1. Exploratory Procedures

Find an object which you like to feel and bring it to class Wednesday, October 30. In class, we will watch each other explore these objects with hands only. We will watch for people using the following "exploratory procedures" and find the most common order that people use them. <http://pavlov.psyc.queensu.ca/~cheryl/labpage.html>

These EPs work for "static objects" but for expressive control we want dynamic objects. Propose two or three dynamic exploratory procedures which people use to discover the dynamic properties of objects. Hand in your EP list at the end of class.

2. Two-value Instrument

Using any of the sensors available in the lab (or any you can find for yourself) capture at least two motions of the object you brought to class (or any other dynamic objects). Control at least two continuous parameters of a PD composition. Compare the results as you vary:

   a. Resolution -- 6 bits, 8 bits and 10 bit resolution (64, 256, 1024 levels).
   b. Smoothing -- use a first-order filter in the AVR and/or line~ in PD (.01, 0.1, 1.0 sec time constants).
   c. Sampling Rate -- slow down your program with timerPause or adjust the ADC prescaler with a2dSetPrescaler(0); 0 - fastest, 7 - slowest. Measure the rate by timing some large number of conversions.
      100 Hz, 10 Hz, 1 Hz
   d. Other mappings -- non-linear (log or square), derivative and integral.

Demonstrate to the TA, your favorite setting and show what happens as you vary one or more of the parameters, a, b, c or d.