

# Pianists!

PSYC 399: Independent Research

## **The Role of Acoustic Feedback in Piano Playing**

Instructor: Professor Saul Sternberg

What roles does feedback play in the control of action? One skill in which the primary feedback is detailed, rapid, and precisely perceived is musical performance, in which our highly evolved hearing mechanism is available to discriminate the acoustic consequences of our actions. Whereas conventional musical instruments don't easily permit the dissociation of actions and their acoustic consequences, this is possible with an electronic instrument connected to a computer. The project would start as an exploratory study of the effects of feedback manipulations on piano playing. The subjects in this phase would be the investigators: the student and the teacher; for this reason the student should have had at least six years of keyboard-playing experience, some of them recent. Depending on our findings, we might then be led to more formal experiments with other pianists. If the student doesn't already know the rudiments of the statistical environment R, he or she would learn this. The work would involve designing and running experiments and conducting data analyses, including the use of graphical methods, simple statistical tests, and confidence intervals.

Course Requirements: STAT111 or its equivalent.

Other Requirements: Piano skill.

When: Fall Semester, 2011, and/or Spring Semester, 2012

Application Deadline for Fall Semester: September 23rd.

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