Numerical information can be perceived at multiple levels (e.g., two birds, or one pair of birds). How do regularities in terms of object co-occurrences shape numerical representations?

**Experiment 1:** How do color pairs influence numerosity estimations?

- **Color pairs**
  - Structured (n=20)
  - Random (n=20)

- **Singles**
  - Structured (n=20)
  - Random (n=20)

**Estimation error**

- Estimated - objective numerosity

Interaction between condition and numerosity levels:

\[ F(10, 380) = 3.83, p < .001, \eta^2 = .09 \]

**Experiment 2:** Does grouping explain underestimation?

- **Color duplicates**
  - Structured (n=20)
  - Random (n=20)

**Estimation error**

- Estimated - objective numerosity

Interaction between condition and numerosity levels:

\[ F(10, 380) = 5.32, p < .001, \eta^2 = .12 \]

**Experiment 3:** Is underestimation due to local attention?

- **Color pop-outs**
  - Pop-out (n=25)
  - Uniform (n=25)

**Estimation error**

- Estimated - objective numerosity

No Interaction between condition and numerosity levels:

\[ F(10, 480) = 0.20, p = .99, \eta^2 = .004 \]