

Online Appendix for "The Effects of Expected Value and Episodic Memory on Preference Reversals" by Yong Lu, Marek Nieznański and Michał Obidziński

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A Lists of Lottery

A.1 *Experiment 1*

Table A.1 contains the 2 lottery pairs of fillers, the 22 lottery pairs of targets, and the 22 lottery pairs of distractors used for yielding the different EVs *between* bet pairs and for the memory test. The EV for each pair of bets is the same.

A.2 *Experiment 2*

Table A.2, Table A.3, and Table A.4 contain the target, attraction decoy, buffer, and distractor bets (cf., Figure B.1) used for yielding the different EVs *within* the P-bet and \$-bet in a given bet pair and for the memory test.

Table A.1: Products, images, MSRPs, EVs, and loss and gain ratios of paired “P-bet” and “\$-bet” options: Fillers, targets, and distractors.

No.	Products ^a	Images	MSRPs ^b	Options ^c	EVs	No.	Products ^a	Images	MSRPs ^b	Options ^c	EVs
1	Helio cereals honey candy		3.5	(70%, 2; 30%, -2) (30%, 26; 70%, -10)	2.8	2	Swarovski symbolic bracelet		375.0	(75%, 3; 25%, -1) (25%, 23; 75%, -5)	750.0
22 target pairs and their corresponding 22 distractor pairs:											
2 filler pairs:											
3	Italian blanket and bed		425.0	(70%, 2; 30%, -1) (30%, 6; 70%, -1) (85%, 2; 15%, -1) (15%, 6; 85%, -1)	467.5 658.8 21.3	4	Philips coffer machine		1450.0	(75%, 3; 25%, -2) (25%, 13; 75%, -2) (85%, 3; 15%, -2) (15%, 13; 85%, -2)	2537.5 3262.5 362.5
5	Vitarol marinated mushroom		4.0	(85%, 2; 15%, -1) (15%, 16; 85%, -1) (30%, 16; 70%, -1)	6.2 16.4	6	Super Zings cyber squad set		30.0	(70%, 2; 30%, -2) (30%, 12; 70%, -4) (80%, 2; 20%, -2)	24.0 36.0 -48.0
7	Książęce black beer		3.8	(70%, 2; 30%, -1) (80%, 3; 20%, -1) (20%, 19; 80%, -2)	4.4 8.4	8	LG LKB television		1250.0	(15%, 12; 85%, -4) (85%, 2; 15%, -2) (15%, 32; 85%, -4)	1750.0 8250.0
9	Marmalade donuts		3.6	(85%, 3; 15%, -1) (70%, 3; 30%, -1) (30%, 13; 70%, -3)	8.6 6.5	10	Massimo Giacom “Halloween” cap		33.0	(75%, 2; 25%, -2) (25%, 22; 75%, -6) (30%, 32; 70%, -4)	1250.0 33.0
11	Unity Varsovia bicycle		1300.0	(20%, 13; 80%, -3) (85%, 3; 15%, -1) (80%, 2; 20%, -1) (20%, 19; 80%, -3)	0.7 8.6 1820.0	12	Dyson vacuum cleaner		370.0	(80%, 2; 20%, -2) (20%, 22; 80%, -6) (85%, 3; 15%, -2) (15%, 49; 85%, -6)	39.6 39.6 832.5 2867.5
				(70%, 2; 30%, -1) (30%, 19; 70%, -3)	1430.0 4680.0					(75%, 2; 25%, -2) (25%, 22; 75%, -6) (80%, 2; 20%, -2) (20%, 22; 80%, -6) (85%, 3; 15%, -2) (15%, 49; 85%, -6) (75%, 2; 25%, -2) (25%, 22; 75%, -6) (80%, 2; 20%, -2) (20%, 22; 80%, -6) (85%, 3; 15%, -2) (15%, 49; 85%, -6) (70%, 3; 30%, -2)	33.0 39.6 39.6 832.5 2867.5 555.0

Table A.1: Continued.

No.	Products ^a	Images	MSRPs ^b	Options ^c	EVs	No.	Products ^a	Images	MSRPs ^b	Options ^c	EVs
13	Prymat grill		3.0	(75%, 3; 25%, -2) (25%, 31; 75%, -8) (85%, 3; 15%, -2)	5.3 6.8 11.1	14	Beko microwave		600.0	(80%, 3; 20%, -2) (20%, 42; 80%, -8) (70%, 3; 30%, -2)	1200.0 900.0 2700.0
15	Parker jotter pen		35.0	(85%, 2; 15%, -1) (15%, 33; 85%, -4) (75%, 2; 25%, -1)	54.3 43.8 248.5	16	Philips steam generator		430.0	(70%, 3; 30%, -1) (30%, 20; 70%, -6) (85%, 3; 15%, -1)	774.0 1032.0 215.0
17	Vespa motorcycle		1550.0	(30%, 33; 70%, -4) (75%, 2; 25%, -2) (25%, 40; 75%, -12)	1550.0 1860.0 5580.0	18	Unbranded air moisturizer		38.0	(80%, 2; 20%, -2) (20%, 54; 80%, -12) (85%, 2; 15%, -2)	45.6 45.6 171.0
19	Frozen honey cake		3.5	(30%, 40; 70%, -1) (85%, 3; 15%, -1) (15%, 50; 85%, -6)	8.4 7.7 41.3	20	Honor smart touch watch		36.0	(80%, 3; 20%, -1) (30%, 50; 70%, -6) (85%, 2; 15%, -2)	28.8 50.4 -72.0
21	HP laptop		1600.0	(80%, 2; 20%, -2) (30%, 100; 85%, -16) (80%, 2; 20%, -2)	2240.0 1920.0 30080.0	22	Electric toothbrush		48.0	(85%, 3; 15%, -2) (25%, 67; 75%, -20) (85%, 3; 15%, -2)	84.0 108.0 -333.6
23	Tissot automatic watch		1400.0	(30%, 100; 70%, -16) (80%, 3; 20%, -2) (20%, 90; 80%, -20)	2800.0 2450.0 18200.0	24	Nike Jordan Air 1 Retro High		400.0	(15%, 67; 85%, -20) (85%, 2; 15%, -1) (75%, 2; 25%, -1)	620.0 500.0 5240.0

Note: ^aThe descriptions of the products are not shown to the participants.

^bMSRPs denote the manufacturer's suggested retail prices (PLN) per single product.

^cAmong the affiliated four options of each product, the upper and lower two represent the targets and their distractors, respectively.

Table A.2: EVDs of lotteries and words: Targets, competitors, attraction decoys, and buffers.^a

No.	Words				Words					
	Lottery	EVs	EVDs	Targets	Decoys	No.	Lottery	EVs	EVDs	
	Targets, competitors, and decoys:									
1	(70%, 23; 30%, -17) (25%, 68; 75%, -8) (60%, 23; 40%, -17)	11.0	0%	<u>kadlub</u> <u>ciocia</u>	<u>znajomy</u>	2	(70%, 37; 30%, -18) (35%, 79; 65%, -11) (30%, 79; 70%, -11)	20.5	0%	<u>plaszcz</u> <u>łańcuch</u>
3	(75%, 35; 25%, -49) (25%, 92; 75%, -12) (64%, 35; 36%, -49)	14.0	0%	<u>tablica</u> <u>górnik</u>	<u>kodeks</u>	4	(75%, 40; 25%, -32) (40%, 70; 60%, -10) (34%, 70; 66%, -10)	22.0	0%	<u>gromada</u> <u>twórcza</u>
5	(80%, 25; 20%, -20) (30%, 65; 70%, -5) (68%, 25; 32%, -20)	16.0	0%	<u>ubranie</u> <u>kolajka</u>	<u>grzbiet</u>	6	(80%, 32; 20%, -45) (30%, 81; 70%, -11) (26%, 81; 74%, -11)	16.6	0%	<u>gardło</u> <u>wejście</u>
7	(85%, 17; 15%, -9) (30%, 67; 70%, -10) (72%, 17; 28%, -9)	13.1	0%	<u>klient</u> <u>dźwięk</u>	<u>zegarek</u>	8	(85%, 24; 15%, -66) (25%, 66; 75%, -8) (21%, 66; 79%, -8)	10.5	0%	<u>ziarno</u> <u>oparcie</u>
9	(70%, 29; 30%, -17) (40%, 75; 60%, -12) (60%, 29; 40%, -17)	15.2	(+) 50%	<u>koncert</u> <u>dworzec</u>	<u>siatka</u>	10	(75%, 30; 25%, -18) (35%, 92; 65%, -8) (30%, 92; 70%, -8)	18.0 27.0	(+) 50%	<u>krzesło</u> <u>styczeń</u>
11	(80%, 16; 20%, -9) (25%, 75; 75%, -3) (68%, 16; 32%, -9)	11.0	(+) 50%	<u>więzień</u> <u>egzamin</u>	<u>silnik</u>	12	(85%, 22; 15%, -14) (30%, 90; 70%, -3) (26%, 90; 74%, -3)	16.6 24.9	(+) 50%	<u>kartka</u> <u>północ</u>
13	(70%, 27; 30%, -19) (30%, 48; 70%, -8) (60%, 27; 40%, -19)	13.2	(+) 50%	<u>dREWNO</u> <u>kuchnia</u>	<u>chodnik</u>	14	(75%, 35; 25%, -15) (40%, 48; 60%, -7) (34%, 48; 66%, -7)	22.5 15.0	(+) 50%	<u>przewód</u> <u>magazyn</u>
		8.6						11.7		<u>komora</u>

Table A.2: Continued.

No.	Lottery	Words				Words					
		EVs	EVDs	Targets	Decoys	No.	Lottery	EVs	EVDs	Targets	Decoys
15	(80%, 31; 20%, -19) (25%, 74; 75%, -6)	21.0	(↑)	stolik		16	(85%, 27; 15%, -35) (30%, 65; 70%, -11)	17.7	(↑)	biurko	
		14.0	50%	bohater	wakacje			11.8	50%	centrum	
17	(68%, 31; 32%, -19) (70%, 20; 30%, -3) (40%, 79; 60%, -9)	15.0				18	(26%, 65; 74%, -11) (75%, 32; 25%, -52)	8.8	(↓)	spodnie	hrabia
		13.1	100%	autobus	tesknić			22.0	100%	zołądek	
19	(60%, 20; 40%, -3) (80%, 20; 20%, -40)	10.8				20	(30%, 85; 70%, -5) (26%, 85; 74%, -5)	18.4	(↓)	prezent	wysiętek
		8.0	100%	randka				8.4	100%	ofiara	
21	(35%, 81; 65%, -19) (68%, 20; 32%, -40)	16.0	100%	handel		22	(30%, 70; 70%, -6) (26%, 70; 74%, -6)	16.8	(↑)	granica	koniec
		0.8		interes	strzał			13.8		choroba	
23	(70%, 30; 30%, -42) (35%, 38; 65%, -14)	8.4	100%	smutek		24	(75%, 38; 25%, -66) (20%, 70; 80%, -10)	12.0	(↑)	budynek	uśmiech
		4.2		diabeł	królowa			6.0		teoria	
25	(60%, 30; 40%, -42) (80%, 50; 20%, -30)	1.2		chmura		28	(17%, 70; 83%, -10) (85%, 32; 15%, -64)	17.6	(↑)	pokład	wiersz
		34.0	100%	regula	oddech			8.8	100%	wiosna	
27	(25%, 80; 75%, -4) (68%, 50; 32%, -30)	17.0		muzyka		26	(30%, 76; 70%, -20) (26%, 76; 74%, -20)	8.8	(↑)	szczyt	
		24.4		rodzice	gwiazda			6.1		zwyczaj	
29	(70%, 30; 30%, -40) (20%, 86; 80%, -14)	9.0	50%	mistrz		28	(75%, 24; 25%, -8) (20%, 60; 80%, -5)	16.0	(↑)	wygląd	święto
		6.0		statek				8.0			

Note: ^aOnly the underlined words and their corresponding lotteries were included in the memory test. See Table A.4 for the English meanings of the Polish words.

Table A.3: The lotteries and words: Distractors.^a

No.	Lottery	EVs	Distractors	No.	Lottery	EVs	Distractors
29	(75%, 30; 25%, -20)	17.5	pawilon	30	(25%, 27; 75%, -7)	1.5	gabinet
31	(30%, 82; 70%, -28)	5.0	depesza	32	(80%, 35; 20%, -18)	24.4	białko
33	(72%, 36; 28%, -19)	20.6	ogniwo	34	(28%, 84; 72%, -21)	12.9	tramwaj
35	(78%, 22; 22%, -23)	12.1	hodowla	36	(27%, 76; 73%, -24)	3.0	schemat
37	(85%, 19; 15%, -21)	13.0	podłoga	38	(20%, 86; 80%, -8)	10.8	butelka
39	(66%, 24; 34%, -11)	12.1	zapach	40	(28%, 89; 72%, -6)	20.6	rysunek
41	(70%, 38; 30%, -17)	21.5	pojazd	42	(35%, 77; 65%, -13)	18.5	siostra
43	(72%, 33; 28%, -17)	19.0	dziadek	44	(28%, 72; 72%, -18)	7.2	szpital
45	(75%, 19; 25%, -9)	12.0	maszyna	46	(35%, 71; 65%, -17)	13.8	piasek
47	(66%, 22; 34%, -13)	10.1	oddział	48	(29%, 75; 71%, -15)	11.1	gwiazda
49	(80%, 23; 20%, -37)	11.0	poziom	50	(25%, 80; 75%, -18)	6.5	pomyłka
51	(74%, 42; 26%, -28)	23.8	godzina	52	(28%, 74; 72%, -21)	5.6	cesarz

Note: ^aAs per Table A.2.

Table A.4: Full list of word stimuli: Targets, decoys, distractors, and buffers.^a

48 targets	28 decoys	28 distractors	12 buffers
kadlub (hull)	ciocia (aunt)	znajomy (friend)	pawilon (pavilion)
plaszcz (coat)	łańcuch (chain)	malarz (painter)	gabinet (cabinet)
tabllica (blackboard)	górnik (miner)	kodeks (code)	depesza (telegram)
gromada (flock)	twórca (creator)	odznaka (badge)	białko (protein)
ubranie (cloth)	kolejka (queue)	szczyt (edge)	ogniwo (link)
gardło (throat)	wejście (entrance)	ścieżka (path)	tramwaj (tram)
klient (client)	dźwięk (sound)	zegarek (watch)	hodowla (breeding)
ziarno (grain)	oparcie (backrest)	kolumna (column)	schemat (scheme)
koncert (concert)	dworzec (station)	siatka (grid)	podłoga (floor)
krzesło (chair)	styczeń (January)	powieść (novel)	butelka (bottle)
więzień (prisoner)	egzamin (exam)	silnik (engine)	zapach (smell)
kartka (card)	północ (midnight)	jezioro (lake)	rysunek (drawing)
drewno (wood)	kuchnia (kitchen)	chodnik (pavement)	pojazd (vehicle)
przewód (wire)	magazyn (magazine)	komora (chamber)	siostra (sister)
stolik (board)	bohater (hero)	wakacje (holiday)	dziadek (grandfather)
biurko (desk)	centrum (hub)	hrabia (count)	szpital (hospital)
autobus (bus)	pacjent (patient)	teścinię (Miss)	maszyna (machine)
spodnie (pants)	żołądek (stomach)	wysiłek (effort)	piasek (sand)
randka (date)	handel (trade)	strzał (shot)	oddział (branch)
prezent (gift)	ofiara (victim)	koniec (end)	gwiazda (star)
interes (business)	smutek (sadness)	królowa (queen)	poziom (level)
granica (border)	choroba (sickness)	uśmiech (grin)	pomyłka (blunder)
diabeł (devil)	chmura (cloud)	oddech (breath)	godzina (hour)
budynec (building)	teoria (theory)	wiosna (spring)	cesarz (emperor)

Note: ^aAll the words are concrete nouns in Polish, with a mean frequency of 31.5 (range 22–51) occurrences per 0.5 million according to Kurcz *et al.* (1990); besides, the words are six to seven letters in length, and have no obvious associations with the color green, blue, or red. The English meanings of Polish words are in parentheses.

B Instructions and Material Illustrations (English Translation)

B.1 Experiment 1

B.1.1 The General Instruction Given at the Start of the Experiment

At first, we will present to you a series of lottery pairs, then we will ask you to choose one lottery in each pair. Please, try to remember the one that you will choose and the one that you will reject in each pair, because we will ask you at the end to recollect these decisions.

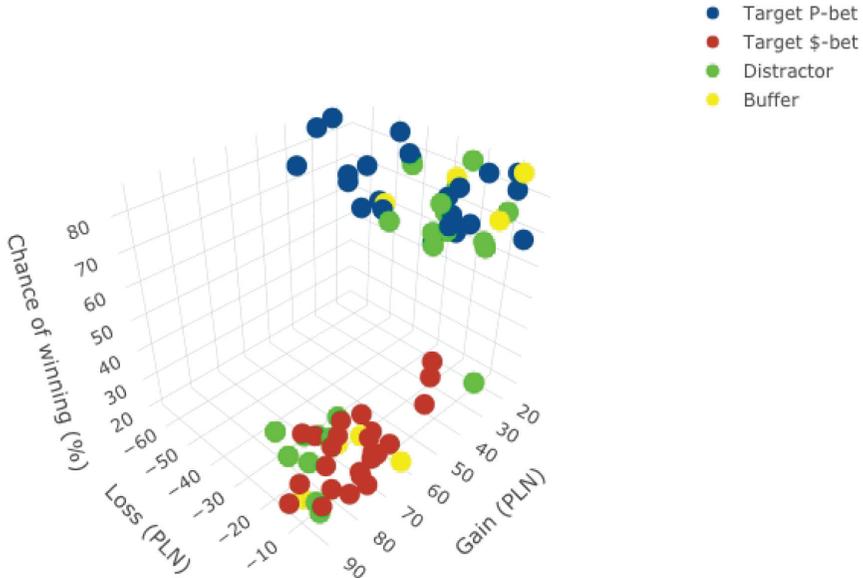


Figure B.1: Target P-bets and \$-bets, distractors, and buffers.

Note: All the bets (dots) were represented in terms of their gain and loss payoffs (horizontal axes) and winning probabilities (vertical axis).

B.1.2 The Scenario Informed to Image within the Choice Task

Imagine that you are the owner of a large warehouse of goods cooperating with many stores from various industries. On the occasion of the 20th anniversary of the Polish Society of Wholesale Sellers, a series of lotteries was organized, each of which has a specific chance of winning different goods from your warehouse, but there is also a specific risk that you will lose some goods. For example, a lottery might look like this:

- In the first bet you have 80% of winning two couches (each worth PLN 235) and 20% risk of losing one couch.

- While in the second bet you have a 20% chance of winning 30 couches and an 80% risk of losing 7 couches.

(Wins or losses can be converted into money instead of real items.)

Please choose only one lottery that you would like mostly in each pair.

B.1.3 The Instruction Given Within the Price Task

Now imagine that your colleagues from another warehouse would like to take part in the lottery too, but they ran out of tickets. For each bet, please specify the amount you would be willing to sell to them. Below each bet, enter the amount in PLN you are willing to sell your stake, and press Enter to go to the next slide.

B.2 Experiment 2

B.2.1 Participation Invitation Letter

Good morning Jan Kowalski (Invitee),

We would like to invite you to participate in an experiment involving decision making and memory recollection. The experiment will last for up to 1 hour and will be held fully at your own self-pace without in-person interactions with the research team. The experiment will not represent any psychological risks to you. The only disappointment you may face is not being remunerated for additional earnings. This is a study from the doctoral student Yong Lu and his supervisor Dr. Prof. Marek Nieznański, both at the Faculty of Christianity Philosophy, Cardinal Stefan Wyszyński University in Warsaw (UKSW).

Payments

- The amount of compensation for your participation will include 50 PLN for your “show up”, and additional earnings will depend partly on your decisions and partly on chance.
- Payments to you will be made as online Empik e-card.

Rules

- You must be at least 18 years old.
- You must be able to speak Polish fluently.
- You must not make the question form received from the research team available on the internet or to third parties.

- You can participate through a computer or device with a larger screen than a smartphone and as long as you have the Adobe Reader or other such programs installed in it. No web camera or microphone are required.
- During the experiment, you must adhere to the rules laid down by the research team in the instructions.

Procedures

If you agree to participate in this experiment, you will be asked to fully complete:

- A basic demographic questionnaire that includes your age, gender, university and major if applicable, and email address that will take approximately one minute to complete.
- A choice and learning task that includes 26 questions that will take approximately 15 minutes to complete.
- A valuation task that includes 78 questions that will take approximately 25 minutes to complete.
- A memory recollection task that includes 72 questions that will take approximately 20 minutes to complete.

Privacy

- The identifying information such as your name and email address is only for the purpose of sending the experimental question form and paying reimbursement, and it will not be used for any purposes outside of this study. Other personal information, such as age, gender, and academic major, will be used as part of our ongoing research.
- The generated, anonymized data is used for the preparation of a scientific research paper and lectures. Your individual privacy will be maintained in all published and written data resulting from the experiment. The research team will treat all the data made by the participants anonymized and will not assign these data to any other institutions or persons. Participation in this experiment is anonymous in this sense.

Contacts and questions

If you have any questions now or at a later time, you may contact Yong Lu, via luyong@student.uksw.edu.pl. You can ask any questions you have before you begin the experiment.

Statement of consent

I have read the above information. I feel I understand the study well enough to make a decision about my participation. I understand and agree to the terms described above.

Participation

If you want to participate, please reply to this email for registration, by indicating your willingness to participate and agreeing to the statement of consent. You will receive email with a question form and a base remuneration attached after we sign you up for participation. You also have right to withdraw consent at any time in writing to inform a member of the study team. Thank you and we hope to see your participation soon!

One side experiment

We will be grateful if you can also complete another one side experiment involving making 50 choice decisions. We think they will take you about 10-15 minutes. Please note that these two experiments are ENTIRELY independent with each other.

Sincerely yours,
Yong Lu

B.2.2 Participation Registration Letter

Good morning Jan Kowalski (Invitee),

Thank you for your interest in participating in our experiments. Attached please find the two question forms that are independent with each other. Please, fill them out fully and then send back to luyong@student.uksw.edu.pl. We first reimburse you a 25 PLN online Empik e-card (no. xxxxxxxxxx) due by 30 October 2021 (www.empik.com). Upon receiving your fully completed forms, we will reimburse you another 25 PLN.

Thanks in advance for your thoughtful completion of these questions — we really appreciate your time and effort. We look forward to receiving your answers.

Sincerely yours,
Yong Lu

B.2.3 Participation Reception Letter

Good morning Jan Kowalski (Invitee),

Thank you for sending back your completed form to us. Here is your another 25 PLN online Empik e-card (no. xxxxxxxxxxx) as the second part of your base remuneration.

The bet represented by the random number (i.e., xx) that you have played out for real is the one having a xx% probability of winning xx PLN and a xx% probability of losing xx PLN, as attached by the word “xxxxxxxx”. The offer price represented by another random number for the bet is x PLN. As seen, the amount of minimum selling price of the bet that you stated is less/equal to/greater than the offer price. According to the rules, your additional earnings are 0/25 PLN reimbursed by a 25 PLN online Empik e-card (no. xxxxxxxxxxx).

Sincerely yours,
Yong Lu

B.2.4 Question Form

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY
BEFORE FILLING THE FORM

Experimental Instructions

Introduction

This is an experiment in decision making and memory. We think that the entire experiment will take you about 1 hour, including the time taken to read and understand the instructions. **Kindly please note that once you have started your answers, you are required to *not* take breaks.** You can save data typed into the form by clicking on the “save file” icon in the Adobe Reader or other such programs. If you have any questions after reading the instructions, please contact Yong Lu, via luyong@student.uksw.edu.pl. You can ask any questions you have before you begin answering the questions. **After you have done all the questions, please save your completed form to your local computer, and send as an attachment via email to Yong Lu.** Once you have submitted your form, you will *not* later be allowed to change any of them.

In the beginning of this form, you will be asked to complete a brief demographic questionnaire. Then, the rest questions come in three tasks. First, a set of 26 questions asking you to choose among three options in each question. Second, a set of 78 questions asking you to evaluate prices for the options. Third, another 72 memory questions. **Please note that the questions must be completed sequentially, that is, from the first page to the last page.** Details of how you will make decisions and judgments, receive additional earnings, and follow the rules will be provided below.

Task 1

In this task, you will participate in 26 independent decision problems that share a common form regarding bets. As indicated by Figure 1 for an example, each bet is composed of a certain amount of money to win or lose with some probabilities. More specifically, (1) each of the top, middle, and bottom rows contains 100 squares; (2) the numbers of green and white squares in the top row represent the probabilities (unit: %) of gain and loss payoffs of a bet, respectively; (3) the numbers of blue squares in the middle row represent the gain payoff of a bet; (4) the numbers of red squares in the bottom row represent the loss payoff of a bet; (5) each 1 filled blue or red square = 1 PLN; (6) each bet is different from one another at least in one aspect of probability, gain, and loss; and (7) each column represents an alternative bet. Since the bet in Figure 1 contains 75 filled green squares, 17 filled blue squares, and 6 filled red squares, it means that if you play the bet, then you will have a 75% probability of winning 17 PLN and a 25% probability of losing 6 PLN.

Each decision you shall make will involve three bets which are presented on one page. Suppose you have the opportunity to play one among each of three bets. **Please, choose *only one* bet that you would prefer to play among each of three bets** by ticking the appropriate box below this chosen bet. **Please, also try to remember the one that you will choose and the rest two that you will reject in each decision problem**, because we will ask you to recollect your decisions in Task 3. Since each bet is composed of the aforementioned three dimensions (i.e., probability, gain, and loss), remembering a bet that you will choose or reject means that you will have to remember the densities of green, blue, and red squares of the bet. **In order to help you in appropriating remembrance for bets and decisions, we add a unique word for each bet, as shown in the upper left squares of the bottom row (e.g., the word “loteria” in Figure B.2).** Therefore, you can also alternatively try to remember these mutually exclusive words, which represent alternative bets, as well as to remember your decisions corresponding to these words. Nevertheless, it is important to note that **your preference for choosing or rejecting a bet should be only based on the probabilities and the gain and loss payoffs of the bet *per se* and should not be based on its attached word**, because the word is intended as just a label of the bet for the purpose of helping you to remember the bet. Please also note that **there is no single “right” choice in any one of these decision problems — different people may have different preferences, and we simply want you to tell us your personal preference.**

Task 2

In this task, suppose that you have been presented, for each of the bets, a ticket that allows you to play a bet. **You will be asked for the smallest**

Key: ■ Probability of win
■ Win
■ Loss

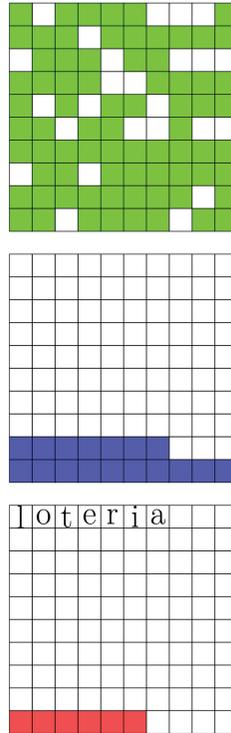


Figure B.2: A bet example.

price at which you would sell the ticket to each of the bets. Enter this amount in the blank box below the bet (all payoffs are in the Polish Złoty). Again, as for the same reason, **your valuations should be only based on the probabilities and the gain and loss payoffs of the bet *per se* and should not be based on its attached word.**

Task 3

In this task, you will be asked, as mentioned earlier, to recall your choices and rejections made in Task 1. You will be asked to answer “Yes” or “No” to one of the following three types of questions: (1) Did you choose the option?; (2) Did you reject the option?; and (3) Did you choose or reject the option?.

Note that some bets would be *new* and would be not presented in Task 1, so answer “No” to them.

PLEASE NOTE: We only care about your recognition memory for your previous choices — please do not assess to your previous choices when you answer the questions in this task.

Earnings

The university foundation has provided funds for conducting this research. At this time, you have received the base 25 PLN remuneration as we expect that **you can complete all the experimental tasks and send back this form to us**. Upon receiving your fully completed forms, we will reimburse you another 25 zł. Moreover, **your additional earnings could be up to 25 PLN and depend only partly on your decisions and partly on chance**. They will not depend on the decisions of the other participants in the experiment. Please, pay careful attention to the following instructions regarding how your additional earnings are determined, as a considerable amount of money is at stake. We have drawn a random number, 12, which represents one of those bets, such that you will play out this bet for real. Please note that the probabilities and the gain and loss payoffs of this randomly chosen bet will be unknown to you until we further inform you via email. The rules of bidding for this randomly chosen bet are as follows:

- Another random number between zero and the largest possible outcome of the bet, that is, the amount of gain payoff represented by the density of blue squares (e.g., 17 PLN), will be obtained as an “offer price”. Again, we will further inform you this random number via email.
- If the amount of minimum selling price of the bet that you will state in Task 2, say, x PLN, is less than this offer price, you will get additional earnings equal to x PLN. For example, suppose you would be willing to sell the bet in Figure 1 for 10 PLN, that is, $x = 10$ PLN, which is less than the offer price drawn at random (e.g., 12 PLN), then you would be additionally paid 10 PLN.
- If the x PLN is equal to or greater than this offer price, you will not get any additional earnings. In other words, if the minimum price you state is too high, then you are passing up opportunities that you will gain additional earnings. For example, suppose you would be willing to sell the bet in Figure 1 for 16 PLN, which is instead greater than the random offer price (e.g., 12 PLN), then you would not be additionally paid. Thus, **it is in your own best interests to state minimum amounts at which you would indeed sell the bets**.

- Because of both the limited amount of the funds designated for the current research and the only face value of 25 PLN of the online Empik e-card, please note that *in practice* if the x PLN is less than the offer price, no matter what the amount of the offer price is, you will be paid **25 PLN**. However, ***IT IS VERY IMPORTANT TO NOTE*** that a x PLN that you will state for any bet should be based upon the former three rules rather than this practical rule.

PLEASE NOTE: Your additional earnings will entirely not depend on your performance of memory recollection in Task 3.



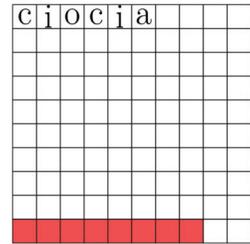
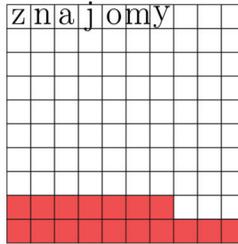
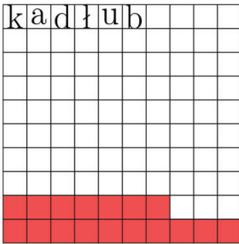
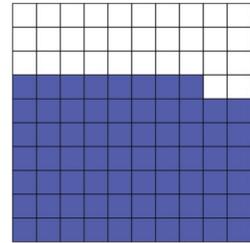
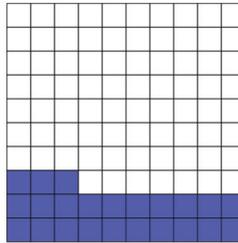
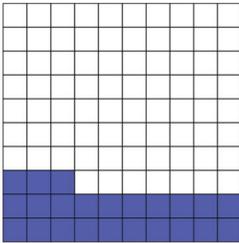
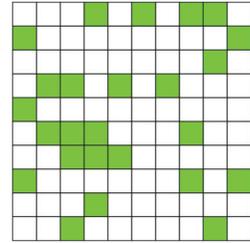
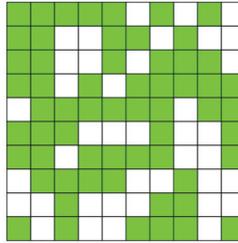
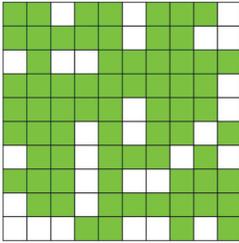
Demographic questionnaire

Please provide the following information in the space provided:

1. Age:
2. Gender: Male Female
3. If you are a student, please fill out the following information:
 - University: UKSW Other ;
 - Field of study:
 - Year: 1st , 2nd , 3rd , 4th
4. Email address:

Task 1 (example)

Key: ■ Probability of win
■ Amount of win
■ Amount of loss



k a d ł u b

z n a j o m y

c i o c i a

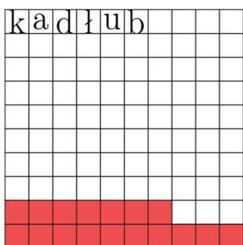
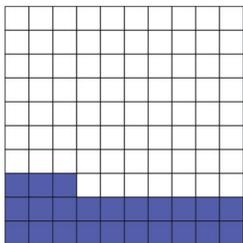
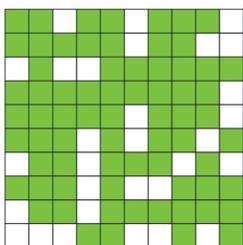
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Choose: ,

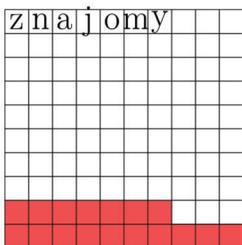
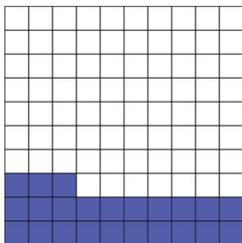
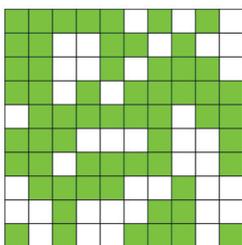
Choose:

Task 2 (example)

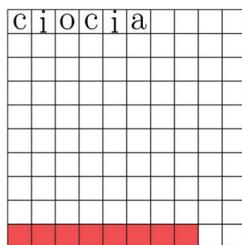
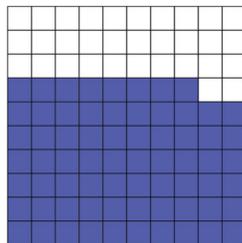
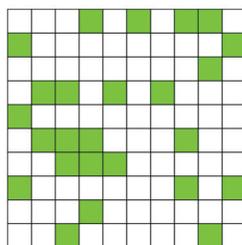
Key: ■ Probability of win
■ Amount of win
■ Amount of loss



Price:

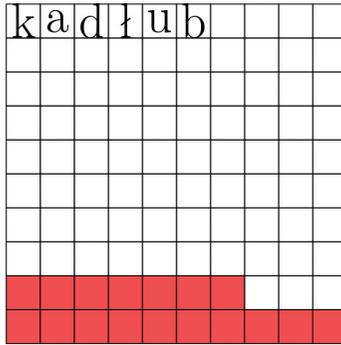
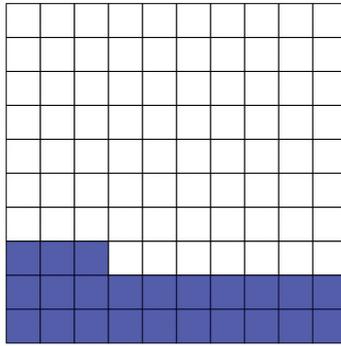
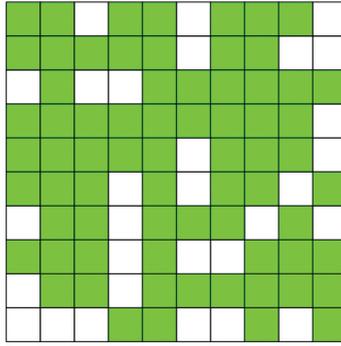


Price:



Price:

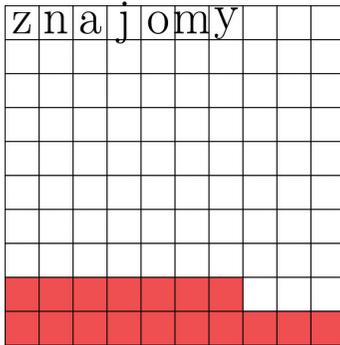
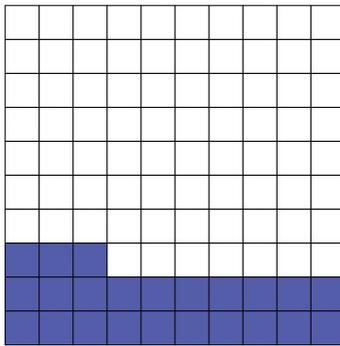
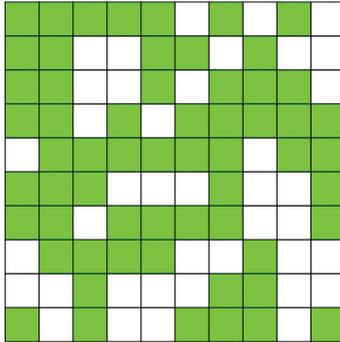
Task 3 (example)



Did you choose the bet?

Yes:

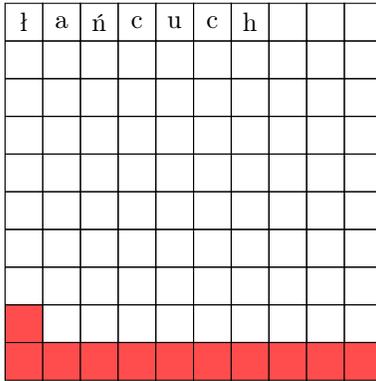
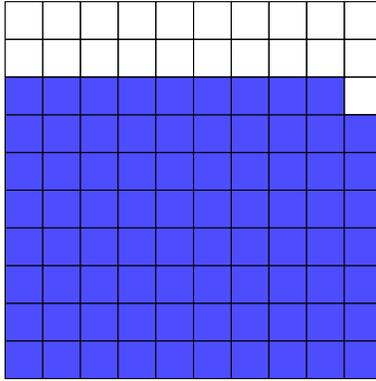
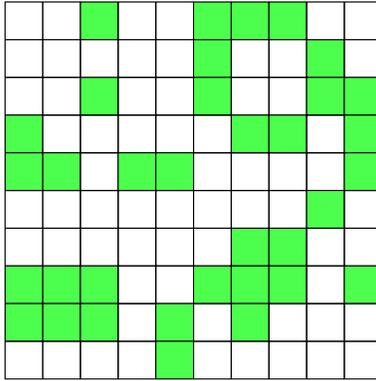
No:



Did you reject the bet?

Yes:

No:



Did you choose or reject the bet?

Yes:

No:

C Percentages of Choice, Price Valuation, and Predicted and Unpredicted PR: Exact Two-Sided Binomial Tests

See Table C.1 and Table C.2. The proportionate rates of predicted and unpredicted PR are reported in these entries corresponding to “P-bet” and “\$-bet > P-bet” and to “\$-bet” and “P-bet > \$-bet”, respectively. The results of the binomial tests are shown in the “*p*-value” and “*g*” entries. The three binomial *p*-values in each panel show, from left to right, the test statistics of the choice, price valuation, and predicted versus unpredicted PR rates, respectively. Within the price task, we calculate the exact binomial tests by excluding the equal valuation percentages. The reason, of course, is that according to standard theory, the strict preference, choosing Bet A over Bet B, is inconsistent with the deviating valuation price, that is, pricing Bet B over Bet A, and indifference, that is, pricing Bet A and Bet B equivalently. According to Cohen (1988), a rule of thumb for the effect size of *g* is as follows: $0.00 < 0.05$ — Negligible; $0.10 < 0.15$ — Small; $0.20 < 0.25$ — Medium; 0.25 or more — Large.

Table C.1: Percentages of choice, price valuation, and predicted and unpredicted PR in Experiment 1: Exact two-sided binomial tests pooled across the same loss ratios.^a

Choice (%)				Choice (%)				Choice (%)							
Price	P-bet	\$-bet	Total	P-bet	\$-bet	Total	Price	P-bet	\$-bet	Total	Price	P-bet	\$-bet	Total	
Lotteries 3 - 5 (loss ratio = -1.0):															
P-bet > \$-bet	15.11	15.11	30.22***	P-bet > \$-bet	13.54	15.10	28.64***	P-bet > \$-bet	14.06	14.06**	28.12***	P-bet > \$-bet	13.54	11.46***	25.00***
\$-bet > P-bet	19.79	32.81	52.60***	\$-bet > P-bet	21.36	37.50	58.86***	\$-bet > P-bet	27.35**	28.91	56.26***	\$-bet > P-bet	23.96**	39.06	63.02***
P-bet = \$-bet	7.81	9.37	17.18	P-bet = \$-bet	6.77	5.73	12.50	P-bet = \$-bet	6.64	8.98	15.62	P-bet = \$-bet	4.69	7.29	11.98
Total	42.71	57.29	41.67*	Total	41.67*	58.33*	Total	48.05	51.95	Total	42.19*	Total	42.19*	57.81*	Total
<i>p</i> -value	.051	< .001	.328	<i>p</i> -value	.025	< .001	.188	<i>p</i> -value	.574	< .001	.001	<i>p</i> -value	.036	< .001	.005
<i>g</i>	0.07	0.14	0.07	<i>g</i>	0.08	0.17	0.09	<i>g</i>	0.02	0.17	0.16	<i>g</i>	0.08	0.21	0.18
Lotteries 6 - 8 (loss ratio = -2.0):															
P-bet > \$-bet	14.06	9.76***	23.82***	P-bet > \$-bet	21.09	7.81***	28.90***	P-bet > \$-bet	22.40	8.85***	31.25***	P-bet > \$-bet	15.84	11.93***	27.77***
\$-bet > P-bet	34.77***	28.91	63.68***	\$-bet > P-bet	28.91***	32.03	60.94***	\$-bet > P-bet	38.02***	18.75	56.77***	\$-bet > P-bet	27.98***	30.90	58.88***
P-bet = \$-bet	5.08	7.42	12.50	P-bet = \$-bet	3.91	6.25	10.16	P-bet = \$-bet	7.29	4.69	11.98	P-bet = \$-bet	6.11	7.24	13.35
Total	53.91	46.09	53.91	Total	53.91	46.09	Total	67.71***	32.29***	Total	49.93	Total	49.93	50.07	Total
<i>p</i> -value	.235	< .001	< .001	<i>p</i> -value	.426	< .001	< .001	<i>p</i> -value	< .001	< .001	< .001	<i>p</i> -value	.979	< .001	< .001
<i>g</i>	0.04	0.23	0.28	<i>g</i>	0.04	0.18	0.29	<i>g</i>	0.18	0.15	0.31	<i>g</i>	0.00	0.18	0.20
Lotteries 9 - 12 (loss ratio = -3.0):															
Lotteries 13 - 15 (loss ratio = -4.0):															
Lotteries 16 - 19 (loss ratio = -6.0):															
Lotteries 20 - 21 (loss ratio = -8.0):															
Lotteries 22 - 24 (loss ratio = -10.0):															
Lotteries 25 - 28 (loss ratio = -15.0):															
Lotteries 29 - 32 (loss ratio = -20.0):															
Lotteries 33 - 36 (loss ratio = -25.0):															
Lotteries 37 - 40 (loss ratio = -30.0):															
Lotteries 41 - 44 (loss ratio = -35.0):															
Lotteries 45 - 48 (loss ratio = -40.0):															
Lotteries 49 - 52 (loss ratio = -45.0):															
Lotteries 53 - 56 (loss ratio = -50.0):															
Lotteries 57 - 60 (loss ratio = -55.0):															
Lotteries 61 - 64 (loss ratio = -60.0):															
Lotteries 65 - 68 (loss ratio = -65.0):															
Lotteries 69 - 72 (loss ratio = -70.0):															
Lotteries 73 - 76 (loss ratio = -75.0):															
Lotteries 77 - 80 (loss ratio = -80.0):															
Lotteries 81 - 84 (loss ratio = -85.0):															
Lotteries 85 - 88 (loss ratio = -90.0):															
Lotteries 89 - 92 (loss ratio = -95.0):															
Lotteries 93 - 96 (loss ratio = -100.0):															

Note: ^a A loss ratio is measured by the magnitude of the larger absolute value of the loss payoff divided by the smaller one in a pair of P-bet and \$-bet.
* *p* < .05; ** *p* < .01; *** *p* < .001.

Table C.2: Percentages of choice, price valuation, and predicted and unpredicted PR in Experiment 2: Exact two-sided binomial tests.^a

Choice (%)			Choice (%)			Choice (%)			Choice (%)						
Price	P-bet	\$-bet	Total	P-bet	\$-bet	Total	P-bet	\$-bet	Total	P-bet	\$-bet	Total			
Lotteries 1, 3, 5, and 7 (0%; decoy type = P-bet):															
P-bet > \$-bet	10.09	13.25	23.34***	P-bet > \$-bet	8.53	23.93***	P-bet > \$-bet	11.59	12.19	23.78***	P-bet > \$-bet	9.09	17.53	26.62***	
\$-bet > P-bet	14.19	56.47	70.66***	\$-bet > P-bet	9.18***	51.48	60.66***	\$-bet > P-bet	14.02	58.54	72.56***	\$-bet > P-bet	11.69	57.79	69.48***
P-bet = \$-bet	2.21	3.79	6.00	P-bet = \$-bet	1.31	5.57	6.88	P-bet = \$-bet	1.83	1.83	3.66	P-bet = \$-bet	1.95	1.95	3.90
Total	26.49***	73.51***		Total	19.02***	80.98***		Total	27.44***	72.56***		Total	22.73***	77.27***	
p-value	<.001	<.001	.830	p-value	<.001	<.001	.022	p-value	<.001	<.001	.761	p-value	<.001	<.001	.233
g	0.24	0.25	0.02	g	0.31	0.15	0.22	g	0.23	0.25	0.04	g	0.27	0.23	0.10
Lotteries 13 and 15 (50%(†); decoy type = P-bet):															
P-bet > \$-bet	25.97	11.69	37.66	P-bet > \$-bet	18.13	20.63	38.76	P-bet > \$-bet	6.02	6.63**	12.65***	P-bet > \$-bet	3.95	21.71***	25.66***
\$-bet > P-bet	14.93	38.31	53.24	\$-bet > P-bet	12.50	39.37	51.87	\$-bet > P-bet	19.28**	60.24	79.52***	\$-bet > P-bet	5.92***	65.13	71.05***
P-bet = \$-bet	4.55	4.55	9.10	P-bet = \$-bet	3.12	6.25	9.37	P-bet = \$-bet	3.61	4.22	7.83	P-bet = \$-bet	1.32	1.97	3.29
Total	45.45	54.55		Total	33.75***	66.25***		Total	28.91***	71.09***		Total	11.19***	88.81***	
p-value	.295	.052	.533	p-value	<.001	.096	.098	p-value	<.001	<.001	.002	p-value	<.001	<.001	<.001
g	0.05	0.09	0.06	g	0.16	0.07	0.12	g	0.21	0.36	0.24	g	0.39	0.24	0.29
Lotteries 21 and 23 (100%(†); decoy type = P-bet):															
P-bet > \$-bet	22.67	19.33	42.00	P-bet > \$-bet	7.80	24.11*	31.91***	P-bet > \$-bet	11.67	17.70***	29.37***	P-bet > \$-bet	9.09	17.53	26.62***
\$-bet > P-bet	12.00	33.33	45.33	\$-bet > P-bet	12.06*	50.35	62.41***	\$-bet > P-bet	12.24***	51.70	63.94***	\$-bet > P-bet	11.69	57.79	69.48***
P-bet = \$-bet	2.67	10.00	12.67	P-bet = \$-bet	1.42	4.26	5.68	P-bet = \$-bet	2.20	4.49	6.69	P-bet = \$-bet	1.95	1.95	3.90
Total	37.34**	62.66**		Total	21.28***	78.72***		Total	26.11***	73.89***		Total	22.73***	77.27***	
p-value	.002	.727	.144	p-value	<.001	<.001	.024	p-value	<.001	<.001	<.001	p-value	<.001	<.001	<.001
g	0.13	0.02	0.12	g	0.29	0.16	0.17	g	0.24	0.19	0.09	g	0.39	0.24	0.29
Lotteries 22 and 24 (100%(†); decoy type = \$-bet):															
P-bet > \$-bet	22.67	19.33	42.00	P-bet > \$-bet	7.80	24.11*	31.91***	P-bet > \$-bet	11.67	17.70***	29.37***	P-bet > \$-bet	9.09	17.53	26.62***
\$-bet > P-bet	12.00	33.33	45.33	\$-bet > P-bet	12.06*	50.35	62.41***	\$-bet > P-bet	12.24***	51.70	63.94***	\$-bet > P-bet	11.69	57.79	69.48***
P-bet = \$-bet	2.67	10.00	12.67	P-bet = \$-bet	1.42	4.26	5.68	P-bet = \$-bet	2.20	4.49	6.69	P-bet = \$-bet	1.95	1.95	3.90
Total	37.34**	62.66**		Total	21.28***	78.72***		Total	26.11***	73.89***		Total	22.73***	77.27***	
p-value	.002	.727	.144	p-value	<.001	<.001	.024	p-value	<.001	<.001	<.001	p-value	<.001	<.001	<.001
g	0.13	0.02	0.12	g	0.29	0.16	0.17	g	0.24	0.19	0.09	g	0.39	0.24	0.29

Note: ^aThe percentages and the significance of the binomial tests are contingent on the exclusion of the responses of those participants who chose decoy bets within the choice task. *** $p < .001$; ** $p < .01$; * $p < .05$.

D Mean Correct Recall Rates Per EVDs and EVLs in Experiment 2

The first category of Table D.1 shows the descriptive findings of the mean correct recall rates per EVDs (cf., Figure ??). A 5 (EVD: 0% vs. 50%(↓) vs. 50%(↑) vs. 100%(↓) vs. 100%(↑)) × 4 (PR type: predicted vs. unpredicted vs. equivalent vs. non-PR) repeated-measures ANOVA on the mean correct recall rates was conducted. There was a marginally significant main effect of EVD, $F(4, 340) = 3.12, p = .015, \text{partial } \eta^2 = 0.01$. As predicted, there was a significant main effect of PR type, $F(3, 255) = 73.52, p < .001, \text{partial } \eta^2 = 0.21$. The EVD × PR Type interaction effect was not significant, $F(12, 1020) = 0.93, p = .516, \text{partial } \eta^2 = 0.01$.

The second category of Table D.1 shows the descriptive findings of the mean correct recall rates per EVLs (cf., Figure ??). A 2 (EVL (median split): low vs. high) × 4 (PR type: predicted vs. unpredicted vs. equivalent vs. non-PR) repeated-measures ANOVA on the mean correct recall rates was conducted. As predicted, there was a significant main effect of PR type, $F(3, 255) = 25.08, p < .001, \text{partial } \eta^2 = 0.13$. The main effect of EVL was not significant, $F(1, 85) = 0.60, p = .442, \text{partial } \eta^2 = 0.00$. The EVL × PR Type interaction effect was not significant, $F(3, 255) = 0.87, p = .436, \text{partial } \eta^2 = 0.00$.

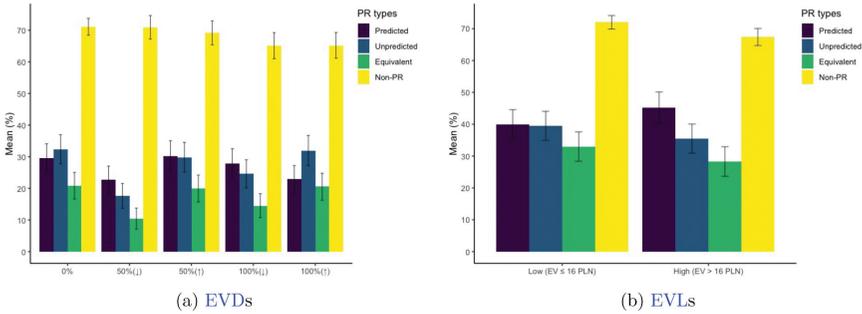


Figure D.1: Mean correct recall rates per (a) EVDs and (b) EVLs.

Note: Error bars are the ±1 standard error of the mean.

Table D.1: Mean correct recollection rates (%) per EVDs, EVLs, and PR types.^a

No.	Categories	Subcategories	PR types				
			Predicted	Unpredicted	Equivalent	Non-PR	
1	EVDs	0%	29.59 (41.66)	32.36 (42.57)	20.83 (39.14)	71.09 (24.65)	
		50%(↓)	22.67 (40.34)	17.64 (36.10)	10.47 (30.79)	70.93 (34.63)	
		50%(↑)	30.23 (44.91)	29.85 (43.77)	19.96 (39.51)	69.19 (35.01)	
		100%(↓)	27.91 (43.12)	24.61 (41.28)	14.53 (35.04)	65.12 (38.04)	
2	(median split)	Low (EV ≤ 16 PLN)	22.97 (39.52)	31.98 (44.28)	20.54 (39.58)	65.21 (37.99)	
		High (EV > 16 PLN)	39.98 (42.60)	39.51 (42.45)	32.98 (42.90)	72.01 (19.79)	
			45.26 (45.04)	35.49 (42.56)	28.30 (43.09)	67.40 (24.95)	

Note: ^aStandard deviations are reported in parentheses.