

Online appendix for:

“Perceptual and cognitive characteristics of common playing cards”[†]

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Appendix A

Tables A1 – A7 give the full test results. The asterisks denote $p < \text{per-test } \alpha$.

Appendix B

Table B1 shows average measures for all cards.

Appendix C

Supplementary figures C1 – C13.

[†] The original paper to which this appendix refers to can be found at <http://dx.doi.org/10.1068/p7175>

Table A1
Visibility Sensitivity ANOVA Results.

Group	Factor	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	α	η^2
AS vs. Other Aces	Group	1	1.15	1.15	21.63	<.001*	.012	.08
	Group residuals	48	4.74	0.1				
	Subject residuals	23	7.95	0.35				
Aces vs. numbers	Group	1	1.16	1.16	9.08	.006*	.012	.01
	Group residuals	912	97.15	0.11				
	Subject residuals	23	38.76	1.69				
Numbers vs. faces	Group	1	0.06	0.06	0.44	.513	.012	
	Group residuals	1080	109.94	0.1				
	Subject residuals	23	46.66	2.03				
QH vs. Other Queens	Group	1	0	0	0.06	.804	.012	
	Group residuals	48	3.97	0.08				
	Subject residuals	23	7.35	0.32				
Aces	Suit	2	0.06	0.03	0.28	.755	.05	
	Suit residuals	46	4.68	0.1				
	Subject residuals	23	6.66	0.29				
Number cards	Value	8	1.39	0.17	1.62	.121	.017	
	Value residuals	184	19.75	0.11				
	Suit	3	0.89	0.3	1.82	.152	.017	
	Suit residuals	69	11.22	0.16				
	Value \times suit	24	1.93	0.08	0.81	.726	.017	
	Value \times suit res.	552	54.86	0.1				
	Subject residuals	23	33.75	1.47				
Face cards	Value	2	0.29	0.14	1.45	.244	.017	
	Value residuals	46	4.53	0.1				
	Suit	3	0.31	0.1	1.26	.294	.017	
	Suit residuals	69	5.65	0.08				
	Value \times suit	5	0.43	0.09	1.13	.346	.017	
	Value \times suit res.	115	8.7	0.08				
	Subject residuals	23	15.8	0.69				

Table A2
Visibility Bias ANOVA Results.

Group	Factor	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	α	η^2
AS vs. Other Aces	Group	1	0.22	0.22	2.01	.17	.012	
	Group residuals	48	8.71	0.18				
	Subject residuals	23	4.64	0.2				
Aces vs. numbers	Group	1	0	0	0	.972	.012	
	Group residuals	912	169.37	0.19				
	Subject residuals	23	54.15	2.35				
Numbers vs. faces	Group	1	0.06	0.06	0.25	.621	.012	
	Group residuals	1080	198.29	0.18				
	Subject residuals	23	69.04	3				
QH vs. Other Queens	Group	1	0.01	0.01	0.02	.881	.012	
	Group residuals	48	9.4	0.2				
	Subject residuals	23	7.22	0.31				
Aces	Suit	2	0.01	0.01	0.03	.973	.05	
	Suit residuals	46	8.7	0.19				
	Subject residuals	23	4.05	0.18				
Number cards	Value	8	3.6	0.45	2.36	.019	.017	
	Value residuals	184	35.1	0.19				
	Suit	3	5.37	1.79	10.93	<.001*	.017	.03
	Suit residuals	69	11.3	0.16				
	Value \times suit	24	4.3	0.18	1.01	.456	.017	
	Value \times suit res.	552	98.25	0.18				
	Subject residuals	23	54.06	2.35				
Face cards	Value	2	0.06	0.03	0.21	.811	.017	
	Value residuals	46	6.14	0.13				
	Suit	3	1.01	0.34	2	.121	.017	
	Suit residuals	69	11.54	0.17				
	Value \times suit	5	0.39	0.08	0.42	.836	.017	
	Value \times suit res.	115	21.24	0.18				
	Subject residuals	23	20.61	0.9				

Table A3
Memorability Sensitivity ANOVA Results.

Group	Factor	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	α	η^2
AS vs. Other Aces	Group	1	6.09	6.09	17.21	<.001*	.012	.14
	Group residuals	48	16.9	0.35				
	Subject residuals	23	12.99	0.56				
Aces vs. numbers	Group	1	13.83	13.83	35.82	<.001*	.012	.03
	Group residuals	912	398.35	0.44				
	Subject residuals	23	93.14	4.05				
Numbers vs. faces	Group	1	2.01	2.01	6.98	.015	.012	
	Group residuals	1080	473.91	0.44				
	Subject residuals	23	115.75	5.03				
QH vs. Other Queens	Group	1	0.05	0.05	0.16	.694	.012	
	Group residuals	48	20.66	0.43				
	Subject residuals	23	20.49	0.89				
Aces	Suit	2	0.96	0.48	1.39	.259	.05	
	Suit residuals	46	15.94	0.35				
	Subject residuals	23	13.76	0.6				
Number cards	Value	8	3.68	0.46	1.1	.363	.017	
	Value residuals	184	76.66	0.42				
	Suit	3	0.55	0.18	0.43	.735	.017	
	Suit residuals	69	29.54	0.43				
	Value \times suit	24	12.85	0.54	1.21	.224	.017	
	Value \times suit res.	552	243.94	0.44				
	Subject residuals	23	89.04	3.87				
Face cards	Value	2	0.01	0	0.01	.99	.017	
	Value residuals	46	22.64	0.49				
	Suit	3	2.99	1	2.28	.087	.017	
	Suit residuals	69	30.09	0.44				
	Value \times suit	5	1.54	0.31	0.72	.613	.017	
	Value \times suit res.	115	49.42	0.43				
	Subject residuals	23	33.34	1.45				

Table A4
Memorability Bias ANOVA Results.

Group	Factor	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>	α	η^2
AS vs. Other Aces	Group	1	0.15	0.15	1.43	.243	.012	
	Group residuals	48	7.93	0.17				
	Subject residuals	23	18.81	0.82				
Aces vs. numbers	Group	1	2.05	2.05	5.39	.03	.012	
	Group residuals	912	192.98	0.21				
	Subject residuals	23	120.29	5.23				
Numbers vs. faces	Group	1	14.66	14.66	35.23	<.001*	.012	.04
	Group residuals	1080	240.13	0.22				
	Subject residuals	23	141	6.13				
QH vs. Other Queens	Group	1	0.06	0.06	0.27	.608	.012	
	Group residuals	48	8.88	0.19				
	Subject residuals	23	13.4	0.58				
Aces	Suit	2	0.61	0.31	1.93	.157	.05	
	Suit residuals	46	7.32	0.16				
	Subject residuals	23	15.83	0.69				
Number cards	Value	8	5.24	0.66	3.62	<.001*	.017	.03
	Value residuals	184	33.27	0.18				
	Suit	3	1.18	0.39	1.59	.199	.017	
	Suit residuals	69	17.09	0.25				
	Value \times suit	24	5.84	0.24	1.12	.316	.017	
	Value \times suit res.	552	119.85	0.22				
	Subject residuals	23	110.22	4.79				
Face cards	Value	2	0.44	0.22	0.97	.385	.017	
	Value residuals	46	10.49	0.23				
	Suit	3	0.33	0.11	0.39	.762	.017	
	Suit residuals	69	19.78	0.29				
	Value \times suit	5	1.16	0.23	1.04	.395	.017	
	Value \times suit res.	115	25.46	0.22				
	Subject residuals	23	40.34	1.75				

Table A5
Likability χ^2 Results.

Group	Factor	<i>df</i>	χ^2	<i>p</i>	α
AS vs. Other Aces	Group	1	7.56	.006*	.012
Aces vs. numbers	Group	1	40.13	<.001*	.012
Numbers vs. faces	Group	1	30.02	<.001*	.012
QH vs. Other Queens	Group	1	17.2	<.001*	.012
Aces	Suit	2	19.44	<.001*	.05
Number cards	Value	8	21.18	.007*	.017
	Suit	3	96.67	<.001*	.017
	Value \times suit	24	16.11	.884	.017
Face cards	Value	2	7.36	.025	.017
	Suit	3	51.35	<.001*	.017
	Value \times suit	6	170.72	<.001*	.017

Table A6
Verbal Accessibility χ^2 Results.

Group	Factor	<i>df</i>	χ^2	<i>p</i>	α
AS vs. Other Aces	Group	1	150.69	<.001*	.012
Aces vs. numbers	Group	1	121.01	<.001*	.012
Numbers vs. faces	Group	1	74.98	<.001*	.012
QH vs. Other Queens	Group	1	101.35	<.001*	.012
Aces	Suit	2	11.06	.004*	.05
Number cards	Value	8	26.17	<.001*	.017
	Suit	3	12.14	.007*	.017
	Value \times suit ^a		28.12	.241	.017
Face cards	Value	2	3.32	.19	.017
	Suit	3	36.81	<.001*	.017
	Value \times suit ^a		27.89	<.001*	.017

^aComputed by Monte Carlo simulation.

Table A7

Visual Accessibility χ^2 Results.

Group	Factor	<i>df</i>	χ^2	<i>p</i>	α
AS vs. Other Aces	Group	1	65.33	<.001*	.012
Aces vs. numbers	Group	1	130.67	<.001*	.012
Numbers vs. faces	Group	1	12.22	<.001*	.012
QH vs. Other Queens	Group	1	74.86	<.001*	.012
Aces	Suit	2	53.82	<.001*	.05
Number cards	Value	8	36.83	<.001*	.017
	Suit	3	11.14	.011*	.017
	Value \times suit ^a		31.11	.15	.017
Face cards	Value	2	4.6	.1	.017
	Suit	3	28.75	<.001*	.017
	Value \times suit ^a		18.93	.006*	.017

^aComputed by Monte Carlo simulation.

Table B1

Mean Sensitivity (d'), Bias (c), and Proportions across Playing Cards.

Card	Visibility		Memorability		Likability	Verbal Accessibility	Visual Accessibility
	d'	c	d'	c			
AS	1.76	0.08	1.43	0.21	.771	.246	.173
2S	1.29	0.42	0.65	0.18	.597	.009	.009
3S	1.14	0.36	0.8	0.35	.479	.017	.016
4S	0.94	0.39	0.45	0.33	.493	0	.004
5S	1.11	0.28	0.4	0.16	.476	.009	0
6S	1.15	0.14	0.79	0.32	.451	0	.004
7S	1.15	0.24	0.6	0.54	.51	.002	.009
8S	1.25	0.36	0.48	0.5	.497	.009	.02
9S	1.23	0.32	0.36	0.4	.51	.002	.002
10S	1.32	0.19	0.61	0.34	.521	.002	.004
JS	1.25	0.24	0.82	-0.03	.642	.043	.024
QS	1.15	0.26	0.54	0.11	.597	.021	.018
KS	1.07	0.19	0.61	0.15	.583	.024	.016
AH	1.29	0.18	0.69	0.23	.781	.061	.111
2H	1.29	0.21	0.61	0.15	.663	.014	.016
3H	1.26	0.14	0.61	0.11	.545	.014	.013
4H	1.06	0.33	0.43	0.4	.472	.017	.009
5H	1.38	0.09	0.76	0.38	.552	.012	.024
6H	1.32	-0.06	0.46	0.32	.59	.002	.007
7H	1.52	0.21	0.48	0.29	.483	.019	.013
8H	1.22	0.11	0.85	0.29	.552	.012	.018
9H	1.42	0.05	0.34	0.4	.521	.002	.013
10H	1.24	-0.01	0.58	0.46	.587	.007	.02
JH	1.15	0.1	0.4	-0.07	.646	.028	.02
QH	1.21	0.13	0.74	0.06	.694	.137	.1
KH	1.46	0.2	0.6	0.03	.726	.059	.051
AC	1.35	0.21	0.97	0	.573	.017	.013
2C	1.39	0.15	0.7	0.08	.49	.009	.009
3C	1.2	0.03	0.82	0.24	.424	.002	.018
4C	1.24	0.17	0.49	0.13	.378	.002	.007
5C	1.32	0.14	0.54	0.27	.378	0	.007
6C	1.15	0.22	0.72	0.34	.358	0	.009
7C	1.19	0.07	0.42	0.22	.372	.009	.004
8C	1.2	0.02	0.65	0.49	.396	.009	.024
9C	1.27	0.1	0.61	0.36	.351	.002	.002
10C	1.46	0.03	0.46	0.27	.396	.007	.002
JC	1.35	0.14	0.73	0.05	.41	.009	.007
QC	1.12	0.02	0.82	-0.15	.413	.005	.004
KC	1.4	0.03	0.79	0.14	.497	.005	.007
AD	1.27	0.18	0.87	0.12	.503	.038	.022
2D	1.31	0.23	0.58	0.06	.406	.007	.016
3D	1.24	0.01	0.53	0.14	.378	.017	.029
4D	1.2	0.16	0.77	0.42	.42	.005	.007
5D	1.05	0.2	0.73	0.32	.368	0	.004
6D	1.01	-0.06	0.37	0.27	.396	.002	.011
7D	1.18	0.23	0.61	0.21	.392	.014	.013
8D	1.03	0.05	0.78	0.19	.42	.005	.018
9D	1.08	0.26	0.68	0.36	.424	.007	.002
10D	1.37	0.12	0.6	0.31	.472	.007	.007
JD	1.29	0.17	0.82	0	.493	.021	.011
QD	1.29	0.15	0.69	0.06	.451	.021	.016
KD	1.36	0.1	0.78	0	.5	.007	.016

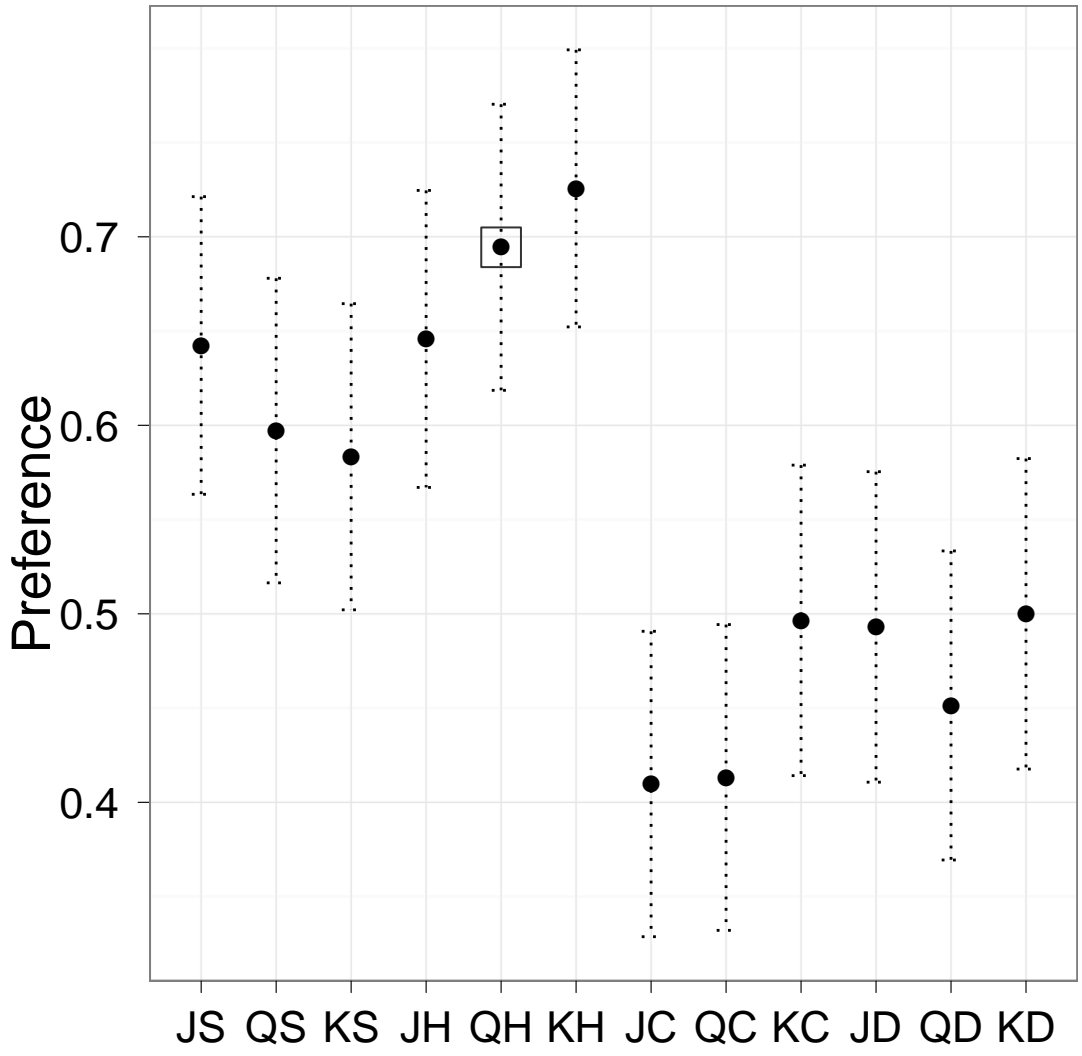


Figure C1: Preference for Face Cards by Card.

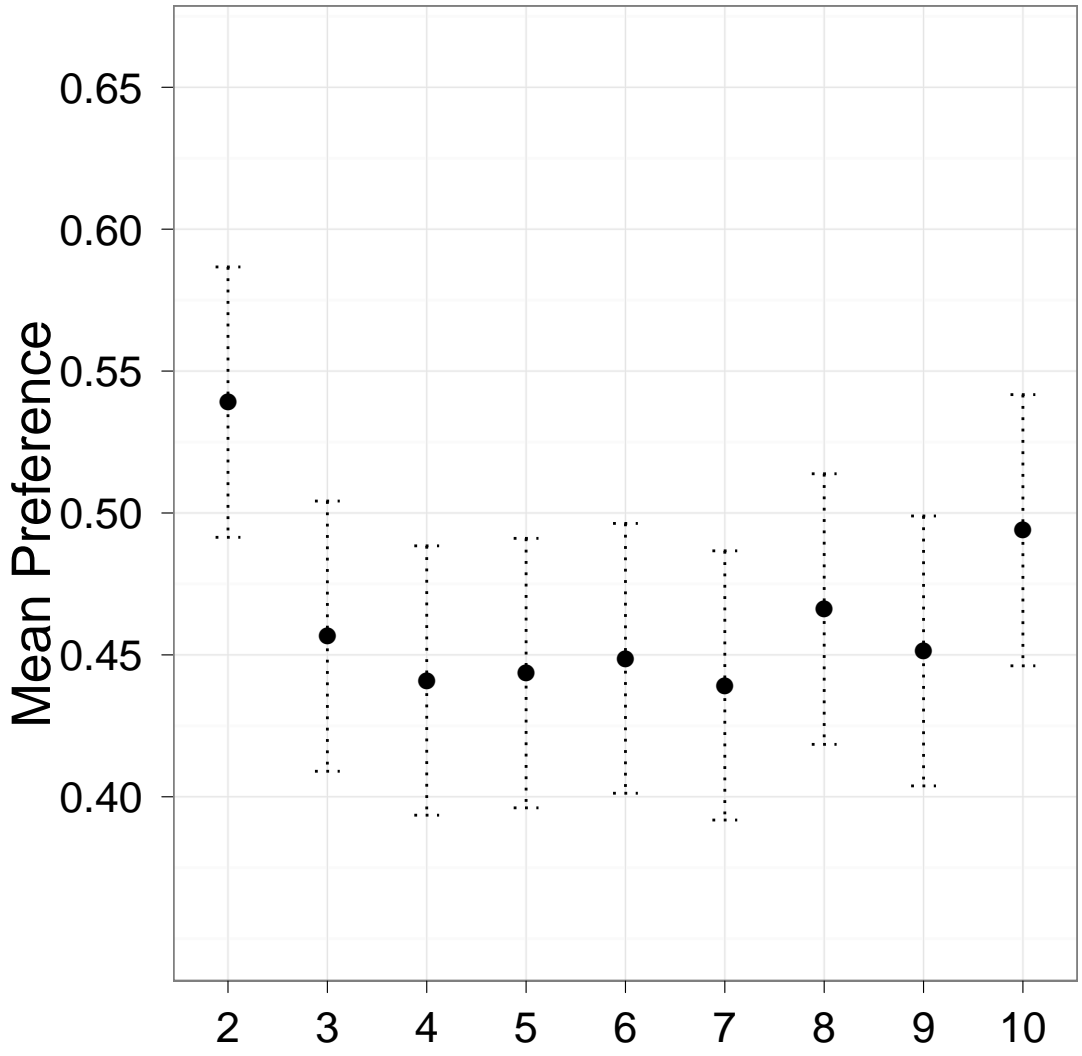


Figure C2: Mean Preference for Number Cards by Value.

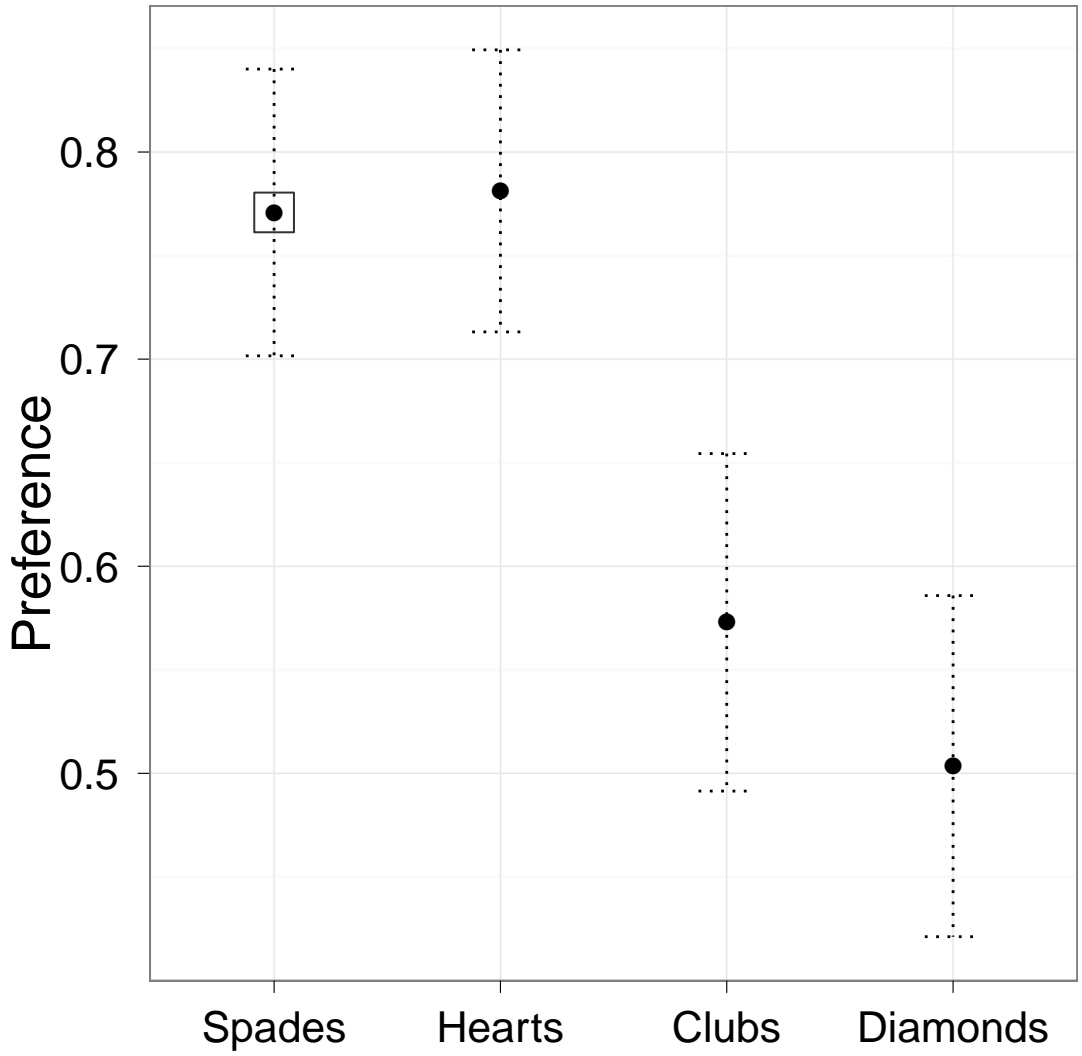


Figure C3: Preference for Aces by Suit.

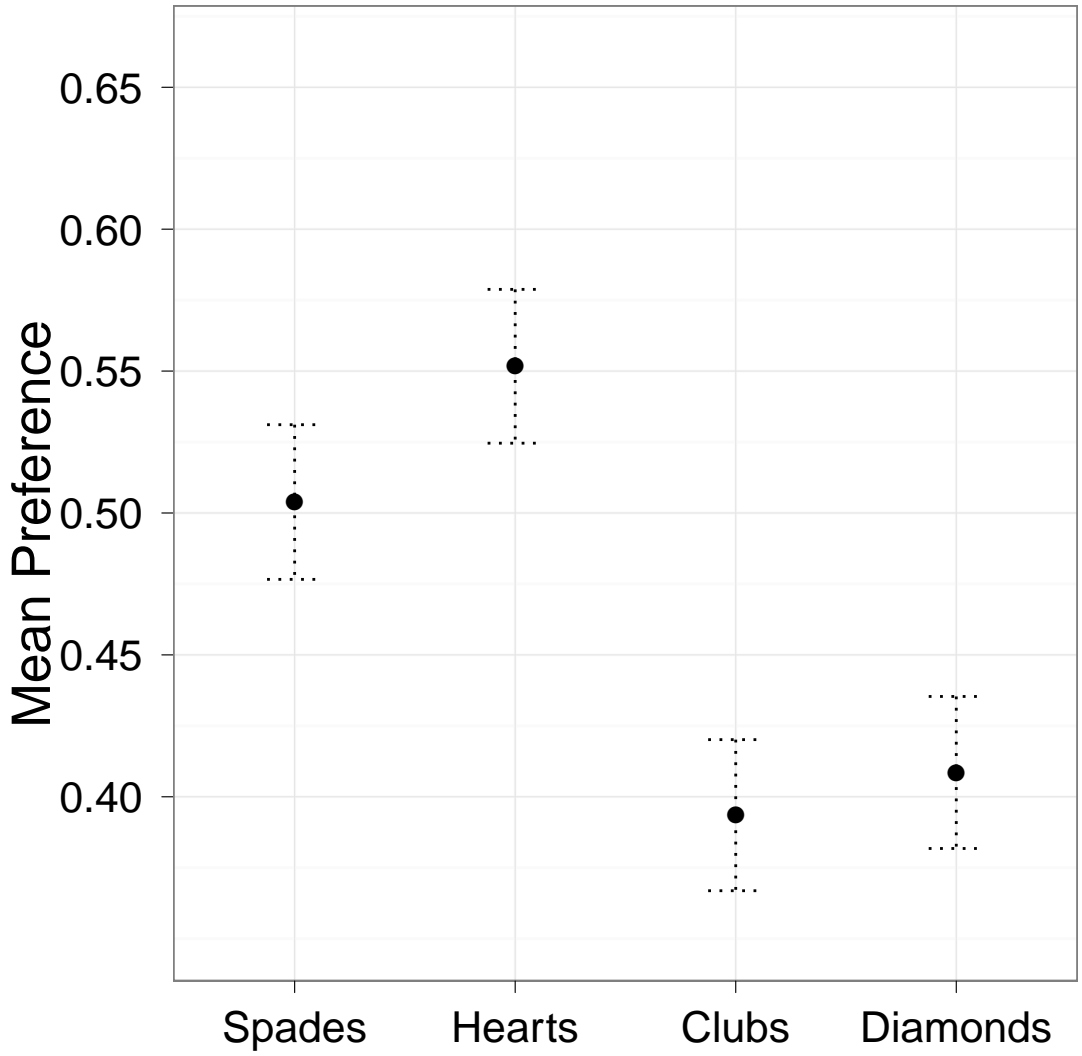


Figure C4: Mean Preference for Number Cards by Suit.

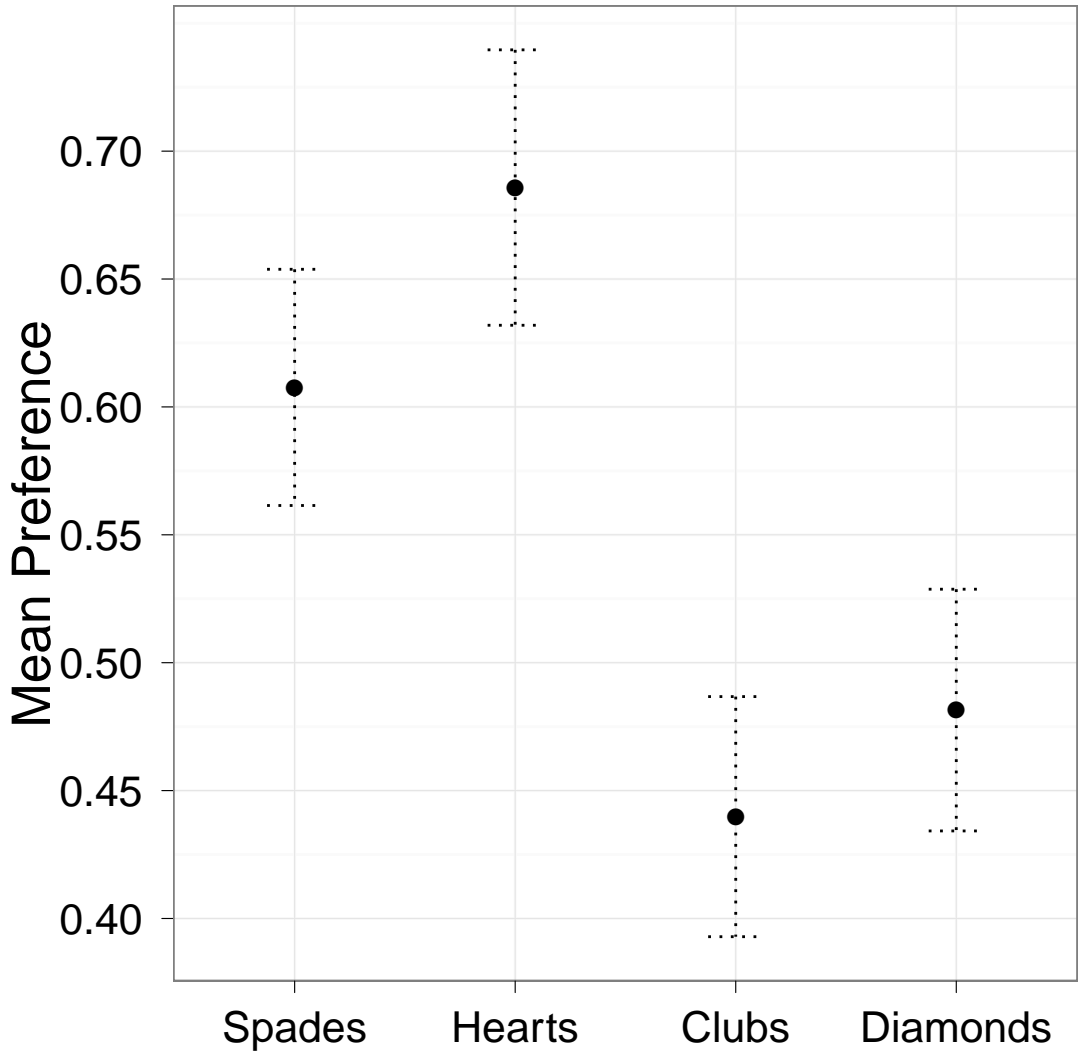


Figure C5: Mean Preference for Face Cards by Suit.

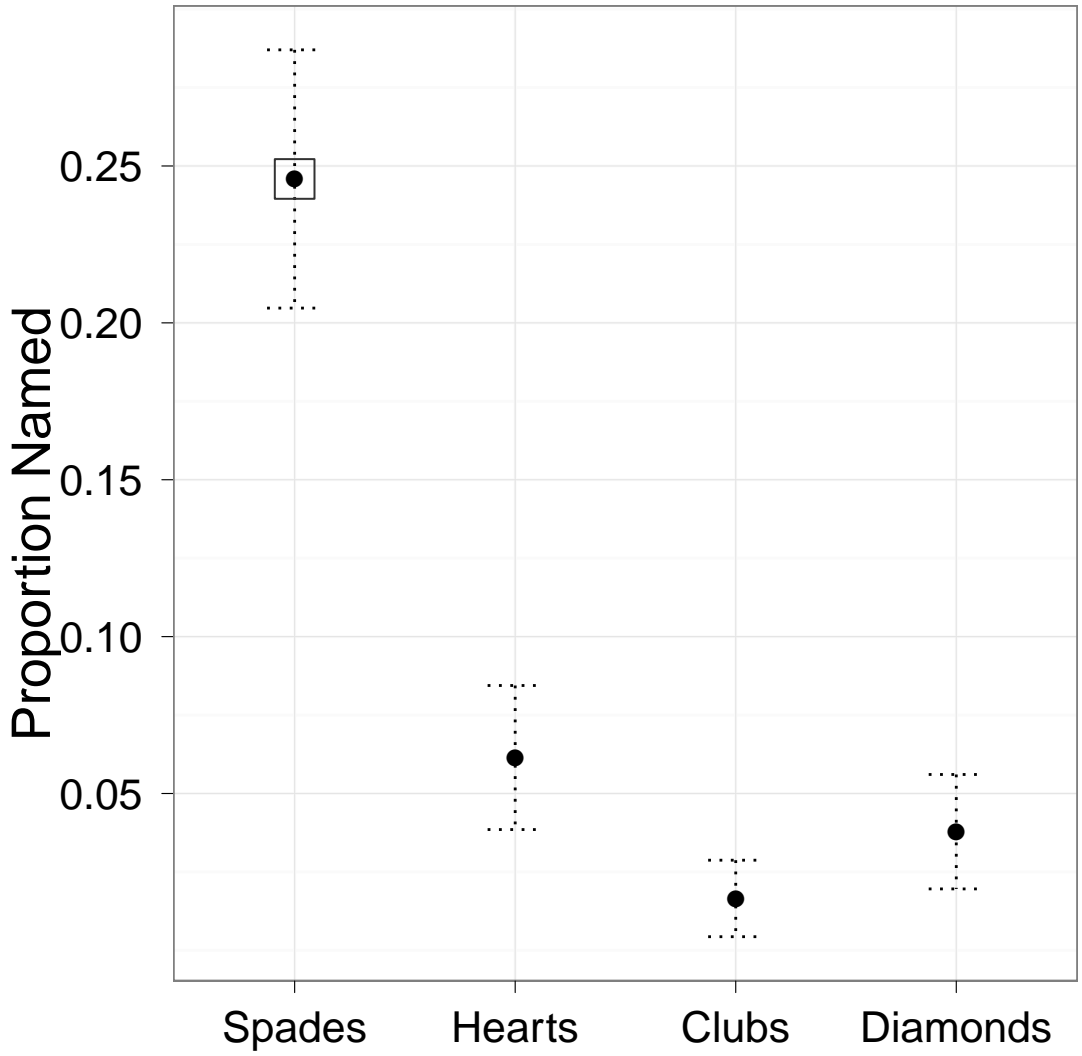


Figure C6: Proportion of Aces Named by Suit.

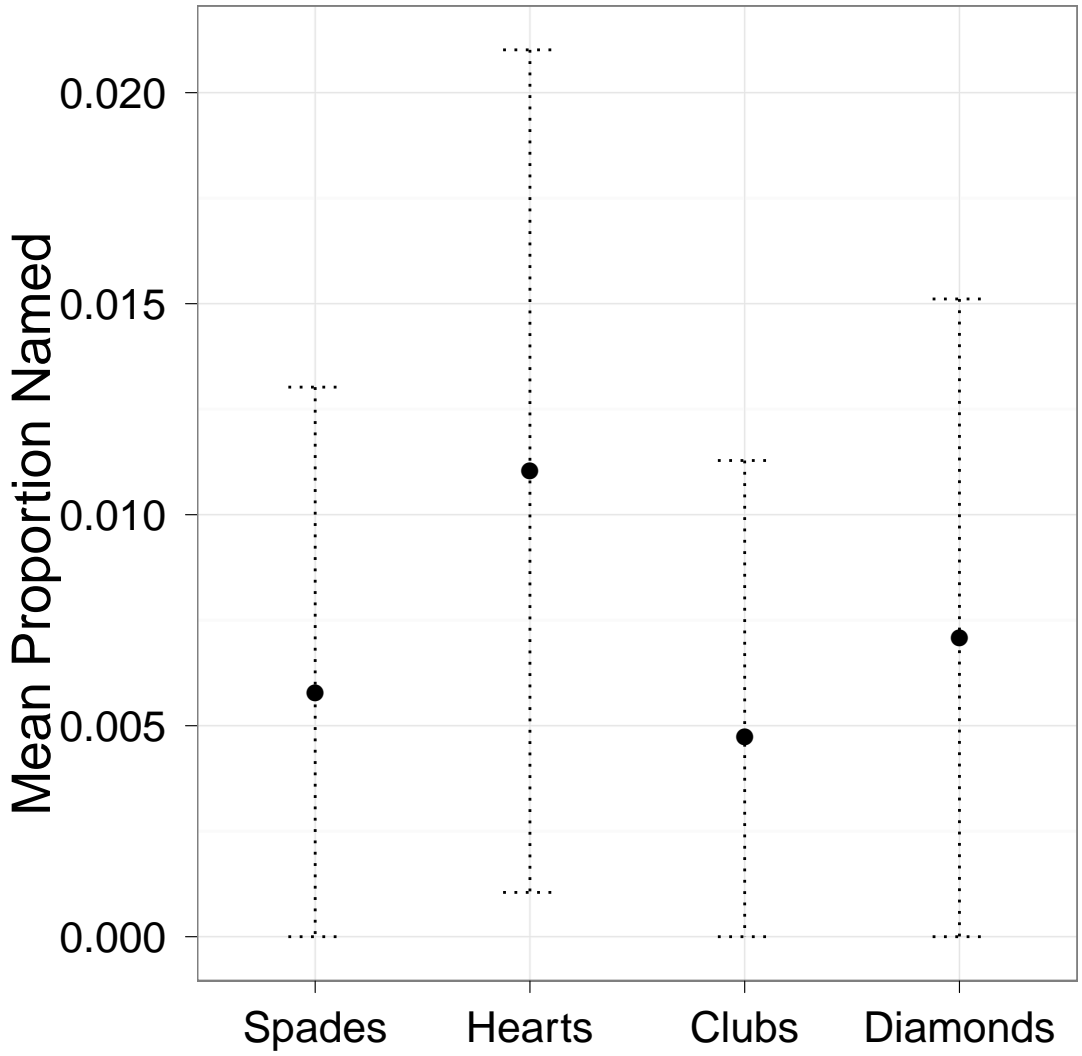


Figure C7: Mean Proportion of Number Cards Named by Suit.

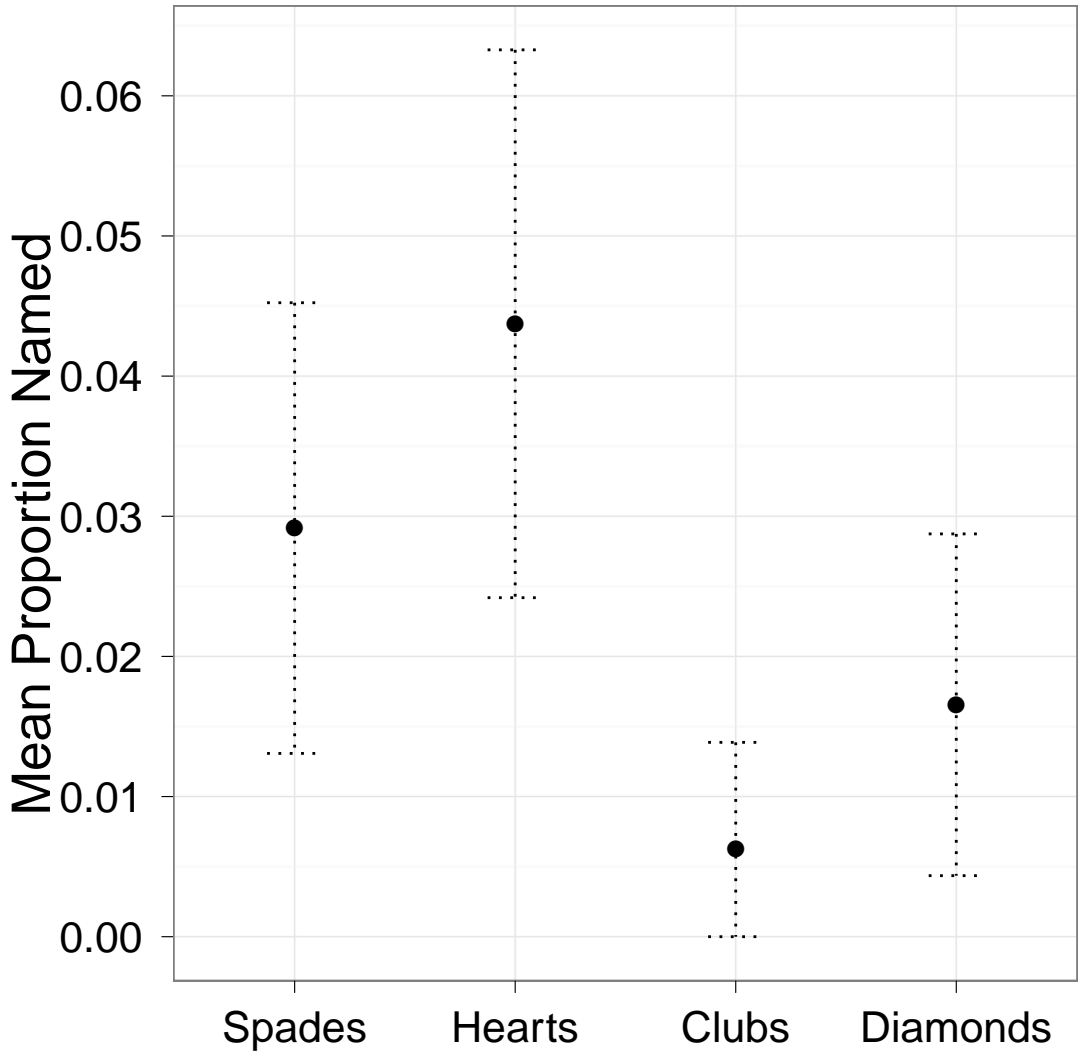


Figure C8: Mean Proportion of Face Cards Named by Suit.

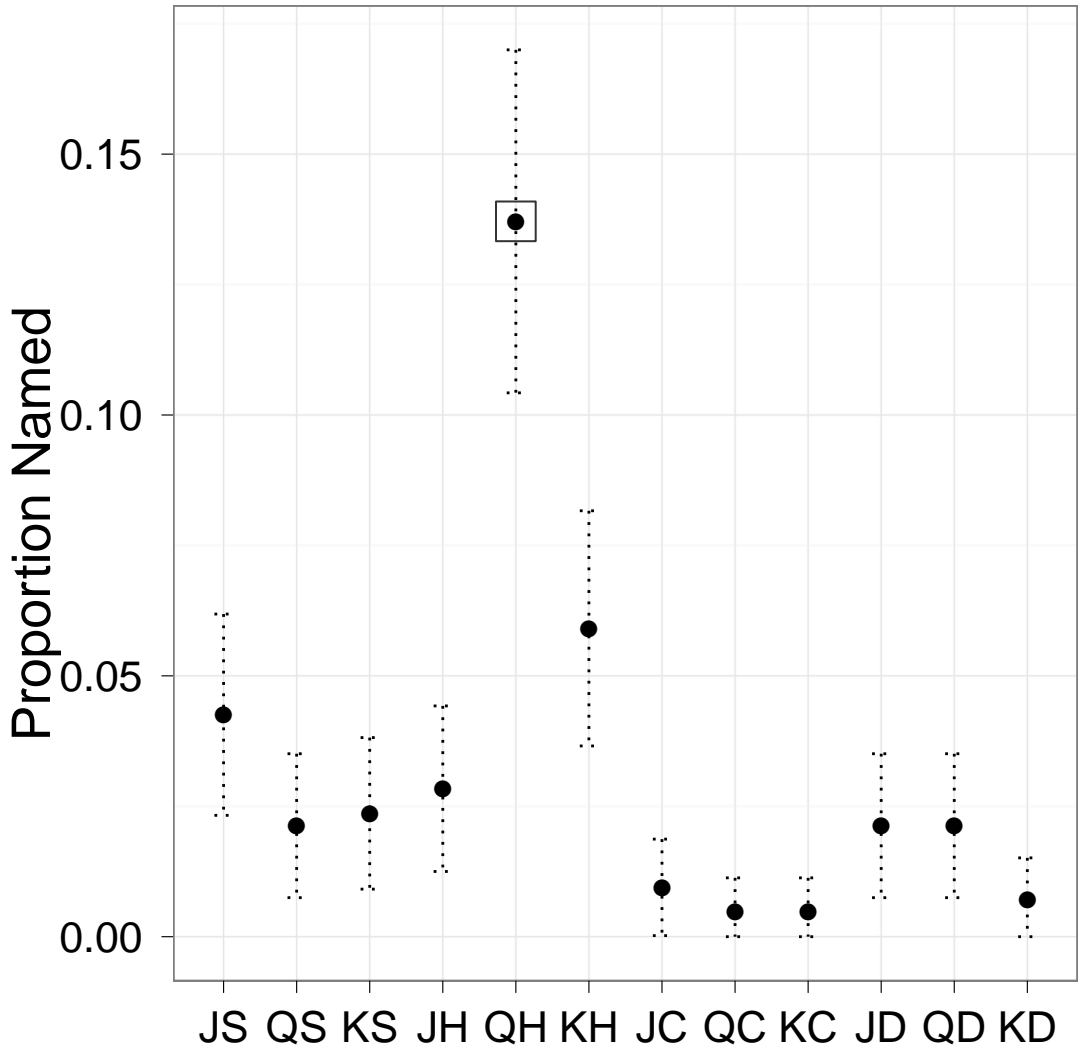


Figure C9: Proportion of Face Cards Named.

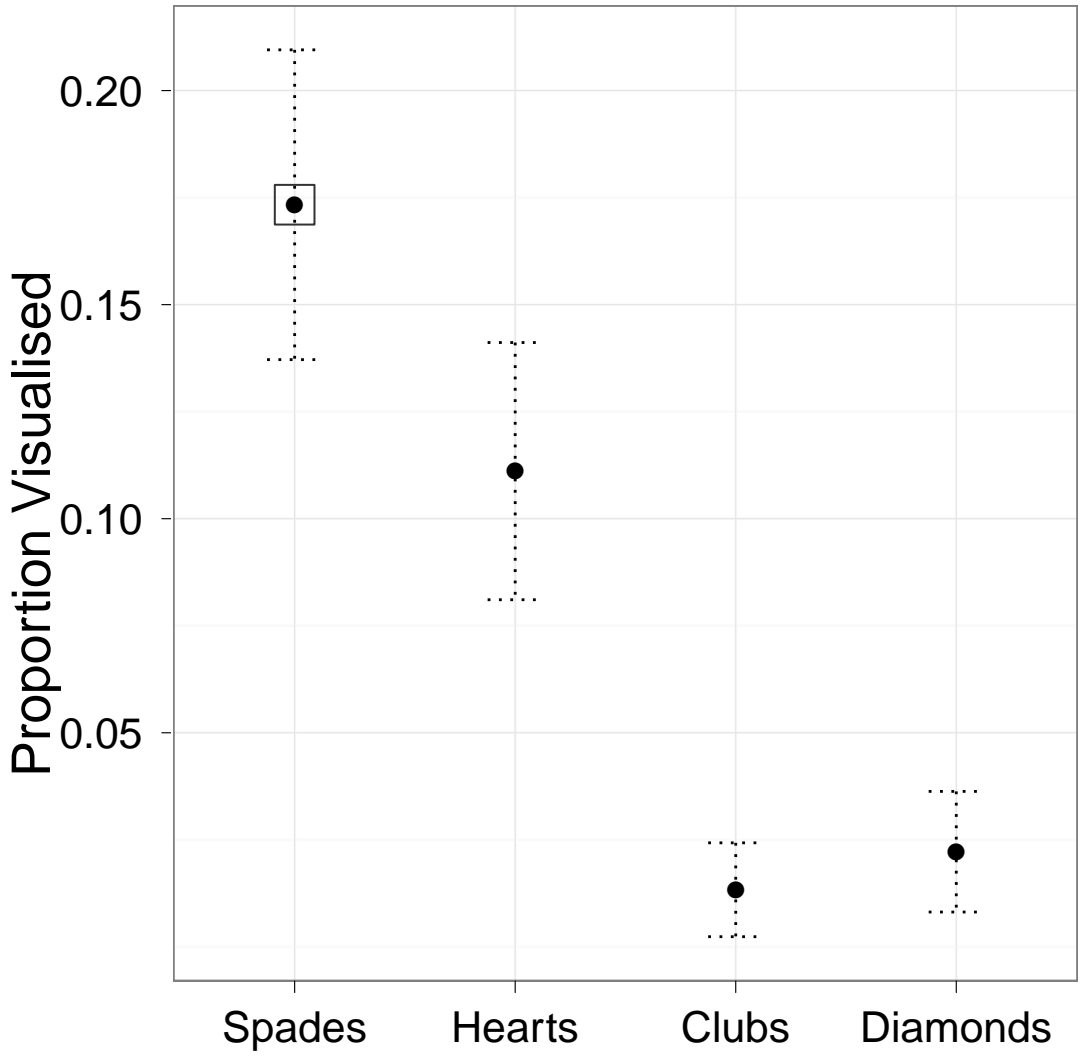


Figure C10: Proportion of Aces Visualised by Suit.

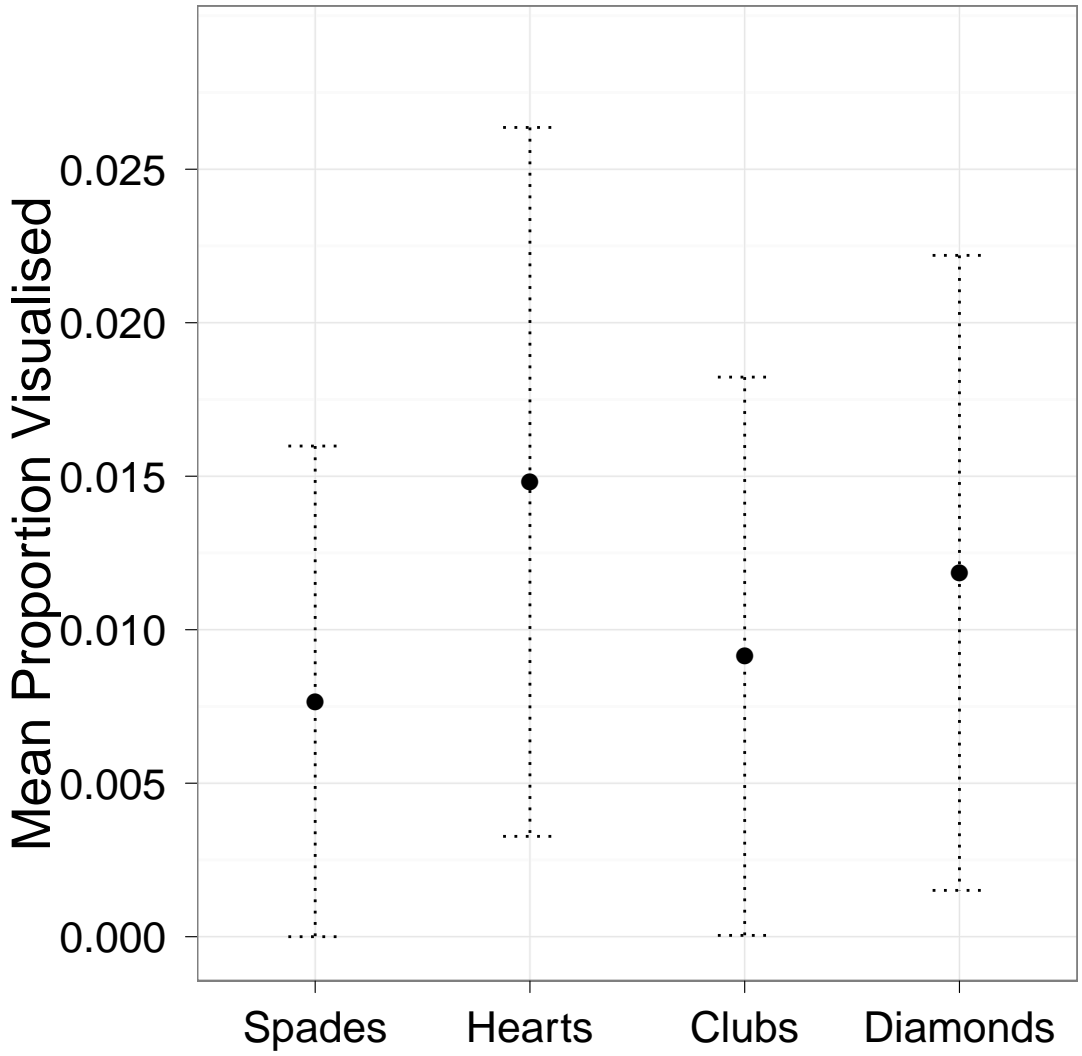


Figure C11: Mean Proportion of Number Cards Visualised by Suit.

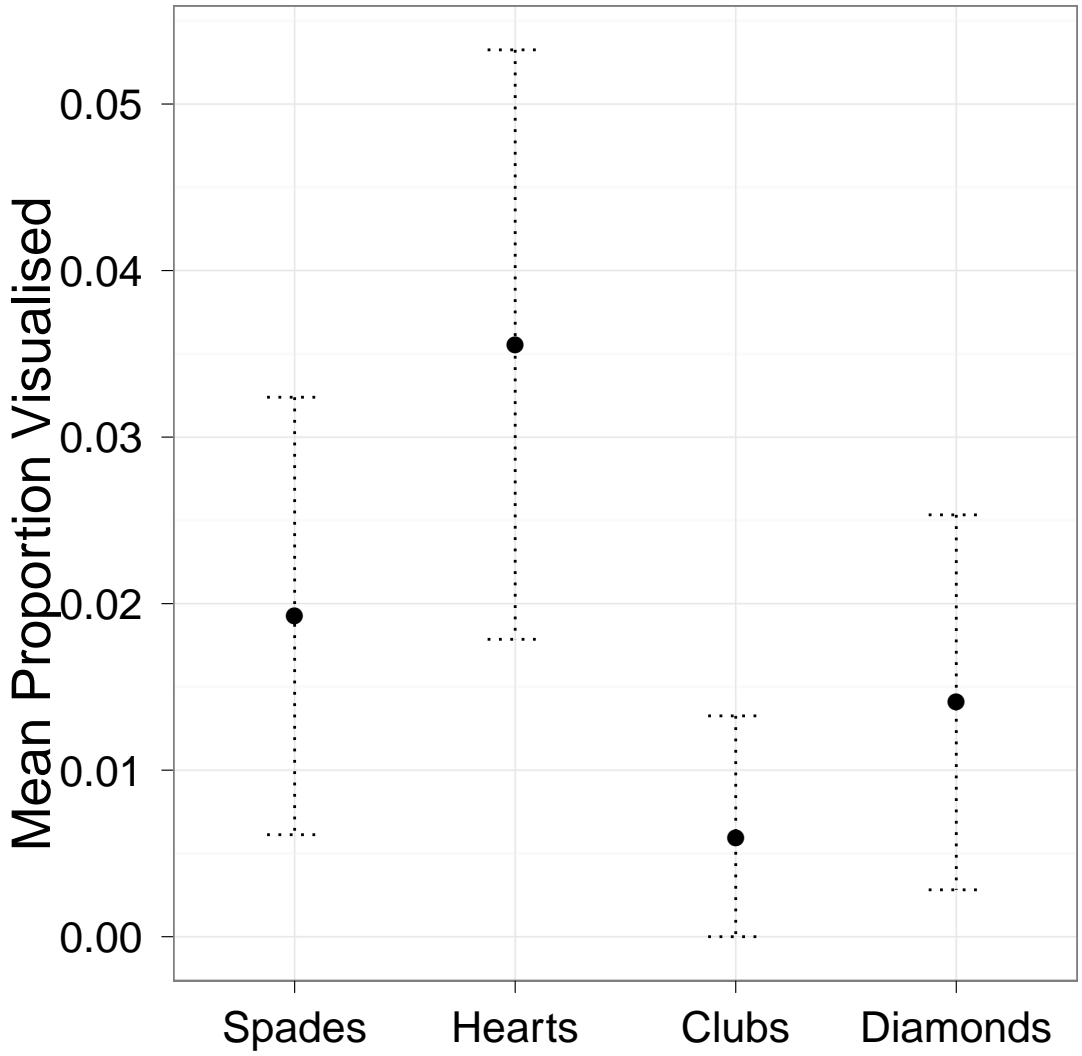


Figure C12: Mean Proportion of Face Cards Visualised by Suit.

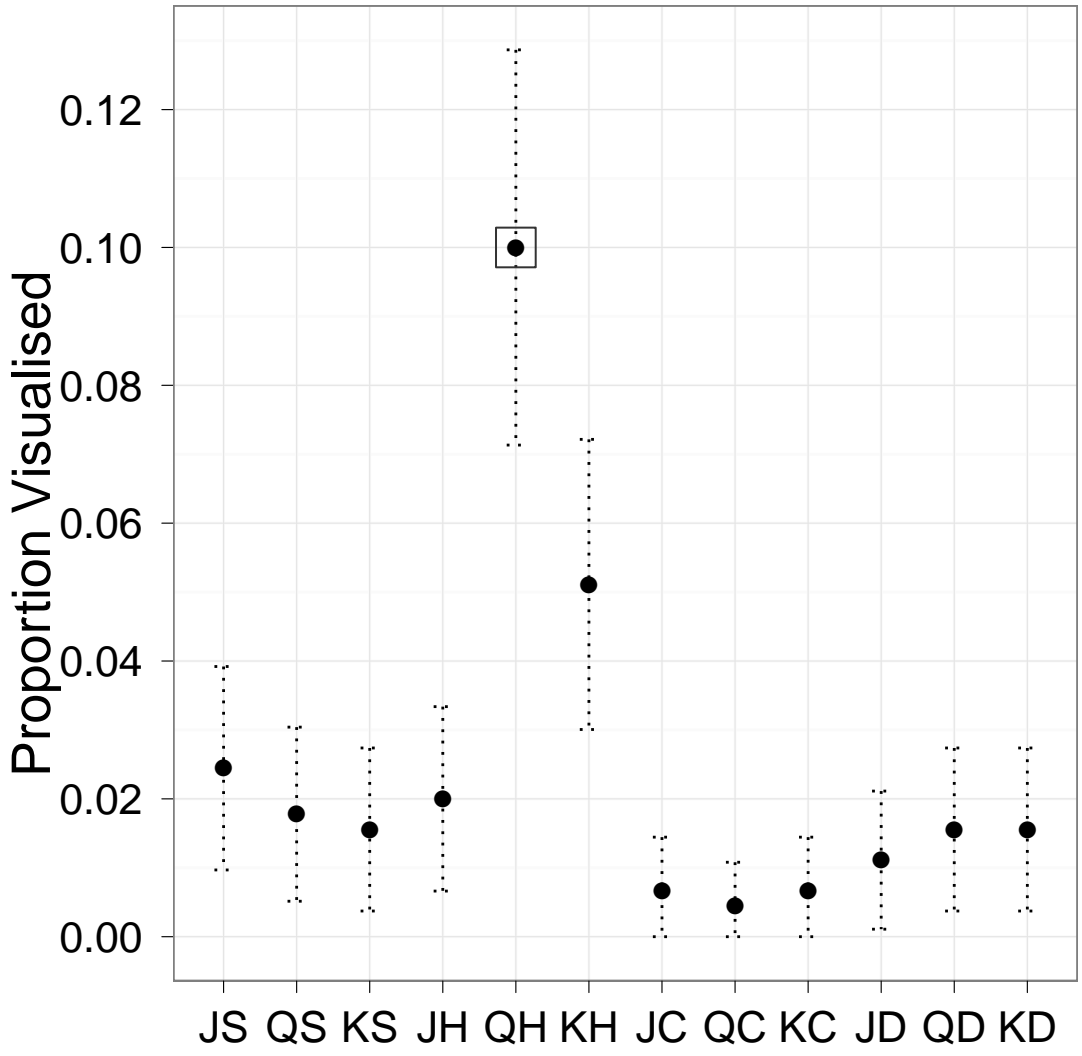


Figure C13: Proportion of Face Cards Visualised.