



Los Angeles Behavioral Economics Laboratory (LABEL)

<http://dornsife.usc.edu/label>

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Background

Economists have traditionally focused on theories relying on mathematical abstractions about how people behave and how markets work. Experimental Economics uses the laboratory method of inquiry to determine whether these abstractions are descriptive of individual and market behavior and thus testable in a scientific way. By studying the decisions of subjects in individual choices, strategic games and market situations motivated by real money and using controlled institutional contexts, one can gain insights about existing theories of economics processes.

Although experimental economics has proved an invaluable resource to economists, it is not always powerful enough to discriminate between theories. For example, if an individual does not play according to the predictions of theory is it because he has limited cognitive ability or because he believes that others have limited ability? Those are two fundamentally different reasons that may lead to the same non-equilibrium choice. In order to discriminate between different possibilities, modern experimental economics has added **non-choice data** to the picture. Non-choice data refers to any measure other than the subject's final choice (reaction time, skin conductance, neural activity, eye movement...)

Experimental economics aims to reveal how individuals make choices in day-to-day situations, however the field has paid little attention to the existence of different populations with possibly different motivations and different abilities to make choices. For instance, there is a very small economic literature on decision-making in children, in older adults or in individuals with behavioral or health disorders. In order to better understand the differences in decisions across populations, recent studies have been recruiting subjects outside the standard pool of undergraduate students.

Mission of LABEL

LABEL dedicates to experimental research with two distinctive features. First, LABEL specializes in the collection of non-choice data. Those data are then used to inform models, point at shortcomings of existing theories, and ultimately build new theories capable of explaining and predicting choices. As such, research developed at LABEL features not only experimental studies but also theoretical projects. It aims at integrating different types and levels of expertise to address decision-making at large.

Example of non-choice data used by the LABEL group:

- Process data: reaction times, sequence and occurrence of information acquisition, sequence of decisions using mousetracking.
- Physiological responses: electrodermal response (skin conductance), pupil dilation, respiration, heart rate, grip force, etc.
- fMRI (in collaboration with Mara Mather's lab and John Monterosso's lab).

Second, LABEL studies populations that have been traditionally neglected or understudied in Economics. We have formed partnerships with organizations and schools to run experiments.

Example of special populations studied by the LABEL group:

- Children: Pre-K to 12th grade.
- Older adults
- Children with ADHD (in collaboration with CHLA)

Related fields of study: Experimental Economics, Experimental Neuroeconomics, Behavioral Economics, Neuroeconomic Theory and Computational Neuroscience.

For more information regarding research topics in our group, please visit our website <http://dornsife.usc.edu/label>. Part of our experimental research is very related to our theoretical research in Neuroeconomic Theory. Students in the lab who would like to specialize in fMRI experiments are encouraged to become familiar with our philosophy. Information about Neuroeconomic theory can be found at <http://www.neuroeconomictheory.org>.

LABEL and the Economics Department

LABEL runs and manages the Experimental Laboratory located in the Economics Department. The Experimental Laboratory is open to full time faculty of the Economics department and students from the Economics department to run standard economics experiments and collect 'choice' data provided the studies are consistent with LABEL's policies. Those policies are meant to ensure research quality and the collection of data according to the standards of the field. The Experimental Laboratory is otherwise closed to the public.

However, software, programs, and equipment (including the BIOPAC module, our eye-trackers or our portable laboratory) developed and used by the LABEL group are not publicly accessible. Experimenters are in charge of developing and bringing their own software and equipment.

PhD dissertations at LABEL

Students who wish to write their dissertation at LABEL are required to complete ECON 620aL, ECON 620bL and ECON 616 in their second year. Fellowships to work on specific topics may be available. For more information regarding research topics in the LABEL group, please visit our website <http://dornsife.usc.edu/label>. If you wish to work with us, contact us to discuss possible projects.

Training for LABEL students

One of LABEL mission is to allow students to learn about novel research on decision-making.

- Courses: We recommend students to have a strong background in Economics and to take Microeconomic Theory (ECON 503, PhD) for students in all departments and Game Theory (ECON 404, BA) for students outside of economics. Specialized graduate classes include Experimental Economics (ECON 616, PhD), Behavioral Economics (ECON 606, PhD) and Neuroeconomics (ECON 608, PhD).
- Lab meetings (Experimental Methods I and II, ECON 620aL and ECON 620bL): regular meetings organized by faculty and designed to discuss ongoing projects with their students.
- Events: LABEL organizes seminars, conferences, and special lectures. Some events are scheduled in lieu of lab meetings.

- Mentoring: students are expected to learn from and teach to other students. This is crucial not only to learn techniques, but also to understand how research is conducted.

Beyond research

Students are expected to get involved in the day-to-day life of the lab. A series of tasks must be completed periodically. These include:

- Subject pool: recruitment and maintenance.
- Lab meetings / seminars / external speakers: coordination and organization.
- Conference(s): logistics, hosting, etc.
- Software: documentation, updating, etc.
- Hardware: exploration of new equipment and techniques

Note. Any problem encountered when preparing, testing or running an experiment must be reported to the lab manager (software issue, misbehavior of a subject, etc.).