Assessing the Item Veto using Randomized Experimentation

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Abstract

Theoretical models show that the item veto can have potentially large effects. These effects may be difficult to detect in observational research, however, because the mere presence of item veto power may cause a legislature to preemptively adapt its proposals sufficiently to avoid provoking an actual veto. As a result, researchers have sought alternative methods of assessing the item veto's subtle yet potentially important impact. This article uses randomized experimentation to assess the item veto. Participants played the role of legislature in a simple two-dimensional bargaining game, with some participants assigned to an item veto condition and others assigned to a package veto condition. While the results support the overall conclusions of existing theories, they challenge some of the underlying mechanisms. They also suggest that the presence of an item veto can reduce collegiality between legislatures and executives, replacing it instead with interbranch bitterness.

State governors vary in their powers (Dometrius 1979, 1987; Ferguson 2003; Kousser and Phillips 2012) and state legislatures vary in their resources (Mooney 2009; Squire 1992, 2007; Squire and Moncrief 2010), creating executive-legislative bargaining contexts that vary widely from state to state. The item veto, found in forty-four states (Wall 2013), stands apart as one of the most intriguing institutional innovations—and one of the hardest to assess.

Veto power of any sort exercises its influence early in the policymaking process by deterring legislators from pursuing overly ambitious legislation (Kiewiet and McCubbins 1988); the same is true of item veto power (Schap 2006). Though this dynamic does not imply that governors will never find occasion to exercise their veto powers (Cameron 2001), it does imply that observational studies will tend to underestimate the veto's effect on policy outcomes. The problem is compounded when comparing the item veto to the package (or full) veto.

Theoretical models of the item veto suggest that it can have dramatic effects on legislative-executive bargaining under certain circumstances (Carter and Schap 1990; Brown 2012). Because those effects can be difficult to detect in observational studies, researchers have adopted several clever roundabout approaches, including surveys of political insiders (Abney and Lauth 1997, 1998), computer simulations based on officeholder's estimated ideal points (Brown 2012), and careful analysis of actual legislative bills (Holtz-Eakin 1998; Nice 1998; Kousser and Phillips 2012). This article attempts a different approach: Using randomized experimentation, it explores whether normal people do indeed play these bargaining games as theoretical models would predict. These experimental tests allow for careful measurement of how people bargain differently under various veto rules.

Theory and Predictions

Models of the package veto generally assume a unidimensional liberal-conservative policy space. In Figure 1's illustration of this scenario, the governor's ideal point (G) lies to the ideological right of the status quo policy (SQ). Point g` marks a position equally far from G as SQ is, but in the opposite direction. With reasonable assumptions[1], we would expect the governor to favor any proposal that would move policy closer to point G than SQ is—that is, we would expect the governor to favor any proposal lying between SQ and g`, as indicated by the dashed line. Legislative proposals that would move policy outside this range would attract a veto. Legislators would adapt their proposals accordingly.

[Figure 1 here]

Of course, if a legislature chose to bundle two distinct policy proposals into a single bill, then bargaining would move into a two-dimensional space. Figure 2 depicts this scenario, with issue *x* and issue *y* represented respectively by the horizontal and vertical axes. Once again, point G marks the governor's ideal point, while point SQ marks the status quo policy's position in ideological space. We can draw a circle with G at its center and SQ on its perimeter. Assuming single-peaked preferences, the governor would favor any proposal that would move policy closer

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[1] Models of the package veto generally assume the following: A unitary governor; a unitary legislature; symmetrical, single-peaked preferences contingent only on policy outcomes; complete information about each player's preferences and the location of status quo; a non-iterative two-step game (proposal and veto); and a unidimensional issue space. These are roughly the assumptions employed by Kiewiet and McCubbins (1985, 1988) in their classic models of the package veto. Subsequent work has shown that these assumptions may not all be necessary. Matthews (1989) shows that rhetoric and veto threats can compensate for incomplete information; Ingberman and Yao (1991) add a third stage to the model by allowing the governor to make a costly veto threat; and Cameron (2001) added a third player (the veto override pivot) and iterative play to show that vetoes might occur for strategic reasons in hopes of influencing future bargaining rounds. In these and other variants on the basic model, the core insight remains: Vetoes are a conditional tool that can be used to reign in a legislature more than to prod it. The present article maintains the original assumptions with the exception of unidimensionality.

to G than SQ is; that is, the governor would veto proposals that move policy outside the circle, but the governor would favor proposals that move policy into the circle.

[Figure 2 here]

Consider, though, how different the result would be if issues x and y were handled separately rather than jointly. If issue x were handled alone, the governor would veto any proposal that would move policy outside the range demarcated by points g_x` and $sq_x$; if issue $y$ were handled alone, the governor would veto any proposal that would move policy outside the range demarcated by points $g_y$` and sq_y. Together, these two ranges form the shaded rectangle shown in Figure 2. When issues x and y are handled jointly, the governor's veto power prevents the legislature from enacting a proposal outside the large circle; when issues x and y are handled separately, however, the governor's veto power prevents the legislature from enacting (cumulative) proposals outside the shaded rectangle. Because the rectangle will always be smaller than the circle, handling issues jointly will always weaken the governor compared to handling them separately.

In the absence of an item veto, it is not difficult to imagine circumstances where a legislative body might bundle multiple proposals together to effect a policy change that might otherwise be hard to pass. A legislature might combine programmatic public policy (issue x) with particularistic pork (issue y). Ronald Reagan famously vetoed a 1987 highway bill because of its 152 pork projects, saying, "I haven't seen so much lard since I handed out blue ribbons at the Iowa State Fair." Or a legislature might combine must-pass legislation (issue x) with a minor provision the executive opposes (issue y). In 2007, George Bush vetoed a major defense bill (HR 1585) over a minor provision that could have hampered his Iraq policy. Under similar circumstances, Barack

Obama signed HR 4310 in January 2013 while issuing a scathing statement criticizing parts of the bill that he wished he could excise.

At this point the item veto becomes relevant. Previous work has already shown—at least in theory—that the item veto's primary effect on executive-legislative bargaining is to produce the same outcome when issues are bundled into a single bill as when they are addressed in separate bills, a finding that generalizes into an arbitrarily high number of issue dimensions (Brown 2012; Carter and Schap 1990). Another way to interpret Figure 2, then, is that the package veto allows a governor to kill proposals outside the circle, but the item veto allows a governor to kill proposals outside the rectangle.

Legislators preemptively adapt their proposals to avoid an item or package veto. As one result, veto powers can exert significant influence on enacted policy even if they are never formally exercised.[2] As another result, though, it becomes difficult to test this theory through observational research; the bills that emerge from the legislative process will already have taken the executive's item veto power (or lack of it) into account. As one way around this problem, the present study relies on randomized experimentation to assess this theory of the item veto. In this particular experiment, all participants play the role of the legislature; the executive accepts or rejects legislative proposals based on criteria detailed below. Some participants make proposals to an executive equipped only with a package veto; others make proposals to an executive equipped with an item veto. Participants in both conditions play six independent rounds of the game, enough to

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[2] Whether legislators adapt their proposals because they have complete information about the governor's ideal point (as in Kiewiet and McCubbins 1985, 1988 and Brown 2012) or in response to a veto threat (as in Matthews 1989 and Ingberman and Yao 1991) is irrelevant here.

become familiar with how it works. The existing theories of the item veto summarized above suggest a few hypotheses:

- H1: Participants will make less aggressive proposals when faced with an executive who has item veto power.

- H2: As a corollary to H1, executives will seldom need to exercise their veto power (of any sort).

Experimental Design

In March 2014, 1,001 American adults were recruited via Amazon's Mechanical Turk service to participate online in a randomized experiment. MTurk panels are admittedly a convenience sample. Though they typically are more male, more liberal, more educated, and younger than the nation as a whole, experiments conducted on MTurk studies generally produce the same conclusions as experiments conducted on representative samples (Berinsky et al. 2012; Brown 2014).

Participants were asked to play six brief rounds of a simple bargaining game. To distract from the study's purpose, the instructions avoided political terminology such as the word "veto." Participants were told that the game involved cooperating with their business partner to find a new location for their office. Each participant was shown a simple map (see Figure 3a) that included the business's current location (the status quo policy), the participant's home (the legislature's ideal point), and the partner's home (the governor's ideal point). Participants were asked to click on the map and drag the office to propose a new location; the partner would then accept or reject the proposal. Each player would then earn points based on how much closer the new office was to her respective home compared to the old office. If the partner rejected the proposal, neither player

earned points. For participants assigned to the item veto condition, the partner could accept the proposed office location as-is, or the partner could accept only the north-south or east-west dimension of the proposal. As participants dragged the office around the map, scoreboards below the map updated in real time showing how many points each player would receive under each of the partner's decision options.

Figure 3 depicts the map as it appeared to participants. (Though it is black and white in print, the houses were different colors for participants.) Panel (a) shows the game at start; panel (b) shows the game after a proposal has been made. Panel (b) depicts the item veto condition; the faint offices in the upper-left and middle-right helped participants see where the office would be built if their partner exercised an item veto. These faint offices were not shown to participants in the package veto condition. The experiment's complete script, along with additional screenshots, are available in a supplementary appendix.

[Figure 3 here]

Random assignment placed 480 participants in the item veto condition and 521 in the package veto condition. Random assignment further determined how aggressively the veto was used. In the "low aggressiveness" condition, the business partner (i.e. governor) exercised a veto (of any type) only when necessary to avoid a utility loss; this condition mirrors the thin rationality assumptions used in rational models. In the "high aggressiveness" condition, the governor would accept proposals (or, under the item veto, partial proposals) only if they awarded the governor at least 20 points. To put this in perspective, shrewed participants could earn 200-300 points in most rounds of the game; in only 3 of the game's 6 rounds would thin rationality even predict that the governor would be offered fewer than 20 points. This condition is labeled "high aggressiveness,"

but that term may be an exaggeration. Table 1 shows that similar numbers of participants were assigned to each condition.

[Table 1 here]

Participants played 6 independent rounds of the game. All participants saw the same alignment of ideal points in each round. Rounds 1 and 6 used identical configurations of ideal points, but rotated 90 degrees to obscure this fact from participants. In these two rounds, the item veto was not predicted to have any effect; in terms of Figure 2, these two rounds placed the participant's (legislator's) ideal point within the shaded rectangle, rendering either form of veto irrelevant. By contrast, the item veto was expected to have a large effect in rounds 2 and 5, a modest effect in round 4, and a small effect in round 3. (For details, consult the supplemental appendix)

Results

Tables 2 and 3 summarize the results of the game. The item veto's effect is measured by calculating the average score earned by players in the item veto condition as a percentage of the average score earned by players in the package veto condition.[3] The table depicts how the item veto effects each player's proposed utility—that is, the score each player would receive if the participant's score were accepted as-is—as well as each player's actual utility—that is, the score each player received after the partner (governor) chose whether to exercise a package or item veto.

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[3] Because of the study's large number of participants, all the effects that are large enough to be of substantive interest (that is, effects larger than a few percentage points) are generally also statistically significant.

The table also shows how frequently vetoes were actually exercised. Several interesting findings stand out in these tables.

- In the package veto condition, participants generally were able structure their proposals to avoid attracting a veto. In the item veto condition, however, respondents struggled throughout the game to anticipate how their proposals would be received. Item vetoes were exercised frequently in rounds 2 through 5. This finding suggests that the item veto may add a level of cognitive complexity to legislative-executive bargaining that existing theories have not fully appreciated. This pattern works against H2.

- Theoretical work predicts that legislature will earn less utility—and governors will earn more—when the governor has access to an item veto. Though we do see this result clearly in each player's actual utility received—particularly in rounds 2 through 6, where the item veto was expected to have an effect—we see the opposite pattern when we look at each player's proposed utility. It appears that the presence of an item veto caused participants to double down and make more aggressive proposals than participants in the package veto condition made. This pattern works against H1.

- Although rounds 1 and 6 used identical setups, participants assigned to the item veto condition made more aggressive proposals in round 6 than in round 1. (Recall that these two rounds were also designed so that the item veto would have no expected effect on outcomes.) Though they did not generally propose more utility for themselves, they did propose significantly less utility for their business partner. This finding suggests that the presence of an item veto—or perhaps the frequent use of it—creates a more hostile general culture between the legislature and governor. Participants apparently perceived that the item veto was forcing them to give up points to their partner, and their escalating

resentment becomes apparent when comparing round 1 to round 6. It is unclear at this point whether this rising resentment reflects the partner's actual use of the item veto, or whether it reflects the participant's perception of his or her own weakness.

- Because Table 3 depicts the results from the "high aggressiveness" condition, use of the veto is somewhat higher across the board. Still, the results in Table 3 follow the same general patterns as in Table 2.

Details results tables that go far beyond those included in this manuscript are available in the supplemental appendix. The supplement also includes heatmaps depicting the actual arrangement of ideal points in each round, along with colors indicating where participants tended to place their proposals in each condition.

Discussion

In these experiments, the item veto produced the expected result: Legislatures got less of what they wanted, and governors got more of what they wanted. That being said, these experiments uncovered unexpected complexity in the underlying mechanisms. Legislatures did not adapt to the item veto by making less aggressive proposals, as theories predict. To the contrary, they reacted to the governor's strength by doubling down with more aggressive proposals, forcing the governor to actually exercise her veto power to reign the legislature in. It is unclear whether actual legislatures would behave similarly, or whether they would become accustomed to the governor's item veto strength over a longer period of time.

These results point to several avenues for potentially fruitful followup experiments:

- Manipulate whether the governor issues a veto threat prior to making a final decision, with the participant receiving an opportunity to revise his proposal after hearing the governor's threat. Presumably this would cause actual use of the veto (and the item veto) to decline. In the real world, veto threats are routine; their frequent use might explain why item vetoes are used rarely in the rare world, but frequently in this experiment.

- Randomly assign some participants to have their second round proposal (or some other round) vetoed automatically, no matter how generous it was, with other participants assigned to have their proposal accepted, no matter how aggressive it was. This manipulation would sort out whether the round 1 vs round 6 effect is caused by frustration with vetoes being actually exercised rather than frustration with having to make less aggressive proposals.[4]

- In this experiment, human participants played the role of the Legislature. A followup could assign participants to play the role of governor (under the same highly controlled circumstances, where it's a computer playing the other role and making pre-determined proposals) to see how aggressive actual human players would be. Going a step further, the experiment could pit live humans against one another.

As this is a conference paper, not a manuscript being submitted to a journal, I look forward to discussing these possible followup experiments with conference participants.

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[4] Regression analysis suggests that it was the fact of being in the item veto condition, not the number of vetoes that were actually issued against a participant, that predicts whether the participant was more aggressive in round 6 than round 1. Demographic controls (gender, age, education, partisanship) add no value to this model.

References

Abney, Glenn, and Thomas P. Lauth. 1997. The item veto and fiscal responsibility. *Journal of Politics* 59: 882-892.

Abney, Glenn, and Thomas P. Lauth. 1998. The end of executive dominance in state appropriations. *Public Administration Review* 58:388–94.

Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis*.

Brown, Adam R. 2012. The item veto's sting. *State Politics and Policy Quarterly* 12 (June): 183-203.

Brown, Adam R. 2014? Voters don't care much about incumbency. *Journal of Experimental Political Science* forthcoming.

Cameron, Charles M. 2001. *Veto bargaining: Presidents and the politics of negative power*. Cambridge: Cambridge University Press.

Carter, John R., and David Schap. 1990. Line-item veto, where is thy sting? *Journal of Economic Perspectives* 4(2): 103-118.

Dometrius, Nelson C. 1979. Measuring gubernatorial power. *Journal of Politics* 41 (May): 589-610.

Dometrius, Nelson C. 1987. Changing gubernatorial power: The measure vs. reality. *Western Political Quarterly* 40 (June): 319-328.

Ferguson, Margaret Robertson. 2003. Chief executive success in the legislative arena. *State Politics and Policy Quarterly* 3 (summer): 158-182.

Holtz-Eakin, Douglas. 1988. The line-item veto and public sector budgets. *Journal of Public Economics* 36:269–92.

Ingberman, Daniel E., and Dennis A. Yao. 1991. Presidential commitment and the veto. *American Journal of Political Science* 35 (May): 357-389.

Kiewiet, D. Roderick, and Mathew D. McCubbins. 1985. Appropriations decisions as a bilateral bargaining game between president and Congress. *Legislative Studies Quarterly* 10 (May): 181-201.

Kiewiet, D. Roderick, and Mathew D. McCubbins. 1988. Presidential influence on Congressional appropriations decisions. *American Journal of Political Science* 32 (August): 713-736.

Kousser, Thad, and Justin H. Phillips. 2012. *The power of American governors: Winning on budgets and losing on policy*. Cambridge: Cambridge University Press.

Matthews, Steven A. 1989. Veto threats: Rhetoric in a bargaining game. *Quarterly Journal of Economics* 104 (May): 347-369.

Mooney, Christopher Z. 2009. Term limits as a boon to legislative scholarship: A review. *State Politics and Policy Quarterly* 9 (summer): 204-228.

Nice, David C. 1988. The item veto expenditure restraint. *Journal of Politics* 50:487–99.

Schap, David. 2006. Line item veto: Lessons from the literature. In *The Elgar Companion to Public Economics: Empirical Public Economics*, Attiat F. Ott and Richard J. Cebula, eds. Northampton, MA: Edward Elgar.

Squire, Peverill. 1992. Legislative professionalism and membership diversity in state legislatures. *Legislative Studies Quarterly* 17: 69-79.

Squire, Peverill. 2007. Measuring state legislative professionalism: The Squire index revisited. *State Politics and Policy Quarterly* 7 (summer): 211-227.

Squire, Peverill, and Gary Moncrief. 2010. *State legislatures today: Politics under the domes*. Boston: Longman.

Wall, Audrey S. 2013. *The book of the states: 2013*. Lexington, KY: Council of State Governments.

Table 1: Participants per Condition

	Low aggressiveness	High aggressiveness
Package veto	245	276
Item veto	242	238

Table 2: Results (Low Aggressiveness)

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Effect of item veto on L's utility						
Effect on L's proposed utility	-4%	-14%	14%	-6%	2%	2%
Effect on L's actual utility	-4%	-37%	-2%	-13%	-16%	2%
Effect of item veto on G's utility						
Effect on G's proposed utility	-1%	9%	-50%	-1%	-19%	-10%
Effect on G's actual utility	-1%	32%	5%	7%	22%	-10%
Decision (package veto condition)						
Accept	100%	100%	91%	100%	98%	100%
Reject	0%	0%	9%	0%	2%	0%
Decision (item veto condition)						
Accept	100%	31%	50%	74%	47%	100%
Item veto	0%	68%	45%	26%	52%	0%
Reject	0%	1%	5%	0%	0%	0%

Table 3: Results (High Aggressiveness)

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
Effect of item veto on L's utility						
Effect on L's proposed utility	-5%	-10%	23%	-5%	10%	-2%
Effect on L's actual utility	-5%	-34%	33%	-12%	-6%	-1%
Effect of item veto on G's utility						
Effect on G's proposed utility	-4%	0%	-79%	-2%	-29%	-14%
Effect on G's actual utility	-4%	26%	16%	5%	17%	-13%
Decision (package veto condition)						
Accept	100%	97%	69%	100%	94%	100%
Reject	0%	3%	31%	0%	6%	0%
Decision (item veto condition)						
Accept	99%	29%	38%	67%	44%	98%
Item veto	0%	70%	48%	33%	56%	2%
Reject	1%	1%	13%	0%	0%	0%

Figure 1: The Package Veto Bargaining Context
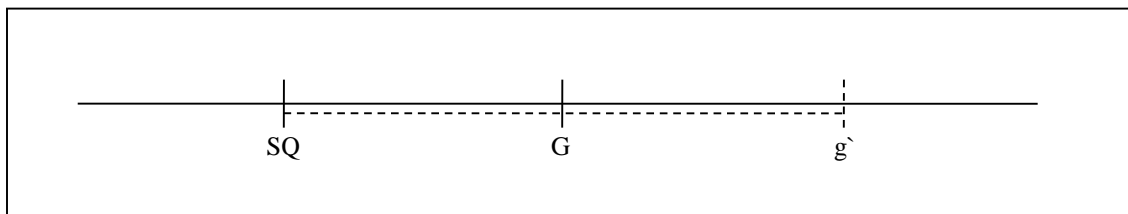
Figure 2: The Item Veto Bargaining Context
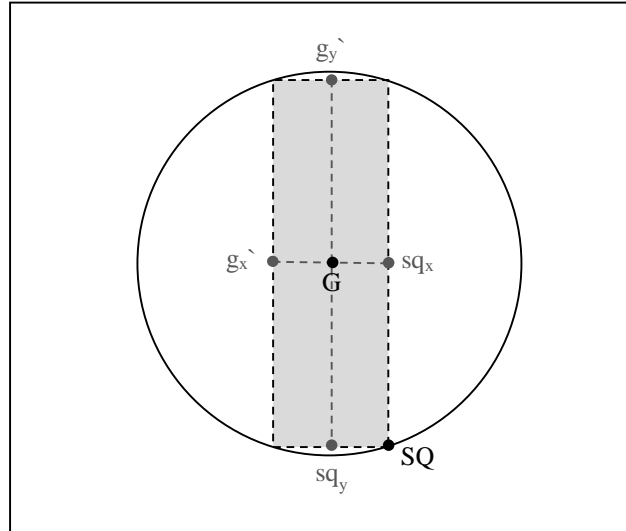
Figure 3: Participant Interface
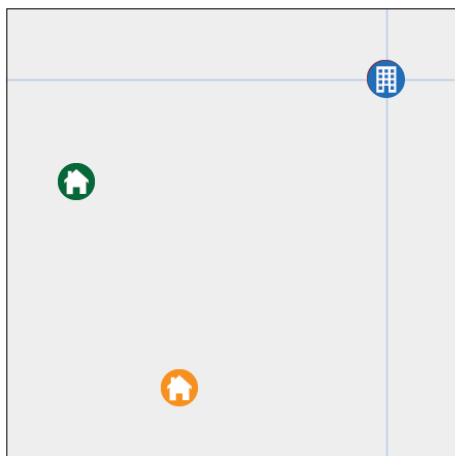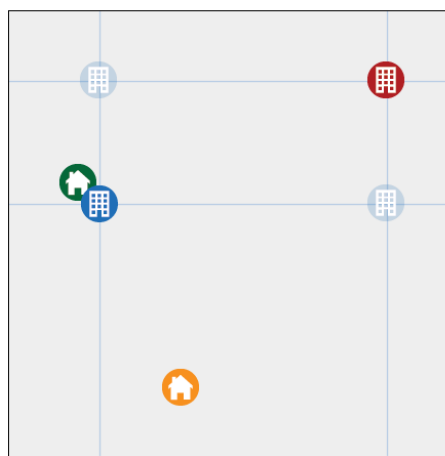
(a)   (b)

Supplemental appendix

This document contains additional materials that, though not critical to understanding the main document, may be of interest to some readers. Those wishing to explore the data further are invited to contact the author for the raw data and for Stata do-files.

Table A1 presents a demographic profile of respondents, demonstrating that treatment groups are reasonably balanced across several demographic indicators.

Tables A2 and A3 present detailed results from the experiment. Table A2 reports results when the governor plays a low aggressiveness strategy; Table A3 reports results when the governor plays a high aggressiveness strategy.

Figures A1 through A6 use heatmaps to indicate where respondents typically placed their proposals. There is a separate set of heatmaps for each of the game's six rounds. For each round, I present a set of four heatmaps that correspond to the experiment's four conditions. The heatmaps contain labels marking the position of the participant's (i.e. legislator's) ideal point (L), the governor's ideal point (G), and the status quo (SQ). The heatmaps also label the theoretically expected proposal under the package veto condition (P) and under the item veto condition (I); these expected proposals assume the legislature makes a proposal that maximizes the legislature's utility gain while giving the governor only enough utility to avoid any type of veto.

Following the figures is a reprint of the experiment's entire script.

Table A1: Profile of Respondents

	All	Group 1	Group 2	Group 3	Group 4
Item veto available?	--	No	Yes	No	Yes
Governor's aggressiveness?	--	Low	Low	High	High
Number of respondents	1,001	245	242	276	238
Percent who received bonus	98%	96%	99.6%	98%	98%
Gender					
Male	66%	61%	62%	68%	73%
Female	34%	39%	38%	32%	27%
Age					
25th percentile	25	24	24	25	25
50th percentile	28	28	28	29	29
75th percentile	35	35	35	34	35
Average age	31	31	31	31	31
Partisanship					
Democrat	60%	60%	58%	62%	60%
Independent	23%	23%	29%	19%	23%
Republican	12%	12%	8%	15%	13%
Other or not sure	4%	5%	5%	4%	3%
Education					
Less than high school	1%	1%	2%	1%	1%
High school diploma	10%	9%	11%	8%	11%
Some college	41%	40%	45%	41%	36%
Four-year degree	39%	39%	33%	41%	41%
Graduate degree	10%	11%	10%	9%	11%

Table A2: Experimental Results (Low Aggressiveness)

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
L's raw utility gain (package veto)						
Expected gain	316	262	190	242	266	316
Average proposed gain	217	134	128	141	170	224
Average actual gain	217	134	109	141	165	224
L's raw utility gain (item veto)						
Expected gain	316	92	142	142	156	316
Average proposed gain	209	115	147	132	174	229
Average actual gain	209	84	106	122	138	229
G's raw utility gain (package veto)						
Expected gain	137	11	0	51	2	137
Average proposed gain	219	129	52	138	89	199
Average actual gain	219	129	55	138	91	199
G's raw utility gain (item veto)						
Expected gain	137	163	0	146	84	137
Average proposed gain	217	140	26	136	72	180
Average actual gain	217	171	58	147	110	180
Effect of item veto on L's utility						
Effect on L's proposed utility	-4%	-14%	14%	-6%	2%	2%
Effect on L's actual utility	-4%	-37%	-2%	-13%	-16%	2%
Effect of item veto on G's utility						
Effect on G's proposed utility	-1%	9%	-50%	-1%	-19%	-10%
Effect on G's actual utility	-1%	32%	5%	7%	22%	-10%
Decision (package veto condition)						
Accept	100%	100%	91%	100%	98%	100%
Reject	0%	0%	9%	0%	2%	0%
Decision (item veto condition)						
Accept	100%	31%	50%	74%	47%	100%
Item veto	0%	68%	45%	26%	52%	0%
Reject	0%	1%	5%	0%	0%	0%
Participants						
Package veto condition	245	245	245	245	245	245
Item veto condition	242	242	242	242	242	242
Total	487	487	487	487	487	487

Table A3: Experimental Results (High Aggressiveness)

	Round 1	Round 2	Round 3	Round 4	Round 5	Round 6
L's raw utility gain (package veto)						
Expected gain	316	252	170	242	247	316
Average proposed gain	215	132	135	132	166	223
Average actual gain	215	126	75	135	149	223
L's raw utility gain (item veto)						
Expected gain	316	92	139	142	156	316
Average proposed gain	206	118	166	128	183	219
Average actual gain	206	83	100	119	140	220
G's raw utility gain (package veto)						
Expected gain	137	20	20	51	21	137
Average proposed gain	224	132	45	144	93	205
Average actual gain	224	132	49	144	94	205
G's raw utility gain (item veto)						
Expected gain	137	163	22	146	84	137
Average proposed gain	216	133	10	141	66	177
Average actual gain	216	166	57	151	110	178
Effect of item veto on L's utility						
Effect on L's proposed utility	-5%	-10%	23%	-5%	10%	-2%
Effect on L's actual utility	-5%	-34%	33%	-12%	-6%	-1%
Effect of item veto on G's utility						
Effect on G's proposed utility	-4%	0%	-79%	-2%	-29%	-14%
Effect on G's actual utility	-4%	26%	16%	5%	17%	-13%
Decision (package veto condition)						
Accept	100%	97%	69%	100%	94%	100%
Reject	0%	3%	31%	0%	6%	0%
Decision (item veto condition)						
Accept	99%	29%	38%	67%	44%	98%
Item veto	0%	70%	48%	33%	56%	2%
Reject	1%	1%	13%	0%	0%	0%
Participants						
Package veto condition	276	276	276	276	276	276
Item veto condition	238	238	238	238	238	238
Total	514	514	514	514	514	514

Figure A1: Experimental Results, Round 1
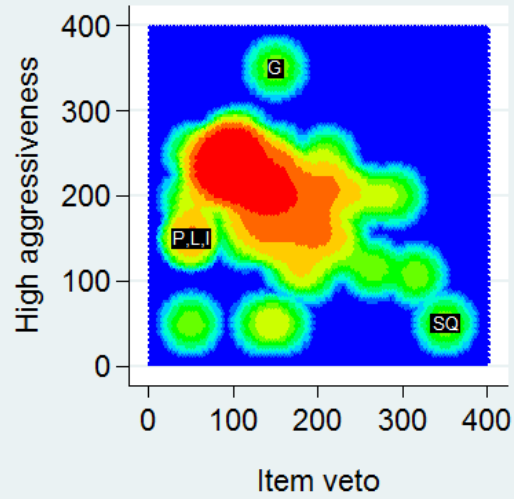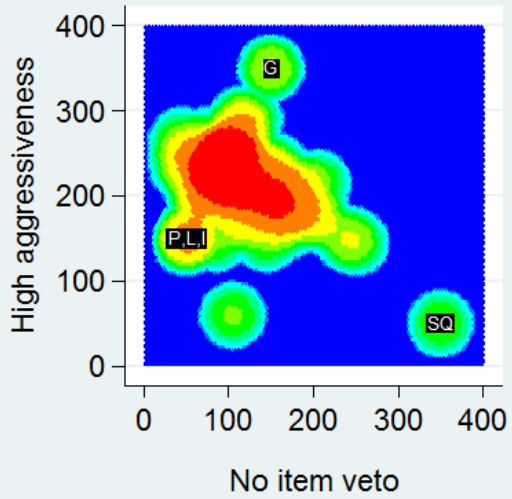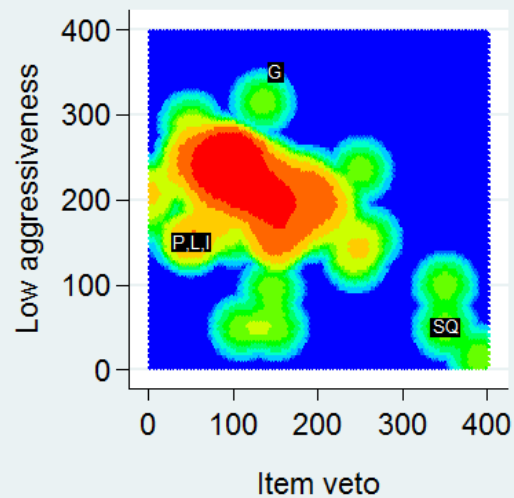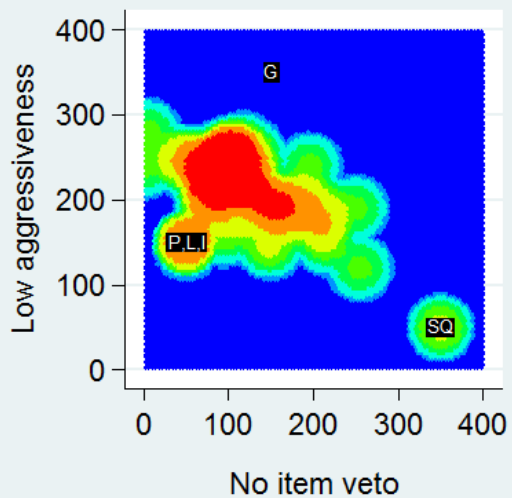
Figure A2: Experimental Results, Round 2
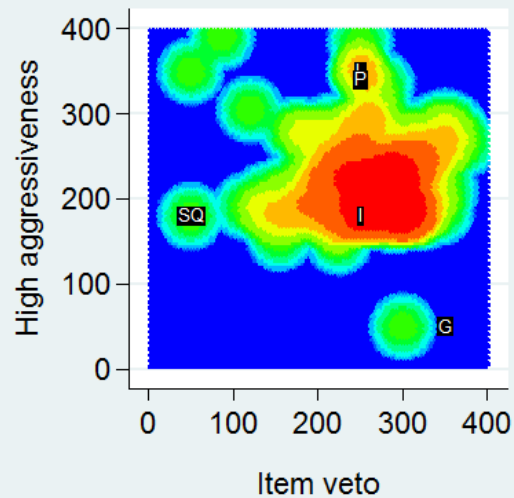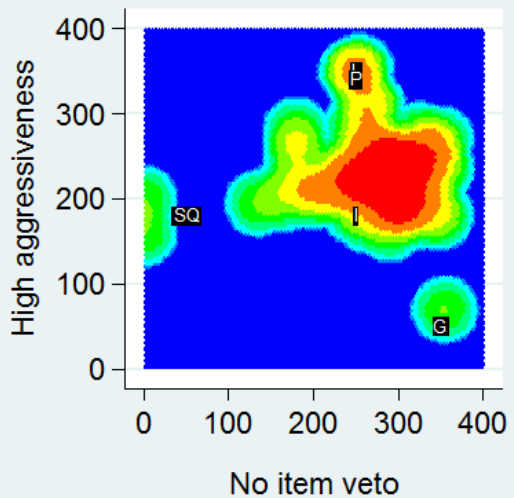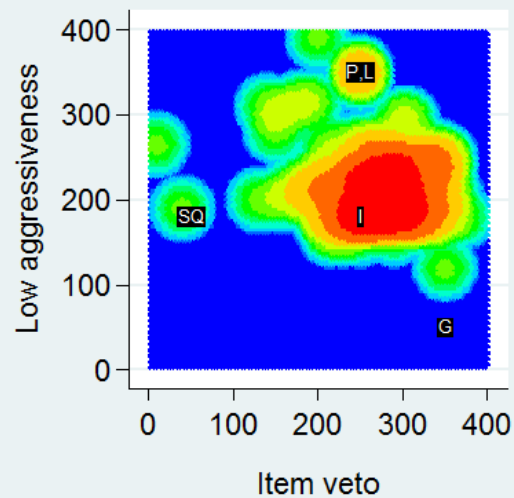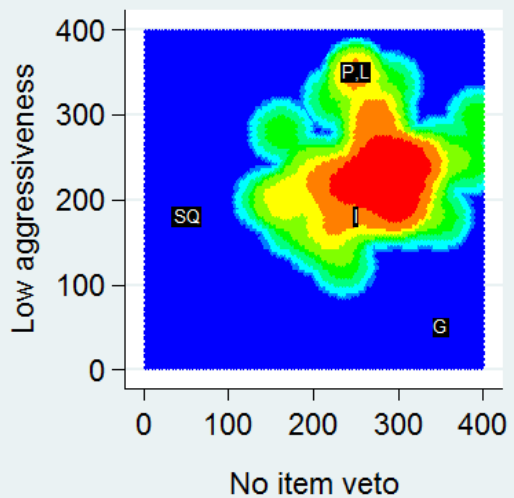
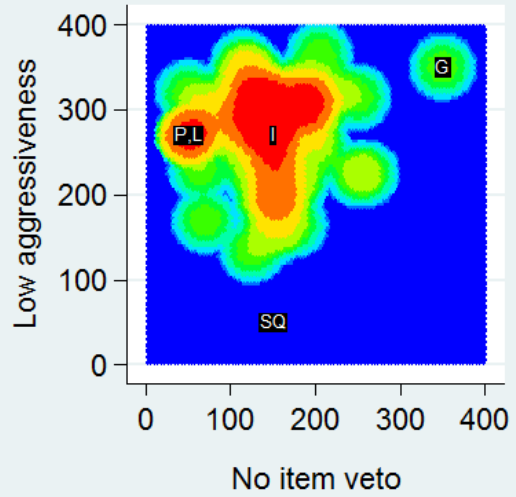Figure A3: Experimental Results, Round 3
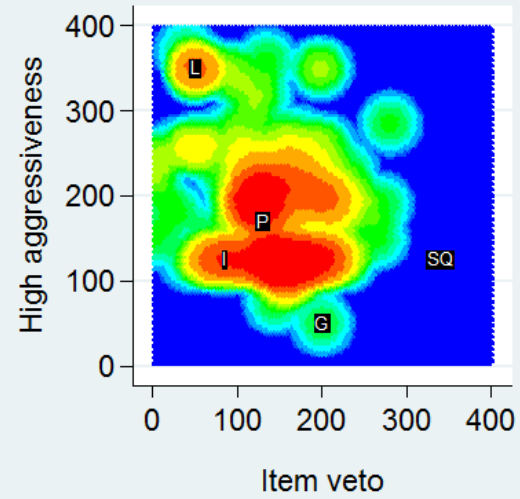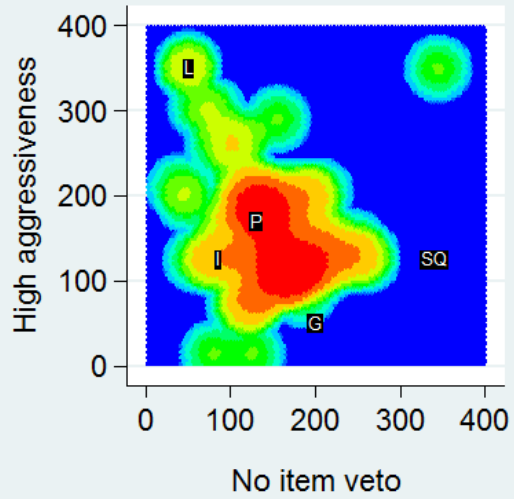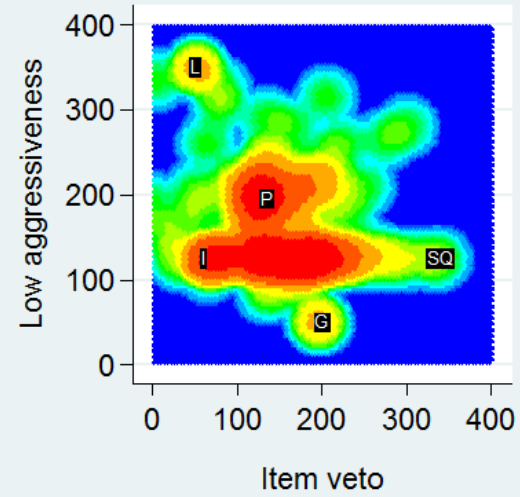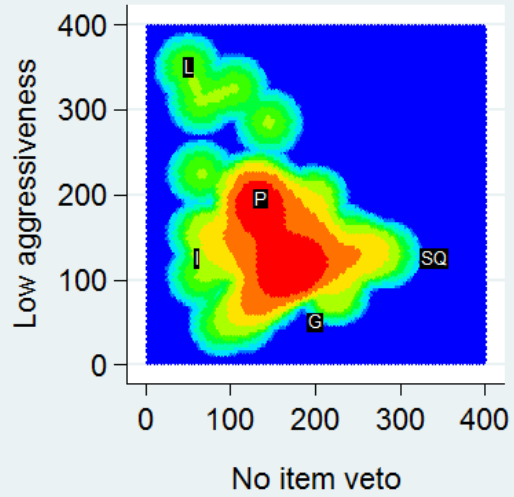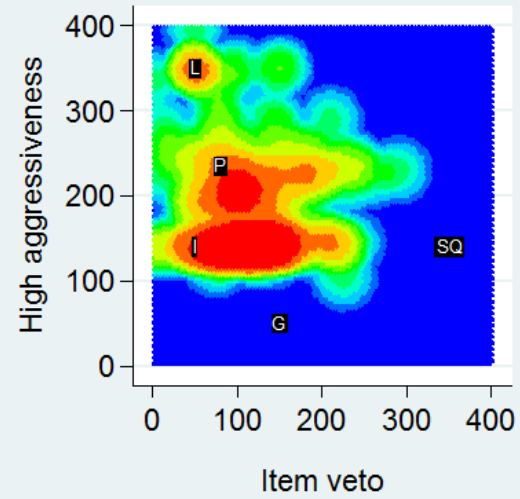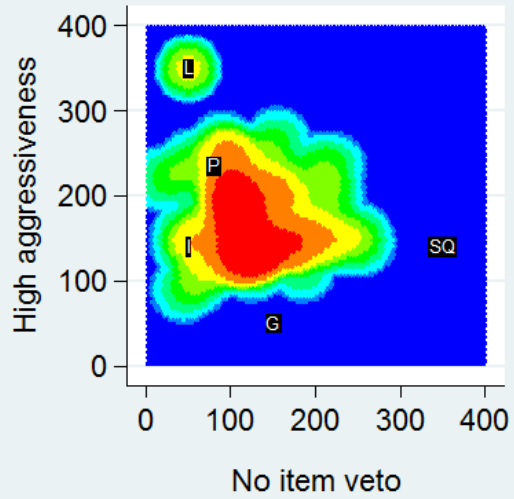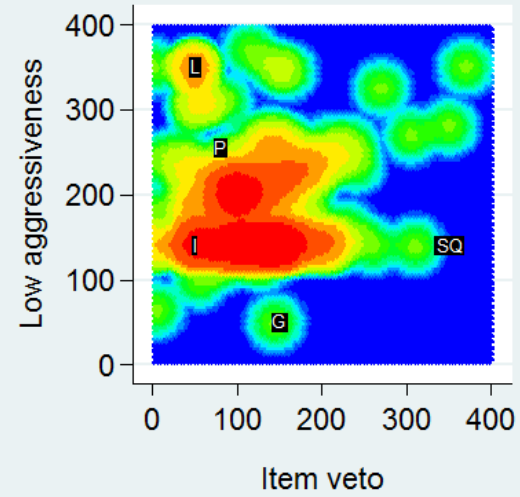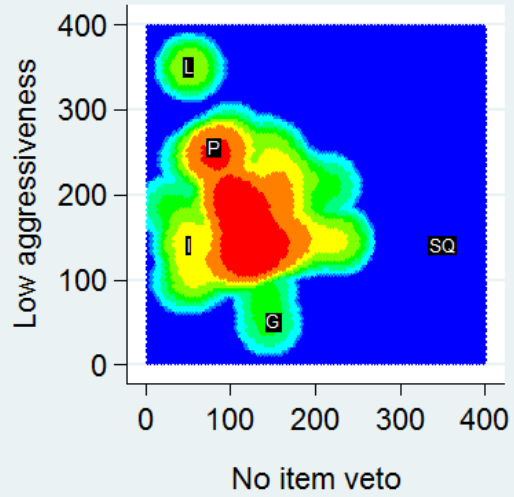
Figure A4: Experimental Results, Round 4
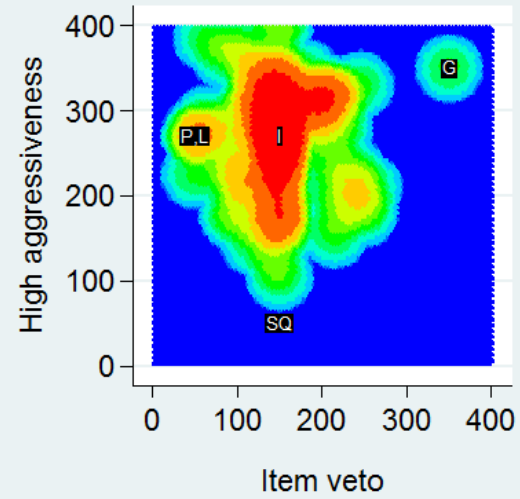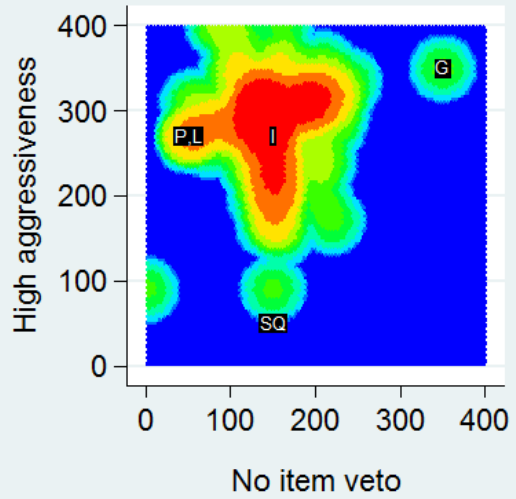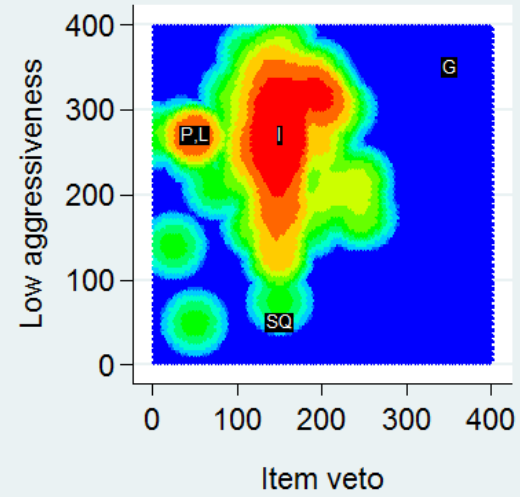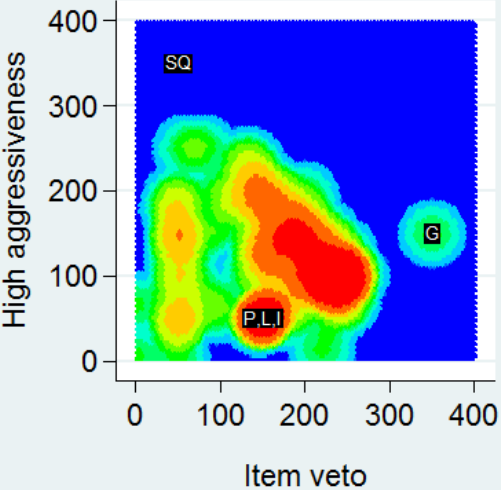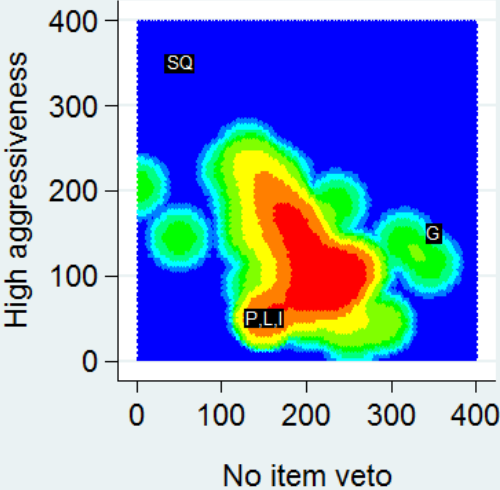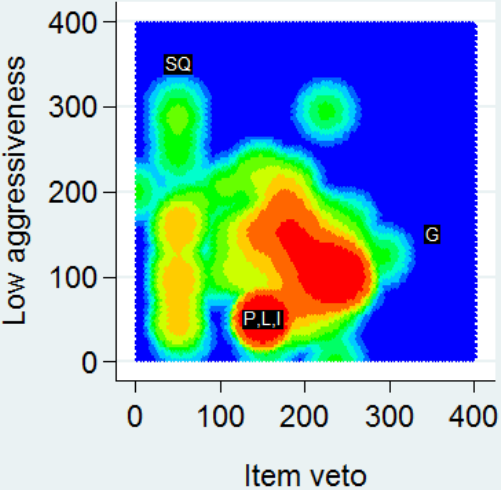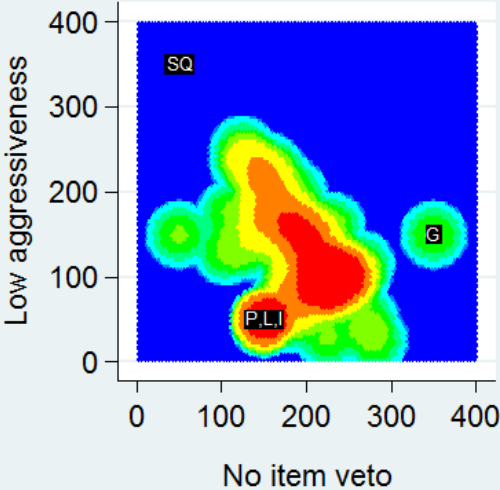
Figure A5: Experimental Results, Round 5

Figure A6: Experimental Results, Round 6

Experimental protocol

The following pages contain screenshots from the experiment. The language below would have varied slightly depending on experimental conditions. Those wishing to participate in the experiment (in beta test mode) may follow this link:

http://adambrown.info/mturk_experiments/2014-item-bargaining-game/0-beta-test

Welcome!

We are researching a new game concept and need playtesters. Most people need only **6-8 minutes** to finish. We will allow you up to 20 minutes just in case.

To participate, you need the following:

- A pointing device, such as a mouse. Touch screens will not work.
- Speakers (turn them on). You will need to watch a brief instructional video.
- A tall enough display screen that you can see this entire page at once (without scrolling).
- **Do not use your brower's "back" button**

You can return this HIT at any time if you decide not to participate. You may participate only once.

About this research

This is academic research. The lead researcher is Adam Brown, an assistant professor at Brigham Young University, who can be contacted at brown@byu.edu. We will not collect any personally identifiable information about you, nor will we contact you again in the future.

This research does not expose participants to meaningful risks beyond those inherent in using a computer. If you have questions about your rights as a research participant you may contact the university's Institutional Review Board (IRB) at (801) 422-1461 or irb@byu.edu or write to IRB Administrator, A-285 ASB, Brigham Young University, Provo, UT 84602.

Continue »

Compensation

We will ask you to play 6 brief rounds of the game. All participants who make a sincere effort at all 6 rounds will receive $0.75. We will not reject your HIT unless it is obvious you made little or no effort to participate in good faith.

Bonuses

We expect that most participants will qualify for an additional $0.25 bonus. You will lose this bonus only if your performance leaves us thinking you were not trying very hard to maximize your score.

Continue »

Instructions

Please watch this brief instructional video. We will ask some simple questions on the next screen to ensure you understood the instructions. If you find yourself unable view the video or answer the questions, you will need to return this HIT.

Continue »

This page contains an embedded instructional video lasting roughly 2 minutes. There were two versions of the video. Those assigned to the item veto condition saw a video with an extra 15-20 seconds of instructions relevant to the item veto. Instructional videos may be viewed at these links:

http://youtu.be/S1A9o3ALuDQ (package veto) or http://youtu.be/vDwG3Pxh48E (item veto)

Following is a rough transcript of the video:

Imagine you and a partner own a business together. [show picture of the game map] The business is located here [show on map]. You live here, in the green house, and your partner lives here, in the orange house. You are both interested in shortening your commute time by finding a new office location. The business is small and the map is wide open, so you could move the business anywhere.

You and your partner have a process that you've agreed on for selecting a new location. This is what the two of you came up with:

You will be responsible for proposing a new location. To make your proposal, simply grab the office with your mouse and drag it anywhere you please. You can even put it in your own house or in your partner's house or anywhere else in the map. [Demonstrate on screen] When you're done, you'll click this "make proposal" button.

At that point, your partner will decide whether to accept or reject your proposed location. It's that easy: You propose a location, and your partner decides whether to accept or reject it.

If your partner accepts your proposal, then each of you receives points based on how much closer the new office is to each of your homes compared to the old office location. If your partner rejects your proposal, then the office will remain in its original location and neither of you will receive any points at all.

[THIS PARAGRAPH FOR ITEM VETO CONDITION ONLY] But there's a catch: Your partner can also choose to accept only the north-south dimension of your proposal, or your partner can choose to accept only the east-west dimension of your proposal. So if you make a proposal here [show on map], for example, and your partner chooses to accept only the north-south dimension, then you would build your new office over here [show on map].

To make this easier, there is a scoreboard below the map that will update as you move the office around. Your possible score appears on the left, next to the green house icon, and your partner's score appears on the right, next to the orange house icon. Each partner's highest scoring outcome will appear in green, though you have no guarantee that your partner will actually choose that outcome.

Were you able to see and hear the entire instructional video?

  ○ Yes
  ○ No

What will be your role in the game?

  ○ Find a new job
  ○ Propose a new business location
  ○ Recruit a business partner
  ○ Decide where to build my house
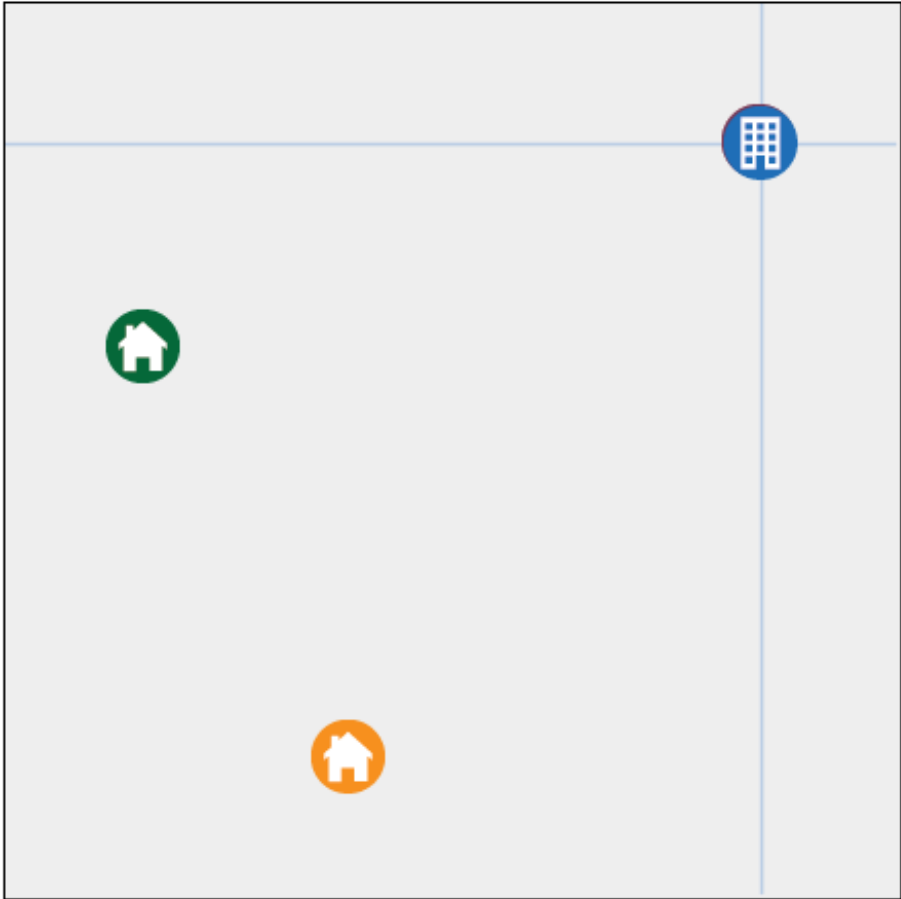
Which participants will earn a bonus?

  ○ Those who score in the top 10%
  ○ Those who score in the top 25%
  ○ Those who score in the top 50%
  ○ All participants who make a serious effort to score well

If there are questions you cannot answer, please return this HIT.

Continue »

Respondents who failed to answer all three questions correctly were removed from the study.

Round 1 of 6. Use your mouse to drag the office wherever you like. Click "Make Proposal" when you are ready for your partner to evaluate your proposed location.

0 🏠	If your partner **accepts** your proposal	🏠 **0**
Your score		Partner's score
0 🏠	If your partner accepts **only your east-west** proposal	🏠 **0**
Your score		Partner's score
0 🏠	If your partner accepts **only your north-south** proposal	🏠 **0**
Your score		Partner's score
0 🏠	If your partner **rejects** your proposal	🏠 **0**
Your score		Partner's score

Make proposal

This image depicts the game in the item veto condition. In the package veto condition, two of the four rows below the image—those dealing with the east-west or north-south proposal—would not have appeared. Respondents would have played six rounds of the game.

To help us analyze the results of this study, please tell us a few things about yourself.

Are you male or female?

○ Male
○ Female

What is the highest level of education you have completed?

○ Less than high school
○ High school diploma
○ Some college
○ Four-year college degree
○ Advanced degree (Masters, doctorate, JD, etc)

Do you consider yourself a Democrat, a Republican, or something else?

○ Strong Republican
○ Republican
○ Independent, leaning Republican
○ Independent
○ Independent, leaning Democratic
○ Democrat
○ Strong Democrat
○ Another party

In what year were you born? Please write it here: [_____]

Continue »

Thank you!

Thank you for your participation. Copy the confirmation code below and paste it into the Mechanical Turk HIT. We will process HITs (and determine which participants qualified for the bonus) when the study closes in a few days.

Your confirmation code:
1121-51ecc

Thank you again for your participation.