"Buying a pig in a poke":
An experimental study of unconditional veto power

Werner Güth[a], M. Vittoria Levati[a,*], Axel Ockenfels[b], Torsten Weiland[a]

[a] Max Planck Institute of Economics, Strategic Interaction Group, Jena, Germany
[b] University of Cologne, Department of Economics, Köln, Germany

Abstract

We study an ultimatum experiment in which the responder does not know the offer when accepting or rejecting. Unconditional veto power leads to acceptances, although proposers are significantly greedier than in standard ultimatum games, and this is anticipated by responders.

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[*] Corresponding author. Tel.: +49-(0)3641-686629; fax: +49-(0)3641-686667.
E-mail address: levati@econ.mpg.de (M. V. Levati).

1. Introduction and experimental procedures

We examine behavior in a variation of the ultimatum game (UG) that we call "Yes or No-game" (Y/N). Unlike in UG, the responder in Y/N does not know the proposal when deciding between "yes" (acceptance) and "no" (rejection). In this sense, accepting means to "buy a pig in a poke".

Previous research has shown that many responders in the UG are unwilling to accept 'unfair' offers (e.g., Roth, 1995), and that proposers offer substantial amounts with the modal offer typically being half of the pie.[1] Not knowing the offer, however, creates moral hazard problems: because responders cannot observe the 'quality' of the offer, proposers may want to behave more unfairly. In fact, we find that offers in our Y/N treatment are significantly lower than in the UG and similar to the dictator game (DG), where responders have no veto power at all. While the greediness of Y/N proposers is anticipated by the responders, we do not observe a single rejection.

Our computerized (via Fischbacher 1999's z-Tree) experiment was performed at the experimental laboratory of the Max Planck Institute. Participants were undergraduate students from different disciplines at the University of Jena. We ran eight sessions, each involving 28 participants. Two sessions were devoted to UG, two to DG, and the remaining four to Y/N, yielding 28 independent observations for dictators, and 28 (56) independent observations for each of the two parties in DG (Y/N). In all three games, the monetary pie was €20 and only integer allocations were allowed.

In all treatments, the first mover A chose an assignment $b \in \{1, 2, ..., 19\}$, thereby allocating $a = 20 - b$ to herself and b to the second mover B. The task of B depends on

[1] This phenomenon is captured by various theories of fairness, such as Bolton (1991), Rabin (1993), Fehr and Schmidt (1999), and Bolton and Ockenfels (2000).

the game. In DG, *B* was a recipient with no veto power. In UG, *B* indicated for each of the 19 possible integer offers whether or not she would veto it. In Y/N, *B* decided between acceptance and rejection without knowing *A*'s proposal. After choices were made, we elicited beliefs about the respective opponent's behavior ('first order belief'), as well as beliefs about the beliefs of the opponent about one's own behavior ('second order beliefs'). Belief elicitation was conducted in an elementary way (see Appendix A for all instructions). In particular, subjects were asked not to state any beliefs if they did not form beliefs in their decision process.

An experimental session lasted about 45 minutes. Proposers' average earnings were €17.32, €16.70 and €13.39, in DG, Y/N and UG, respectively. The corresponding average earnings for responders amounted to €7.68, €8.30 and €11.61.

2. First mover behavior

The distributions of proposals in each of the three treatments are shown in Figure 1. Table 1 provides summary statistics.

Figure 1 and Table 1 about here

With very few exceptions, we have $b \leq 10$ in all treatments. In UG, $b = 10$ is the mode and there are no offers below $b = 5$. In Y/N and DG, there are peaks at $b = 1$ and 10, which are somewhat more pronounced in DG. Wilcoxon rank sum tests (one-sided) indicate that proposals are significantly greater in UG than in the other two games ($p < 0.001$ for both UG vs. DG, and UG vs. Y/N), whereas they do not significantly differ between DG and Y/N ($p = 0.58$). The comparison of UG and DG replicates earlier findings (e.g., Forysthe et al., 1994). The proposer behavior suggests that proposers react

to the threat of rejecting unfair offers in the UG, but they do not distinguish between DG, where responders do not have any veto power, and Y/N, where responders only have unconditional veto power.[2]

The elicited beliefs support the view that first movers respond strategically to the veto power of second movers in UG. 23 out of those 25 proposers stating beliefs expect monotonic acceptance rates: higher offers have a higher probability of being accepted.[3] Given the beliefs, we can compute the average expected proposer payoff, $E(20-b) = \left[\Pr("B \text{ accepts}") \times (20-b)\right]$, as shown in Figure 2.[4] The function exhibits maximum values for $b \in [8,10]$, which are the most frequent actual offers. Thus, proposers in UG are, on average, maximizing own expected payoffs. However, expected and actual average payoffs differ significantly (two-sided Kolmogorov-Smirnov test, $p < 0.001$) as proposers tend to overestimate the responders' willingness to punish greedy offers.

Figure 2 about here

In Y/N, almost all proposers (50 out of 52) expect *B* to accept. However, because acceptances cannot be conditioned on offers, Y/N-givings – similar to DG-givings – cannot be explained by a fear of rejection or other selfish concerns.

Turning to second order beliefs, 16 out of 24 UG-proposers state that responders expect an equal split. Not surprisingly, the average offer that *A*-participants think their *B*-partner expects does not significantly differ from the actual average offer (two-sided Wilcoxon signed-rank, $p = 0.9$). In Y/N, *A*'s second order beliefs are basically bimodal:

[2] This is in line with simple theories of inequality aversion.

[3] Two proposers believe that responders will accept any offer.

[4] The probability that *B* accepts is calculated using the distribution of expected acceptance rates.

the most frequent offer that *A* believes *B* to expect is $b = 1$ (17 out of 43 cases), followed by $b = 10$ (14 cases). On average, proposers in Y/N think that almost 40% of the responders expect to receive the smallest amount, which, furthermore, they expect to be accepted.

3. Second mover behavior

All 56 responders in Y/N accept. Acceptance rates in UG are illustrated in Figure 3: more than 67% of the responders reject minimal offers of 1 and 2 in UG, and average acceptance rates are monotonically increasing to one, when the equal split is reached.

Figure 3 about here

In UG, all 28 responders have expectations both about proposals and about what proposers expects from them. First order beliefs are concentrated in the interval $b \in [8,10]$ (the mean expected proposal is 8.07), which is quite in line with the observed proposals: a (two-sided) Kolmogorov-Smirnov test indicates that there is no statistically detectable difference between expected and actual proposals (p = 0.763). *B*'s second order beliefs coincide also quite well with *B*'s observed behavior (p = 0.208): responders anticipate that proposers expect a monotonic acceptance pattern, although the actual frequencies of accepted offers below 10€ are slightly higher than predicted.

In Y/N, only 57.1% of the responders state first order beliefs. Their average expected offer is 4 with a standard deviation of 3.35, whereas the average actual offer they are granted is higher (6). A Kolmogorov-Smirnov test (two-sided) comparing the distributions of expected and actual offers for these responders reveals a significant difference (p = 0.047). All responders with second order beliefs (83.9%) anticipate that *A*

expects acceptance. In sum, Y/N-responders 'buy the pig in the poke' even though they rightly expect proposers to be much greedier than in the UG, and even greedier than they actually are.

4. Conclusions

Proposers offer significantly more in the ultimatum game than in a game where responders only have unconditional veto power. Offers do not differ when responders have unconditional veto power or no veto power at all. Surprisingly, however, responders with unconditional veto power never reject, even when they anticipate small offers. As an illustration, observe that, on average, Y/N-responders expected an offer of 4€ and never rejected; by contrast, the same offer in the UG had a 46%-chance of being rejected.

It appears that, in case of uncertainty about offers, responders do not base their decision in a straightforward way on their expectations and beliefs – as, e.g., suggested by simple theories of fairness (see footnote 3). Rather, the uncertainty seems to interact with fairness considerations in non-trivial ways (see also Bolton et al., 2005, for another observation along these lines). We can think of at least two explanations for the responders' willingness to 'buy a pig in the poke'. First, "in dubio pro reo": responders refrain from punishing, because they may suffer much more from punishing an innocent proposer than from accepting a greedy proposal. Second, "in dubio pro meo": responders refrain from punishing, because even a small chance that the proposer is fair may provide a sufficient excuse for selfishly taking the money.

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Table 1
Average, median and standard deviation of actual proposals

Game	Mean	Median	Std. Dev.
DG (n = 28)	5.18	4	3.98
UG (n = 28)	9.11	10	1.50
Y/N (n = 56)	5.80	5.5	3.48

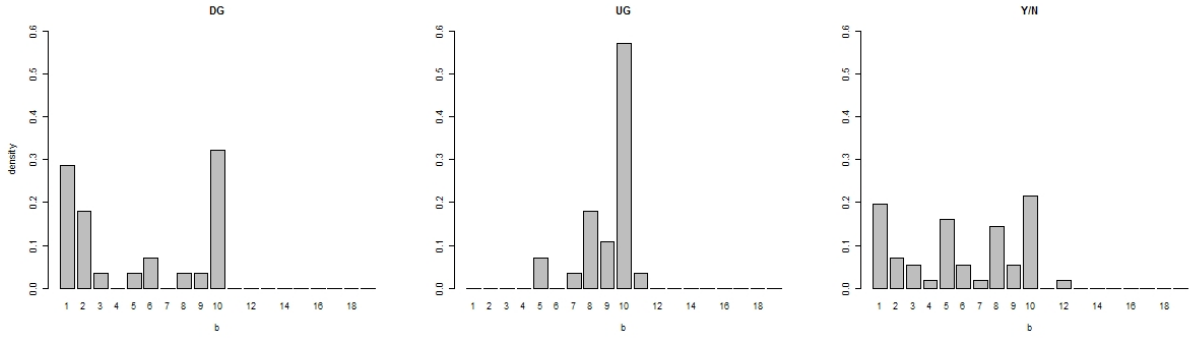

Fig. 1. Distribution of actual proposals.

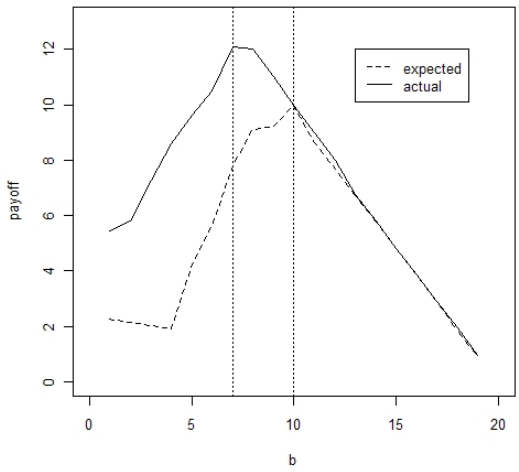

Fig. 2. Proposers' expected and actual payoffs in UG.

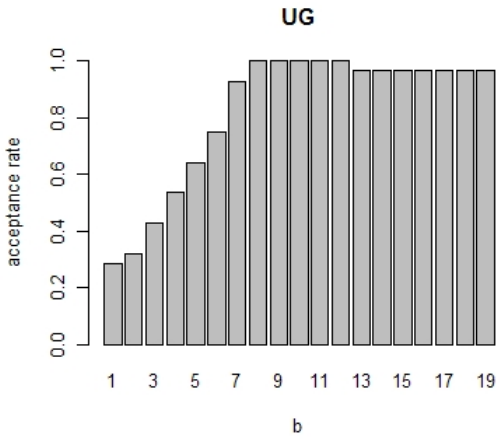

Fig. 3. Responders' observed acceptance rates.

Appendix A. Laboratory protocol

This section contains the written instructions distributed to the subjects as well as a description of the belief elicitation procedures for all sessions of the experiment.

A.1. Written instructions (translation from German)

Welcome and thank you very much for participating in this experiment. You receive €2.50 for having shown up on time. Please read the instructions – which are identical for all participants – carefully. If you have any questions or concerns, please raise your hand. We will answer your questions individually.

It is strictly forbidden to communicate with other participants during the experiment. It is very important that you follow this rule. Otherwise we must exclude you from the experiment and from all payments.

In this experiment, two participants will interact with each other just once. Each of the two members of a pair will be randomly assigned one of two roles: *A* or *B*. Your role will be told to you at the beginning of the experiment.

Each pair can share €20.00. *A* has the right to propose the distribution of the €20.00. In particular, *A* chooses the distribution (*a*, *b*) meaning that *A* wants to keep €*a* for him/herself, and give €*b* to *B*. More specifically, *A* can choose any of the following 19 distributions:

a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
b	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

[*Participants in Y/N read:*

Without knowing which of the 19 proposals *A* has chosen, *B* must accept or reject it.

After *A* and *B* have made their choices, their payoff is determined as follows: *if B has accepted*, then both get what *A* has proposed, i.e., *A* earns *a* and *B* earns *b*; *if B has rejected*, then both earn nothing i.e., the €20.00 are lost.

It must be emphasized that *B* does not know the actual distribution (*a*, *b*) proposed by *A* when deciding whether to accept or reject it.]

[*Participants in UG read:*

B must decide for each possible distribution of €20.00, if (s)he accepts or rejects it. Thus, *B* will face the following table:

a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
b	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Accept																			
Reject																			

For each possible distribution, *B* must specify if (s)he accepts or rejects it by checking the corresponding box (thus *B* is required to make 19 decisions).

After *A* and *B* have made their choices, their payoff is determined as follows: *if B has accepted the actual proposal by A*, then both get what *A* has proposed, i.e., *A* earns *a* and *B* earns *b*; *if B has rejected the actual proposal*, then both earn nothing, i.e., the €20.00 are lost.]

[*Participants in DG read:*

B has to accept the proposition of *A*, and has no influence on the eventual distribution.]

At the end of the experiment, the actual payoff will be paid out in cash, together with the show-up fee of €2.50, i.e., *A* will collect in cash the amount *a* + €2.50 and *B* the amount *b* + €2.50 if *B* has accepted *A*'s proposal. Otherwise both will collect only €2.50.

[*In DG, this paragraph was replaced by:* At the end of the experiment, the distribution proposed by *A* will be paid out in cash, together with the show-up fee of €2.50, i.e., *A* will collect in cash the amount *a* + €2.50 and *B* the amount *b* + €2.50.]

A.2. Belief elicitation

After choices were made and before receiving any feedback, participants were asked whether or not they formed (first and second order) beliefs during their decision process. Only those who answered positively to this question proceeded to the computer screen with the corresponding expectation elicitation. In particular, the screen(s) shown to the participants were the following.

First movers in Y/N and UG:

Have you thought about *B*'s behavior?

yes ☐ no ☐

Y/N:

I thought that *B* would:

accept ☐ reject ☐

UG:

I thought that *B* would react as follows (please specify your beliefs about *B*'s behavior for each possible distribution of €20.00):

a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
b	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Accept																			
Reject																			

First movers in all three games:

Have you thought about which proposal *B* expected from you?

yes ☐ no ☐

I thought *B* expected the following proposal (please choose only ONE of the following 19 distributions of €20.00):

a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
b	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Second movers in all three games:

Have you thought about the possible proposal of *A*?

yes ☐ no ☐

I expected *A* to make the following proposal (please choose only ONE of the following 19 distributions of €20.00):

a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
b	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Second movers in Y/N and UG:

Have you thought about which reaction *A* expected from you?

yes ☐ no ☐

Y/N:

I thought that *A* expected that I would:

accept ☐ reject ☐

UG:

I thought that *A* expected that I would react to each of his possible proposals as follows (please specify your beliefs about *A*'s expectations for each possible distribution of €20.00):

a	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
b	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Accept																			
Reject																			

Appendix B. Data

The following tables present decisions and beliefs of each participant in the three games. In UG, the data vectors refer to the proposers' first order beliefs and the responders' decision and second order beliefs in case of a = 1, 2,…, 19. For each possible value of a, a "1" stands for acceptance and a "0" for rejection.

game	subject	group	mover	decision	has 1st order belief	1st order belief	has 2nd order belief	2nd order belief
YN	1	1	1	11	y	y	y	10
YN	2	2	1	11	y	y	y	19
YN	3	3	1	14	y	y	n	NA
YN	4	4	1	18	y	y	y	10
YN	5	5	1	19	y	y	y	19
YN	6	6	1	12	n	n	n	NA
YN	7	7	1	15	y	y	y	15
YN	8	8	1	10	y	y	y	19
YN	9	9	1	15	y	y	y	19
YN	10	10	1	10	y	y	y	19
YN	11	11	1	11	y	y	y	11
YN	12	12	1	18	n	n	n	NA
YN	13	13	1	12	y	y	n	NA
YN	14	14	1	19	y	y	y	10
YN	15	15	1	12	y	y	y	10
YN	16	16	1	19	y	y	y	19
YN	17	17	1	14	y	y	y	12
YN	18	18	1	10	y	y	y	10
YN	19	19	1	12	y	y	y	14
YN	20	20	1	10	y	y	y	19
YN	21	21	1	19	y	y	y	19
YN	22	22	1	17	y	n	y	19
YN	23	23	1	16	y	y	y	18
YN	24	24	1	14	y	y	y	10
YN	25	25	1	19	y	y	y	10
YN	26	26	1	18	y	y	n	NA
YN	27	27	1	15	y	y	y	19
YN	28	28	1	19	y	y	y	19
YN	29	29	1	10	y	y	y	10
YN	30	30	1	19	y	y	n	NA
YN	31	31	1	19	y	y	n	NA
YN	32	32	1	15	y	y	n	NA
YN	33	33	1	15	y	y	y	10
YN	34	34	1	13	y	y	n	NA
YN	35	35	1	15	y	y	y	15
YN	36	36	1	10	n	n	n	NA
YN	37	37	1	10	y	y	y	10
YN	38	38	1	8	y	y	y	11
YN	39	39	1	12	y	y	y	10
YN	40	40	1	15	y	y	y	17
YN	41	41	1	10	y	y	y	10
YN	42	42	1	17	y	y	y	19
YN	43	43	1	19	y	y	y	19
YN	44	44	1	10	y	y	y	19
YN	45	45	1	10	y	y	y	19
YN	46	46	1	15	y	y	y	10
YN	47	47	1	17	n	n	y	19
YN	48	48	1	18	y	n	y	19
YN	49	49	1	10	y	y	n	NA
YN	50	50	1	12	y	y	n	NA
YN	51	51	1	12	y	y	y	14
YN	52	52	1	19	y	y	y	10
YN	53	53	1	15	y	y	y	12
YN	54	54	1	12	y	y	y	15
YN	55	55	1	10	y	y	y	12
YN	56	56	1	19	y	y	n	NA

game	subject	group	mover	decision	has 1st order belief	1st order belief	has 2nd order belief	2nd order belief
YN	57	1	2	y	y	19	y	y
YN	58	2	2	y	y	13	y	y
YN	59	3	2	y	n	NA	y	y
YN	60	4	2	y	y	12	y	y
YN	61	5	2	y	n	NA	y	y
YN	62	6	2	y	y	18	y	y
YN	63	7	2	y	y	12	y	y
YN	64	8	2	y	y	19	y	y
YN	65	9	2	y	y	18	y	y
YN	66	10	2	y	n	NA	y	y
YN	67	11	2	y	y	19	y	y
YN	68	12	2	y	n	NA	y	y
YN	69	13	2	y	n	NA	y	y
YN	70	14	2	y	y	12	y	y
YN	71	15	2	y	n	NA	y	y
YN	72	16	2	y	n	NA	y	y
YN	73	17	2	y	n	NA	n	n
YN	74	18	2	y	n	NA	y	y
YN	75	19	2	y	n	NA	y	y
YN	76	20	2	y	y	19	y	y
YN	77	21	2	y	n	NA	y	y
YN	78	22	2	y	n	NA	y	y
YN	79	23	2	y	y	17	n	n
YN	80	24	2	y	y	17	n	n
YN	81	25	2	y	y	19	y	y
YN	82	26	2	y	y	12	y	y
YN	83	27	2	y	y	19	y	y
YN	84	28	2	y	n	NA	y	y
YN	85	29	2	y	y	10	y	y
YN	86	30	2	y	y	12	y	y
YN	87	31	2	y	n	NA	y	y
YN	88	32	2	y	n	NA	y	y
YN	89	33	2	y	y	18	y	y
YN	90	34	2	y	y	10	y	y
YN	91	35	2	y	n	NA	y	y
YN	92	36	2	y	n	NA	y	y
YN	93	37	2	y	y	15	y	y
YN	94	38	2	y	y	19	y	y
YN	95	39	2	y	n	NA	y	y
YN	96	40	2	y	n	NA	n	n
YN	97	41	2	y	n	NA	n	n
YN	98	42	2	y	y	19	y	y
YN	99	43	2	y	y	15	y	y
YN	100	44	2	y	n	NA	y	y
YN	101	45	2	y	n	NA	n	n
YN	102	46	2	y	n	NA	y	y
YN	103	47	2	y	y	19	n	n
YN	104	48	2	y	y	19	y	y
YN	105	49	2	y	y	10	y	y
YN	106	50	2	y	y	19	y	y
YN	107	51	2	y	y	19	n	n
YN	108	52	2	y	y	13	y	y
YN	109	53	2	y	n	NA	n	n
YN	110	54	2	y	y	19	y	y
YN	111	55	2	y	y	17	y	y
YN	112	56	2	y	y	19	y	y

game	subject	group	mover	decision	has 1st order belief	1st order belief																	has 2nd order belief	2nd order belief
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
UG	1	1	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	11
UG	2	2	1	15	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	n	NA
UG	3	3	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	n	NA
UG	4	4	1	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	17
UG	5	5	1	11	y	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	10
UG	6	6	1	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	11
UG	7	7	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	y	10
UG	8	8	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	n	NA
UG	9	9	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	y	10
UG	10	10	1	10	y	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	y	10
UG	11	11	1	10	n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	y	10
UG	12	12	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	10
UG	13	13	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	10
UG	14	14	1	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	11
UG	15	15	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	10
UG	16	16	1	10	y	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	y	10
UG	17	17	1	10	n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	y	10
UG	18	18	1	11	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	y	10
UG	19	19	1	13	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	12
UG	20	20	1	9	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	y	10
UG	21	21	1	15	n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	n	NA
UG	22	22	1	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	17
UG	23	23	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	13
UG	24	24	1	10	y	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	y	10
UG	25	25	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	y	10
UG	26	26	1	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	14
UG	27	27	1	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	10
UG	28	28	1	11	y	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	10

				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
UG	29	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
UG	30	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
UG	31	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	y	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
UG	32	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
UG	33	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
UG	34	6	2	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	y	11	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
UG	35	7	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
UG	36	8	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	12	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
UG	37	9	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UG	38	10	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	y	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
UG	39	11	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	y	13	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
UG	40	12	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	12	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
UG	41	13	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UG	42	14	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	y	11	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
UG	43	15	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	9	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
UG	44	16	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	11	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
UG	45	17	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	y	15	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0
UG	46	18	2	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	y	10	y	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0
UG	47	19	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	11	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
UG	48	20	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	y	10	y	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
UG	49	21	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	10	y	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
UG	50	22	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	19	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UG	51	23	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	10	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UG	52	24	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	19	y	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
UG	53	25	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	y	11	y	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
UG	54	26	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	y	15	y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UG	55	27	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	y	12	y	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
UG	56	28	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	y	19	y	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0

game	subject	group	mover	decision	has 1st order belief	1st order belief
DG	1	1	1	10	y	10
DG	2	2	1	10	y	10
DG	3	3	1	19	n	NA
DG	4	4	1	18	y	19
DG	5	5	1	19	y	11
DG	6	6	1	14	y	15
DG	7	7	1	18	n	NA
DG	8	8	1	17	y	19
DG	9	9	1	10	y	10
DG	10	10	1	18	y	10
DG	11	11	1	19	n	NA
DG	12	12	1	10	y	19
DG	13	13	1	10	y	10
DG	14	14	1	11	y	10
DG	15	15	1	14	y	19
DG	16	16	1	18	y	13
DG	17	17	1	19	y	19
DG	18	18	1	19	y	19
DG	19	19	1	10	y	16
DG	20	20	1	10	n	NA
DG	21	21	1	10	y	19
DG	22	22	1	18	y	19
DG	23	23	1	19	y	19
DG	24	24	1	10	y	19
DG	25	25	1	15	y	19
DG	26	26	1	19	n	NA
DG	27	27	1	19	y	16
DG	28	28	1	12	y	15
DG	29	1	2	NA	y	19
DG	30	2	2	NA	y	14
DG	31	3	2	NA	n	NA
DG	32	4	2	NA	n	NA
DG	33	5	2	NA	y	19
DG	34	6	2	NA	y	10
DG	35	7	2	NA	n	NA
DG	36	8	2	NA	y	15
DG	37	9	2	NA	n	NA
DG	38	10	2	NA	y	10
DG	39	11	2	NA	y	16
DG	40	12	2	NA	n	NA
DG	41	13	2	NA	y	11
DG	42	14	2	NA	y	13
DG	43	15	2	NA	y	18
DG	44	16	2	NA	y	19
DG	45	17	2	NA	y	12
DG	46	18	2	NA	y	10
DG	47	19	2	NA	y	19
DG	48	20	2	NA	n	NA
DG	49	21	2	NA	y	19
DG	50	22	2	NA	y	10
DG	51	23	2	NA	y	19
DG	52	24	2	NA	y	19
DG	53	25	2	NA	y	19
DG	54	26	2	NA	n	NA
DG	55	27	2	NA	n	NA
DG	56	28	2	NA	y	19