Description and choice data for the domain “Star pairs”

Description of the choice domain 4, `Star pairs`

The prompt question and the universe of five response options in the choice domain `Star pairs` 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.

% Star pairs

Here, choice objects are pairs of movie stars from a set of four movie stars: Tom Hanks, Scarlett Johansson, Brad Pitt and Angelina Jolie. The only missing pair is Brad Pitt and Angelina Jolie. One possible measure of similarity is the number of actors in common between two pairs, with values 0 and 1. There are nine doubleton choice sets (i.e. pairs of actor pairs) with one star in common and one ($\{c, d\}$) without any stars in common. Thus there are three triples ($\{a, c, d\}$, $\{b, c, d\}$, $\{c, d, e\}$) where one might expect a similarity effect.

In this example, respondents' preferences may depend not only on their liking of particular actors but also on complementaries between actors. {}

Knowing only who is starring, which one of these new films would you choose to see?

- Tom Hanks and Scarlett Johansson
- Scarlett Johansson and Brad Pitt
- Tom Hanks and Brad Pitt
- Scarlett Johansson and Angelina Jolie
- Tom Hanks and Angelina Jolie

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

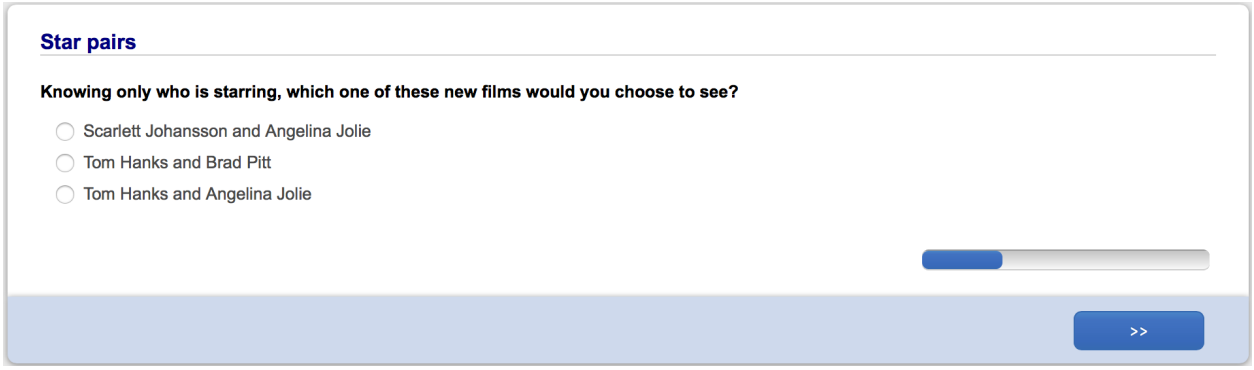


Figure 1: Screenshot for domain Star pairs

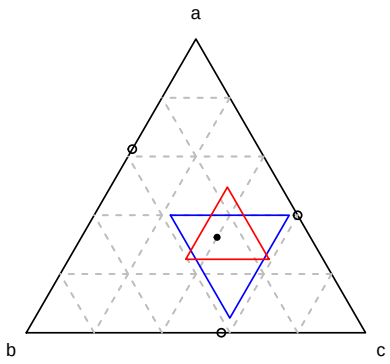
	Choice counts					Choice proportions				
Menu A	$N_A(a)$	$N_A(b)$	$N_A(c)$	$N_A(d)$	$N_A(e)$	$\hat{P}_A(a)$	$\hat{P}_A(b)$	$\hat{P}_A(c)$	$\hat{P}_A(d)$	$\hat{P}_A(e)$
$\{a,b\}$	25	15	-	-	-	0.625	0.375	-	-	-
$\{a,c\}$	16	-	24	-	-	0.400	-	0.600	-	-
$\{b,c\}$	-	17	23	-	-	-	0.425	0.575	-	-
$\{a,b,c\}$	13	11	16	-	-	0.325	0.275	0.400	-	-
$\{a,d\}$	27	-	-	13	-	0.675	-	-	0.325	-
$\{b,d\}$	-	22	-	18	-	-	0.550	-	0.450	-
$\{a,b,d\}$	24	9	-	7	-	0.600	0.225	-	0.175	-
$\{c,d\}$	-	-	19	21	-	-	-	0.475	0.525	-
$\{a,c,d\}$	11	-	19	10	-	0.275	-	0.475	0.250	-
$\{b,c,d\}$	-	9	22	10	-	-	0.220	0.537	0.244	-
$\{a,b,c,d\}$	17	5	15	3	-	0.425	0.125	0.375	0.075	-
$\{a,e\}$	22	-	-	-	18	0.550	-	-	-	0.450
$\{b,e\}$	-	20	-	-	20	-	0.500	-	-	0.500
$\{a,b,e\}$	21	13	-	-	6	0.525	0.325	-	-	0.150
$\{c,e\}$	-	-	27	-	13	-	-	0.675	-	0.325
$\{a,c,e\}$	18	-	16	-	6	0.450	-	0.400	-	0.150
$\{b,c,e\}$	-	19	11	-	10	-	0.475	0.275	-	0.250
$\{a,b,c,e\}$	13	11	8	-	8	0.325	0.275	0.200	-	0.200
$\{d,e\}$	-	-	-	16	24	-	-	-	0.400	0.600
$\{a,d,e\}$	17	-	-	10	13	0.425	-	-	0.250	0.325
$\{b,d,e\}$	-	14	-	8	18	-	0.350	-	0.200	0.450
$\{a,b,d,e\}$	17	11	-	8	5	0.415	0.268	-	0.195	0.122
$\{c,d,e\}$	-	-	18	14	8	-	-	0.450	0.350	0.200
$\{a,c,d,e\}$	14	-	9	12	5	0.350	-	0.225	0.300	0.125
$\{b,c,d,e\}$	-	6	19	6	9	-	0.150	0.475	0.150	0.225
$\{a,b,c,d,e\}$	11	5	13	6	5	0.275	0.125	0.325	0.150	0.125

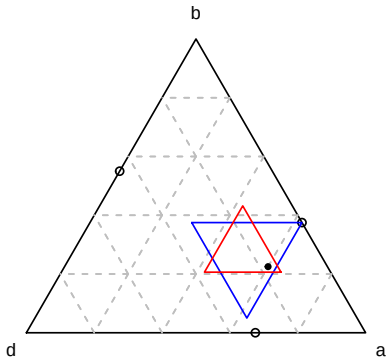
Table 1: Observed choice counts and proportions.

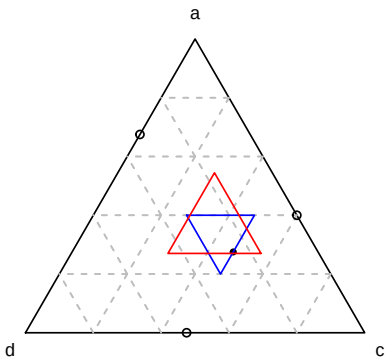
Choice data for domain 4, Star pairs

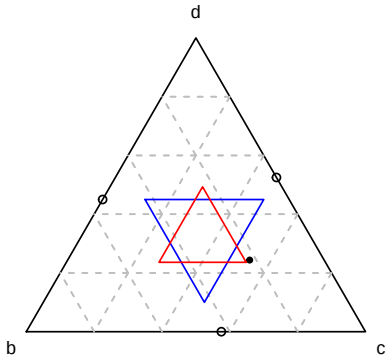
Table 1 shows choice counts and choice proportions for this choice domain. For each menu A and each object $x \in \{a,b,c,d,e\}$, $N_A(x)$ is the number of participants who chose object x from menu A and $\hat{P}_A(x)$ is the corresponding proportion of participants who chose x from A. When $x \notin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

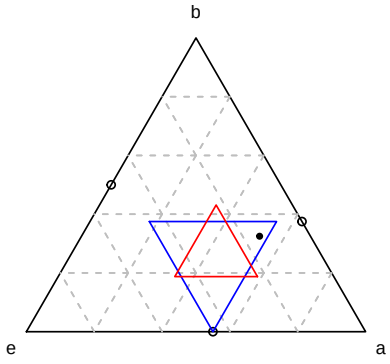
The following figure displays choice proportions for all doubleton and tripleton menus in Barycentric coordinates. See a full description of this graphical representation in the paper. Each panel shows choice proportions for all doubleton and tripleton menus of a different tripleton subset of $\{a,b,c,d,e\}$. 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.

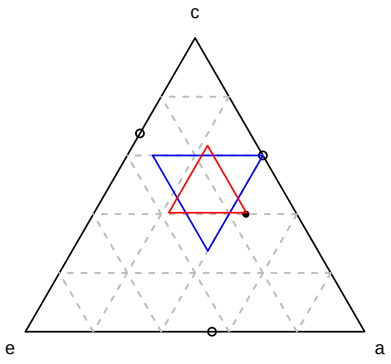

a
b
c


b
d
a


a
d
c


d
b
c


b
e
a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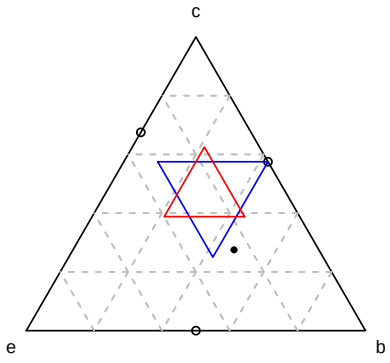
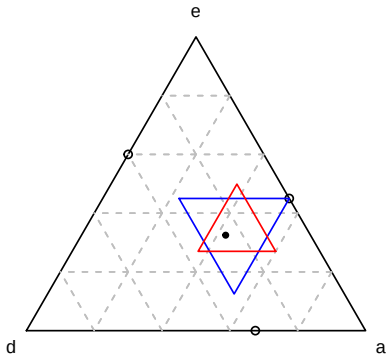
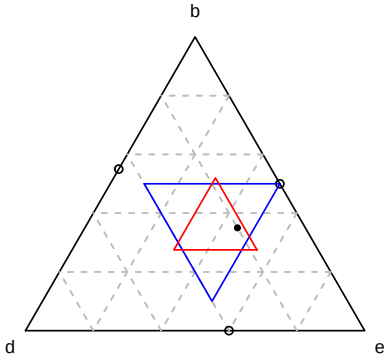
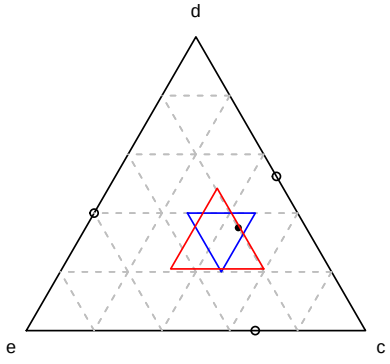

c
e
b


e
d
a


b
d
e


d
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