

# A Behavioral Approach to International Cooperation

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# Our General Claim

Decision makers' behavioral traits help to explain their preferences for participation in and the design and implementation of international law.

# Research Design

Survey experiments

+

Behavioral Games

# 2 Samples:

1. 509 UCSD college students in the lab

2. 73 senior level elites in the field:

- Working in the U.S. government as chief trade negotiators, members of Congress, etc.
- Working as heads of business and financial strategy in major U.S.-based companies exposed to trade related policy decisions.

# Measures:

- Survey Experiment
  - Complexity of negotiations
  - Whether to join a cooperative trade agreement
- Behavioral Games
  - Patience
  - Level of Strategic Reasoning

# Research Design:

- Two types of decisions
  - Complexity of negotiations
  - Whether to join a cooperative trade agreement
- Two types of traits measured
  - Patience
  - Level of Strategic Reasoning

# Two Hypotheses for the Decision to Join a Trade Agreement

- 1. Enforcement:** Individuals will be more likely to join an international trade agreement when there is enforcement.
- 2. Strategic thinking:** More strategic decision-makers are more willing to join cooperative agreements because they understand that their joining affects whether other states will reciprocate

# Defining Strategic Reasoning:

The extent to which a person's actions take in to account how other players will respond and counter respond to one another in a particular game.

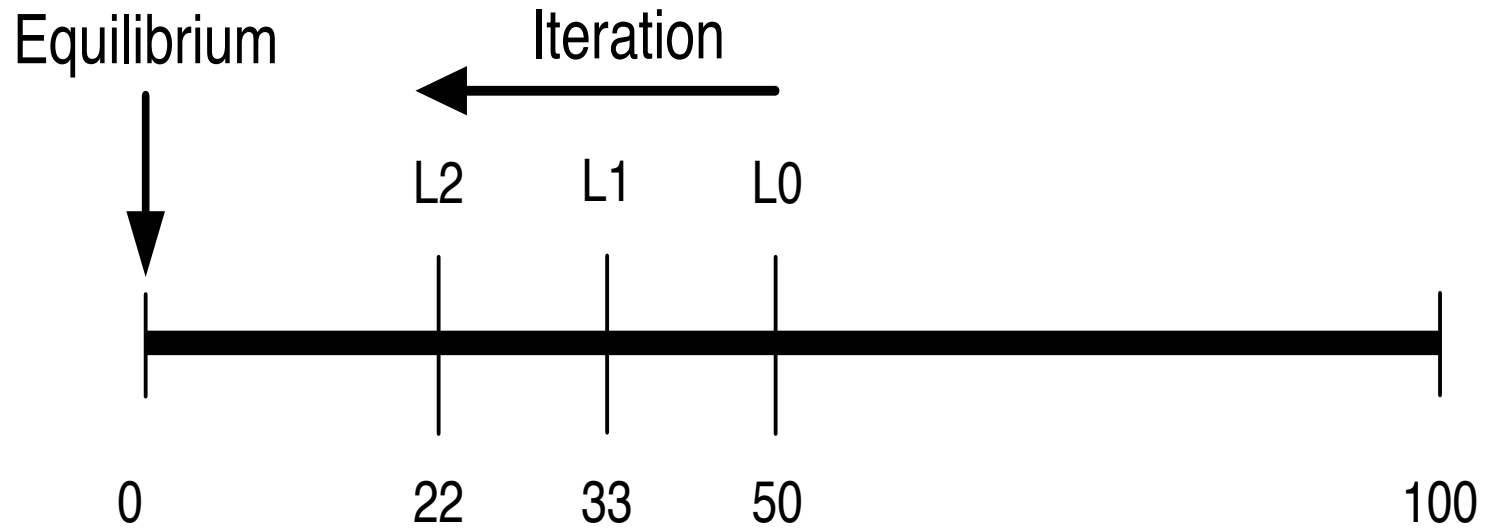


## Beauty Game Contest:

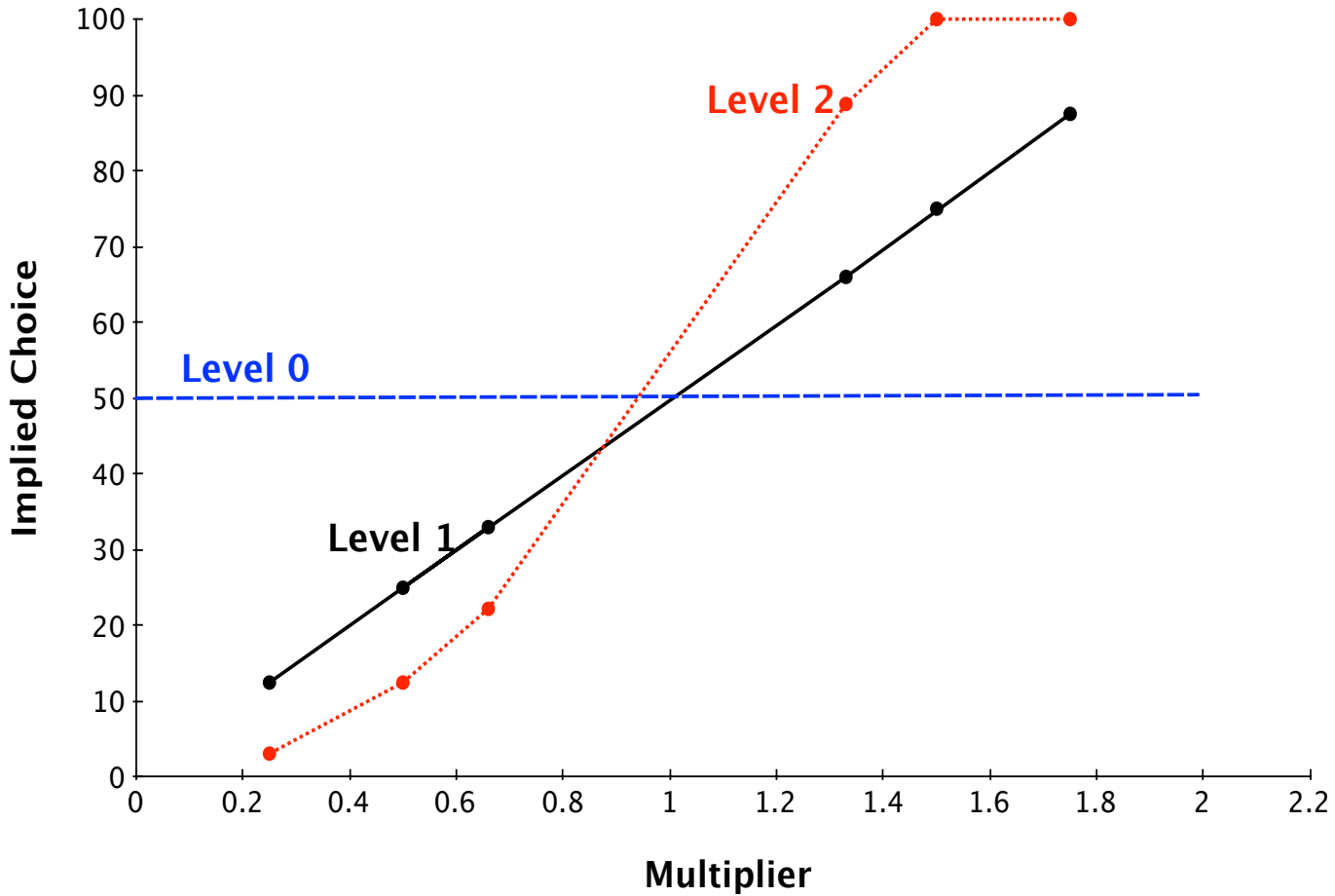
Example: 5 players pick a number from 0 to 100.  
Winner is player who is closest to  $2/3$ 's of the group's  
average.

Measures whether people iteratively eliminate  
dominated strategies.

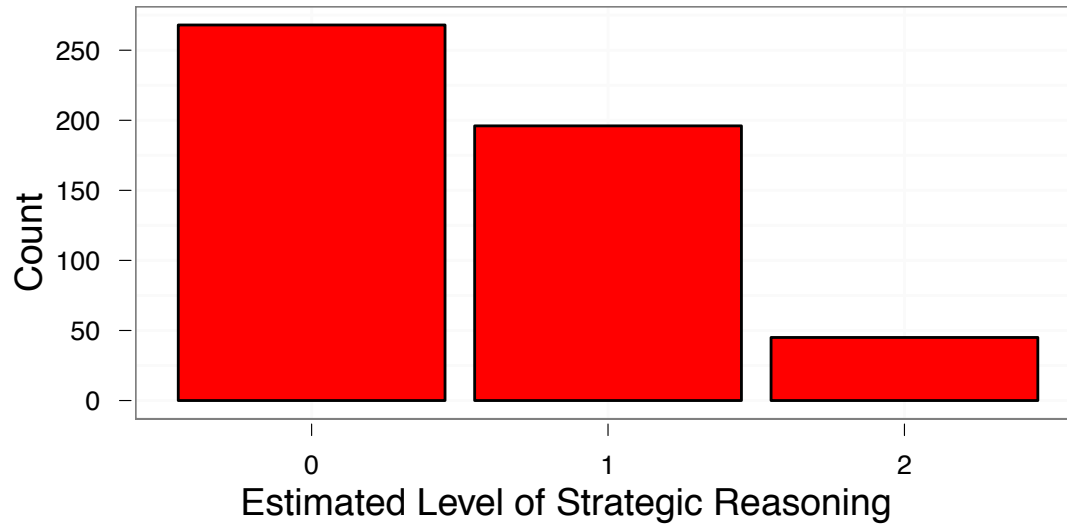
# Beauty Game Contest



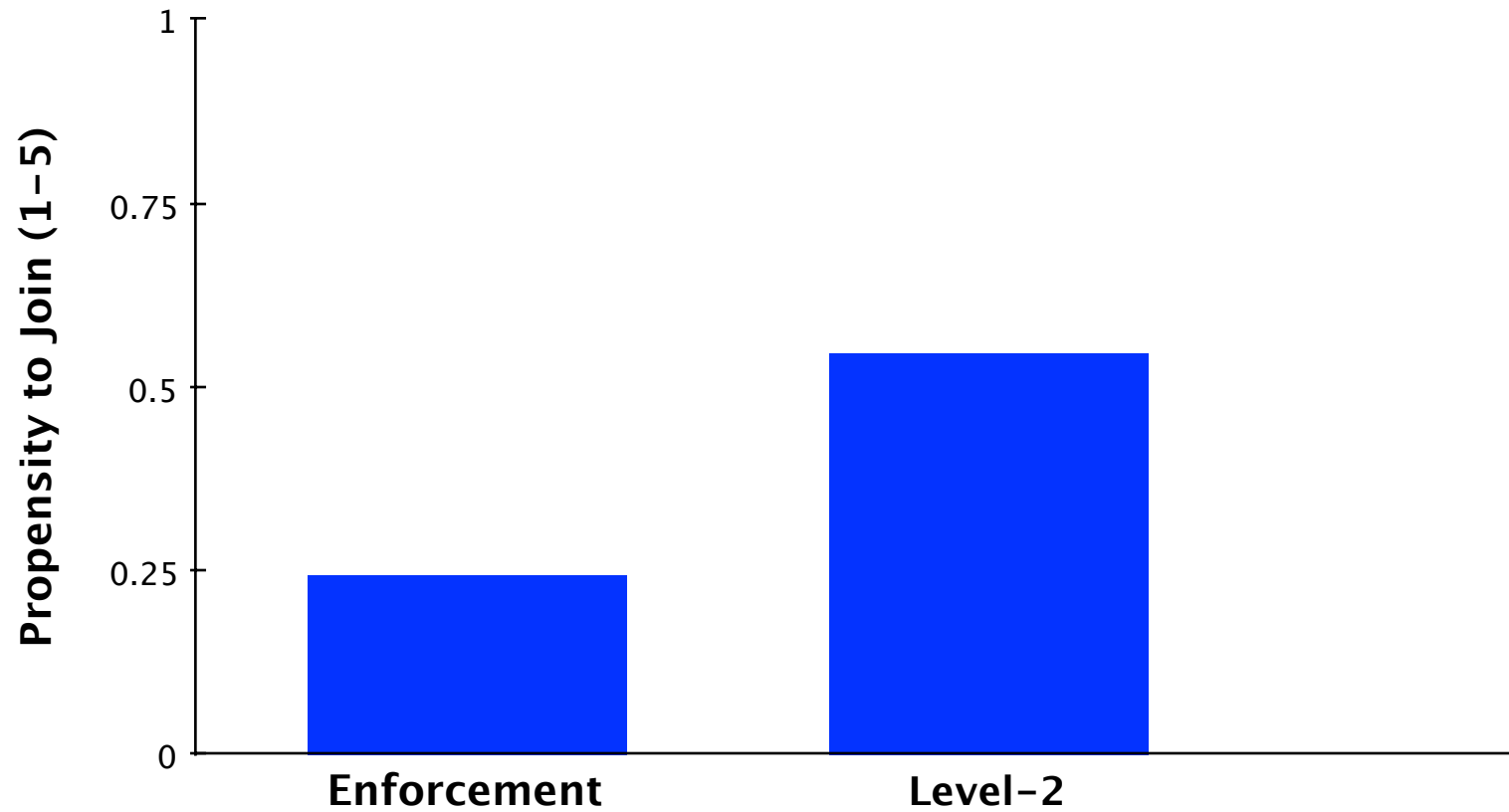
# Beauty Game Contest



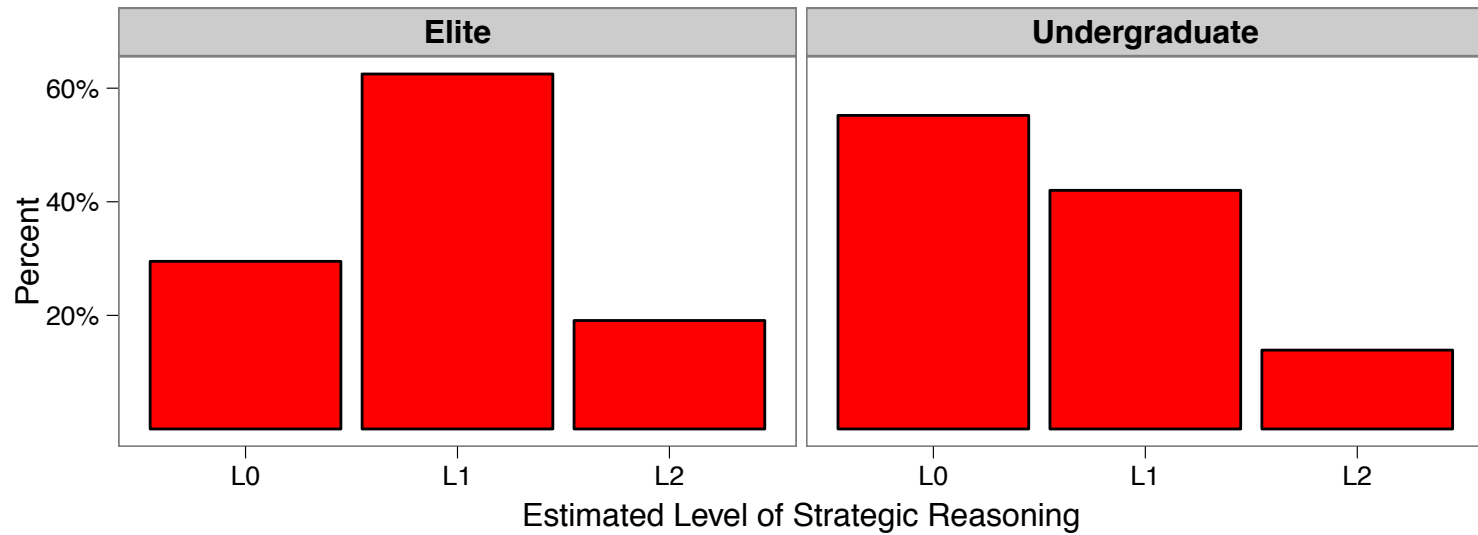
# Strategic Reasoning:



# Results For Joining a Treaty



# Are Elites Different?



# Next steps

- Experimentally manipulating behavioral traits
- The interaction between group decision-making and behavioral traits.

**Thank You**

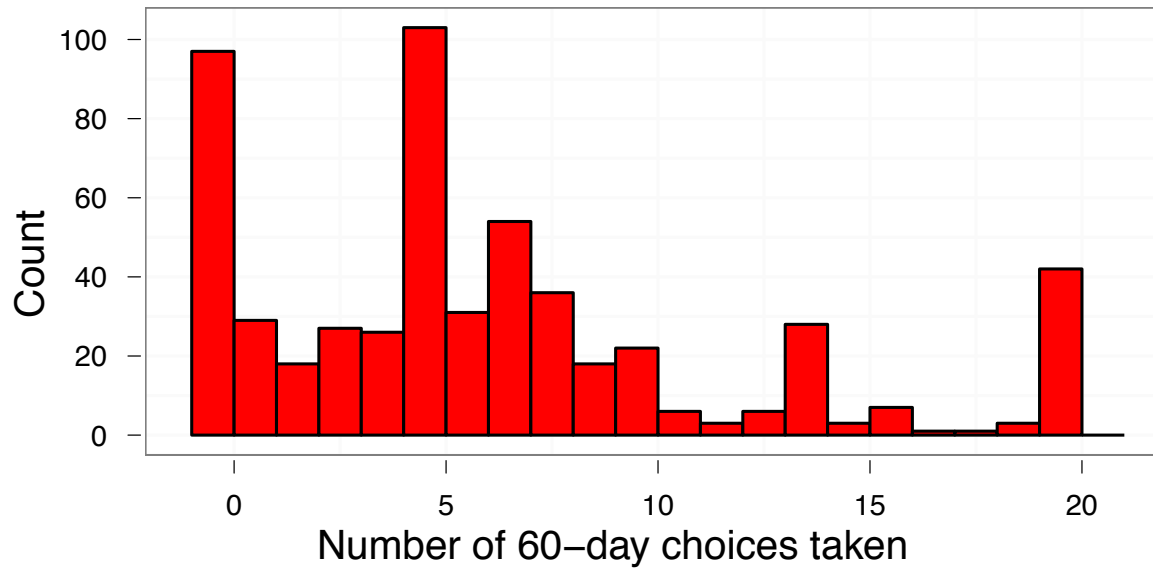


# Patience

How much do you discount future rewards which occur further into the future.

Measured via a multiple pricelist:  
\$100 prize in 30 days vs.  $\$100+x$  in 60 days

# Patience



# Results for Bargaining Complexity

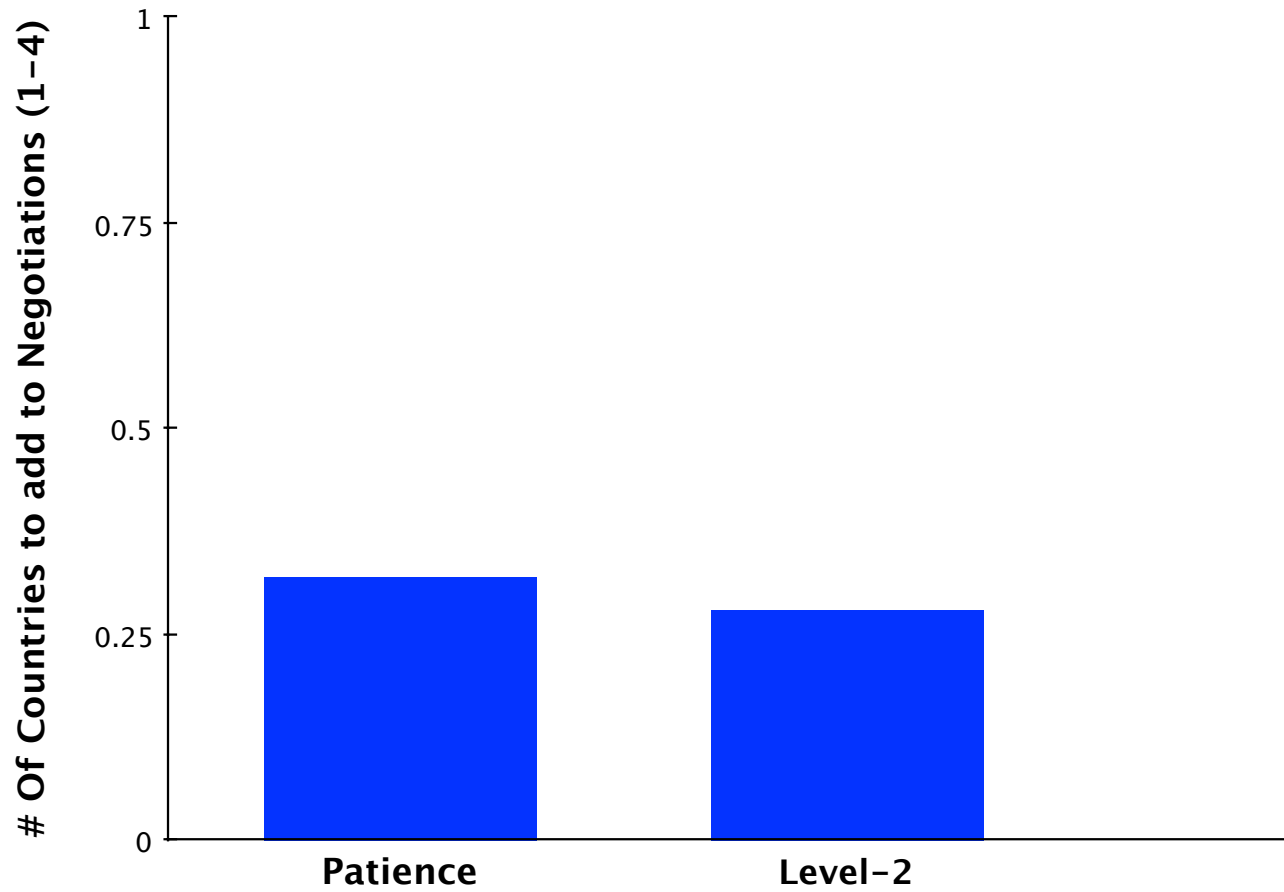


Table 2. Behavioral Traits and Tolerance for Complexity in Negotiations

	<i>Dep. Variable: No. of Countries in Negotiation (4 categories)</i>		
	<i>Patience</i>	<i>Level-K</i>	<i>Both measures + Controls</i>
<i>Patience</i>	0.016*** (0.004)		0.017*** (0.004)
<i>Level 1 Reasoner</i>		0.072 (0.048)	0.043 (0.051)
<i>Level 2 Reasoner</i>		0.281*** (0.099)	0.297*** (0.105)
<i>Female</i>			0.127*** (0.048)
<i>Income</i>			0.006 (0.012)
<i>Year in School</i>			-0.019 (0.019)
<i>Graduate Student</i>			-0.088 (0.091)
<i>Intercept</i>	1.974*** (0.034)	2.030*** (0.035)	1.904*** (0.082)
<i>N</i>	509	509	487†

Standard errors reported beneath each coefficient are White's robust standard errors.

\* p<0.1 \*\* p<0.05 \*\*\* p<0.01

†This regression has fewer observations due to some subjects not reporting their family's income.

Table 3. Decision to Join Trade Agreement

	<i>Dependent Variable: Would Subject Join Treaty?</i>			
	Enforcement	Patience	Level-K	Interactions + Controls
<i>Enforcement</i>	0.244*** (0.089)	0.240** (0.090)	0.239** (0.087)	0.402** (0.164)
<i>Patience</i>		0.008 (0.008)		0.002 (0.013)
<i>Level 1 Reasoner</i>			0.048 (0.092)	0.190 (0.150)
<i>Level 2 Reasoner</i>			0.546*** (0.147)	0.610** (0.247)
<i>Female</i>				-0.016 (0.101)
<i>Income</i>				0.003 (0.021)
<i>Year in School</i>				0.025 (0.031)
<i>Graduate Student</i>				0.268* (0.157)
<i>Enforcement * Patience</i>				-0.340 (0.208)
<i>Enforcement * Level 1</i>				-0.254 (0.323)
<i>Enforcement * Level 2</i>				2.892 (0.171)
<i>Intercept</i>	3.141*** (0.068)	3.089*** (0.088)	3.077*** (0.074)	2.892*** (0.171)
<i>N</i>	507	507	507	485†

Standard errors reported beneath each coefficient are White's robust standard errors.

\* p<0.1 \*\* p<0.05 \*\*\* p<0.01

†This regression has fewer observations due to some subjects not reporting their family's income.

Table 4. Decision to Join Trade Agreement Pooling Elite and Undergraduate Samples

	<i>Dependent Variable: Would Subject Join Treaty?</i>			
	Enforcement	Patience	Level-K	All interactions
<i>Enforcement</i>	0.244** (0.090)	0.240** (0.084)	0.226** (0.083)	0.236** (0.089)
<i>Patience</i>		0.008 (0.008)		0.004 (0.008)
<i>Level 1 Reasoner</i>			0.047 (0.094)	0.040 (0.095)
<i>Level 2 Reasoner</i>			0.546*** (0.161)	0.533** (0.162)
<i>Elite</i>	0.375** (0.126)	0.367 (0.24)	0.304 (0.243)	0.409 (0.320)
<i>Elite × Enforcement</i>	-0.15 (0.23)			-0.104 (0.258)
<i>Elite × Patience</i>		-0.002 (0.022)		-0.008 (0.022)
<i>Elite × Level 1</i>			0.051 (0.296)	0.061 (0.309)
<i>Elite × Level 2</i>			-0.090 (0.397)	-0.033 (0.428)
<i>Intercept</i>	3.140*** (0.068)	3.092*** (0.088)	3.083*** (0.074)	3.050*** (0.090)
<i>N</i>	580	580	580	580

Standard errors reported beneath each coefficient are White's robust standard errors.

\* p<0.1 \*\* p<0.05 \*\*\* p<0.01

# Prompt for Bargaining Complexity

(yes, it is long—beta testers needed that for realism)

- Currently you are deciding how many countries should be invited to the first round of negotiations. Ideally, the treaty would include a large number of countries that all adhere to the treaty obligations. However, there is a trade off. At one extreme, you can start negotiations with all of the 160 countries that could be treaty members, but the risk is that such a negotiation would be extremely complicated and reaching agreement would require watering down the obligations for each country. Possibly over time those obligations could be strengthened through future negotiations. At the other extreme, you can start negotiations with just a few countries, accounting for a substantial fraction of international trade, and guarantee the treaty contains essentially all of the obligations you want. However, the risk is that you will reach an agreement that will anger countries left out of the negotiations, and those countries' markets will become less accessible to trade now and in the future. While these countries comprise a small share of the market now, many of these country's markets are likely to grow over time. Possibly over time through future negotiations some of these other countries could be included.

# Response Options for Bargaining Complexity

- Start with a very small number of countries that account for 1/3rd of world trade and are likely to accept 100% of the treaty obligations, but only for that very small group (1)
- Start with a couple dozen countries that account for ½ of world trade and are likely to accept 75% of the treaty obligations that you are seeking, but only for those couple dozen countries (2)
- Start with about 100 countries that account for the majority of world trade and accept 50% of the treaty obligations that you are seeking, but only for those 100 countries (3)
- Start with all 160 countries that account for essentially all world trade are likely to accept perhaps 25% of the treaty obligations that you are seeking (4)



# Prompt for Joining the Agreement

You are deciding on behalf of the government whether to join a major new treaty on international trade. The treaty contains obligations that require signatories to lower tariffs and other barriers against trade with other countries that also join the treaty. If you join the treaty, your country's economic output could increase by a few percent in a decade, creating new jobs. Furthermore, in the future, the larger international markets created by the treaty may also create opportunities for local companies to sell profitable new products and services around the world. However, in the immediate term not everyone in your country will benefit if you join the treaty; some existing jobs could be lost, leaving some people unemployed. You will benefit more if many other countries join the treaty than if only a few join the treaty, as long as most countries comply with the agreement.

## **Sample Divided into Half and treated:**

- **The treaty does not provide any formal mechanism to punish countries that fail to comply.**
- **An independent enforcement mechanism promptly and credibly punishes any country that does not comply by taking away some of the benefits of the treaty from the country that breaks the rules**

# Joiner Response Options

- What is the percent chance that you will join this treaty?
- 0-20% Highly unlikely (1)
- 21-40% Fairly unlikely (2)
- 41- 60% Could go either way (3)
- 61-80% Fairly likely (4)
- 81-100% Almost certain (5)