Risk aversion relates to cognitive ability: Fact or Fiction?

ONLINE APPENDIX

For online publication only

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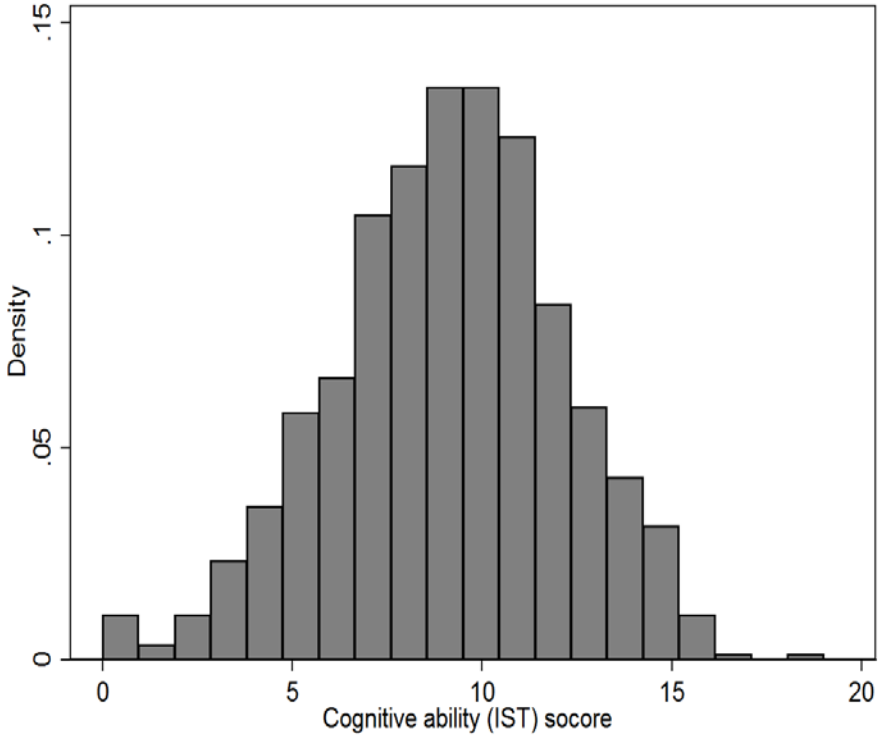
This document provides supplementary information to the paper "Risk aversion relates to cognitive ability: Fact or Fiction?". The appendix is organized into the following sections:

A. Distribution of our cognitive ability measure

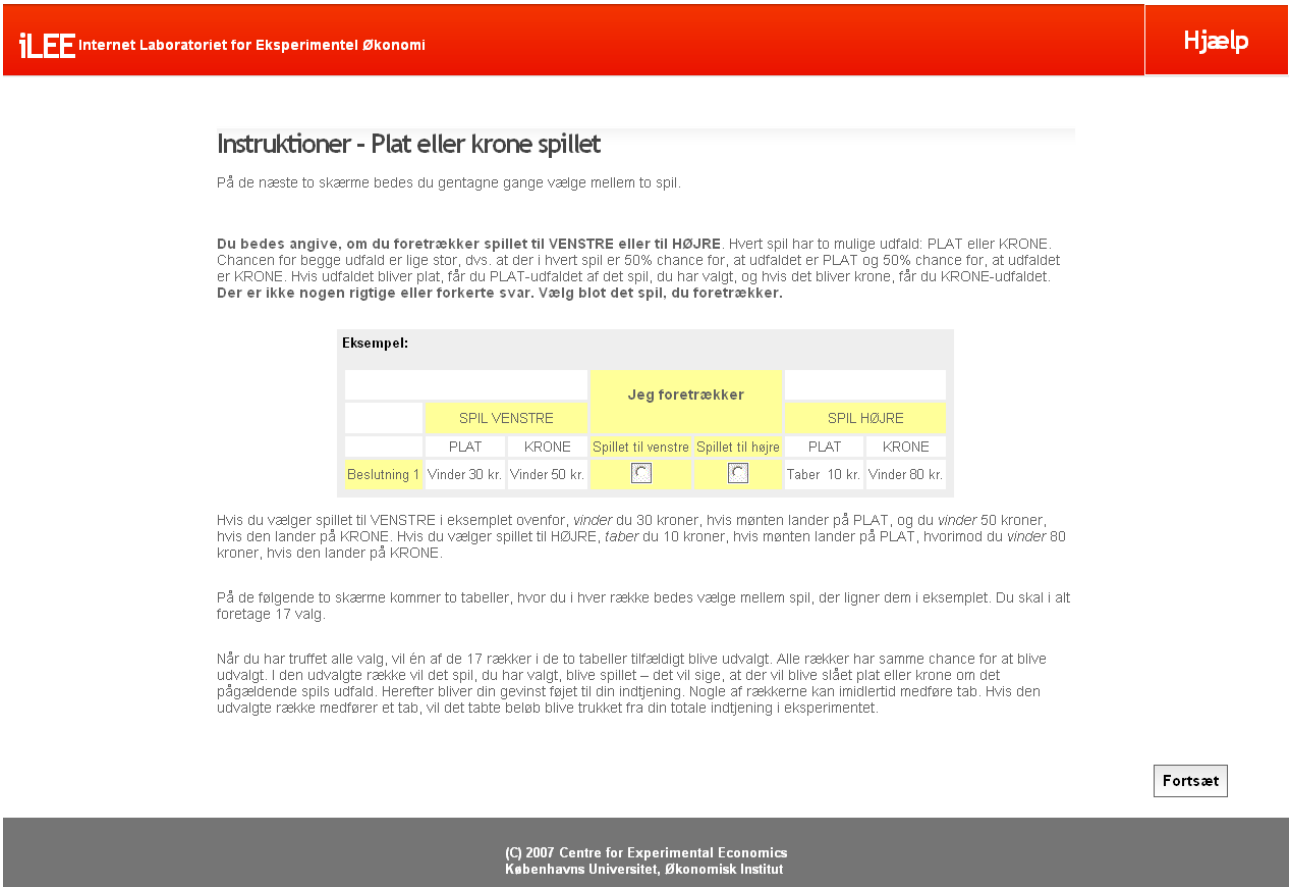
Figure A1. Distribution of our main cognitive ability measure (taken from IST R 2000)



Notes: The histogram is based on the subjects used in our main analysis. Subjects who always chose the Left lottery or always the Right lottery are excluded. Number of observations = 1756; Mean cognitive ability score = 8.8; Median cognitive ability score = 9.

B. Experimental instructions and screen shots

Screenshot S1: Experiment1, Risk Preference Elicitation Task, Instructions



Translation S1: Experiment 1, Risk preference elicitation task, Instructions

Instructions - The heads or tails game.

In the two following screens, please choose between two lotteries.

Please state, whether you prefer the lottery to the LEFT or to the RIGHT. Each lottery has two possible outcomes: HEADS or TAILS. The chances of getting either one are equally big, i.e. each lottery has a probability of 50 percent for HEADS and a probability of 50 percent for TAILS. If the outcome is HEADS, you will receive the HEADS outcome of your chosen lottery. If the outcome is TAILS, you will receive the TAILS outcome of your chosen lottery. **There is no right or wrong answer. Just choose the lottery you prefer.**

For example:

	I prefer					
	LEFT LOTTERY				RIGHT LOTTERY	
	HEADS	TAILS	The Left Lottery	The Right Lottery	HEADS	TAILS
Decision 1	Win 30 kr.	Win 50 kr.			Lose 10 kr.	Win 80 kr.

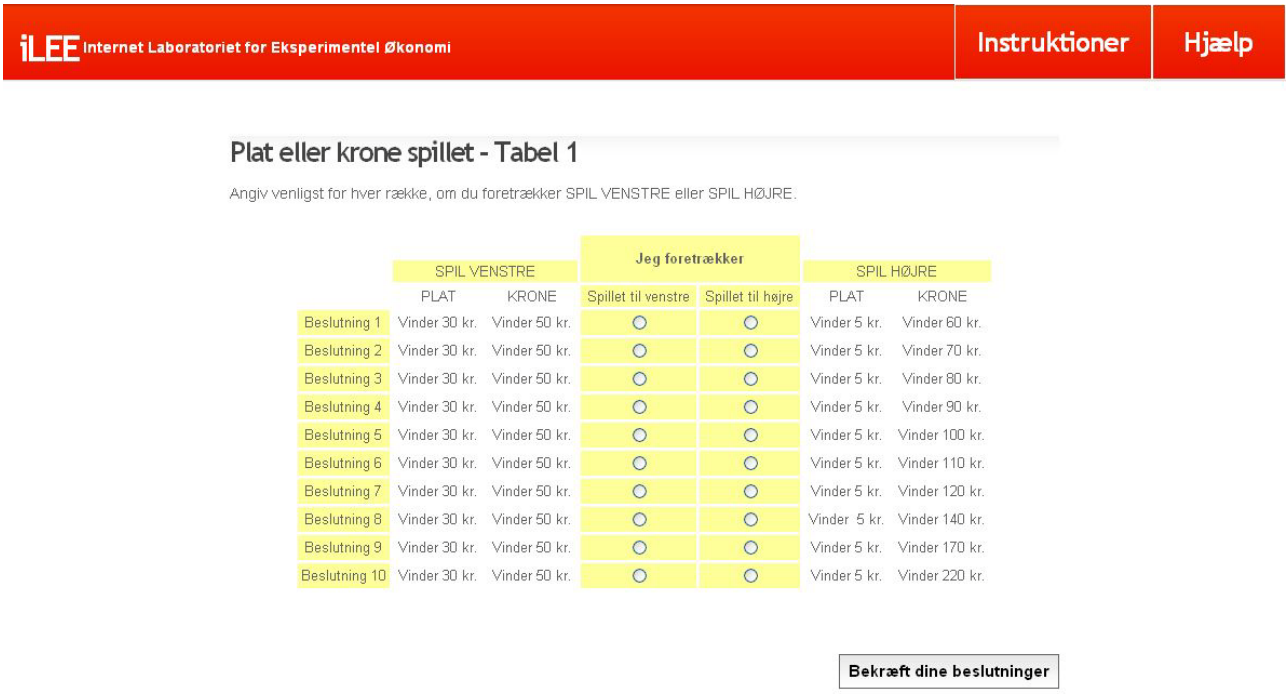
If you choose the lottery to the left in the example above: you will *win* 30 kroner if the coin shows HEADS; and you will *win* 50 kroner if the coin shows TAILS. If you choose the lottery to the right: you will *lose* 10 kroner if the coin shows HEADS; and you will *win* 80 kroner if it shows TAILS.

In the following two screens, there will be two tables, where you will be asked to choose between lotteries similar to the ones in the example. In total, you have to make 17 choices.

When you have made all you choices, one of the 17 rows will be randomly selected. All the rows have the same probability of being chosen. In the selected row, the lottery you have chosen will be played out – which means a coin will be flipped to determine the outcome of the lottery. Thereafter, your earnings will be added to your income. However, some of the rows can bring losses. If the selected row induces a loss, that loss will be deducted from your total income in the experiment.

Continue

Screenshot S2: Experiment 1, Risk Preference Elicitation Task, Price List 1



Translation S2: Experiment 1, Risk Preference Elicitation Task, Price List 1
The Head or Tails game – Table 1

For each row, please state if you prefer the LEFT LOTTERY or the RIGHT LOTTERY.

	LEFT LOTTERY		I prefer		RIGHT GAME	
	HEADS	TAILS	The left lottery	The right lottery	HEADS	TAILS
Decision 1	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 60 kr.
Decision 2	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 70 kr.
Decision 3	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 80 kr.
Decision 4	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 90 kr.
Decision 5	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 100 kr.
Decision 6	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 110 kr.
Decision 7	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 120 kr.
Decision 8	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 140 kr.
Decision 9	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 170 kr.
Decision 10	Win 30 kr.	Win 50 kr.			Win 5 kr.	Win 220 kr.

Confirm your decisions

Screenshot S3: Experiment 1, Raven progressive matrices – instruction

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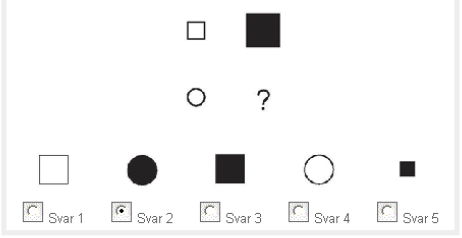
Instruktioner - Logiske Opgaver

Du er næsten færdig med eksperimentet. Det sidste, vi vil bede dig om, er at løse nogle logiske opgaver.

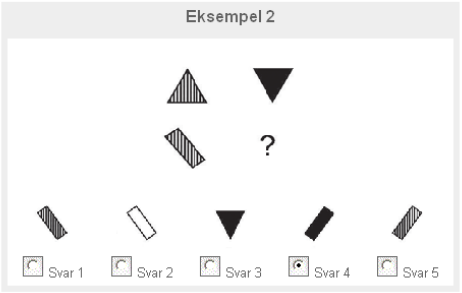
På hver af de følgende opgaver vil du øverst se et billede, som mangler en figur. Under billedet ser du fem figurer, hvoraf én fuldender billedet. Du bedes finde ud af, hvilken af de fem valgmuligheder, som skal indsættes i stedet for spørgsmålstegnet i billedet.

Eksempel 1



I den øverste række af billedet i eksempel 1 bliver den lille hvide firkant til en stor sort firkant. Derfor må den lille hvide cirkel i nederste række blive til en stor sort cirkel. Det korrekte svar i eksempel 1 er altså "Svar 2".

Eksempel 2



I eksempel 2 bliver trekanten i øverste række af billedet spejlet horisontalt (trekanten bliver vendt på hovedet) og bliver sort. Derfor skal rektanglet i nederste række også spejles horisontalt og blive sort. Det korrekte svar i eksempel 2 er altså "Svar 4".

Hver opgave har én logisk korrekt løsning. For hver opgave skal du klikke på den svar mulighed, du mener er den rigtige, herefter skal du trykke på Bekræft svar for, at dit svar bliver registeret.

Du har præcis **10 minutter** til at løse så mange af opgaverne som muligt; derefter afsluttes del 3 automatisk. **Forvent ikke at nå at løse alle opgaverne**. I løbet af de 10 minutter kan du **gå frem og tilbage mellem opgaverne, og du har mulighed for at ændre dine svar.** Du kan gå frem og tilbage i opgaverne på to måder. 1) Inden for de 10 minutter vil du kunne se en oversigtslinje i bunden af skærmen. Ved at trykke på tallene på den linje, kan du komme til den ønskede opgave 2) I hver ende af oversigtslinjen kan du også trykke på enten frem eller tilbage pilene.

Du kan til enhver tid forlade de logiske opgaver, selvom de 10 minutter ikke er gået. Skulle du ønske dette, trykker du blot på Afslut opgaverne.

Når du er klar til at gå i gang med at løse opgaverne, tryk da Start opgaver. Når de 10 minutter er gået, afsluttes de logiske opgaver automatisk. Bemærk, at såfremt du logger ud undervejs og vender tilbage senere, vil du ikke have mulighed for at fortsætte de logiske opgaver, men vil komme videre til afslutningen af eksperimentet.

Start opgaver

Translation S3: Experiment 1, Raven progressive matrices – instructions

Instructions - Logical problems.

You are almost done with the experiment. The last task we ask of you is to solve some logical problems.

At the top of each of the following problems, you will see a picture that is missing a figure. Below the picture you will see five figures, one of which completes the picture. Please determine which one of the five possible answers should be inserted to replace the question mark in the picture.

Example 1

In the top row of the picture in example one, the small white square becomes a big black square. Thus the small white circle in the bottom row will become a big black circle. The correct solution in example 1 is therefore "Answer 2"

Example 2

In example 2, the triangle in the top row was mirrored horizontally (the triangle was turned upside down) and colored black. Thus, the rectangle in the bottom row should also be mirrored horizontally and colored black. The correct solution example in example 2 is therefore "Answer 4"

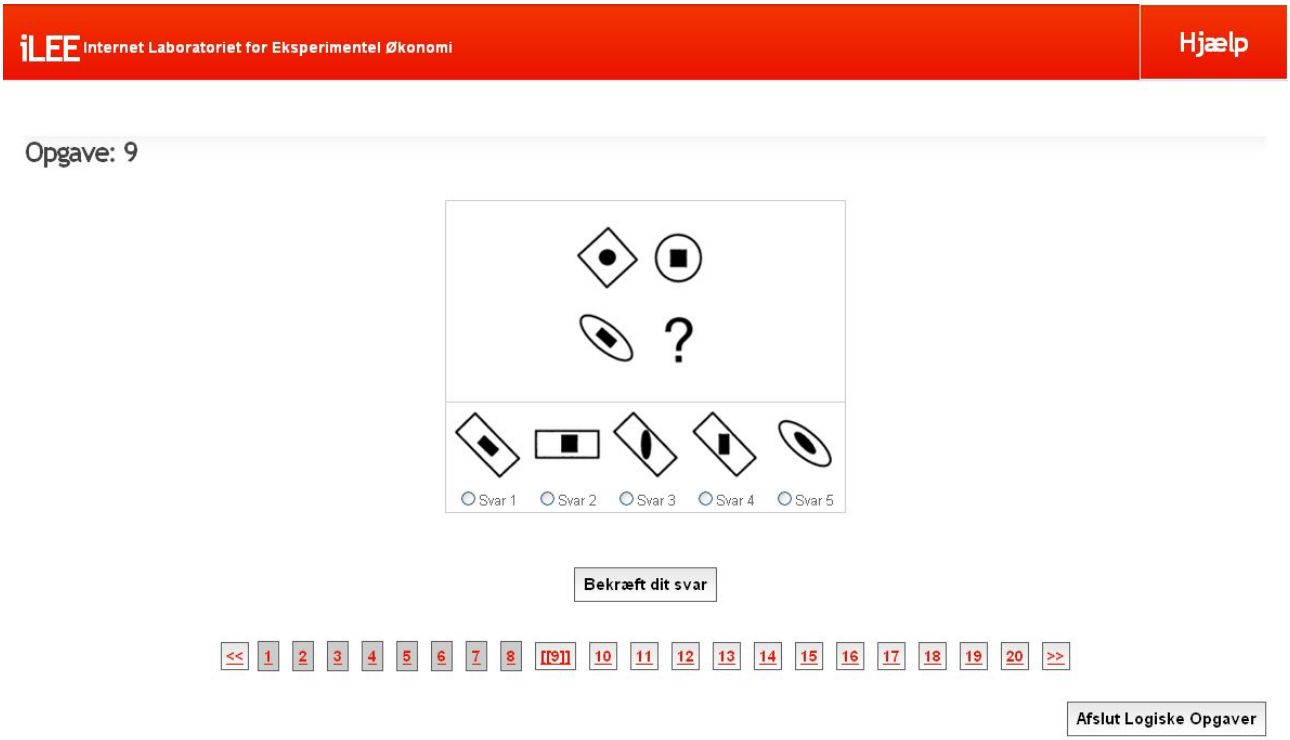
Each problem has one logical solution. In each problem you have to click on the answer you believe is correct, and then press Confirm Solution for your answer to be registered.

You have exactly **10 minutes** to solve as many of the problems as possible, and then part 3 will be automatically finished. **Do not expect to solve all the problems**. During the 10 minutes, you **can skip back and forth between the problems and you have the possibility of changing your answers.** You can skip between the problems in two ways. 1) During the 10 minutes you will see an overview line at the bottom of the screen. By pressing the numbers on that line, you can jump to the desired problem. 2) At the ends of the overview line you can press either the forward or back arrows.

You can leave the logical problem anytime you wish, even though the 10 minutes have not passed. Should you wish to do so, just press Finish Problems.

When you are ready to start solving the problems, press Start problems. When the 10 minutes have passed, the problems will end automatically. Note, that if you log out on the way and return later, you will not be able to continue the logical problems, but will be taken to the finish the experiment stage. Start Problems

Screenshot S4: Experiment 1, Raven progressive matrices – decision



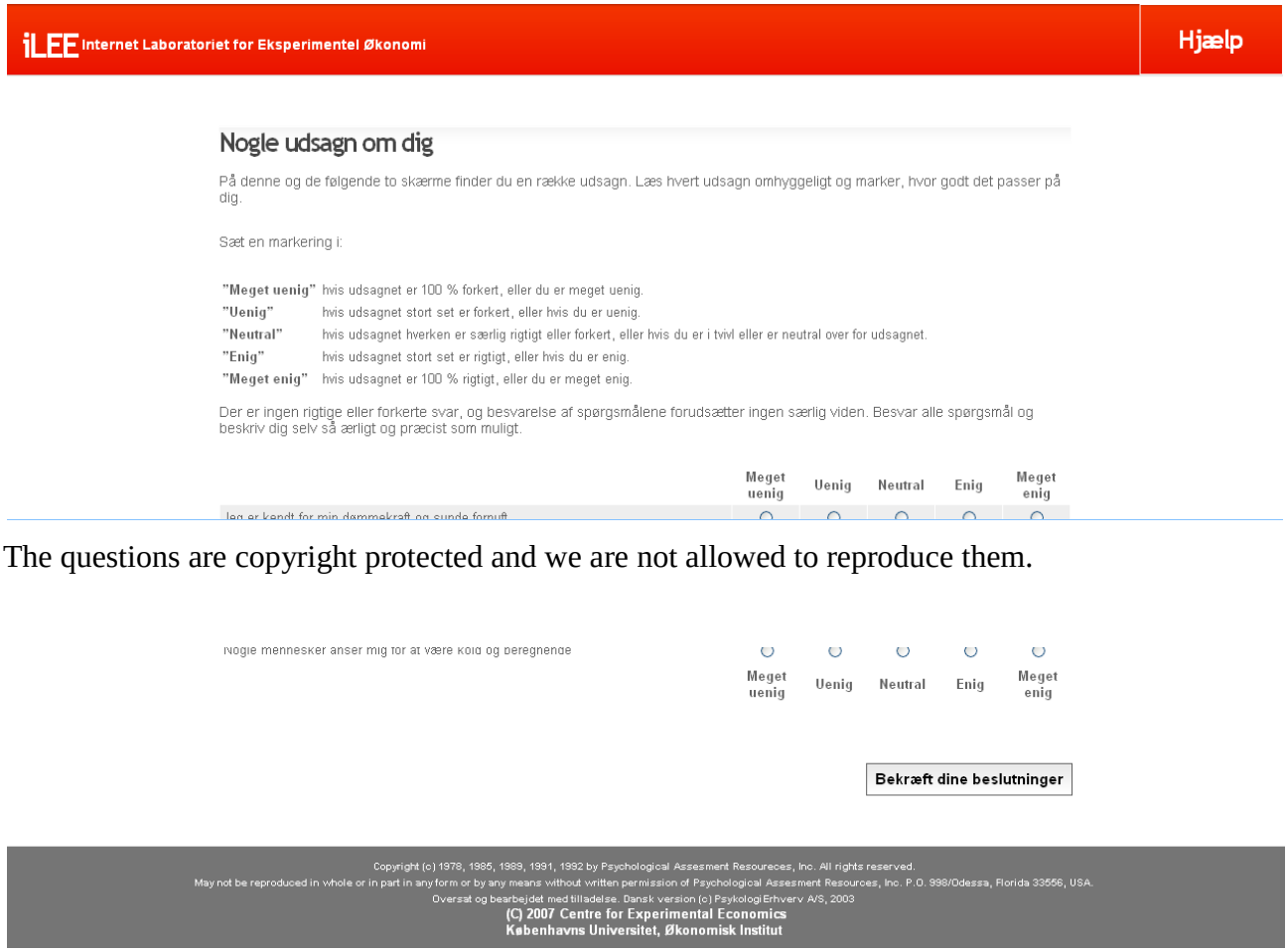
Translation S4: Experiment 1, Raven progressive matrices – decision

Confirm you answer

<< 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20 >>

Finish Logical Problems

Screenshot S5: Experiment 1, Personality traits



The questions are copyright protected and we are not allowed to reproduce them.

Translation S5: Experiment 1, Personality traits

Some statements about you

In this and the following screens, you will find a number of statements. Read each of the statements carefully and mark how well they fit you.

Mark either:

“Disagrees a lot” if the statement is 100 percent incorrect or you disagree a lot.

“Disagrees” if the statement is wrong on the whole or if you disagree.

“Neutral” if the statement is neither very wrong nor right, or if you are in doubt or neutral towards the question.

“Agrees” if the statement is correct on the whole, or if you agree.

“Agrees a lot” if the statement is 100 percent correct, or if you agree a lot.

There are no right or wrong answers, and the completion of the questions does not presume any special knowledge. Answer all the questions and describe yourself as honestly and precisely as possible.

	Disagrees a lot	**Disagrees**	**Neutral**	**Agrees**	**Agrees a lot**
…..					
	Disagrees a lot	Disagrees	Neutral	Agrees	Agrees a lot

Confirm your decisions

Screenshot S6: Experiment 2, Risk Preference Elicitation Task, Instructions

Translation S6: Experiment 2, Risk preference elicitation task, Instructions

Choose between Heads and Tails lotteries

In the third part of last year's experiment, you made a series of choices between two lotteries. We now would like you to repeat this task, but with somewhat different outcomes. There follows a repetition of the instructions.

Please state, whether you prefer the lottery to the LEFT or to the RIGHT. Each lottery has two possible outcomes: HEADS or TAILS. The outcome is randomly determined, and each outcome is equally likely. If the outcome is HEADS, you will receive the outcome stated below HEADS. If the outcome is TAILS, you will receive the outcome stated below TAILS.

There is no right or wrong answer. Just choose the lottery that you prefer.

You will be asked to make a total of 20 choices. One of the 20 rows will be randomly selected for payment. All rows have the same probability of being chosen. In the selected row, the lottery you have chosen will be played out and the outcome HEADS or TAILS will determine your earnings. Some of the rows can bring losses, which will be deducted from your total income in the experiment.

Here is an example:

	I prefer					
	LEFT LOTTERY				RIGHT LOTTERY	
	HEADS	TAILS	The Left Lottery	The Right Lottery	HEADS	TAILS
Decision 1	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 40kr.

If you choose the LEFT lottery, you will *win* 25 kroner if the coin shows HEADS, and 45 kroner if the coin shows TAILS. If you choose the RIGHT lottery, you will *win* 2 kroner if the coin shows HEADS, but you will *win* 40 kroner if the outcome is TAILS.

Continue

Screenshot S7: Experiment 2, Risk Preference Elicitation Task

Translation S7: Experiment 2, Risk Preference Elicitation Task

Choose between Head or Tails lotteries – (1/2)

Please state which lotteries you prefer.

	LEFT LOTTERY		I prefer		RIGHT GAME	
	HEADS	TAILS	The left lottery	The right lottery	HEADS	TAILS
Decision 1	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 40 kr.
Decision 2	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 50 kr.
Decision 3	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 55 kr.
Decision 4	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 60 kr.
Decision 5	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 65 kr.
Decision 6	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 70 kr.
Decision 7	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 75 kr.
Decision 8	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 95 kr.
Decision 9	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 135 kr.
Decision 10	Win 25 kr.	Win 45 kr.			Win 2 kr.	Win 215 kr.

Confirm your decisions

C. Robustness checks

This appendix contains a range of robustness checks. The appendix is divided into the following subsections:

i. Pearson's correlations coefficients between alternative risk aversion measures and cognitive ability measures
ii. Regression results (corresponding to Table 3 in the paper) using alternative measures of risk and cognitive ability
iii. Regression results (corresponding to Table 3 in the paper) excluding subjects whose completion times were among the slowest 10 percent of the sample
iv. Ordered probit regressions (corresponding to Table 3 in the paper)
v. Regression results on the (within subject) difference between number of safe choices between Experiment 1 and Experiment 2
vi. Structural estimations using a reduced set of covariates
vii. Structural estimations (corresponding to Table 4 in the paper) using CRT score as a measure of cognitive ability
viii. Structural estimations using the Expo-power utility function
ix. Structural estimations using alternative error specifications

To measure cognitive ability, we use either the IST (referred to as *Cognitive ability)* or the CRT (*Cognitive reflection)*. In the paper we only present and review results based on IST.

In sections i and ii we use three measures of risk preferences. First, we use *# number of safe choices (full sample),* which describes the number of safe choices using all individuals. Second, we use the measure *# number of safe choices (restricted sample),* which is the measure deployed throughout the paper. This measure excludes subjects that never switched (i.e. chose only the left or the right gamble). Third, we use *switch point*, which measures the row at which the individual first switched to choosing the right gamble. For this measure, subjects having no switch point or multiple switch points are excluded.

i. Correlations, alternative risk and cognitive ability measures

Table C1. Pearson's correlations

		Cognitive ability (IST)	Cognitive reflection (CRT)
Experiment 1	Switch point	-0.060 (0.025)	-0.182 (0.000)
	Number of safe choices, restricted sample	-0.073 (0.002)	-0.175 (0.000)
	Number of safe choices, full sample	-0.054 (0.009)	-0.085 (0.000)
Experiment 2	Switch point	0.108 (0.001)	0.0745 (0.026)
	Number of safe choices, restricted sample	0.114 (0.000)	0.084 (0.005)
	Number of safe choices, full sample	0.045 (0.090)	0.0654 (0.015)

ii. OLS regressions with alternative risk and cognitive ability measures

Table C2. OLS Regressions, Experiment 1, # safe choices (full sample), Cognitive ability (IST)

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	-0.0500***	-0.0549***	-0.0601***
	[0.0192]	[0.0210]	[0.0210]
Female		0.407***	0.227*
		[0.126]	[0.135]
Age		-0.00343	-0.00640
		[0.00478]	[0.00498]
Education1		-0.0120	-0.0374
		[0.227]	[0.227]
Education2		-0.0720	-0.132
		[0.209]	[0.210]
Education3		-0.269	-0.371
		[0.241]	[0.246]
Big5a			0.0233**
			[0.0117]
Big5c			0.0283**
			[0.0126]
Big5e			-0.0197*
			[0.0114]
Big5n			0.0227**
			[0.0109]
Big5o			0.0359***
			[0.0108]
Constant	4.719***	4.807***	2.638***
	[0.176]	[0.392]	[0.831]
Observations	2,333	2,333	2,333
R-squared	0.003	0.009	0.020

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C3. OLS Regressions, Experiment 1, Switch point, Cognitive ability (IST)

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	-0.0386**	-0.0443**	-0.0450**
	[0.0172]	[0.0183]	[0.0182]
Female		0.366***	0.155
		[0.107]	[0.116]
Age		-0.00389	-0.00374
		[0.00408]	[0.00428]
Education1		-0.143	-0.104
		[0.208]	[0.207]
Education2		-0.321	-0.289
		[0.196]	[0.196]
Education3		-0.467**	-0.420*
		[0.214]	[0.217]
Big5a			0.0384***
			[0.00955]
Big5c			-0.00304
			[0.0105]
Big5e			0.0162*
			[0.00965]
Big5n			0.0260***
			[0.00916]
Big5o			0.00954
			[0.00913]
Constant	5.529***	5.862***	3.545***
	[0.165]	[0.335]	[0.698]
Observations	1,415	1,415	1,415
R-squared	0.004	0.019	0.038

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C4. OLS Regressions, Experiment 1, # safe choices (restricted sample), Cognitive reflection (CRT)

VARIABLES	(1)	(2)	(3)
Cognitive reflection (CRT)	-0.307***	-0.264***	-0.261***
	[0.0413]	[0.0427]	[0.0427]
Female		0.304***	0.139
		[0.0953]	[0.103]
Age		0.00216	0.00140
		[0.00321]	[0.00339]
Education1		-0.132	-0.102
		[0.174]	[0.174]
Education2		-0.181	-0.168
		[0.162]	[0.162]
Education3		-0.372**	-0.342*
		[0.184]	[0.187]
Big5a			0.0334***
			[0.00866]
Big5c			-0.00660
			[0.00938]
Big5e			0.00560
			[0.00856]
Big5n			0.0178**
			[0.00826]
Big5o			0.00999
			[0.00810]
Constant	4.834***	4.710***	3.162***
	[0.0777]	[0.231]	[0.603]
Observations	1,758	1,758	1,756
R-squared	0.031	0.039	0.052

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C5. OLS Regressions, Experiment 1, # safe choices (full sample), Cognitive reflection (CRT)

VARIABLES	(1)	(2)	(3)
Cognitive reflection (CRT)	-0.230***	-0.189***	-0.202***
	[0.0557]	[0.0577]	[0.0578]
Female		0.341***	0.158
		[0.128]	[0.137]
Age		0.000823	-0.00189
		[0.00438]	[0.00459]
Education1		-0.00750	-0.0344
		[0.227]	[0.227]
Education2		-0.0652	-0.122
		[0.209]	[0.210]
Education3		-0.209	-0.313
		[0.243]	[0.247]
Big5a			0.0228*
			[0.0117]
Big5c			0.0260**
			[0.0126]
Big5e			-0.0225**
			[0.0114]
Big5n			0.0207*
			[0.0109]
Big5o			0.0374***
			[0.0108]
Constant	4.624***	4.429***	2.397***
	[0.102]	[0.309]	[0.806]
Observations	2,336	2,336	2,333
R-squared	0.007	0.011	0.021

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C6. OLS Regressions, Experiment 1, Switch point, Cognitive reflection (CRT)

VARIABLES	(1)	(2)	(3)
Cognitive reflection (CRT)	-0.327***	-0.295***	-0.292***
	[0.0470]	[0.0483]	[0.0482]
Female		0.252**	0.0519
		[0.107]	[0.116]
Age		-0.000636	-0.000837
		[0.00378]	[0.00398]
Education1		-0.135	-0.0982
		[0.205]	[0.205]
Education2		-0.304	-0.275
		[0.193]	[0.194]
Education3		-0.370*	-0.330
		[0.212]	[0.215]
Big5a			0.0383***
			[0.00945]
Big5c			-0.00569
			[0.0103]
Big5e			0.0129
			[0.00956]
Big5n			0.0227**
			[0.00907]
Big5o			0.0118
			[0.00904]
Constant	5.713***	5.821***	3.696***
	[0.0928]	[0.263]	[0.672]
Observations	1,417	1,417	1,415
R-squared	0.033	0.040	0.058

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C7. OLS Regressions, Experiment 2, # safe choices (full sample), Cognitive ability (IST)

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	0.0370*	0.0308	0.0314
	[0.0218]	[0.0240]	[0.0239]
Female		0.0314	-0.0688
		[0.144]	[0.155]
Age		-0.00305	-0.00761
		[0.00533]	[0.00549]
Education1		-0.0652	-0.0805
		[0.260]	[0.260]
Education2		0.00689	-0.0243
		[0.242]	[0.243]
Education3		0.233	0.186
		[0.279]	[0.283]
Big5a			0.0367***
			[0.0133]
Big5c			0.00175
			[0.0141]
Big5e			-0.0300**
			[0.0128]
Big5n			-0.00797
			[0.0122]
Big5o			0.0256**
			[0.0121]
Constant	5.449***	5.609***	5.023***
	[0.205]	[0.455]	[0.940]
Observations	1,396	1,396	1,396
R-squared	0.002	0.004	0.015

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C8. OLS Regressions, Experiment 2, Switch point, Cognitive ability (IST)

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	0.0662***	0.0509**	0.0528**
	[0.0204]	[0.0217]	[0.0217]
Female		-0.0644	-0.118
		[0.127]	[0.140]
Age		-0.00963**	-0.0115**
		[0.00470]	[0.00487]
Education1		0.689***	0.694***
		[0.240]	[0.241]
Education2		0.544**	0.550**
		[0.229]	[0.230]
Education3		0.545**	0.522**
		[0.255]	[0.259]
Big5a			0.0102
			[0.0116]
Big5c			0.00387
			[0.0125]
Big5e			-0.0198*
			[0.0116]
Big5n			0.000558
			[0.0106]
Big5o			0.0220**
			[0.0104]
Constant	6.004***	6.065***	5.704***
	[0.202]	[0.401]	[0.836]
Observations	892	892	892
R-squared	0.012	0.027	0.035

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C9. OLS Regressions, Experiment 2, # safe choices (restricted sample), Cognitive reflection (CRT)

VARIABLES	(1)	(2)	(3)
Cognitive reflection (CRT)	0.136***	0.128***	0.116**
	[0.0477]	[0.0492]	[0.0494]
Female		-0.0304	-0.0965
		[0.111]	[0.119]
Age		-0.0123***	-0.0136***
		[0.00361]	[0.00377]
Education1		0.411**	0.394**
		[0.196]	[0.196]
Education2		0.314*	0.300
		[0.184]	[0.184]
Education3		0.261	0.205
		[0.213]	[0.216]
Big5a			0.00624
			[0.00988]
Big5c			0.00875
			[0.0107]
Big5e			-0.0142
			[0.00968]
Big5n			0.00474
			[0.00908]
Big5o			0.0257***
			[0.00909]
Constant	5.324***	5.617***	4.909***
	[0.0894]	[0.260]	[0.683]
Observations	1,142	1,142	1,142
R-squared	0.007	0.023	0.032

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C10. OLS Regressions, Experiment 2, # safe choices (full sample), Cognitive reflection (CRT)

VARIABLES	(1)	(2)	(3)
Cognitive reflection (CRT)	0.155**	0.151**	0.134**
	[0.0635]	[0.0658]	[0.0660]
Female		0.0908	-0.0211
		[0.147]	[0.157]
Age		-0.00520	-0.00967*
		[0.00487]	[0.00507]
Education1		-0.0727	-0.0845
		[0.260]	[0.260]
Education2		-0.00810	-0.0332
		[0.242]	[0.243]
Education3		0.172	0.140
		[0.280]	[0.284]
Big5a			0.0368***
			[0.0133]
Big5c			0.00235
			[0.0141]
Big5e			-0.0271**
			[0.0128]
Big5n			-0.00632
			[0.0122]
Big5o			0.0239**
			[0.0121]
Constant	5.541***	5.744***	5.086***
	[0.119]	[0.354]	[0.913]
Observations	1,396	1,396	1,396
R-squared	0.004	0.006	0.017

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C11. OLS Regressions, Experiment 2, Switch point, Cognitive reflection (CRT)

VARIABLES	(1)	(2)	(3)
Cognitive reflection (CRT)	0.127**	0.132**	0.122**
	[0.0570]	[0.0584]	[0.0587]
Female		-0.0232	-0.0910
		[0.130]	[0.142]
Age		-0.0134***	-0.0151***
		[0.00442]	[0.00462]
Education1		0.683***	0.688***
		[0.240]	[0.241]
Education2		0.541**	0.548**
		[0.229]	[0.230]
Education3		0.505**	0.489*
		[0.256]	[0.260]
Big5a			0.0104
			[0.0116]
Big5c			0.00520
			[0.0125]
Big5e			-0.0157
			[0.0116]
Big5n			0.00312
			[0.0106]
Big5o			0.0202*
			[0.0104]
Constant	6.417***	6.483***	5.975***
	[0.114]	[0.306]	[0.816]
Observations	892	892	892
R-squared	0.006	0.026	0.033

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

iii. *OLS Regressions in which participants whose completion times were among the slowest 10 percent of the sample are excluded.*

Table C12. OLS Regressions Experiment 1, 10% fastest excluded

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	-0.0528***	-0.0545***	-0.0532***
	[0.0154]	[0.0169]	[0.0169]
Female		0.416***	0.259**
		[0.0985]	[0.107]
Age		-0.00178	-0.00160
		[0.00370]	[0.00385]
Education1		-0.142	-0.102
		[0.183]	[0.183]
Education2		-0.140	-0.124
		[0.170]	[0.171]
Education3		-0.432**	-0.396**
		[0.193]	[0.197]
Big5a			0.0324***
			[0.00923]
Big5c			-0.00448
			[0.00994]
Big5e			0.0119
			[0.00897]
Big5n			0.0175**
			[0.00869]
Big5o			0.00472
			[0.00854]
Constant	4.819***	4.894***	3.200***
	[0.143]	[0.312]	[0.665]
Observations	1,611	1,611	1,611
R-squared	0.007	0.024	0.035

Notes: Dependent variable is # safe choices (restricted sample). Cognitive ability is measured using the IST test. Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C13. OLS Regressions Experiment 2, 10% fastest excluded

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	0.0734***	0.0552***	0.0552***
	[0.0175]	[0.0192]	[0.0192]
Female		-0.0572	-0.104
		[0.114]	[0.124]
Age		-0.00870**	-0.00944**
		[0.00418]	[0.00429]
Education1		0.420*	0.402*
		[0.215]	[0.215]
Education2		0.350*	0.336*
		[0.202]	[0.202]
Education3		0.391*	0.333
		[0.229]	[0.233]
Big5a			0.00167
			[0.0106]
Big5c			0.00238
			[0.0114]
Big5e			-0.0150
			[0.0101]
Big5n			0.00406
			[0.00948]
Big5o			0.0277***
			[0.00955]
Constant	4.891***	5.145***	4.721***
	[0.165]	[0.371]	[0.754]
Observations	1,040	1,040	1,040
R-squared	0.017	0.026	0.036

Notes: Dependent variable is # safe choices (restricted sample). Cognitive ability is measured using the IST test. Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

iv. Ordered probit regressions

Table C14. Ordered probit regressions, Experiment 1

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	-0.0222***	-0.0235***	-0.0236***
	[0.00769]	[0.00842]	[0.00846]
Female		0.219***	0.122**
		[0.0501]	[0.0545]
Age		-0.00140	-0.00163
		[0.00187]	[0.00197]
Education1		-0.0657	-0.0490
		[0.0926]	[0.0929]
Education2		-0.109	-0.100
		[0.0861]	[0.0870]
Education3		-0.251**	-0.230**
		[0.0977]	[0.1000]
Big5a			0.0188***
			[0.00467]
Big5c			-0.00117
			[0.00505]
Big5e			0.00524
			[0.00459]
Big5n			0.0120***
			[0.00443]
Big5o			0.00281
			[0.00435]
Observations	1,756	1,756	1,756

Notes: Coefficient estimates from ordered probit regressions. Dependent variable is # safe choices (restricted sample). Cognitive ability is measured using the IST test. Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table C15. Ordered probit regressions, Experiment 2

VARIABLES	(1)	(2)	(3)
Cognitive ability (IST)	0.0323***	0.0235**	0.0229**
	[0.00951]	[0.0104]	[0.0104]
Female		-0.0379	-0.0726
		[0.0628]	[0.0681]
Age		-0.00450**	-0.00545**
		[0.00227]	[0.00236]
Education1		0.241**	0.231**
		[0.113]	[0.113]
Education2		0.171	0.162
		[0.106]	[0.107]
Education3		0.153	0.113
		[0.122]	[0.124]
Big5a			0.00364
			[0.00571]
Big5c			0.00455
			[0.00619]
Big5e			-0.00997*
			[0.00558]
Big5n			0.00190
			[0.00525]
Big5o			0.0167***
			[0.00525]
Observations	1,142	1,142	1,142

Notes: Coefficient estimates from ordered probit regressions. Dependent variable is # safe choices (restricted sample). Cognitive ability is measured using the IST test. Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

v. OLS regressions on the (within) difference in number of safe choices between Experiment 1 and Experiment 2

An alternative way to analyze the data is to study within variation in the number of safe choices for those subjects that take part in both Experiment 1 and Experiment 2. Define this difference as Number of safe choices (Experiment 2) – Number of safe choices (Experiment 1). Given the structure of the two lists, we then expect, for rational individuals with a given risk-preference, more safe choices in Experiment 2 and hence a positive difference. Mistakes will put a downward bias on this measure due to the fact that Experiment 2 is constructed to create a downward bias on the number of safe choices.

Table C16. OLS Regressions, Difference in number of safe choices

VARIABLES	(1)	(2)	(3)
Cognitive Ability (IST)	0.0927***	0.0949***	0.0998***
	[0.0285]	[0.0306]	[0.0308]
Female		-0.390**	-0.311
		[0.191]	[0.209]
Age		0.00161	0.000739
		[0.00643]	[0.00667]
Education1		-0.347	-0.320
		[0.363]	[0.364]
Education2		-0.252	-0.226
		[0.341]	[0.345]
Education3		0.404	0.499
		[0.375]	[0.389]
Big5a			0.0109
			[0.0173]
Big5c			-0.0378**
			[0.0175]
Big5e			-0.00559
			[0.0168]
Big5n			-0.0243
			[0.0150]
Big5o			-0.0148
			[0.0152]
Constant	0.780***	1.012*	2.876**
	[0.280]	[0.577]	[1.183]
Observations	1,396	1,396	1,396
R-squared	0.007	0.017	0.022

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

vi. Structural estimations, CRRA, reduced set of covariates

Table C17. Estimates of risk preferences and noisiness, Contextual utility

	(1)		(2)	
VARIABLES	γ	τ	γ	τ
Cognitive ability (IST)	-0.00796*		-0.00338	-0.0146***
	[0.00448]		[0.00396]	[0.00133]
Constant	0.325***	0.230***	0.287***	0.363***
	[0.0439]	[0.00527]	[0.0416]	[0.0151]
Observations	27,920	27,920	27,920	27,920

Notes: The estimations are based on the CRRA utility function. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table C18 Estimates of risk preferences and noisiness, Contextual utility

	(1)		(2)	
VARIABLES	γ	τ	γ	τ
Cognitive ability (IST)	-0.00750		-0.00444	-0.00892***
	[0.00482]		[0.00442]	[0.00140]
Female	0.0646**		0.0618**	0.0216**
	[0.0276]		[0.0286]	[0.00979]
Age	0.000230		-0.000752	0.00285***
	[0.00112]		[0.00108]	[0.000368]
Education1	0.0125		0.0539	-0.0142
	[0.0539]		[0.0429]	[0.0171]
Education2	0.0177		0.0446	-0.0147
	[0.0493]		[0.0437]	[0.0173]
Education3	-0.0203		0.0316	-0.0532***
	[0.0575]		[0.0492]	[0.0178]
Constant	0.271***	0.229***	0.260***	0.190***
	[0.0961]	[0.00526]	[0.0808]	[0.0275]
Observations	27,920	27,920	27,920	27,920

Notes: The estimations are based on the CRRA utility function. Education1 refers to participants degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

vii. Structural estimations, CRRA, Cognitive Reflection

Table C19. Estimates of risk preferences and noisiness, Cognitive Reflection

	(1)		(2)	
VARIABLES	γ	τ	γ	τ
Cognitive Reflection (CRT)	-0.00137		0.00512	-0.0323***
	[0.0120]		[0.0128]	[0.00484]
Female	0.0307		0.0268	0.0160
	[0.0319]		[0.0290]	[0.0102]
Age	-7.39e-05		-0.00121	0.00329***
	[0.000974]		[0.000982]	[0.000356]
Education1	0.00949		0.0470	-0.0185
	[0.0526]		[0.0598]	[0.0169]
Education2	0.00655		0.0460	-0.0228
	[0.0498]		[0.0587]	[0.0166]
Education3	-0.0434		0.00964	-0.0521***
	[0.0550]		[0.0598]	[0.0171]
Big5a	0.00788***		0.00769***	0.000431
	[0.00265]		[0.00269]	[0.000767]
Big5c	0.00458		0.00421	-0.000724
	[0.00293]		[0.00297]	[0.000831]
Big5e	-0.00681***		-0.00602**	-0.00154*
	[0.00251]		[0.00236]	[0.000803]
Big5n	0.00102		0.000381	-0.000338
	[0.00245]		[0.00236]	[0.000764]
Big5o	0.00798***		0.00671***	0.000849
	[0.00238]		[0.00257]	[0.000695]
Constant	-0.189	0.228***	-0.138	0.187***
	[0.181]	[0.00521]	[0.195]	[0.0513]
Observations	27,920	27,920	27,920	27,920

Notes: Education1 refers to participants' degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a to Big5o refer to the scores of the Big five personality dimensions. Standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

viii. Structural estimations, Expo-power utility

In this section we replace the CRRA utility function with the more flexible Expo-power function (Saha, 1993) which uses two parameters to characterize the curvature of the utility function (ρ and α). This function includes constant relative risk aversion and constant absolute risk aversion as special cases. The Expo-Power function has the following form:

$$u(x) = \frac{1 - e^{\alpha x^{1-\rho}}}{\alpha}$$

Table C20. Expo-Power function

	(1)			(2)		
VARIABLES	ρ	α	τ	ρ	α	τ
Cognitive ability	0.0171***	0.000124		-0.00258	-0.000159	-0.00884***
	[0.00622]	[9.22e-05]		[0.00719]	[0.000156]	[0.00132]
Female	-0.0415	0.000261		-0.122	0.00197	0.00535
	[0.0332]	[0.000503]		[0.0769]	[0.00162]	[0.0112]
Age	-0.00779***	-8.56e-05***		-0.00049	-3.53e-05	0.00255***
	[0.000857]	[1.52e-05]		[0.00206]	[3.29e-05]	[0.000377]
Constant	0.115	0.00879***	0.185***	0.147	0.00924***	0.169***
	[0.0816]	[0.00135]	[0.00555]	[0.153]	[0.00280]	[0.0263]
Observations	27,920	27,920	27,920	27,920	27,920	27,920

Notes: The estimations are based on the Expo-Power utility function. Cognitive ability measured using the IST test. Robust standard errors in brackets.
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

ix. Structural estimations, alternative error models

It has previously been pointed out that estimates may differ significantly depending on the choice of stochastic model (Wilcox 2008; Harrison and Rutström 2008). We therefore estimate a series of models that differ in terms of how the stochastic errors are modeled. More specifically, we estimate models building on the Luce error structure (introduced by Luce 1959 and popularized by Holt and Laury 2002) and to further enrich the error structure, we add errors—trembles—that are unrelated to the underlying utility difference between the gambles (see for example Harless and Camerer 1994 and Moffatt and Peters 2001).

In the Luce error specification (Luce 1959) the probability of choosing left is given by:

$$Pr(L) = \frac{EU(L)^{1/\tau}}{EU(L)^{1/\tau} + EU(R)^{1/\tau}}$$

where τ is a structural noise parameter that specifies how close choices follow the underlying expected utility specification. As τ approaches 0 choice probabilities goes to 0 or 1 according depending on the sign of (3) and as τ increases, choices become more random.

We estimate the CRRA utility function with the Luce error specifications using maximum likelihood. The results are reported in Table C21. Model 1 show a specification in which only the risk aversion parameter γ depend on cognitive ability and other covariates. We confirm the findings of Table 4 in the main text. We find a negative effect of cognitive ability on the risk parameter, suggesting that higher cognitive ability maps into less risk aversion. When we also allow the noise parameter τ to depend on cognitive ability in model 2, the relation between cognitive ability and the risk parameter turns insignificant whereas the relation between cognitive ability and noise is significant.

Table C21. Estimates of risk preferences and noisiness, Luce model

	(1)		(2)	
VARIABLES	γ	τ	γ	τ
Cognitive ability	-0.0140***		-0.00611	-0.00900***
	[0.00462]		[0.00470]	[0.00161]
Female	0.0434		0.0327	0.0149
	[0.0314]		[0.0301]	[0.0129]
Age	0.00213**		-0.000706	0.00341***
	[0.00106]		[0.00106]	[0.000483]
Education1	-0.0111		0.0275	-0.0249
	[0.0475]		[0.0446]	[0.0236]
Education2	-0.0119		0.0201	-0.0206
	[0.0475]		[0.0473]	[0.0243]
Education3	-0.0824		-0.0143	-0.0571**
	[0.0516]		[0.0527]	[0.0239]
Big5a	0.00702**		0.00770***	-0.000883
	[0.00288]		[0.00270]	[0.00101]
Big5c	0.00337		0.00426*	-0.00127
	[0.00237]		[0.00240]	[0.000994]
Big5e	-0.00482**		-0.00561***	0.000414
	[0.00193]		[0.00215]	[0.000850]
Big5n	0.00126		0.000854	0.000522
	[0.00203]		[0.00230]	[0.000880]
Big5o	0.00646***		0.00641***	-0.000202
	[0.00189]		[0.00196]	[0.000839]
Constant	-0.0368	0.223***	-0.0314	0.228***
	[0.176]	[0.00700]	[0.175]	[0.0593]
Observations	27,920	27,920	27,920	27,920

Notes: The estimations are based on the CRRA utility function. Cognitive ability measured using the IST test. Education1 refers to participants degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big Five personality dimensions. Age is divided by 100. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

In the example in Section 3 of the main text, we introduced noise as a probability to randomly choose between the options. We now extend the error structures above which such a tremble probability ω and obtain the following choice probabilities for the contextual utility specification:

$$\Pr(L) = (1 - \omega)\Phi\left(\frac{\Delta EU}{\tau\mu}\right) + \frac{\omega}{2}$$

and for the Luce specification:

$$Pr(L) = (1 - \omega)\frac{EU(L)^{1/\tau}}{EU(L)^{1/\tau} + EU(R)^{1/\tau}} + \frac{\omega}{2}$$

The results are presented in Table C22 and Table C23. Again, in the first model in each table, only the risk aversion parameter γ depend on cognitive ability and other covariates. Again, we observe that γ is (borderline) significantly related to cognitive ability when we do not let the noise parameter depend on cognitive ability ($p = 0.008$ in the Luce specification and $p = 0.12$ in the contextual utility specification). When we allow also the noise parameters to depend on the cognitive ability, we confirm our previous findings. Cognitive ability is significantly related to the noise parameters but not to the risk aversion parameter. In particular, cognitive ability appear to be strongly related the tremble parameter ω. A one standard deviation increase in cognitive ability decreases the propensity to tremble with 5 to 6 percentage points (amounting to a 15-19 percent decrease for the median subject).[1]

[1] This ignores the indirect effects due to the relationship between cognitive ability and τ, so it can be seen as a lower bound of the effects.

Table C22. Estimates of risk preferences and noisiness, Contextual utility model with trembles

	(1)			(2)		
VARIABLES	γ	μ	τ	γ	μ	τ
Cognitive ability	-0.00704			-0.00546	-0.0142***	-0.00385**
	[0.00453]			[0.00432]	[0.00446]	[0.00153]
Female	0.0246			0.0218	0.0424	0.00446
	[0.0304]			[0.0268]	[0.0280]	[0.0109]
Age	-0.00146			-0.00193**	0.00531***	0.000652
	[0.00106]			[0.000910]	[0.00107]	[0.000472]
Education1	0.0128			0.0472	-0.0436	-0.00922
	[0.0502]			[0.0458]	[0.0446]	[0.0156]
Education2	0.00511			0.0359	-0.0575	0.000172
	[0.0502]			[0.0430]	[0.0445]	[0.0163]
Education3	-0.0385			0.00428	-0.0959*	-0.0272
	[0.0531]			[0.0460]	[0.0502]	[0.0171]
Big5a	0.00714***			0.00753***	-0.00337	0.00232***
	[0.00252]			[0.00243]	[0.00233]	[0.000689]
Big5c	0.00492*			0.00494*	-0.000462	-6.93e-05
	[0.00287]			[0.00274]	[0.00252]	[0.000744]
Big5e	-0.00625***			-0.00580**	-0.00124	0.000334
	[0.00235]			[0.00253]	[0.00286]	[0.00107]
Big5n	0.00124			0.00156	-2.08e-05	0.000748
	[0.00233]			[0.00209]	[0.00190]	[0.000757]
Big5o	0.00723***			0.00598**	0.00284	-0.000178
	[0.00241]			[0.00240]	[0.00349]	[0.00105]
Constant	-0.0547	0.267***	0.127***	-0.0756	0.259*	0.0463
	[0.178]	[0.0158]	[0.00648]	[0.155]	[0.142]	[0.0487]
Observations	27,920	27,920	27,920	27,920	27,920	27,920

Notes: The estimations are based on the CRRA utility function. Cognitive ability measured using the IST test. Education1 refers to participants degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big Five personality dimensions. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table C23. Estimates of risk preferences and noisiness, Luce model with trembles

	(1)			(2)		
VARIABLES	γ	μ	τ	γ	μ	τ
Cognitive ability	-0.0123***			-0.00588	-0.0185***	-0.00226*
	[0.00464]			[0.00404]	[0.00450]	[0.00120]
Female	0.0382			0.0175	0.0669***	-0.00549
	[0.0309]			[0.0293]	[0.0259]	[0.00780]
Age	-4.49e-05			-0.00182*	0.00553***	0.000602*
	[0.00108]			[0.00106]	[0.000852]	[0.000327]
Education1	-0.0158			0.0324	-0.0269	-0.0175
	[0.0496]			[0.0455]	[0.0442]	[0.0163]
Education2	-0.0216			0.0239	-0.0391	-0.00722
	[0.0505]			[0.0456]	[0.0419]	[0.0164]
Education3	-0.0846			-0.0103	-0.106**	-0.0226
	[0.0534]			[0.0466]	[0.0453]	[0.0165]
Big5a	0.00762***			0.00804***	-0.00115	0.00108
	[0.00231]			[0.00206]	[0.00215]	[0.000689]
Big5c	0.00467*			0.00460*	0.000207	-0.000534
	[0.00267]			[0.00250]	[0.00251]	[0.000656]
Big5e	-0.00530**			-0.00492**	-0.00337	0.00146**
	[0.00241]			[0.00233]	[0.00223]	[0.000628]
Big5n	0.00147			0.00207	-0.00184	0.00122**
	[0.00205]			[0.00209]	[0.00217]	[0.000618]
Big5o	0.00680***			0.00511**	0.00410*	-0.000950
	[0.00217]			[0.00243]	[0.00230]	[0.000640]
Constant	-0.0549	0.266***	0.122***	-0.0688	0.269*	0.0603
	[0.162]	[0.0180]	[0.0067]	[0.155]	[0.144]	[0.0447]
Observations	27,920	27,920	27,920	27,920	27,920	27,920

Notes: The estimations are based on the CRRA utility function. Cognitive ability measured using the IST test. Education1 refers to participants degrees from high school and vocational school, Education2 represents tertiary education up to 4 years and Education3 tertiary education of at least 4 years. Participants with basic schooling (up to 10 years of schooling) are our baseline category. Big5a-Big5o refer to the scores of the Big Five personality dimensions. Age is divided by 100. Robust standard errors in brackets. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

D. Cognitive ability and risk preference: theory

Several explanations for why there might be a link between risk preference and cognitive ability have been proposed in the literature. Dohmen et al. (2010) suggest that the relationship may be due to choice bracketing or the "two-system" approach (e.g. in Dohmen et al. 2010). Burks et al. (2009) attribute the relationship to noisy utility evaluations. All of these accounts are in some sense related to mistakes, but those mistakes are different from the kind of decision mistakes that we consider.

Choice bracketing claims that subjects consider decisions in isolation (i.e., narrow bracketing), thus ignoring their wider consequences, for instance with respect to their overall wealth (see Rabin 2000). Now, if subjects with high cognitive ability are more likely to engage in broad bracketing, these subjects will make more risk-neutral choices over small gambles than subjects with low cognitive ability. But, this is so even if both types of subjects have the same underlying global risk aversion. Hence, this account does not imply that cognitive ability is correlated with risk preferences. A similar critique applies to the "two systems" account which posits that choices are governed by a rapid and intuitive emotional System 1 and a slower, deliberative and cognitive System 2. Looking only at the surface, it is intuitive to assume that emotionally driven individuals are more prone to risk aversion and that "cold" cognitively oriented individuals end up with risk neutral choices. However, if we take theory seriously, risky decisions according to expected utility theory involve both systems; they are the result of a mental process combining (emotionally based) preferences about outcomes and the (cognitive) probability calculations of them. Thus, separating individuals into either of these systems does not seem congruent with expected utility concepts. The argument based on noisy utility evaluations put forth by Burks et al. (2009) presumes that evaluations of complex options involving risk are noisier than evaluations of options without risk. If individuals are averse to this type of noise and individuals with low cognitive abilities are noisier, they will be more prone to choose the safe over the risky options, thereby establishing a link between risk preferences and cognitive ability.

None of the alternative accounts predicts that the relationship between risk-preference estimates and cognitive ability is sensitive to varying the choice set. Hence, the alternative explanations cannot explain the findings of our experiment.

E. References

Burks, Stephen V., Jeffrey P. Carpenter, Lorenz Goette, and Aldo Rustichini. 2009. "Cognitive Skills Affect Economic Preferences, Strategic Behavior, and Job Attachment." *Proceedings of the National Academy of Sciences* 106 (19): 7745–50.

Dohmen, Thomas, Armin Falk, David Huffman, and Uwe Sunde. 2010. "Are Risk Aversion and Impatience Related to Cognitive Ability?" *American Economic Review* 100 (3): 1238–60.

Harless, David W. and Colin F. Camerer. 1994. "The Predictive Utility of Generalized Expected Utility Theories." *Econometrica* 62 (6): 1251–89.

Harrison, Glenn W. and E. Elisabet Rutström. 2008. "Risk Aversion in the Laboratory." in James C. Cox, Glenn W. Harrison (ed.) Risk Aversion in Experiments (Research in Experimental Economics, Volume 12). Bingley, UK: Emerald. 41-196.

Holt, Charles A. and Susan K. Laury. 2002. "Risk Aversion and Incentive Effects." *American Economic Review* 92 (5): 1644–55.

Luce, R. Duncan. 1959. "Individual choice behavior". New York: Wiley.

Moffatt, Peter and Simon Peters. 2001. "Testing for the Presence of a Tremble in Economic Experiments." *Experimental Economics* 4 (3): 221-228.

Rabin, Matthew. 2000. Notes and Comments, "Risk Aversion and Expected-utility Theory: A Calibration Theorem." *Econometrica*, 68(5): 1281–1292.

Saha, Atanu. 1993. "Expo-power utility: A Flexible Form for Absolute and Relative Risk Aversion." *American Journal of Agricultural Economics* 75 (4): 905–13.

Wilcox, Nathaniel T. 2008. "Stochastic models for binary discrete choice under risk: A critical primer and econometric comparison." in James C. Cox, Glenn W. Harrison (ed.) Risk Aversion in Experiments (Research in Experimental Economics, Volume 12). Bingley, UK: Emerald. 197-292.