Description and choice data for the domain “Population”

Description of the choice domain 20, `Population`

The prompt question and the universe of five response options in the choice domain `Population` are as follows. The labels *a*, *b*, *c*, *d* and *e* were not displayed during the experiment and are indicated here to allow cross-referencing with data tables and visualizations below and results in the paper.

% Population

These countries were ranked, respectively, 4th through 8th in terms of population in 2016, when their populations, in millions, were 258, 206, 202, 186 and 156.

Which one of the following countries do you think has the largest population?

- Indonesia
- Brazil
- Pakistan
- Nigeria
- Bangladesh

The following figure is a screenshot from the actual experiment, with one of the 26 possible menus for this domain.

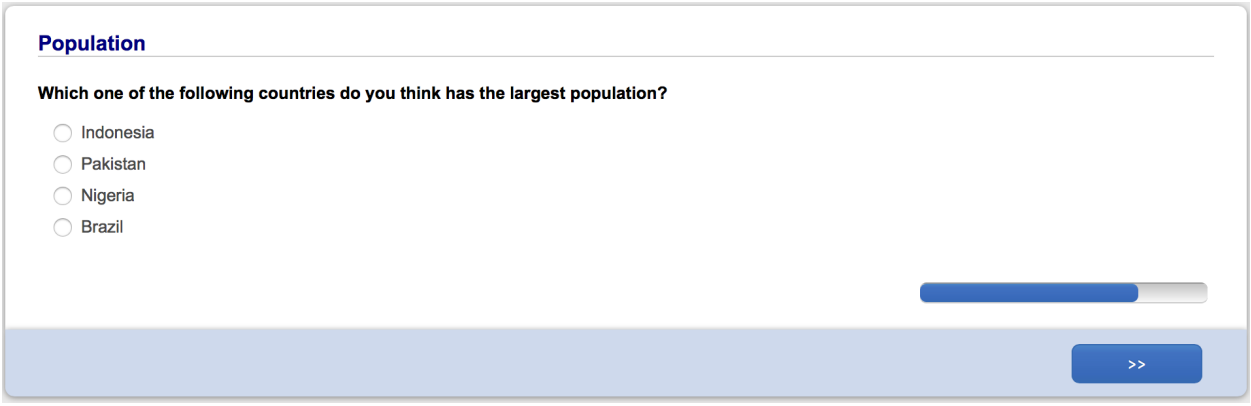


Figure 1: Screenshot for domain Population

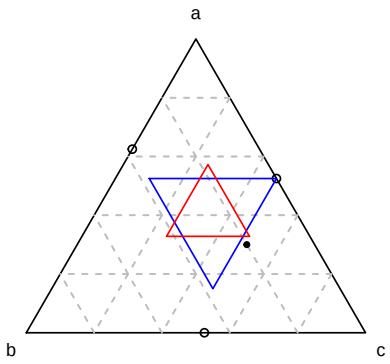
	Choice counts					Choice proportions				
Menu A	$N_A(a)$	$N_A(b)$	$N_A(c)$	$N_A(d)$	$N_A(e)$	$\hat{P}_A(a)$	$\hat{P}_A(b)$	$\hat{P}_A(c)$	$\hat{P}_A(d)$	$\hat{P}_A(e)$
$\{a, b\}$	25	15	-	-	-	0.625	0.375	-	-	-
$\{a, c\}$	21	-	19	-	-	0.525	-	0.475	-	-
$\{b, c\}$	-	19	21	-	-	-	0.475	0.525	-	-
$\{a, b, c\}$	12	8	20	-	-	0.300	0.200	0.500	-	-
$\{a, d\}$	25	-	-	15	-	0.625	-	-	0.375	-
$\{b, d\}$	-	27	-	13	-	-	0.675	-	0.325	-
$\{a, b, d\}$	20	14	-	6	-	0.500	0.350	-	0.150	-
$\{c, d\}$	-	-	30	10	-	-	-	0.750	0.250	-
$\{a, c, d\}$	13	-	17	10	-	0.325	-	0.425	0.250	-
$\{b, c, d\}$	-	14	17	10	-	-	0.341	0.415	0.244	-
$\{a, b, c, d\}$	13	11	14	2	-	0.325	0.275	0.350	0.050	-
$\{a, e\}$	18	-	-	-	22	0.450	-	-	-	0.550
$\{b, e\}$	-	19	-	-	21	-	0.475	-	-	0.525
$\{a, b, e\}$	11	8	-	-	22	0.268	0.195	-	-	0.537
$\{c, e\}$	-	-	19	-	21	-	-	0.475	-	0.525
$\{a, c, e\}$	11	-	12	-	17	0.275	-	0.300	-	0.425
$\{b, c, e\}$	-	15	12	-	13	-	0.375	0.300	-	0.325
$\{a, b, c, e\}$	11	11	9	-	9	0.275	0.275	0.225	-	0.225
$\{d, e\}$	-	-	-	13	27	-	-	-	0.325	0.675
$\{a, d, e\}$	15	-	-	4	21	0.375	-	-	0.100	0.525
$\{b, d, e\}$	-	15	-	4	21	-	0.375	-	0.100	0.525
$\{a, b, d, e\}$	15	7	-	3	15	0.375	0.175	-	0.075	0.375
$\{c, d, e\}$	-	-	19	9	12	-	-	0.475	0.225	0.300
$\{a, c, d, e\}$	12	-	17	3	8	0.300	-	0.425	0.075	0.200
$\{b, c, d, e\}$	-	13	11	5	11	-	0.325	0.275	0.125	0.275
$\{a, b, c, d, e\}$	11	10	10	2	7	0.275	0.250	0.250	0.050	0.175

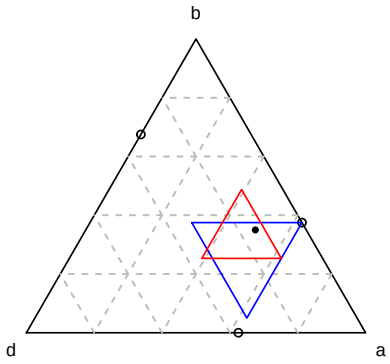
Table 1: Observed choice counts and proportions.

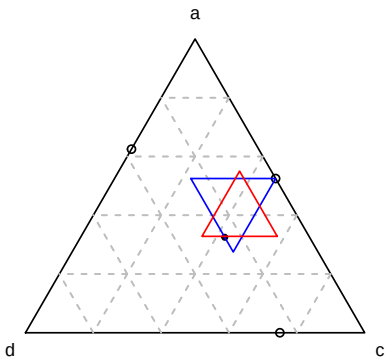
Choice data for domain 20, Population

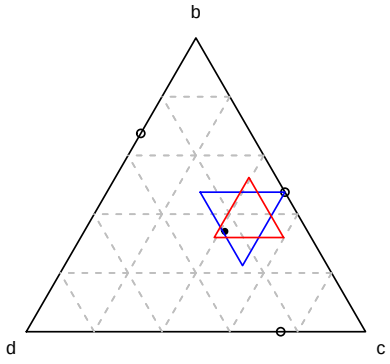
Table 1 shows choice counts and choice proportions for this choice domain. For each menu A and each object $x \in \{a, b, c, d, e\}$, $N_A(x)$ is the number of participants who chose object x from menu A and $\hat{P}_A(x)$ is the corresponding proportion of participants who chose x from A. When $x \notin A$, a dash is displayed.

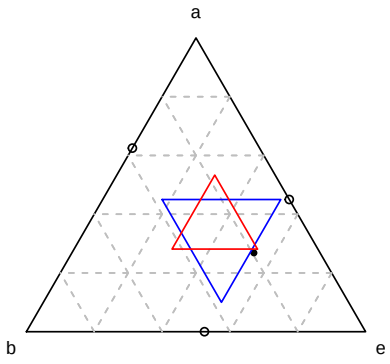
The following figure displays choice proportions for all doubleton and tripleton menus in Barycentric coordinates. See a full description of this graphical representation in the paper. Each panel shows choice proportions for all doubleton and tripleton menus of a different tripleton subset of $\{a, b, c, d, e\}$. The downward-pointed (blue) triangle shows the set of ternary choice proportions that are compatible with regularity and the three binary choice proportions, on the corresponding tripleton. The upward-pointed (red) triangle shows the set of ternary choice proportions compatible with the multiplicative inequality and the three binary choice proportions.

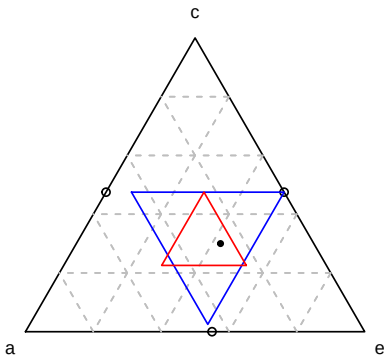

a
b
c

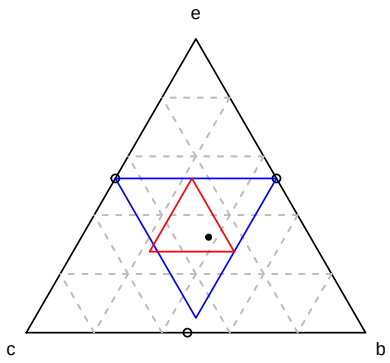

b
d
a

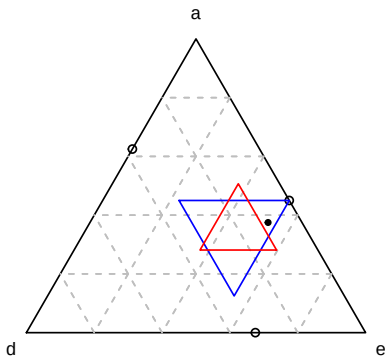

a
d
c

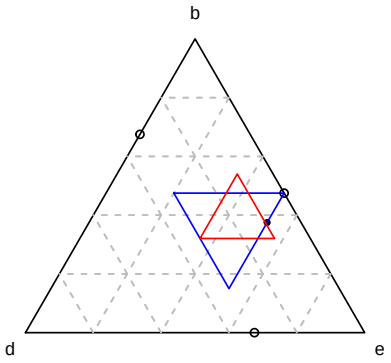

b
d
c

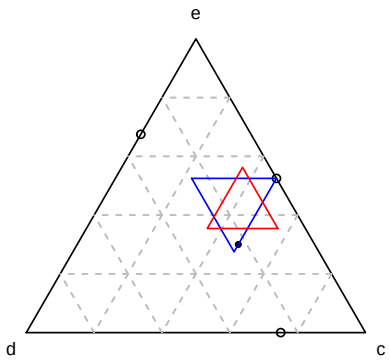

a
b
e


c
a
e


e
c
b


a
d
e


b
d
e


e
d
c