for students with no computational experience to gain intuition about a range of neuronal processes integral to memory formation and learning (e.g., integration of synaptic inputs or feedback inhibition). Neuronify can be run on smart phones as well as tablets and personal computers. As a plug-and-play environment, this software allows students to build and explore neuronal circuitry by adjusting parameters from a menu, using their phone cameras as visual sensors or touch screens for manipulation.³¹
- **Field studies**: Field studies outside of a controlled laboratory setting require a research plan at the outset. Designing a field research strategy compels students to review the existing body of work in a given field, form testable hypotheses, make decisions about which type of data to collect, and select relevant statistical tests. This approach to teaching psychology is

¹⁹Ray R, Miraglia K. A sample of CyberRat and other experiments: Their pedagogical functions in a learning course. *J Neurosci Res*. 2011;9:44-61.

²⁰Phelps B. How close to real can a non-real CyberRat behave? *Behavior and Philosophy*. 2011; 39/40:309-315.

²¹Iverson I. Commentary on CyberRat. *Behavior and Philosophy*. 2011;39/40:303-307.

²²The Learning Simulator. Accessed June 15, 2023. <https://www.learningsimulator.org/>

²³The Learning Simulator. Accessed June 23, 2023. <https://www.learningsimulator.org/education>

²⁴Ghirlanda S, Lind J, Enquist, M. A-learning: A new formulation of associative learning theory. *Psychon Bull Rev*. 2020;27:1166-1194.

²⁵Lind J. What can associative learning do for planning? *R Soc Open Sci*. 2018;5:180778.

²⁶Lind J, Ghirlanda S, Enquist M. Social learning through associative processes: A computational theory. *R Soc Open Sci*. 2019;6:181777.

²⁷Jonsson M, Ghirlanda S, Lind J, Vinken V, Enquist M. Learning Simulator: A simulation software for animal and human learning. *J Open Source Softw*. 2021;6(58):2891.

²⁸Enjoy making experiments.SuperLab Accessed July 5, 2023. <https://cedrus.com/superlab/index.htm>

²⁹A sample of research papers that used SuperLab. Accessed July 5, 2023.

<https://cedrus.com/superlab/publications.htm>

³⁰Neuronify is an educational neuronal network app. Accessed May 17, 2023. <https://ovilab.net/neuronify/>

³¹Dragly SA, Hobbi Mobarhan M, Våvang Solbrå A, Tennøe S, Hafreager A, Malthe-Sørenssen A, et al. Neuronify: An educational simulator for neural circuits. *eNeuro*. 2017; 4. doi:10.1523/ENEURO.0022-17.2017

comparable in its value to traditional classroom methods. For instance, students observing wild pigeons in a city park received evaluation scores comparable to the scores of students who studied operant conditioning using rats in a traditional lab.³² In addition, having students in psychology-of-learning courses work with animals in an animal shelter is an effective way to teach operant conditioning, and offers many benefits that are not available in classroom animal laboratories, for instance networking and the ability to apply science in everyday situations, and providing valuable community service (e.g., stress alleviation and sociability training in companion animals and rehabilitated wildlife).^{33,34,35}

- **Non-animal classroom experiments:** The principles of operant conditioning have also been practically and clinically applied to humans, and educators have developed programs for applying these concepts to classroom laboratory activities.^{36,37} As most psychology experiments using animals are designed to model human behavior, allowing students to learn basic psychological principles with virtual software and then apply them to studies involving human volunteers would be the most comprehensive way to teach basic research principles, ethics, and applications in an undergraduate psychology course.
- **Open Access Data Analysis:** Data literacy is considered as a key twenty first century skill set.³⁸ By asking students to characterize open data sets through visualization and statistical inference, educators can help them explore themes in psychology and develop transferable analytical skills. For example, data types relevant to learning about emotional and motivational factors of behavior include traffic violation records, which can be used to investigate repeated offense behaviors; and credit card reward program participation records, which can be used to examine questions about compulsive buying disorder.³⁹ Many open-access repositories offer educators the freedom to access data on a range of topics in psychology⁴⁰ and design unique activities with real-world relevance.

There is no legal, scientific or ethical justification to continue to harm animals to prepare students for careers in brain science. It is also critical that young psychologists and neuroscientists have the opportunity to discuss the problems associated with animal use in education, and are presented with the plethora of non-animal tools. Otherwise, we risk fostering a “culture of disengagement” regarding issues of public welfare⁴¹ or alienating talented and compassionate people from the field.

³²Cohen PS, Block M. Replacement of laboratory animals in an introductory-level psychology laboratory. *Humane Innovations and Alternatives*. 1991;5:221-225.

³³Flaisher-Grinberg S. For the love of dogs: An academia-community partnership targeting a mutual goal. *The Journal of the Center of Interdisciplinary Teaching and Learning*. 2021;9(1):8-15.

³⁴McDonald TW, Caso R, Fugit D. Teaching and learning operant principles in animal shelters: Perspectives from faculty, students, and shelter staff. *J Instr Psychol*. 2005;32(4):310-321.

³⁵Back to School Operant Conditioning with Tigers. Carolina Tiger Rescue. Accessed July 5, 2023.

<https://carolinatigerrescue.org/newsroom/back-to-school/>

³⁶Shields C, Gredle M. A problem-solving approach to teaching operant conditioning. *Teach Psychol*. 2003;30:114-116.

³⁷Chrisler JC. Conditioning the instructor’s behavior: A class project in psychology of learning. *Teach Psychol*. 1998;15:135–137.

³⁸Coughlan T. The use of open data as a material for learning. *Education Tech Research Dev*. 2020. 68, 383–411.

³⁹Cornell D. 13 Operant Conditioning Examples. Helpful Professor. May 13, 2023. Accessed June 15, 2023.

<https://helpfulprofessor.com/operant-conditioning-examples/>.

⁴⁰PsychArchives. Disciplinary Repository for Psychological Science. Accessed June 15, 2023.

<https://psycharchives.org/>

⁴¹Cech EA. Culture of Disengagement in Engineering Education? *Sci Technol Human Values*. 2014. 39(1), 42–72.

Please reply to MaggieW@peta.org by July 31, 2023. If we do not receive a satisfactory reply, we will have to inform our supporters. Thank you for your consideration of this important matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Maggie Wiśniewska". The signature is fluid and cursive, with a prominent initial "M" and a long, sweeping underline.

Maggie Wiśniewska, PhD
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