

The effect of mood on perception: A signal detection analysis

Goals:

- To determine the effect of mood on pattern perception.
- To explore the effect of personality differences on pattern perception.

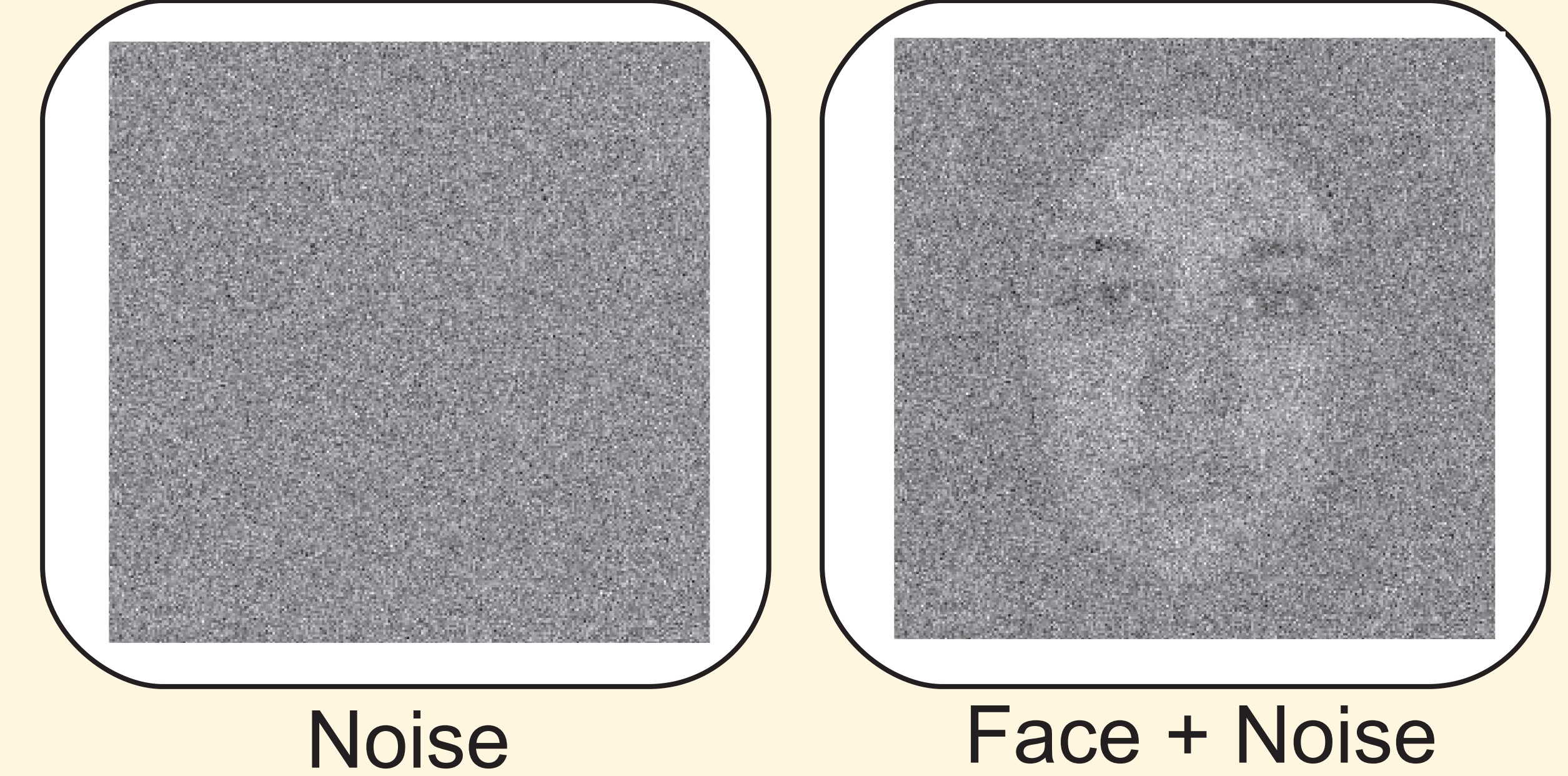
Background

People have a tendency to impose patterns on random information (Wolford, et al, 2004). The perception of such illusory patterns can be altered by factors such as stress (Simonov, et al, 1977) and a feeling of lack of control (Whitson & Galinsky, 2008).

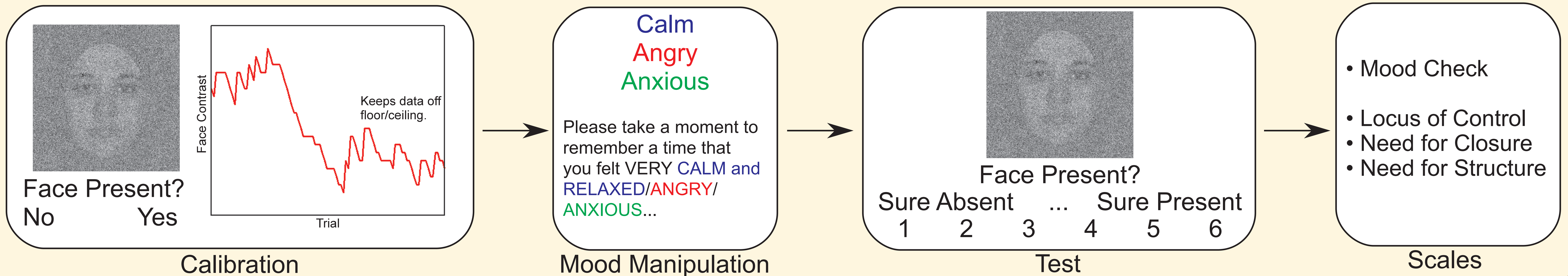
Anxiety is highly correlated with an intolerance of uncertainty (Jovic, 2008), so may increase the need or ability to discover patterns. Anger is similar to anxiety, i.e., arousing and negative (Russell & Mehrabian, 1974), without the feeling of uncertainty (Lerner & Keltner, 2000). Calm is used as a control.

Signal detection theory is used to separate the effects of bias and sensitivity.

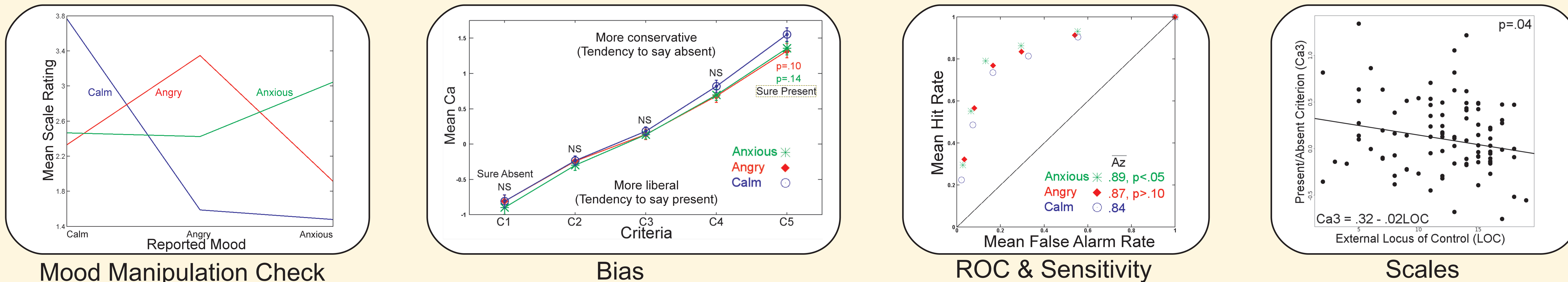
Stimuli



Experiment



Results



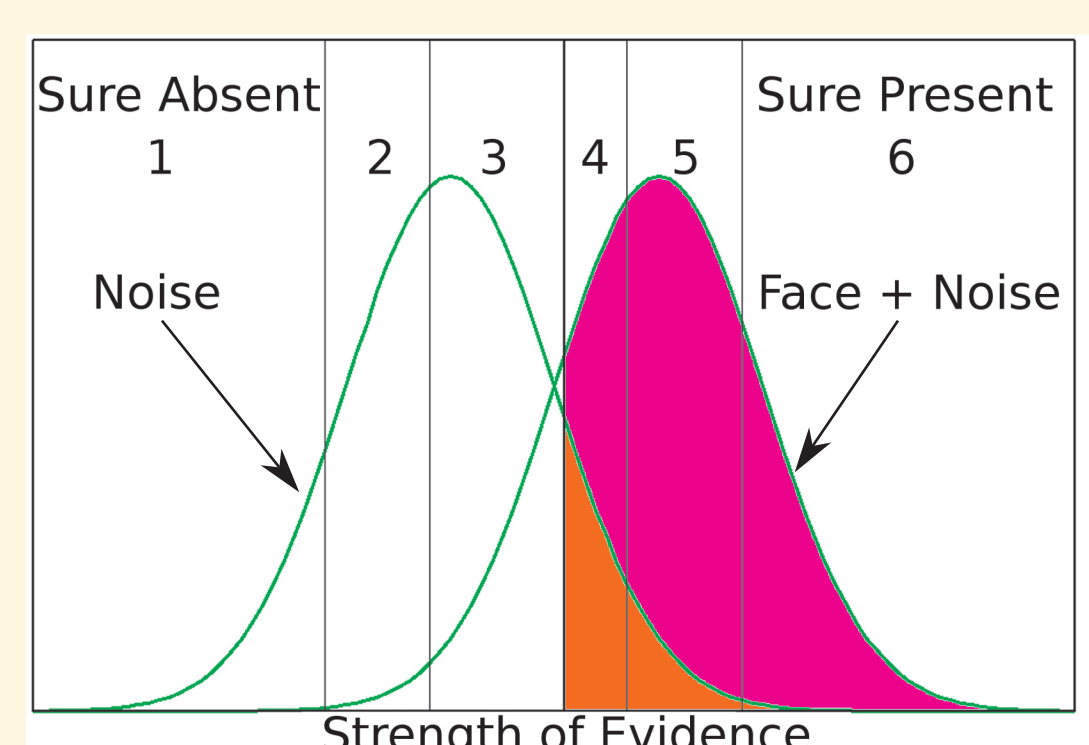
SDT Basics

Signal detection theory determines:

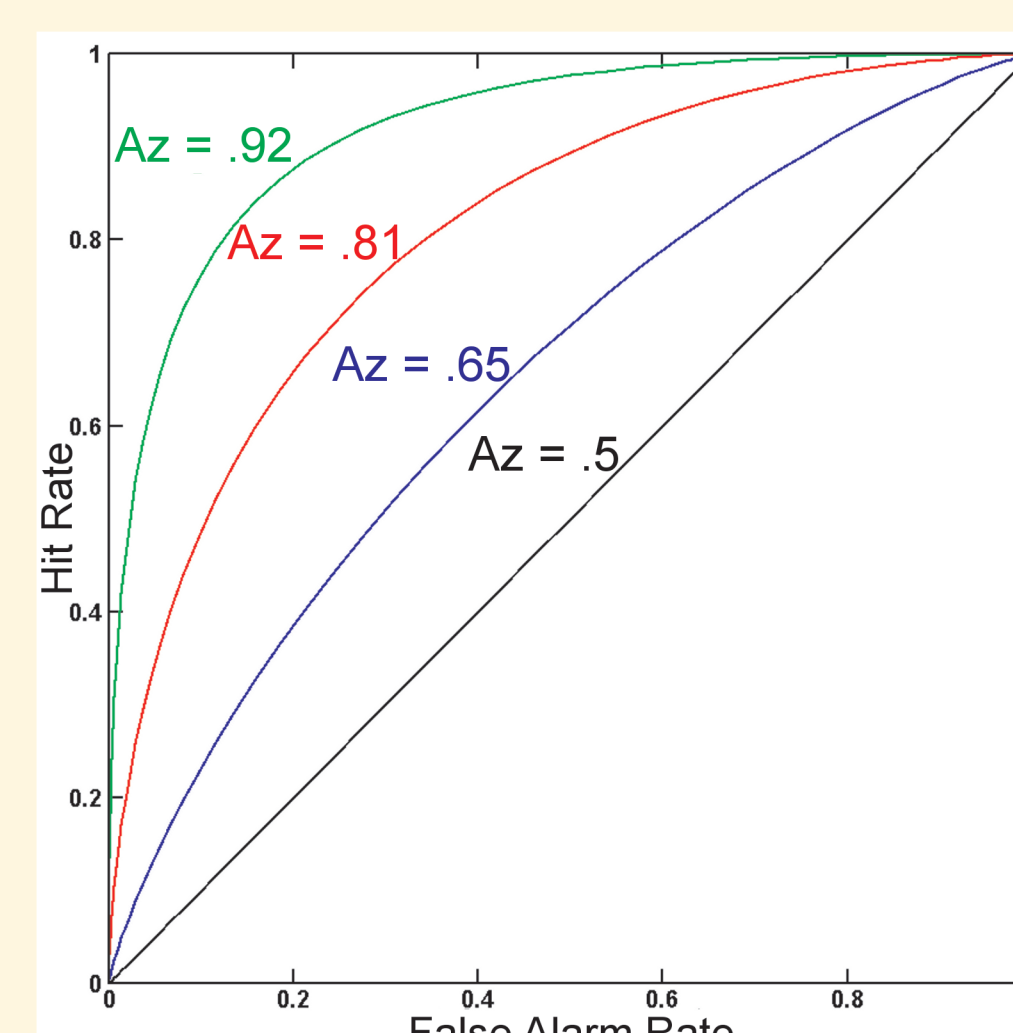
- Bias - The tendency to respond "present" or "absent".
- Sensitivity - The ability to distinguish present from absent.

Some definitions:

- **Hit** - Correctly responding "present".
- **False Alarm** - Incorrectly responding "present".



Ca is a measure of bias.
Az is a measure of sensitivity.



Concl.

- **Mood can influence perception:**
 - Anxiety can increase sensitivity (Az). Anxious participants, i.e., participants in an uncertain mood, were better at discriminating face-present and face-absent stimuli.
- **Locus of control can affect bias:**
 - The less control a participant felt, the higher the tendency to respond that a face was present (Ca3).

Andrea M. Cataldo

Andrew L. Cohen

Nilanjana Dasgupta

Department of Psychology

University of Massachusetts, Amherst

acohen@psych.umass.edu