

Supplementary Information Appendix for:

## The Role of Self-Interest in Elite Bargaining

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## Methods And Materials

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We recruited 102 “elite” subjects to play the ultimatum game as part of a larger study on elite behavior in areas of international cooperation.

Elite subjects participated in our study through the online software Qualtrics. Instructions for the game are located in the following sections of this SI. Subjects played the ultimatum game twice, once as a responder and once as a proposer and knew they were playing against other subjects with extensive experience in international policy-making. Of these subjects, 102 made a proposal, but only 98 stated their minimum demand when playing as a responder. Our anonymity protocol made it impossible to re-contact these elites in order to ascertain what minimum they would have demanded. Of these elites, 95 also participated in tasks used to measure strategic reasoning and patience.

In addition to the sample of elites, we recruited a group of 641 college students at a large west-coast research university to participate in the same tasks, using the same software as our elite pool. 641 of these subjects participated in our measures of strategic reasoning and patience. 132 of these subjects participated in exactly the same version of the ultimatum game as the sample of elites. We therefore use only these 132 subjects for our analyses involving the ultimatum game. We use the additional 509 subjects to compare the distributions of strategic reasoning and patience among college students and elites (Figure 1 of the main text). While these additional subjects help the precision of our estimates, they have no qualitative effect on our conclusions. The distributions of patience and strategic reasoning for these 509 subjects and the 132 subjects who completed the ultimatum game are highly similar. A Kolmogorov-Smirnov test for a difference in distributions shows there is virtually no difference between the two groups in patience ( $p$ -value = 0.94) or strategic reasoning ( $p$ -value = 0.99).

Finally, we recruited a sample of 1007 subjects on Amazon’s online Mechanical Turk (“mTurk”) online marketplace. Once recruited from mTurk, subjects participated in our study through the online software Qualtrics—and thus had the same interface with the survey as the elite sample. Subjects played the ultimatum game twice, once as a responder and once as a proposer, and knew they were playing against other subjects drawn from the same pool.

Across the three samples, the only difference in the questionnaire setup is that the subjects in the college sample took the survey in a laboratory setting.

## Elite Subjects

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### Operational Definition

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In political science, the concept of a political elite is commonly understood to be “the small number of decision makers who occupy the top positions in social and political structures” (1-3). As such, we use the term elite to identify an individual in a position, rather than to identify an individual or characteristics of an individual *per se*. By this definition, individuals in leadership positions of national (as well as local) political institutions would be classified as elites. Also classified as elite under this definition are individuals in positions to make broad, strategic decisions in large corporations and individuals who shape public opinion. Taken together, these individuals “exercise significant influence over social and political change” (3).

### Characteristics

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The following three tables describe the characteristics of the elite and college sample of subjects. We have not reported years of experience for the college age sample. We note, however, that the elite sample is considerably older and composed of a higher proportion of male subjects than the college sample.

**Table 1: Elite Characteristics**

Characteristic	Mean	SD
Years Experience	21.32	11.11
Age	51.07	12.36
Gender	76% male	--

The determination of each elite subject’s job sector was made based on his or her present employment. For subjects who are retired, this classification was made based on their most recent employment before retirement. It is remarkably common for individuals in these sectors to transition fluidly between the sectors – for example a transition from a position in government to a lobbying position at a think tank when party control of the government changes – and so we do not draw strong conclusions from this categorization.

Sector	Number
Government	67
Industry	27
Policy Think Tank or NGO	8

**Table 2: Elite Employment Sector**

### Recruitment

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Elites were recruited through professional networks, congressional contact lists and NGO contact databases. To reach government elites this work relied on *Leadership Directories Congressional Yellow Book* that lists positions and contact information for all

members of the present Congress. We included in the recruitment frame members of congress (MoC), MoC chief of staff and legislative directors. This does not include lower-level MoC staffers. Also included in this sampling frame are individuals in leadership positions in Executive Agencies. Industry contacts were recruited from attendance lists of major professional conferences. We included only individuals whose job titles indicated they were responsible for deploying resources or shaping strategic goals. This rule excluded all but the top management positions, and so included CEO, CFO, CTO, and other VP positions responsible for resource deployment. Policy think tank and NGO subjects were recruited using *Leadership Directories* Associations Yellow Book and Non-profit Yellow Book. Only NGO and think tanks that are directly involved in position advocacy related to industry were included.

## Game Instructions and Measures

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In the following section we provide the specific instructions that were furnished to both elite and college subjects. As we noted in the first section of this SI, subjects were shown identical screens through an online software platform. Thus, the only difference in experience between subject pools is that the elite sample was able to participate in these tasks at the computer terminal of their choosing while the college sample was assigned to a computer terminal.

In the following sections describing the experimental procedures, instructions read by subjects on their computer screen are in italic face (*that looks like this*). Instructions that were not made available to the subjects (i.e. randomization schemes, draws from a respondent database) are in a fixed-width font (`that looks like this`).

### Ultimatum Game

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*The following task will be based on \$100 dollar prize that we will draw at the end of the study. The amount of the prize that you are eligible to win will depend on your choices below.*

*You are about to play a game three times. Each time you will play with a different individual in this study who a computer chooses at random (with equal chance). Your interaction with each person is specific to each game. You will not play them again.*

*In this game the players are called Player 1 and Player 2.*

*Player 1 is given \$100 dollars of the prize, while Player 2 starts with \$0 of the prize.*

*Player 1 then has the opportunity to offer a portion of his or her \$100 to Player 2. Player 1 could offer some, all, or none of the \$100 dollars.*

*Player 2 is given the choice to accept or reject Player 1's offer.*

*If Player 2 accepts Player 1's offer, then Player 2 gets the amount of the offer and Player 1 gets the remainder. If Player 2 rejects Player 1's offer, then neither player receives any money from this game.*

*We will now run through 3 examples to show you how the game might be played.*

1. *Imagine that Player 1 offers \$90 to Player 2. Player 2 decides to reject an offer of \$90 from Player 1. Because Player 2 rejects \$90, Player 1 gets nothing and Player 2 gets nothing.*
2. *Imagine that Player 1 offers \$90 to Player 2. Player 2 decides to accept the offer of \$90 from Player 1. In this case, Player 1 receives \$10 (\$100 minus \$90 equals \$10) and Player 2 receives \$90.*
3. *Imagine that Player 1 offers \$20 to Player 2. Player 2 decides to accept the offer of \$20 from Player 1. Because Player 2 accepts the offer of \$20, Player 1 gets \$80 (\$100 minus \$20 equals \$80), and Player 2 gets \$20.*

*You will play this game three times, once as Player 1 and then twice as Player 2. We will keep these instructions at the top of the page for each game, in case you wish to refer to them.*

*As Player 1 you will make an offer that will be presented to another survey participant. As Player 2 you will accept or reject an offer made by a previous participant.*

*At the end of the study we will randomly pick 1 game, and pay the two participants in that game according to their decisions.*

*<Subjects then saw the following prompts. In our analysis, we used Game 1 and Game 3. Game 2 was used to prompt subjects to focus on how they felt about a specific offer.>*

### Game 1

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*In this game, you are Player 1. You must now decide how much of \$100 dollar prize you want to offer to Player 2. Please use the slider below to indicate how many of the hundred dollars you would like to offer Player 2, and how many dollars of the prize you propose to keep for yourself. Another survey participant, playing as Player 2 will decide whether to reject or accept this proposal.*

### Game 2

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*In this game, you are Player 2. A previous participant, playing as Player 1, made an offer to give you:  $\$e$  of the \$100 prize.*

*Do you want to accept this offer in which case the prize will be split accordingly? Or reject it in which case you will both get \$0 of the prize.*

*$\$e$  makes a random draw from the database of previous offers made by subjects playing Game 1 as Player 1.*

### Game 3

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*In This game you are playing as Player 2. Instead of accepting or rejecting an offer from Player 1, we want you to state what is the lowest offer from Player 1 that you would accept. If Player 1's offer is above or equal to this amount we will split the prize accordingly. If Player 1's offer is lower than this amount, both of you will receive \$0.*

*Please enter the minimum dollar amount (as a number) that Player 1 must offer you in order for you to accept their offer.*

## Time Discounting Task

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### Instructions

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*For this next section of the study, we will draw a monetary prize. If you are chosen to win the prize your choices below will determine the amount of the prize and the date of payment.*

*You will be asked to choose the payment option that you would prefer in each of 20 different payoff alternatives.*

*Note that for each of the 20 payoff alternatives Option A will pay \$100 in 30 days and Option B will pay \$100 + \$x in 60 days.*

*For each payoff alternative you will select the payment option (A or B) that you would prefer if you are chosen to receive the prize.*

*When the study is completed a random drawing will be held to choose which one of the 20 payoff alternatives will determine the prize, and another random drawing will be held to determine the one person who will receive the prize.*

*When and how much the winner will be paid will be based on the payment option he or she chooses under the payoff alternative selected.*

*Please make a choice for each payoff alternative below.*

### Elicitation

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Subjects were shown a response table (reproduced below) and were asked to choose between two choices each with specified interest rates. The options were intentionally ordered from smallest to largest discount rates because this elicitation mechanism is specifically designed to aid respondents in identifying the point at which they are indifferent between the two rates.

○	A (1)	B (2)
Option A (\$100.00 in 30 days) or Option B (\$100.17 in 60 days)? (1)	○	○
Option A (\$100.00 in 30 days) or Option B (\$100.25 in 60 days)?" (2)	○	○
Option A (\$100.00 in 30 days) or Option B (\$100.33 in 60 days)? (3)	○	○
Option A (\$100.00 in 30 days) or Option B (\$100.42 in 60 days)? (4)	○	○
Option A (\$100.00 in 30 days) or Option B (\$100.63 in 60 days)? (5)	○	○
Option A (\$100.00 in 30 days) or Option B (\$100.84 in 60 days)? (6)	○	○
Option A (\$100.00 in 30 days) or Option B (\$101.05 in 60 days)? (7)	○	○
Option A (\$100.00 in 30 days) or Option B (\$101.26 in 60 days)? (8)	○	○
Option A (\$100.00 in 30 days) or Option B (\$101.47 in 60 days)? (9)	○	○
Option A (\$100.00 in 30 days) or Option B (\$101.68 in 60 days)? (10)	○	○
Option A (\$100.00 in 30 days) or Option B (\$102.10 in 60 days)? (11)	○	○
Option A (\$100.00 in 30 days) or Option B (\$102.96 in 60 days)? (12)	○	○
Option A (\$100.00 in 30 days) or Option B (\$104.25 in 60 days)? (13)	○	○
Option A (\$100.00 in 30 days) or Option B (\$106.44 in 60 days)? (14)	○	○
Option A (\$100.00 in 30 days) or Option B (\$108.68 in 60 days)? (15)	○	○
Option A (\$100.00 in 30 days) or Option B (\$110.96 in 60 days)?	○	○

(16) Option A (\$100.00 in 30 days) or Option B (\$113.29 in 60 days)?	<input type="radio"/>	<input type="radio"/>
(17) Option A (\$100.00 in 30 days) or Option B (\$115.66 in 60 days)?	<input type="radio"/>	<input type="radio"/>
(18) Option A (\$100.00 in 30 days) or Option B (\$118.08 in 60 days)?	<input type="radio"/>	<input type="radio"/>
(19) Option A (\$100.00 in 30 days) or Option B (\$123.07 in 60 days)?	<input type="radio"/>	<input type="radio"/>

## Measuring Patience

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We measured patience as the number of choices (out of 20) where a subject picked the 60 day option. However, none of our results change if we use this task to calculate subjects' exponential discount rate, as in (4).

## Beauty Contest Game

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### Instructions

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*For the next section we will draw a \$100 prize at the end of the study. Whether or not you win this prize will depend both on your choices and the choices of other study participants.*

*You have been paired randomly with 5 other anonymous participants in the study. You will never know their identity, and they will never know yours.*

*In this section, you will play 6 games. In each game you and each of the participants that you have been paired with will guess a whole number (integer) between 0 and 100 (0 and 100 included).*

*The winner of this game will be the participant in the group whose guess is closest to the group's average guess, multiplied by a number  $M$ . We tell you what  $M$  is at the beginning of each game.*

*If more than one participant picks the same winning number, we will split the prize among those participants.*

*At the end of the study we will choose 1 group via a random drawing. We will then, via another random drawing, pick 1 of the group's games. For the chosen game and group, the winner will be awarded \$100 and notified by email.*

#### What is the average?

*The average is the sum of each participant's guess divided by the number of participants. So if the 5 participants in a group each guess numbers  $a, b, c, d, e$ . The average is  $(a+b+c+d+e)/5$ .*



### Calculator

*This game isn't supposed to be a math test. Feel free to use a calculator. We've provided a link to one below each game.*

### Examples

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#### **Example 1:**

*Say the multiplier  $M$  is  $3/5$ . The winner of this game is the participant whose guess is closest to the group's average guess multiplied by  $3/5$ . Below is a table showing 3 possible average guesses for a group, and the optimal guess given that average guess. The winner of the game would be the participant whose guess was closest to the optimal number.*

For  $M=3/5$

If the group's average guess is	75	50	25
The winner is the participant in the group who guessed the number closest to	45	30	15

#### **Example 2:**

*Say the multiplier  $M$  is  $6/5$ . Below is a table showing 3 possible average numbers for a group, and the optimal guess.*

For  $M=6/5$

If the group's average guess is	75	50	25
The winner is the participant in the group who guessed the number closest to	90	60	30

*Notice how when the Multiplier  $M$  is less than 1 (Example 1) a player always wants to guess lower than the group average, and when the Multiplier  $M$  is greater than 1 (Example 2) a player always want to guess above the group average.*

<After reading the instructions above, subjects played each of the following 6 games in random order. For each game they had access to a calculator.>

### Game $M=1/4$

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*Please use the slider to pick a number between 0 and 100 (0 and 100 included). The winner of this game will be the participant whose guess is closest to the group's average guess, multiplied by  $1/4$ .*

### Game $M=1/2$

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*Please use the slider to pick a number between 0 and 100 (0 and 100 included). The winner of this game will be the participant whose guess is closest to the group's average guess, multiplied by  $1/2$ .*

### Game M=2/3

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*Please use the slider to pick a number between 0 and 100 (0 and 100 included). The winner of this game will be the participant whose guess is closest to the group's average guess, multiplied by 2/3.*

### Game M=4/3

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*Please use the slider to pick a number between 0 and 100 (0 and 100 included). The winner of this game will be the participant whose guess is closest to the group's average guess, multiplied by 4/3.*

### Game M=3/2

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*Please use the slider to pick a number between 0 and 100 (0 and 100 included). The winner of this game will be the participant whose guess is closest to the group's average guess, multiplied by 3/2.*

### Game M=7/4

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*Please use the slider to pick a number between 0 and 100 (0 and 100 included). The winner of this game will be the participant whose guess is closest to the group's average guess, multiplied by 7/4.*

### Measure of Level-K reasoning

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Following Corricelli and Nagel (9) we calculated the strategy implied by each Level-K type for each game as  $50M^K$  for each game, where  $M$  is the multiplier used in the game, and  $K$  is 0, 1, or 2. For each subject we then calculated the square distance between their strategy and the strategy implied by each Level-K type. Subjects who were closest to a Level-2 strategy in the majority of games (4 of 6) were categorized as Level-2 players. Of the remaining subjects, those who were closest to Level-1 or higher in the majority of games were categorized as Level-1 players. All other subjects were categorized as Level-0 players.

### Analysis of Level-K Reasoning, Ultimatum Bargaining and Patience

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Subjects' Level-K is associated with bargaining behavior, but this relationship is asymmetric: higher demonstrated Level-K is associated with lower demands, but higher Level-K is not associated with lower offers. In fact, higher demonstrated Level-K has no relationship with the offers made by the elite subjects.

**Table 3: Huber Regression on Subjects' Demand in Ultimatum Game**

	UG	t-stat	Elite	t-stat	UG+Elite	t-stat
Intercept	28.33	13.63	35.65	8.12	27.71	13.82
L1	-7.60	-2.52	-3.35	-0.66	-6.32	-2.43
L2	-10.51	-1.87	-7.19	-1.13	-9.58	-2.41
Elite					10.31	4.14
N	130		91		221	

**Table 4: Huber Regression on Subjects' Offer in Ultimatum Game**

	UG	t-stat	Elite	t-stat	UG+Elite	t-stat
Intercept	39.98	20.31	47.92	27.31	40.03	26.20
L1	-2.08	-0.72	-1.90	-0.92	-1.36	-0.90
L2	-0.60	-0.11	-2.58	-0.97	-1.36	-0.47
Elite					6.45	3.43
N	132		95		227	

Table 3 shows that Level-K reasoning has a consistent, linear relationship with subject demands in both the undergraduate and elite population. Compared to L0 reasoners, L1 reasoners demand about \$5 less, and L2 reasoners demand about \$10 less. Both results are significant when the two populations are pooled. Independent of Level-K reasoning, elites demand about \$10 more. This is consistent with the fact that more elites demand a 50/50 split.

Table 4 shows that Level-K reasoning has almost no relationship with subject offers. Independent of this, elites make higher offers.

Table's 5 and 6 show that the relationship with patience is similar to the relationship with Level-K: more patient subjects demand less, but do not offer less. Like Level-K, patience has no significant relationship with proposals. This pattern is independent of Level-K reasoning.

**Table 5: Huber Regression on Subject Demands in Ultimatum Game**

	UG	t-stat	Elite	t-stat	UG+Elite	t-stat
Intercept	28.27	20.31	38.15	9.41	30.83	12.98
Patience	-0.55	-2.28	-0.60	-1.78	-0.49	-2.48
L1					-5.51	-2.07
L2					-8.40	-2.06
Elite					11.46	4.44
N	130		91		221	

**Table 6: Huber Regression on Subject Offers in Ultimatum Game**

	UG	t-stat	Elite	t-stat	UG+ Elite	t-stat
Intercept	40.50	19.93	47.99	27.37	41.40	22.59
Patience	-0.23	-1.07	-0.18	-1.19	-0.19	-1.23
L1					-1.63	-0.80
L2					-1.20	-0.38
Elite					7.13	3.61
N	132		95		227	

### Analysis of Experience and Age in Elite and Undergraduate Populations

In the main text we look at how elite bargaining varies as a function of “years experience”, which was measured by the following question:

*“How many years of experience do you have working in your current field of work?”*

We show that within our elite population there is a positive and significant relationship between elites’ experience and what they demand and offer in the ultimatum game.

Because we did not have a similar measure of experience in our undergraduate population, we cannot compare the two populations on self reported experience. However, we can compare them on a closely related variable, self-reported age in years (*Pearson’s r = .84*). Here, we use Huber robust regression to look at how much age explains the difference between elites and undergraduates.

**Table 7: Huber Regression on Subject Demands, by Age**

	1		2		3		4	
	Pooled	t-stat	Pooled	t-stat	Pooled	t-stat	Pooled	t-stat
Intercept	24.45	15.64	46.81	-2.34	30.83	12.98	-19.14	-0.97
Elite	6.48	2.71	-13.10	-2.15	11.46	2.58	-3.20	-0.52
log(Age)			23.36	3.57			16.27	2.55
Patience					-0.49	-2.48	-0.48	-2.44
L1					-5.50	-2.07	-4.82	-1.82
L2					-8.40	-2.05	-7.14	-1.76
N	228		228		221		221	

Column 1 of Table 7 repeats our finding in the main text. Elite subjects demand more in the ultimatum game. Column 2 shows that this difference can be largely explained by age, and controlling for this variable, elites actually exhibit substantially lower offers. Column 3 shows (again) that this negative association might be explained by the fact that elites are

more strategic (as measured by Level-K reasoning), and more patient, as both factors predict lower offers, and controlling for these factors (but not age) causes the coefficient on the elite indicator variable to almost double. Column 4 shows that including all variables causes the coefficient on the elite indicator variable to shrink and become statistically indistinguishable from 0, suggesting that age plus patience and strategic reasoning may be enough to explain much of the differences between elite and undergraduate demands.

**Table 8: Huber Regression on Subject Offers, by Age**

	1		2		3		4	
	Pooled	t-stat	Pooled	t-stat	Pooled	t-stat	Pooled	t-stat
Intercept	39.15	31.38	-3.80	-0.25	41.40	22.59	4.45	0.28
Elite	4.97	2.62	-7.44	-1.59	7.13	3.61	-3.51	-0.71
log(Age)			14.08	2.82			11.96	2.35
Patience					-0.19	-1.23	-0.19	-1.18
L1					-1.63	-0.80	-1.12	-0.53
L2					-1.20	-0.38	-0.32	-0.10
N	233		233		227		226	

Column 1 of Table 8 shows our finding from the main text that elites make higher offers as well. Column 2 shows that this difference becomes negative, but statistically insignificant when controlling for log(Age). Column 3 shows (again) that there is no significant relationship between offers and patience or Level-K reasoning. Column 4 shows that controlling for all variables, only age remains statistically significant, suggesting that higher offers may be mostly determined by learning over time, which is consistent with the conjecture made by (5) that positive offers may simply reflect a rational response to positive demands in a given population.

## mTurk Subjects

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### Characteristics

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One concern often raised when using an undergraduate subject pool for laboratory experiments is that the subject pool may not be representative of the general public—let alone policy and business elites. In particular, undergraduates are younger and less experienced in matters of business and employment; they are less exposed to the vagaries of the world and human interactions. In the context of this study, this lack of experience may have led to lower assessed strategic reasoning or distinctive offers that drove results.

Another possible concern, raised by one of our reviewers, was that undergraduates might differ from our elite sample because they completed the study in a laboratory setting, while our elite sample took the study in an online setting. Previous research had found that this could matter (6). As we describe below, we do not find evidence that conducting the study online substantially alters our main results.

To examine both possibilities, we recruited a sample of 1007 people from Amazon Mechanical Turk, which is an online labor market where individuals can be hired to complete short tasks, such as an online experiment. This platform allowed us to recruit a sample of people who would take the study entirely online, and who (compared to

undergraduates) are known to be more representative of the general population on a wide variety of characteristics, such as age and education (7, 8). As we report in Table 9, 72% of the Turk sample were employed and earning more than \$24,000 yearly and 61% were male. The mean age of the Turk sample was 31.55 years old. In Table 10 we report education levels of Turk workers.

**Table 9: Characteristics of mTurk Sample**

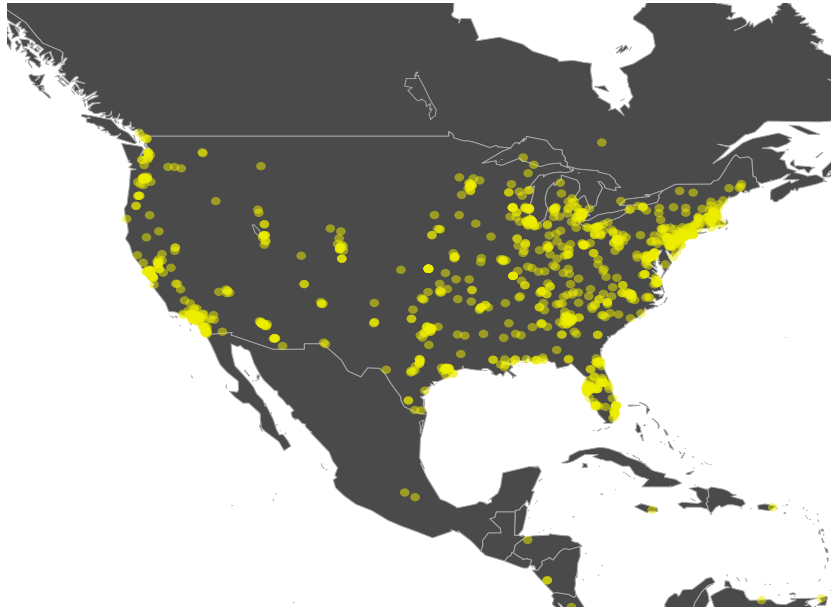
Characteristic	Mean	SD
Age	32	10.26
Male	61%	--
Earning > \$24,000	72%	--

**Table 10: Education Attainment of mTurk Sample**

Education Category	Percent in Each Category
	(%)
Less than High School	.2
High School / GED	10
Some College	29
Two -year college degree	10
Four - year college degree	36
Masters	12
MBA	.7
Juris Doctorate	.8
Doctorate	.5
Other	.4

Figure 1 shows the location of mTurk workers based on approximate locations generated by the Qualtrics online survey software. Most users are drawn from the populated areas of the United States. 88% of the sample reports being a US citizen, and 93% report being in the US full time. Of those not full time residents of the US, 53 (5%) were reported living in India. None of the results change substantively or significantly when the sample is restricted to only those who are living permanently in the US.

Figure 1: Location of mTurk Subjects



### Parallel Analysis with mTurk Sample

In this section we report the results of analysis that is parallel to the analysis with the undergraduate and elite populations.

The following two tables show how offers and demands are distributed across the three populations. Demands in our Turk population replicate the key result from the main text: mTurk subjects are statistically indistinguishable from our undergrad population, and (like undergraduates) make significantly lower demands than our elite population (two-tailed  $t$ -test  $p < 0.04$ ).

#### Mean Demand in the Ultimatum Game

	Mean	SEM
Undergraduate	24.51	1.42
mTurk	26.76	0.55
Elite	30.64	1.78

#### Mean Offer in the Ultimatum Game

	Mean	SEM
Undergraduate	38.70	1.49
mTurk	42.95	0.48
Elite	43.05	1.47

mTurk subjects also make slightly lower offers than our elite population, but this difference is not statistically significant at any conventional level. It is impossible to say for certain why mTurk subjects (like undergraduates) make much lower demands than elites, but only slightly lower offers. However, one possibility is that proposers on mTurk are more uncertain about which offers will be accepted by other mTurk workers because, unlike undergrads at the same institution or elites, mTurk workers interact infrequently.<sup>1</sup> This additional uncertainty would raise average offers even though the offer mTurkers actually demand is similar to undergraduates. In this case, elites' higher offers would come from learning that other elites demand such bargains, whereas mTurk workers' high offers would be driven more by uncertainty (and not learning). This is consistent with our finding below that variables plausibly associated with learning (age and experience) are strongly associated with elite offers, but have no association with the offers of mTurk workers.

On measures of patience and strategic reasoning, our mTurk population also looks very close to our undergraduate sample, but is quite distinct from our elite sample.

Mean number of patient choices

	Mean	SEM
Undergraduate	6.5	0.23
mTurk	4.5	0.16
Elite	10.5	0.60

Percent in each K-Level

	K=0	K=1	K=2
Undergraduate	0.53	0.40	0.07
mTurk	0.52	0.45	0.03
Elite	0.22	0.60	0.18

It is also possible to show that patience and strategic reasoning have the same relationship to offers and demands in the ultimatum game. In the first columns of Table 11 below, we estimate the same Huber Regression on subjects' demand in the Ultimatum Game as presented for the UG and Elite samples in Table 3. We find a similar relationship between estimated Level-K and subjects' demand. Compared to L0 Turkers, L1 Turkers demand about \$3 less. Consistent with the results in Table 3, L2 Turkers demand approximately twice as much less than L1 Turkers – about \$8 less.

In the second set of columns, labeled *Table (4)*, we estimate the same Huber Regression on subjects' offer in the Ultimatum Game as presented for the UG and Elite samples in Table 4. Similar to what we found among both the UG and Elite samples, we find no relationship between Level-K and offers in the Ultimatum Game.

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<sup>1</sup> Note that this problem is not particular to us using mTurk. Even if we had a perfectly representative US sample play online it would still be the case that the typical person from Minnesota rarely interacts with people in California (at least compared to undergrads at the same institutions or elites, who are relatively small in number and know they have a more similar background in terms of variables like education and job experience).



In the third set of columns, labeled *Table (5)*, we estimate the relationship between patience and subjects' demand in the Ultimatum Game. Like the UG and Elite samples, more patient Turkers demand less in the Ultimatum Game.

In the fourth set of columns, labeled *Table (6)*, we estimate the same Huber Regression on subjects' offer in the Ultimatum Game as presented for the UG and Elite samples in Table 6. Similar to what we found among both the UG and Elite samples, we find no relationship between measured patience and offer in the Ultimatum Game.

**Table 11: mTurk Estimates**

	Table (3)		Table (4)		Table (5)		Table (6)	
	Coef.	t-stat	Coef.	t-stat	Coef.	t-stat	Coef	t-stat
Intercept	27.91	38.66	46.69	142.31	27.89	39.59	47.46	181.08
Patience	--		--		-0.33	-3.22	-0.02	-0.41
L1	-2.79	-2.62	0.25	0.52	--		--	
L2	-7.69	-2.51	0.72	0.52	--		--	
N	1006		1007		1006		1007	

## The Role of Age

In the main text of our paper, we show that self-reported experience positively correlates with demands and offers in our elite population. We have also shown in the SI that age, which is closely related to experience, may explain the difference between our elite and undergrad populations. However, both analyses leave open the possibility that experience simply proxies for age in our elite population, and there is simply something about the aging process (rather than experience, learning, or selection) that drives elites to make higher offers.

This was difficult to test with our original sample because undergraduates do not vary much in their age. However, our mTurk sample is non-elite, but does vary substantially in terms of age. If higher demands are simply driven by a universal aging process, then we would expect to see a similar relationship between age and demands in both our elites and mTurk worker populations. As we show in Table 12 below, this is not the case. The coefficient on  $\text{Log}(\text{age})$  is much larger for elites ( $\beta = 24.5$ ,  $\text{se} = 7.21$ ) than it is for our mTurk population ( $\beta = 4.0$ ,  $\text{se} = 1.78$ ). Table 13 shows that the same basic pattern holds for offers.

Therefore, it does not appear to be the case that experience simply proxies for age in our elite population. Instead, it seems that age in our elite population proxies for additional factors that are unique to our elite population, such as selection into elite positions and perhaps domain specific experiential learning.

Table 12: Huber Regression of Demands on Log(Age)

	Elites	t-stat	mTurk	t-stat	Combined	t-stat
Intercept	-64.49	-2.29	12.54	2.05	12.49	2.04
Log(age)	24.54	3.40	4.06	2.28	4.08	2.27
Elite					-70.87	-2.73
Log(age) × Elite					18.82	2.81
N	98		1005		1103	

Table 13: Huber Regression of Offers on Log(Age)

	Elites	t-stat	mTurk	t-stat	Combined	t-stat
Intercept	0.92	0.05	45.46	16.88	45.30	15.99
Log(age)	11.23	2.61	0.42	0.54	0.44	0.53
Elite					-31.73	-2.67
Log(age) × Elite					7.73	2.52
N	101		1006		1107	

### The Role of Income

The behavior of elites might, as well, be affected by income. However, we are unaware of other published studies that have investigated how pre-game income affects bargaining in the Ultimatum game. Moreover, the undergraduate sample is problematic to use in studying income effects since undergraduates are in the midst of transition as wards of their parents to full-fledged adults. We can, however, study income effects using the mTurk and elite samples. For these two samples, we have an 8 category variable for self-reported (with substantial non-reporting especially by elites). Below is the distribution for both our elite and mTurk population. Each distribution skews in the opposite direction, but there is overlap across most of the categories, with the lowest income category being the main exception.

#### Stated income in each population

	Elite	mTurk
\$0-\$24,000	0	258
\$25,000-54,000	2	309
\$55,000 - \$69,000	1	188
\$70,000 - \$84,000	0	67
\$85,000 - \$99,000	4	75
\$100,000 - \$149,000	10	60

\$150,000 - \$199,000	13	8
\$200,000 or more	62	7
Total	92	983

We used regression analysis to see if there was a relationship between logged income and demands in either population, and whether this could explain the difference between the two populations. We find that after controlling for age, income has no significant association with demands in either population (columns 1 and 2 of Table 14). It is also not the case that it has an appreciably different effect in either population (column 3 of table 14). Table 15 shows the same pattern for offers.

Table 14: Huber regression of Demands on log(Income)

	Elites	t-stat	mTurk	t-stat	Combined	t-stat
Intercept	-48.02	-1.68	13.01	2.08	12.93	2.04
Log(age)	17.98	1.96	3.85	2.12	3.87	2.28
Log(income)	5.28	0.55	0.28	0.31	0.28	
Elite					-60.23	-2.20
Log(age) × Elite					14.94	1.70
Log(income) × Elite					2.61	0.29
N	88		970		1058	

Table 15: Huber regression of Offers on log(Income)

	Elites	t-stat	mTurk	t-stat	Combined	t-stat
Intercept	5.77	0.35	44.51	16.90	44.51	16.65
Log(age)	10.80	2.06	0.62	0.80	0.61	0.79
Log(income)	-1.16	-0.21	0.10	0.27	0.10	0.26
Elite					-24.84	-2.15
Log(age) × Elite					4.51	1.22
Log(income) × Elite					3.22	0.85
N	91		971		1062	

### The Role of Game Theory training

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One reviewer asked whether game theory training might explain the difference between elites and undergraduates. This is unlikely, since none of our students were recruited from a course that covered game theory in any depth. However, we examined this question more

directly in our Turk sample by asking a question at the end of that study about subject's game theory training:

*"Have you ever taken a course in game theory or strategic decision-making?"*

89 respondents reported "yes". 38 respondents reported they were unsure. The remaining sample reported "no". However, this training has no effect. If we restrict our sample to only the subjects who reported no game theory training, their mean demand in the ultimatum game was 26.94 (sem = 0.59), which is almost exactly the same as the full sample. The mean proposal is also virtually unchanged: 43.02 (sem = 0.52).

### Supporting Information References

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