

A Sample of Beamer Source File

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Question

During an experiment with blocking, some units may be compromised (e.g. missing, non-compliance). What should we do?

Moore (2010): blockwise deletion

- Delete compromised units and their blockmates.

Dunning (2011) warns

- “[I]f attrition or non-compliance are functions of potential outcomes, dropping blocked pairs does not *eliminate* the bias.”
- “It [Blocking] does not *reduce* bias”
- “Blocking increases efficiency”

My question

- Practically, (on what condition) which should we choose?
 - Blockwise deletion?
 - Unitwise deletion?
 - No deletion?

An Example of Potential Outcomes (Dunning 2011)

2 blocks

2 units in each block (or pair)

$Y_{b,u}(1)$ and $Y_{b,u}(0)$: potential outcome of unit $u \in \{1, 2\}$ in block $b \in \{1, 2\}$ in the case of treatment and control received, respectively.

$Y_{b,u}(0)$	$Y_{b,u}(1)$
$Y_{1,1}(0) = 1$	$Y_{1,1}(1) = 2$
$Y_{1,2}(0) = 3$	$Y_{1,2}(1) = 3$
$Y_{2,1}(0) = 4$	$Y_{2,1}(1) = 6$
$Y_{2,2}(0) = 2$	$Y_{2,2}(1) = 3$

$$\overline{Y(0)} = 2.5 \quad \overline{Y(1)} = 3.5 \quad \bar{\tau} = 1$$

Figure 1

