

Correlation Neglect in Student-to-School Matching

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People struggle with reasoning about correlated outcomes.

Econ: Enke and Zimmermann (2019); Eyster and Weizsäcker (2016), many more...

Psych: Reviewed in Hansson, Juslin, and Winman (2008).

Key finding in literature: many experimental subjects treat correlated outcomes as if they were independent.

Goal in this project: Study this behavior, and its consequences, in domains of school choice.

A simple example with correlated admissions

There are three schools to consider. You can apply to two.

Admissions based on a single, random priority number.

- ▶ Drawn from Uniform[0,100].

School	Utility	Admission Requirement
The good one (A)	3	50
The middle one (B)	2	45
The bad one (C)	1	0

$A \succ B$ **Aggressive Strategy** $\rightarrow (A, 50\%; B, 5\%; \emptyset, 45\%)$

$A \succ C$ **Diversified Strategy** $\rightarrow (A, 50\%; C, 50\%)$

A simple example with uncorrelated admissions

There are three schools to consider. You can apply to two.

Admissions based on school-specific, random priority numbers.

- ▶ Each independently drawn from Uniform[0,100].

School	Utility	Admission Requirement
The good one (A)	3	50
The middle one (B)	2	90
The bad one (C)	1	0

$A \succ B$ **Aggressive Strategy** $\rightarrow (A, 50\%; B, 5\%; \emptyset, 45\%)$

$A \succ C$ **Diversified Strategy** $\rightarrow (A, 50\%; C, 50\%)$

This project

We conduct a lab experiment with incentivized pairs of scenarios like the one already considered.

Findings:

- ▶ Within “matched pair” scenarios, choices vary depending on experimentally manipulated presence or absence of correlation.
 - ▶ With correlated admissions, “safety” options neglected.
 - ▶ Both within-subject and between-subjects.
- ▶ Choices in the presence of correlation are suspect.
 1. Analytically unwise.
 2. Patterns match our theoretical prediction on correlation-neglectful agents
 3. Inconsistent with transparent choice.
 4. Within-subject preference reversals predicted by Enke-Zimmermann measure of correlation neglect.