

## **Parallel extraction of summary information across multi-element arrays**

(Agenda)

## Experiment 1 (S-VSs)

### Variables

```
experiment.task      = 'shape';  
variables.setsizes   = [2,4,8];  
variables.timings     = .2;  
variables.variances   = [.1 .2];  
variables.means       = 0:.05:.2;  
variables.counters    = 1:25;
```

### Experiment

19<sup>th</sup> November, 2012 - 10 subjects

### ANOVA performance

Significant effect for mean ( $p < 0.000$ ).

Significant effect for variance ( $p < 0.022$ ).

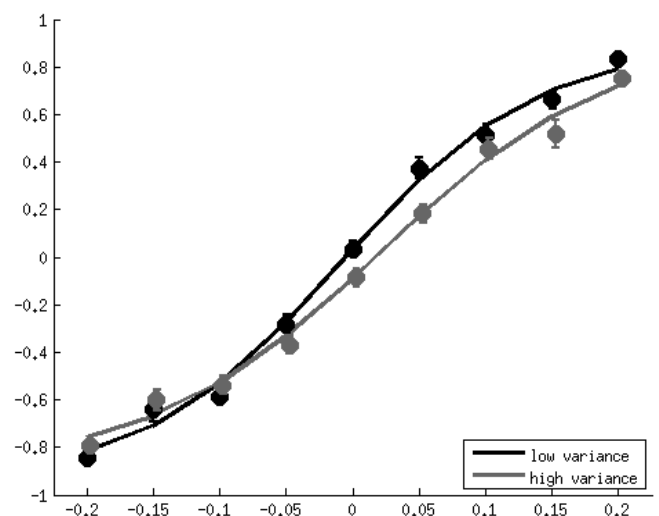
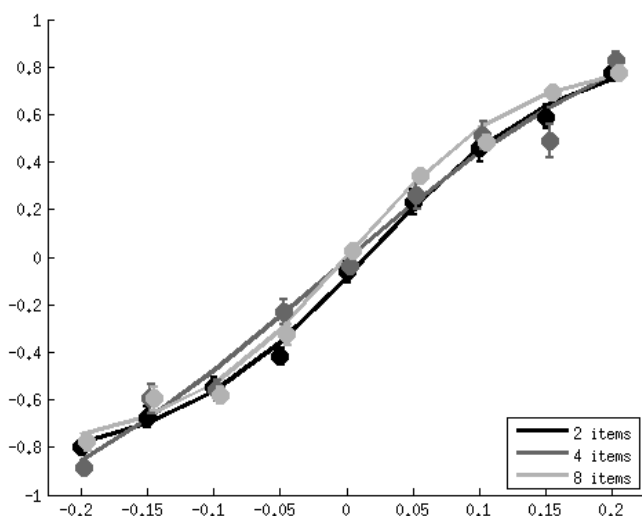
### ANOVA response

No effects.

### ANOVA reaction times

No effects.

### Response plots



## Experiment 2 (B-VSs)

### Variables

```
experiment.task      = 'both';  
variables.setsizes   = [2,4,8];  
variables.timings    = .2;  
variables.variances  = [.1 .2];  
variables.means      = 0:.05:.2;  
variables.counters    = 1:25;
```

### Experiment

26<sup>th</sup> November, 2012 - 16 subjects

### ANOVA performance

Significant effect for mean ( $p < 0.000$ ).

Significant effect for setsize ( $p < 0.001$ ).

Non-significant interaction between mean and variance ( $p < 0.059$ ).

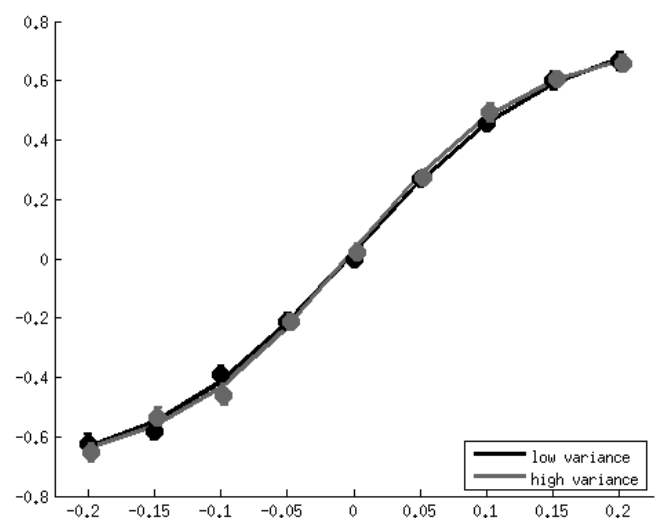
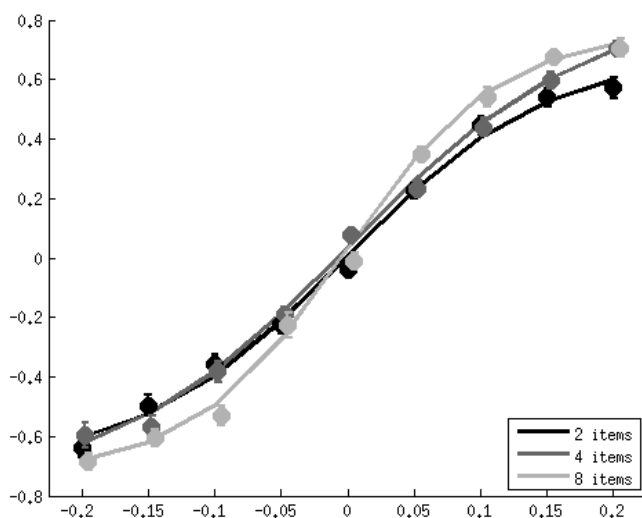
### ANOVA response

No effects.

### ANOVA reaction times

No effects.

### Response plots



## **Experiment 3 (S-TSs)**

### **Variables**

```
experiment.task      = 'shape';  
variables.setsizes   = [1,3,6,12];  
variables.timings     = [.1,.2,.4,.8];  
variables.variances   = .15;  
variables.means       = -.2:.05:.2;  
variables.counters    = 1:15;
```

### **Experiment**

21<sup>th</sup> January, 2013 - 10 subjects

### **ANOVA performance**

Significant effect for mean ( $p < 0.000$ ).

Significant effect for setsize ( $p < 0.019$ ) – though only for setsize 1?

Significant effect for timing ( $p < 0.007$ ).

### **ANOVA [error]**

Significant effect for mean ( $p < 0.000$ ).

Significant effect for setsize ( $p < 0.000$ ) – though only for setsize 1?

Significant interaction between mean and setsize ( $p < 0.000$ ).

Significant effect for timing ( $p < 0.010$ ).

### **ANOVA response**

Significant effect for mean ( $p < 0.000$ ).

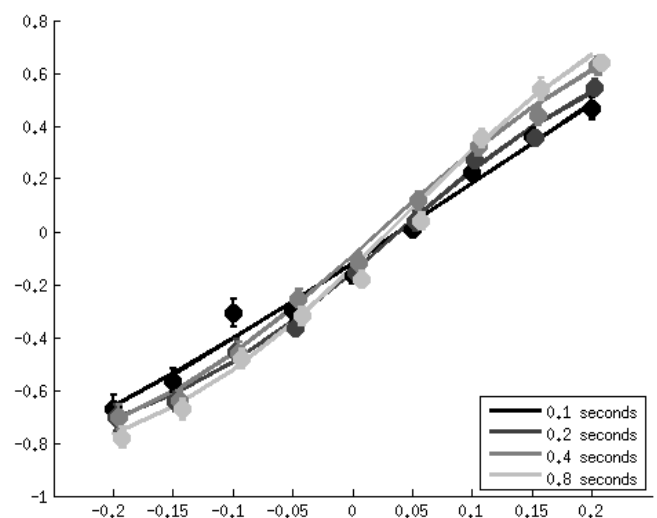
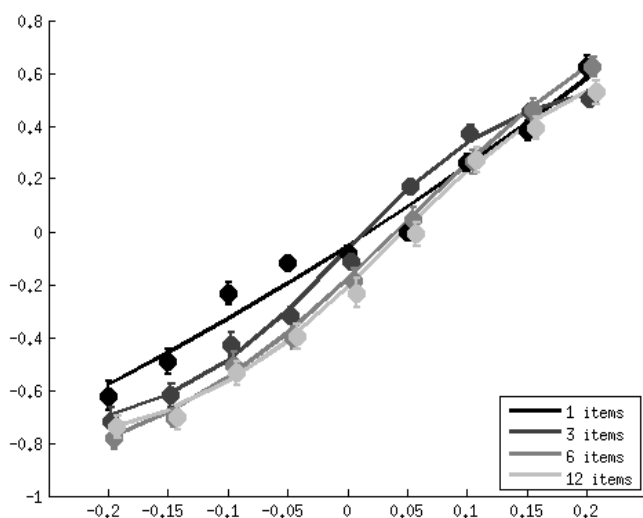
Non-significant interaction between mean and setsize ( $p < 0.061$ ).

Non-significant interaction between mean and timing ( $p < 0.025$ ).

### **ANOVA reaction times**

Non-significant effect for timing ( $p < 0.057$ ).

### **Response plots**



## Experiment 4 (S-spectrumTSs)

### Variables

```
experiment.task      = 'shape';  
experiment.spectrum  = 1;  
variables.setsizes   = [1,3,6,12];  
variables.timings    = [.05,.1,.2,.4];  
variables.variances  = .15;  
variables.means       = -.2:.05:.2;  
variables.counters    = 1:15;
```

### Experiment

13<sup>th</sup> February, 2013 - 5 subjects

### ANOVA performance

No effects.

### ANOVA [error]

Non-significant effect for `setsize` ( $p < 0.062$ ).

### ANOVA response

Significant effect for `mean` ( $p < 0.012$ ).

Non-significant effect for `setsize` ( $p < 0.065$ ).

### ANOVA reaction times

No effects.

### Response plots

