# Online Appendix: <br> Measuring and Bounding <br> Experimenter Demand 

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## A Online Appendix: Additional Tables

Table A.1: Results from the Within Design: Compliers and Defiers

|  | Dictator |  |  |  |  | Risk |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | All | Compliers | Defiers |  | All | Compliers | Defiers |  |
|  |  |  |  |  |  |  |  |  |
| Positive - Neutral (z-score) | $0.512^{* * *}$ | $0.772^{* * *}$ | $-0.401^{* *}$ |  | $0.377^{* * *}$ | $0.704^{* * *}$ | $-0.601^{* * *}$ |  |
| Observations | $(0.044)$ | $(0.055)$ | $(0.122)$ |  | $(0.041)$ | $(0.052)$ | $(0.100)$ |  |
|  | 266 | 180 | 7 | 247 | 146 | 16 |  |  |
| Negative - Neutral (z-score) | $-0.376^{* * *}$ | $-0.795^{* * *}$ | $1.027^{* *}$ | $-0.427^{* * *}$ | $-0.721^{* * *}$ | $0.529^{* *}$ |  |  |
| Observations | $(0.045)$ | $(0.059)$ | $(0.328)$ | $(0.042)$ | $(0.049)$ | $(0.199)$ |  |  |

Notes: This table uses data from the within design (experiment 7). We separately present the results for the whole sample, compliers as well as defiers. In this experiment we employ strong demand treatments in which the experimental objective is revealed to participants.

Table A.2: Bounds from Within Design

| Risk <br> x | Dictator <br> x |
| :---: | :---: |

## Panel A: Standard Bounds

Interval
$95 \% \mathrm{CI}$ on interval
$95 \% \mathrm{CI}$ on parameter

Observations

$$
\begin{array}{ll}
{[0.318,0.560]} & {[0.193,0.383]} \\
{[0.286,0.595]} & {[0.170,0.411]} \\
{[0.293,0.587]} & {[0.175,0.405]}
\end{array}
$$

$500 \quad 502$

Panel B: Adjusted Bounds

| Interval | $[0.308,0.571]$ | $[0.184,0.390]$ |
| :--- | :--- | :--- |
| $95 \%$ CI on interval | $[0.277,0.606]$ | $[0.161,0.419]$ |
| $95 \%$ CI on parameter | $[0.284,0.598]$ | $[0.166,0.412]$ |

$95 \%$ CI on parameter
[0.284, 0.598] [0.166, 0.412]

Observations 500502
Notes: This table uses data from the within design (experiment 7). In Panel A we compute our standard bounds while in Panel B we compute the adjusted bounds which take into account defier behavior.

Table A.3: Predicted Values from Structural Model

|  | Power effort cost |  |  | Exponential effort cost |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ | $(6)$ |
|  | $\log \left(a^{L}(\zeta)\right)$ | $\log (a(\zeta))$ | $\log (a(\zeta))$ | $a^{L}(\zeta)$ | $a(\zeta)$ | $a(\zeta)$ |
| 0 cents | 6.93 | 7.12 | 7.07 | 1363 | 1495 | 1407 |
| 1 cent | 7.40 | 7.41 | 7.42 | 1904 | 1860 | 1886 |
| 4 cents | 7.59 | 7.61 | 7.71 | 2114 | 2134 | 2376 |

Columns 1-3 present predicted values from the power effort cost model, and 4-6 for the exponential cost model. Column numbers correspond to those in table 4 Rows correspond to incentive treatments, in cents per 100 points. Therefore (1) and (4) are predicted values from the model without demand effects, equalling mean observed actions under the neutral treatments, and are potentially contaminated by latent demand. Columns (2) and (5) are predicted demand-free actions when latent demand is restricted to be equal in the 1 and 4 cent treatments. Columns (3) and (6) are predicted demand-free actions when latent demand is allowed to differ across all treatments.

Table A.4: Confidence interval for the interval and the parameter

| Time | Risk | Ambiguity Aversion | Effort 0 cent bonus | Effort 1 cent bonus | Lying | Dictator Game | Ultimatum Game 1 | Ultimatum Game 2 | Trust Game 1 | Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

## Panel A: Strong Demand

Interval
$95 \%$ CI on interval
$95 \%$ CI on parameter

| $[0.659,0.792]$ | $[0.373,0.548]$ | $[0.428,0.583]$ | $[0.254,0.403]$ | $[0.447,0.492]$ | $[0.447,0.492]$ | $[0.252,0.433]$ | $[0.404,0.520]$ | $[0.338,0.474]$ | $[0.350,0.532]$ | $[0.288,0.470]$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $[0.612,0.831]$ | $[0.342,0.581]$ | $[0.391,0.622]$ | $[0.235,0.422]$ | $[0.429,0.511]$ | $[0.487,0.625]$ | $[0.228,0.458]$ | $[0.381,0.541]$ | $[0.314,0.496]$ | $[0.314,0.571]$ | $[0.263,0.499]$ |
| $[0.622,0.823]$ | $[0.349,0.574]$ | $[0.399,0.613]$ | $[0.240,0.418]$ | $[0.433,0.507]$ | $[0.493,0.621]$ | $[0.233,0.452]$ | $[0.386,0.536]$ | $[0.319,0.491]$ | $[0.322,0.562]$ | $[0.269,0.493]$ |

Observations
730
730
404
735
717
366
773
409
425
383
373
Panel B: Weak Demand
Interval
$95 \%$ CI on interval
$95 \%$ CI on paramete

| [0.768, 0.768 ] | [0.469, 0.524] | [0.501, 0.562] | [0.342, 0.329] | [0.468, 0.484] | [0.468, 0.484] | [0.316, 0.382] | [0.443, 0.473] | [0.362, 0.412$]$ | [0.427, 0.453] | [0.346, 0.398] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| [0.716, 0.820] | [0.436, 0.561] | [0.462, 0.601] | [0.315, 0.356] | [0.447, 0.504] | [0.511, 0.557] | [0.293, 0.405] | [0.422, 0.496] | [0.342, 0.435] | [0.385, 0.492] | [0.326, 0.426] |



Observations 426 743 393 392 383 413 761 361 413
Notes: This table uses data from all MTurk experiments with strong and weak demand treatments using real stakes. This table shows the 95 percent confidence interval for the parameter and the interval respectively. We provide a Stata package, demandbounds, which computes the upper and lower bound of confidence intervals for mean behavior and treatment effects using the method proposed by Imbens and Manski 2004. This bounding exercise is based on strong and weak demand treatments in which we manipulate our participants' beliefs about the experimental objective and hypothesis respectively.

Table A.5: Confidence intervals for treatment effects
Treatment Effect:
Score in Effort Task

| Interval | $[175.315,952.811]$ |
| :--- | :--- |
| $95 \%$ CI on interval | $[72.733,1058.305]$ |
| $95 \%$ CI on parameter | $[95.390,1035.004]$ |

Observations 1452
Notes: In this table we use data from the real effort experiment using strong demand treatments (experiment 3). This table shows the 95 percent confidence interval for the parameter and the set respectively. Our estimates are based on a Stata package, demandbounds, which computes the upper and lower bound of confidence intervals for mean behavior and treatment effects using the method proposed by Imbens and Manski (2004). This bounding exercise is based on strong demand treatments in which we manipulate our participants' beliefs about the experimental objective.

Table A.6: Heterogeneous Reponse to the strong demand treatment (raw choices)


Panel A: Design Characteristics

| Sensitivity $\times$ Incentive | 0.026 | -0.028 | 0.062 | 0.014 |
| :--- | :---: | :---: | :---: | :---: |
|  | $(0.029)$ | $(0.051)$ | $(0.039)$ | $(0.030)$ |
| Observations | 3000 | 998 | 1000 | 1002 |

Panel B: Respondent Characteristics

| Sensitivity $\times$ Male | $\begin{gathered} -0.047^{* * *} \\ (0.016) \end{gathered}$ | $\begin{aligned} & -0.098 \\ & (0.074) \end{aligned}$ | $\begin{aligned} & -0.041 \\ & (0.040) \end{aligned}$ | $\begin{gathered} -0.130^{* *} \\ (0.065) \end{gathered}$ | $\begin{gathered} 0.007 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.034) \end{gathered}$ | $\begin{aligned} & -0.037 \\ & (0.037) \end{aligned}$ | $\begin{aligned} & -0.056 \\ & (0.035) \end{aligned}$ | $\begin{aligned} & -0.028 \\ & (0.038) \end{aligned}$ | $\begin{aligned} & -0.031 \\ & (0.040) \end{aligned}$ | $\begin{gathered} 0.023 \\ (0.065) \end{gathered}$ | $\begin{aligned} & -0.066 \\ & (0.045) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Observations | 6013 | 494 | 1071 | 404 | 495 | 475 | 366 | 1118 | 409 | 425 | 383 | 373 |
| Sensitivity $\times$ Attention | $\begin{gathered} 0.019 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.131 \\ (0.166) \end{gathered}$ | $\begin{gathered} 0.150^{* * *} \\ (0.042) \end{gathered}$ | $\begin{aligned} & -0.080 \\ & (0.119) \end{aligned}$ |  |  | $\begin{gathered} 0.059 \\ (0.084) \end{gathered}$ | $\begin{aligned} & -0.001 \\ & (0.036) \end{aligned}$ | $\begin{gathered} -0.079 \\ (0.114) \end{gathered}$ | $\begin{gathered} 0.071 \\ (0.168) \end{gathered}$ | $\begin{aligned} & 0.270^{* *} \\ & (0.122) \end{aligned}$ | $\begin{gathered} -0.019 \\ (0.070) \end{gathered}$ |
| Observations | 5043 | 494 | 1071 | 404 |  |  | 366 | 1118 | 409 | 425 | 383 | 373 |
| Sensitivity $\times$ Representative sample | $\begin{gathered} 0.015 \\ (0.025) \end{gathered}$ |  | $\begin{aligned} & -0.038 \\ & (0.039) \end{aligned}$ |  |  |  |  | $\begin{aligned} & 0.053^{*} \\ & (0.032) \end{aligned}$ |  |  |  |  |
| Observations | 2189 |  | 1071 |  |  |  |  | 1118 |  |  |  |  |

Notes: In Panel A we display heterogeneous treatment effects of the strong demand treatments by design characteristics, i.e. whether our respondents' choices are incentivized or hypothetical. In Panel B we display heterogeneous treatment effects by respondent characteristics, namely by gender, attention and whether our respondents come from MTurk or a representative sample. The variable male takes value one if our respondent is male and zero otherwise, attention takes value one if our respondent correctly completed the screener and zero otherwise. The variable representative sample takes value if our respondent come from a representative sample and zero when they come from the MTurk sample. In the strong demand treatments we reveal the experimental objective to our respondents. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.7: Heterogeneous Reponse to the weak demand treatment (raw choices)


Panel A: Design Characteristics

| Sensitivity $\times$ Incentive | 0.026 | 0.048 | 0.004 |
| :--- | :---: | :---: | :---: |
|  | $(0.027)$ | $(0.042)$ | $(0.028)$ |
| Observations | 1976 | 978 | 998 |

## Panel B: Respondent Characteristics

| Sensitivity $\times$ Male | $\begin{gathered} 0.000 \\ (0.016) \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.077) \end{gathered}$ | $\begin{aligned} & -0.022 \\ & (0.042) \end{aligned}$ | $\begin{gathered} 0.020 \\ (0.069) \end{gathered}$ | $\begin{gathered} 0.057 \\ (0.039) \end{gathered}$ | $\begin{gathered} 0.006 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.011 \\ (0.033) \end{gathered}$ | $\begin{aligned} & -0.031 \\ & (0.034) \end{aligned}$ | $\begin{aligned} & -0.023 \\ & (0.039) \end{aligned}$ | $\begin{gathered} 0.003 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.085 \\ (0.069) \end{gathered}$ | $\begin{aligned} & -0.042 \\ & (0.044) \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Observations | 5618 | 426 | 1046 | 393 | 392 | 383 | 413 | 1089 | 361 | 413 | 355 | 347 |
| Sensitivity $\times$ Attention | $\begin{gathered} 0.007 \\ (0.022) \end{gathered}$ | $\begin{gathered} -0.174 \\ (0.167) \end{gathered}$ | $\begin{gathered} 0.018 \\ (0.043) \end{gathered}$ | $\begin{gathered} 0.127 \\ (0.145) \end{gathered}$ |  |  | $\begin{gathered} 0.053 \\ (0.072) \end{gathered}$ | $\begin{gathered} 0.047 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.030 \\ (0.086) \end{gathered}$ | $\begin{gathered} 0.114 \\ (0.072) \end{gathered}$ | $\begin{gathered} 0.035 \\ (0.108) \end{gathered}$ | $\begin{aligned} & -0.087 \\ & (0.068) \end{aligned}$ |
| Observations | 4843 | 426 | 1046 | 393 |  |  | 413 | 1089 | 361 | 413 | 355 | 347 |
| Sensitivity $\times$ Representative sample Observations | $\begin{gathered} 0.007 \\ (0.027) \\ 2135 \end{gathered}$ |  | $\begin{gathered} 0.009 \\ (0.042) \\ 1046 \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.006 \\ (0.031) \\ 1089 \end{gathered}$ |  |  |  |  |

Notes: In Panel A we display heterogeneous treatment effects of the strong demand treatments by design characteristics, i.e. whether our respondents' choices are incentivized or hypothetical. In Panel B we display heterogeneous treatment effects by respondent characteristics, namely by gender, attention and whether our respondents come from MTurk or a representative sample. The variable male takes value one if our respondent is male and zero otherwise, attention takes value one if our respondent correctly completed the screener and zero otherwise. The variable representative sample takes value if our respondent come from a representative sample and zero when they come from the MTurk sample. In the strong demand treatments we reveal the experimental objective to our respondents. ${ }^{*}$ denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.8: Additional Heterogeneity: Strong demand treatment (z-scored)

|  | All <br> Games | Time | Risk | Ambiguity Aversion | Effort <br> 0 cent bonus | Effort 1 cent bonus | Lying | Dictator Game | Ultimatum Game 1 | Ultimatum Game 2 | Trust Game 1 | Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sensitivity $\times$ High Education | $\begin{gathered} 0.015 \\ (0.073) \end{gathered}$ | $\begin{aligned} & -0.153 \\ & (0.193) \end{aligned}$ | $\begin{gathered} 0.163 \\ (0.173) \end{gathered}$ | $\begin{gathered} -0.213 \\ (0.195) \end{gathered}$ | $\begin{gathered} 0.100 \\ (0.171) \end{gathered}$ | $\begin{aligned} & -0.334^{*} \\ & (0.187) \end{aligned}$ | $\begin{gathered} 0.397 \\ (0.247) \end{gathered}$ | $\begin{aligned} & -0.057 \\ & (0.168) \end{aligned}$ | $\begin{gathered} -0.153 \\ (0.226) \end{gathered}$ | $\begin{gathered} 0.132 \\ (0.221) \end{gathered}$ | $\begin{gathered} 0.079 \\ (0.206) \end{gathered}$ | $\begin{gathered} 0.113 \\ (0.266) \end{gathered}$ |
| Observations | 6330 | 998 | 1000 | 404 | 495 | 475 | 366 | 1002 | 409 | 425 | 383 | 373 |
| Sensitivity $\times$ Experienced | $\begin{gathered} 0.114 \\ (0.084) \end{gathered}$ | $\begin{gathered} 0.087 \\ (0.194) \end{gathered}$ | $\begin{gathered} 0.018 \\ (0.177) \end{gathered}$ | $\begin{gathered} 0.049 \\ (0.206) \end{gathered}$ |  |  | $\begin{gathered} 0.196 \\ (0.242) \end{gathered}$ | $\begin{gathered} -0.139 \\ (0.164) \end{gathered}$ | $\begin{gathered} 0.128 \\ (0.227) \end{gathered}$ | $\begin{gathered} 0.105 \\ (0.237) \end{gathered}$ | $\begin{gathered} 0.160 \\ (0.207) \end{gathered}$ | $\begin{gathered} 0.032 \\ (0.257) \end{gathered}$ |
| Observations | 5043 | 494 | 1071 | 404 |  |  | 366 | 1118 | 409 | 425 | 383 | 373 |

Notes: Our outcome measures are normalized at the game level using the negative demand condition. We display heterogeneous treatment effects by respondent characteristics, namely by education and experience. High Education takes value one if a respondent has at least a bachelor degree. Experienced takes value one if a respondent has completed at least 4000 HITs on MTurk. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.9: Additional Heterogeneity: Weak demand treatment (z-scored)

|  | All <br> Games | Time | Risk | Ambiguity Aversion | Effort <br> 0 cent bonus | Effort <br> 1 cent bonus | Lying | Dictator Game | Ultimatum Game 1 | Ultimatum Game 2 | Trust <br> Game 1 | Trust <br> Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sensitivity $\times$ High Education | $\begin{aligned} & -0.064 \\ & (0.068) \end{aligned}$ | $\begin{gathered} 0.037 \\ (0.192) \end{gathered}$ | $\begin{gathered} 0.055 \\ (0.185) \end{gathered}$ | $\begin{gathered} -0.009 \\ (0.210) \end{gathered}$ | $\begin{gathered} -0.144 \\ (0.210) \end{gathered}$ | $\begin{gathered} 0.060 \\ (0.201) \end{gathered}$ | $\begin{gathered} -0.137 \\ (0.213) \end{gathered}$ | $\begin{gathered} 0.290^{*} \\ (0.149) \end{gathered}$ | $\begin{gathered} -0.319 \\ (0.221) \end{gathered}$ | $\begin{gathered} 0.322 \\ (0.204) \end{gathered}$ | $\begin{gathered} -0.191 \\ (0.218) \end{gathered}$ | $\begin{gathered} -0.283 \\ (0.243) \end{gathered}$ |
| Observations | 5459 | 426 | 978 | 393 | 392 | 383 | 413 | 998 | 361 | 413 | 355 | 347 |
| Sensitivity $\times$ Experienced | $\begin{gathered} -0.059 \\ (0.080) \end{gathered}$ | $\begin{gathered} 0.148 \\ (0.205) \end{gathered}$ | $\begin{gathered} 0.100 \\ (0.226) \end{gathered}$ | $\begin{gathered} -0.142 \\ (0.221) \end{gathered}$ |  |  | $\begin{gathered} -0.051 \\ (0.205) \end{gathered}$ | $\begin{gathered} -0.214 \\ (0.184) \end{gathered}$ | $\begin{gathered} -0.203 \\ (0.231) \end{gathered}$ | $\begin{gathered} -0.304 \\ (0.208) \end{gathered}$ | $\begin{gathered} -0.005 \\ (0.232) \end{gathered}$ | $\begin{gathered} 0.109 \\ (0.250) \end{gathered}$ |
| Observations | 4843 | 426 | 1046 | 393 |  |  | 413 | 1089 | 361 | 413 | 355 | 347 |

Notes: Our outcome measures are normalized at the game level using the negative demand condition. We display heterogeneous treatment effects by respondent characteristics, namely by education and experience. High Education takes value one if a respondent has at least a bachelor degree. Experienced takes value one if a respondent has completed at least 4000 HITs on MTurk. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.10: Belief about the experimental objective in response to the strong demand treatments

|  | Belief: Time | Belief: Risk | Belief: Ambiguity Aversion | Belief: Effort 0 cent bonus | Belief: Effort 1 cent bonus | Belief: Lying | Belief: Dictator Game | Belief: Ult Game 1 | Belief: Ult. Game 2 | Belief: Trust Game 1 | Belief: Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Unconditional Means |  |  |  |  |  |  |  |  |  |  |  |
| Positive demand | $\begin{gathered} 0.797 \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.702 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.701 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.773 \\ (0.027) \end{gathered}$ | $\begin{gathered} 0.942 \\ (0.015) \end{gathered}$ | $\begin{gathered} 0.811 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.648 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.572 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.662 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.410 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.386 \\ (0.036) \end{gathered}$ |
| No demand | $\begin{gathered} 0.720 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.534 \\ (0.032) \end{gathered}$ |  | $\begin{gathered} 0.733 \\ (0.020) \end{gathered}$ | $\begin{gathered} 0.888 \\ (0.020) \end{gathered}$ |  | $\begin{gathered} 0.354 \\ (0.030) \end{gathered}$ |  |  |  |  |
| Negative demand | $\begin{gathered} 0.622 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.424 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.335 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.294 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.509 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.562 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.243 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.309 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.359 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.295 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.217 \\ (0.030) \end{gathered}$ |
| Panel B: Sensitivity (Positive - Negative) |  |  |  |  |  |  |  |  |  |  |  |
| Raw data | $\begin{gathered} 0.175^{* * *} \\ (0.040) \end{gathered}$ | $\begin{gathered} 0.278^{* * *} \\ (0.043) \end{gathered}$ | $\underset{(0.046)}{0.366 * * *}$ | $\begin{gathered} 0.479^{* * *} \\ (0.039) \end{gathered}$ | $\underset{(0.036)}{0.434^{* * *}}$ | $\underset{(0.047)}{0.248^{* * *}}$ | $\begin{gathered} 0.405^{* * *} \\ (0.040) \end{gathered}$ | $\underset{(0.047)}{0.263^{* * *}}$ | $\begin{gathered} 0.303^{* * *} \\ (0.046) \end{gathered}$ | $\underset{(0.049)}{0.115^{* *}}$ | $\begin{gathered} 0.169^{* * *} \\ (0.047) \end{gathered}$ |
| Z-score | $\begin{gathered} 0.360^{* * *} \\ (0.083) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.557^{* * *} \\ (0.087) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.773^{* * *} \\ (0.098) \end{gathered}$ | $\begin{gathered} 1.051^{* * *} \\ (0.086) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.866^{* * *} \\ (0.072) \\ {[0.001]} \end{gathered}$ | $\underset{(0.095)}{0.499^{* * *}}$ | $\begin{gathered} 0.899^{* * *} \\ (0.089) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.567^{* * *} \\ (0.102) \end{gathered}$ | $\begin{gathered} 0.632^{* * *} \\ (0.097) \end{gathered}$ | $\begin{gathered} 0.251^{* *} \\ (0.106) \end{gathered}$ | $\begin{gathered} 0.409^{* * *} \\ (0.113) \end{gathered}$ |
| Panel C: Monotonicity |  |  |  |  |  |  |  |  |  |  |  |
| Positive - Neutral (z-score) | $0.157^{*}$ <br> (0.079) <br> [0.033] | $\begin{gathered} 0.335^{* * *} \\ (0.088) \\ {[0.001]} \end{gathered}$ |  | $\begin{gathered} 0.088 \\ (0.073) \\ {[0.082]} \end{gathered}$ | $\begin{gathered} 0.108^{* *} \\ (0.050) \\ {[0.011]} \end{gathered}$ |  | $\begin{gathered} 0.653^{* * *} \\ (0.092) \\ {[0.001]} \end{gathered}$ |  |  |  |  |
| Negative - Neutral (z-score) | $\begin{gathered} -0.202^{* *} \\ (0.088) \\ {[0.022]} \end{gathered}$ | $\begin{gathered} -0.222^{* *} \\ (0.089) \\ {[0.004]} \end{gathered}$ |  | $\begin{gathered} -0.962^{* * *}(0.077) \\ {[0.001]} \\ \hline 0 \end{gathered}$ | $\begin{gathered} -0.758^{* * *} \\ (0.077) \\ {[0.001]} \end{gathered}$ |  | $\begin{gathered} -0.246^{* * *} \\ (0.090) \\ {[0.002]} \end{gathered}$ |  |  |  |  |
| Observations | 730 | 730 | 404 | 982 | 717 | 366 | 773 | 409 | 425 | 383 | 373 |

[^0]Table A.11: Belief about the experimental objective in response to the weak demand treatments

|  | Belief: Time | Belief: Risk | Belief: Ambiguity Aversion | Belief: Effort 0 cent bonus | Belief: Effort 1 cent bonus | Belief: Lying | Belief: Dictator Game | Belief: Ult. Game 1 | Belief: Ult. Game 2 | Belief: Trust Game 1 | Belief: Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Unconditional Means |  |  |  |  |  |  |  |  |  |  |  |
| Positive demand | $\begin{gathered} 0.829 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.757 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.763 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.790 \\ (0.029) \end{gathered}$ | $\begin{gathered} 0.979 \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.779 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.540 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.700 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.684 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.611 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.669 \\ (0.038) \end{gathered}$ |
| No demand |  | $\begin{gathered} 0.620 \\ (0.030) \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.321 \\ (0.030) \end{gathered}$ |  |  |  |  |
| Negative demand | $\begin{gathered} 0.602 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.372 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.328 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.284 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.356 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.464 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.231 \\ (0.026) \end{gathered}$ | $\begin{gathered} 0.238 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.382 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.112 \\ (0.024) \end{gathered}$ | $\begin{gathered} 0.083 \\ (0.020) \end{gathered}$ |
| Panel B: Sensitivity (Positive - Negative) |  |  |  |  |  |  |  |  |  |  |  |
| Raw data | $\begin{gathered} 0.227^{* * *} \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.386^{* * *} \\ (0.042) \end{gathered}$ | $\underset{(0.045)}{0.434^{* * *}}$ | $\begin{gathered} 0.505^{* * *} \\ (0.044) \end{gathered}$ | $\begin{gathered} 0.623^{* * *} \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.315^{* * *} \\ (0.046) \end{gathered}$ | $\begin{gathered} 0.309^{* * *} \\ (0.041) \end{gathered}$ | $\begin{gathered} 0.462^{* * *} \\ (0.047) \end{gathered}$ | $\begin{gathered} 0.303^{* * *} \\ (0.047) \end{gathered}$ | $\underset{(0.043)}{0.499^{* * *}}$ | $\frac{0.586^{* * *}}{(0.043)}$ |
| Z-score | $\begin{gathered} 0.466^{* * *} \\ (0.087) \end{gathered}$ | $\begin{gathered} 0.772^{* * *} \\ (0.084) \\ {[0.001]} \end{gathered}$ | $\underset{(0.096)}{0.918^{* * *}}$ | $\underset{(0.095)}{1.109^{* * *}}$ | $\begin{gathered} 1.244^{* * *} \\ (0.072) \end{gathered}$ | $\begin{gathered} 0.633^{* * *} \\ (0.092) \end{gathered}$ | $\begin{gathered} 0.685^{* * *} \\ (0.090) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.998^{* * *} \\ (0.101) \end{gathered}$ | $\underbrace{0.631^{* * *}}_{(0.098)}$ | $\underset{(0.095)}{1.091^{* * *}}$ | $\begin{gathered} 1.418^{* * *} \\ (0.104) \end{gathered}$ |
| Panel C: Monotonicity |  |  |  |  |  |  |  |  |  |  |  |
| Positive - Neutral (z-score) |  | $\begin{gathered} 0.274^{* * *} \\ (0.082) \\ {[0.001]} \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.486^{* * *} \\ (0.097) \\ {[0.001]} \end{gathered}$ |  |  |  |  |
| Negative - Neutral (z-score) |  | $\begin{gathered} -0.497^{* * *} \\ (0.086) \\ {[0.001]} \end{gathered}$ |  |  |  |  | $\begin{gathered} -0.199^{* *} \\ (0.088) \\ {[0.008]} \end{gathered}$ |  |  |  |  |
| Observations | 426 | 743 | 393 | 392 | 383 | 413 | 761 | 361 | 413 | 355 | 347 |

[^1]Table A.12: Belief about the experimental hypothesis in response to the strong demand treatments

|  | Belief: Time | Belief: Risk | Belief: Ambiguity Aversion | Belief: Effort 0 cent bonus | Belief: Effort 1 cent bonus | Belief: Lying | Belief: Dictator Game | Belief: Ult. Game 1 | Belief: Ult. Game 2 | Belief: Trust Game 1 | Belief: Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Unconditional Means |  |  |  |  |  |  |  |  |  |  |  |
| Positive demand | $\begin{gathered} 0.727 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.592 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.593 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.729 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.934 \\ (0.016) \end{gathered}$ | $\begin{gathered} 0.789 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.452 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.670 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.653 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.580 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.587 \\ (0.036) \end{gathered}$ |
| No demand | $\begin{gathered} 0.682 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.482 \\ (0.032) \end{gathered}$ |  | $\begin{gathered} 0.700 \\ (0.021) \end{gathered}$ | $\begin{gathered} 0.855 \\ (0.023) \end{gathered}$ |  | $\begin{gathered} 0.142 \\ (0.022) \end{gathered}$ |  |  |  |  |
| Negative demand | $\begin{gathered} 0.639 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.420 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.400 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.266 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.573 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.625 \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.185 \\ (0.025) \end{gathered}$ | $\begin{gathered} 0.284 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.440 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.290 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.243 \\ (0.031) \end{gathered}$ |

Panel B: Sensitivity (Positive - Negative)
$\stackrel{\text { Z-score }}{ }$

| $0.088^{* *}$ | $0.172^{* * *}$ <br> $(0.042)$ |
| :---: | :---: |
| $(0.045)$ |  |
| $0.181^{* *}$ | $0.345^{* * *}$ |
| $(0.086)$ | $(0.090)$ |
| $[0.122]$ | $[0.001]$ |


| $0.193^{* * *}$ $0.463^{* * *}$ <br> $(0.049)$ $(0.040)$ <br> $0.393^{* * *}$ $1.051^{* * *}$ <br> $(0.100)$ $(0.091)$ <br>  $[0.001]$${ }^{2}$ |  |
| :---: | :---: |
|  |  |


| $0.361^{* * *}$ | $0.164^{* * *}$ <br> $(0.036)$ | $0.047)$ |
| :---: | :---: | :---: |
| $0.724^{* * *}$ | $0.339^{* * *}$ | 0.62 |
| $(0.073)$ | $(0.097)$ |  |
| $[0.001]$ |  |  |


| $0.267^{* * *}$ | $0.386^{* * *}$ <br> $(0.039)$ | $0.213^{* * *}$ <br> $(0.046)$ | $0.290^{* * *}$ <br> $(0.049)$ | $0.344^{* * *}$ <br> $(0.048)$ |
| :---: | :---: | :---: | :---: | :---: |
| $0.624^{* * *}$ | $0.859^{* * *}$ | $0.428^{* * *}$ <br> $(0.092)$ | $(0.102)$ | $(0.095)$ |
| $[0.001]$ |  |  | $(0.107)$ | $(0.112)$ |
|  |  |  |  |  |


| Panel C: Monotonicity |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Positive - Neutral (z-score) | $\begin{gathered} 0.091 \\ (0.085) \\ {[0.268]} \end{gathered}$ | $\begin{gathered} 0.221^{* *} \\ (0.091) \\ {[0.016]} \end{gathered}$ |  | $\begin{gathered} 0.065 \\ (0.080) \\ {[0.161]} \end{gathered}$ | $\begin{gathered} 0.158^{* * *} \\ (0.056) \\ {[0.001]} \end{gathered}$ |  | $\begin{gathered} 0.724^{* * *} \\ (0.087) \\ {[0.001]} \end{gathered}$ |  |  |  |  |
| Negative - Neutral (z-score) | $\begin{aligned} & -0.090 \\ & (0.090) \\ & {[0.268]} \end{aligned}$ | $\begin{gathered} -0.124 \\ (0.089) \\ {[0.057]} \end{gathered}$ |  | $\begin{gathered} -0.987^{* * *} \\ (0.079) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} -0.566^{* * *} \\ (0.080) \\ {[0.001]} \end{gathered}$ |  | $\begin{gathered} 0.100 \\ (0.077) \\ {[0.069]} \end{gathered}$ |  |  |  |  |
| Observations | 730 | 730 | 404 | 982 | 717 | 366 | 773 | 409 | 425 | 383 | 373 |

[^2]Table A.13: Belief about the experimental hypothesis in response to the weak demand treatments

|  | Belief: <br> Time | Belief: Risk | Belief: Ambiguity Aversion | Belief: Effort 0 cent bonus | Belief: Effort 1 cent bonus | Belief: Lying | Belief: Dictator Game | Belief: Ult. Game 1 | Belief: Ult. Game 2 | Belief: Trust Game 1 | Belief: Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Unconditional Means |  |  |  |  |  |  |  |  |  |  |  |
| Positive demand | $\begin{gathered} 0.790 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.749 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.707 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.779 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.964 \\ (0.014) \end{gathered}$ | $\begin{gathered} 0.871 \\ (0.023) \end{gathered}$ | $\begin{gathered} 0.464 \\ (0.032) \end{gathered}$ | $\begin{gathered} 0.728 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.733 \\ (0.031) \end{gathered}$ | $\begin{gathered} 0.627 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.682 \\ (0.038) \end{gathered}$ |
| No demand |  | $\begin{gathered} 0.534 \\ (0.031) \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.160 \\ (0.024) \end{gathered}$ |  |  |  |  |
| Negative demand | $\begin{gathered} 0.454 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.260 \\ (0.028) \end{gathered}$ | $\begin{gathered} 0.221 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.239 \\ (0.030) \end{gathered}$ | $\begin{gathered} 0.325 \\ (0.034) \end{gathered}$ | $\begin{gathered} 0.526 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.104 \\ (0.019) \end{gathered}$ | $\begin{gathered} 0.354 \\ (0.036) \end{gathered}$ | $\begin{gathered} 0.362 \\ (0.033) \end{gathered}$ | $\begin{gathered} 0.294 \\ (0.035) \end{gathered}$ | $\begin{gathered} 0.181 \\ (0.028) \end{gathered}$ |
| Panel B: Sensitivity (Positive - Negative) |  |  |  |  |  |  |  |  |  |  |  |
| Raw data | $\begin{gathered} 0.337^{* * *} \\ (0.044) \end{gathered}$ | $\begin{gathered} 0.489^{* * *} \\ (0.040) \end{gathered}$ | $\underset{(0.044)}{0.487^{* * *}}$ | $\begin{gathered} 0.541^{* * *} \\ (0.043) \end{gathered}$ | $\begin{gathered} 0.639^{* * *} \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.345^{* * *} \\ (0.042) \end{gathered}$ | $\begin{gathered} 0.360^{* * *} \\ (0.037) \end{gathered}$ | $\begin{gathered} 0.374^{* * *} \\ (0.049) \end{gathered}$ | $\begin{gathered} 0.371^{* * *} \\ (0.046) \end{gathered}$ | $\begin{gathered} 0.333^{* * *} \\ (0.050) \end{gathered}$ | $\begin{gathered} 0.500^{* * *} \\ (0.047) \end{gathered}$ |
| Z-score | $\begin{gathered} 0.693^{* * *} \\ (0.091) \end{gathered}$ | $\begin{gathered} 0.978^{* * *} \\ (0.080) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.991^{* * *} \\ (0.090) \end{gathered}$ | $\underset{(0.097)}{1.229^{* * *}}$ | $\begin{gathered} 1.282^{* * *} \\ (0.073) \end{gathered}$ | $\begin{gathered} 0.712^{* * *} \\ (0.087) \end{gathered}$ | $\begin{gathered} 0.841 * * * \\ (0.086) \\ {[0.001]} \end{gathered}$ | $\begin{gathered} 0.832^{* * *} \\ (0.108) \end{gathered}$ | $\begin{gathered} 0.746^{* * *} \\ (0.092) \end{gathered}$ | $\begin{gathered} 0.732^{* * *} \\ (0.110) \end{gathered}$ | $\begin{gathered} 1.163^{* * *} \\ (0.109) \end{gathered}$ |

Panel C: Monotonicity


[^3]Table A.14: Attrition overview by game in the strong demand experiments

|  | Finished: Time | Finished: Risk | Finished: Ambiguity Aversion | Finished: Effort 0 cent bonus | Finished: Effort 1 cent bonus | Finished: Lying | Finished: Dictator Game | Finished: Ult. Game 1 | Finished: Ult. Game 2 | Finished: Trust Game 1 | Finished: Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Unconditional Means |  |  |  |  |  |  |  |  |  |  |  |
| Positive demand | $\begin{gathered} 0.996 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.996 \\ (0.004) \end{gathered}$ | $\begin{gathered} 0.995 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.969 \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.968 \\ (0.011) \end{gathered}$ | $\begin{gathered} 0.995 \\ (0.005) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.991 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.990 \\ (0.007) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ |
| No demand | $\begin{gathered} 0.996 \\ (0.004) \end{gathered}$ | $\begin{aligned} & 1.000 \\ & (0.000) \end{aligned}$ |  | $\begin{gathered} 0.938 \\ (0.015) \end{gathered}$ | $\begin{gathered} 0.980 \\ (0.009) \end{gathered}$ |  | $\begin{gathered} 0.996 \\ (0.004) \end{gathered}$ |  |  |  |  |
| Negative demand | $\begin{gathered} 0.992 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.992 \\ (0.005) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.980 \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.963 \\ (0.012) \end{gathered}$ | $\begin{gathered} 0.994 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.992 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.985 \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.991 \\ (0.007) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ |
| Panel B: Differential attrition |  |  |  |  |  |  |  |  |  |  |  |
| Positive - Negative | $\begin{gathered} 0.004 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.003 \\ (0.007) \end{gathered}$ | $\begin{aligned} & -0.005 \\ & (0.005) \end{aligned}$ | $\begin{gathered} -0.012 \\ (0.014) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.008) \end{gathered}$ | $\stackrel{0.008}{(0.006)}$ | $\begin{aligned} & 0.015^{*} \\ & (0.009) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.009) \end{gathered}$ | $\begin{gathered} -0.010 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ |
| Positive - Neutral | $\begin{gathered} 0.000 \\ (0.006) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.004) \end{gathered}$ |  | $\begin{aligned} & 0.031^{*} \\ & (0.019) \end{aligned}$ | $\begin{gathered} -0.012 \\ (0.014) \end{gathered}$ |  | $\begin{gathered} 0.004 \\ (0.004) \end{gathered}$ |  |  |  |  |
| Negative - Neutral | $\begin{gathered} -0.004 \\ (0.007) \end{gathered}$ | $\begin{gathered} -0.008 \\ (0.005) \end{gathered}$ |  | $\begin{gathered} 0.043^{* *} \\ (0.018) \end{gathered}$ | $\begin{aligned} & -0.017 \\ & (0.015) \end{aligned}$ |  | $\begin{gathered} -0.004 \\ (0.007) \end{gathered}$ |  |  |  |  |
| Observations | 734 | 733 | 405 | 764 | 739 | 368 | 776 | 412 | 429 | 385 | 373 |

Notes: In Panel A we present unconditional the proportion of respondents who completed the experiment in the positive, negative and no-demand treatment arms respectively. In Panel B we assess whether there was differential attrition across treatment arms by examining differences in completion rates across demand treatment arms. In the demand treatments we reveal the experimental objective to our respondents. * denotes significance at 10 pct., ** at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.15: Attrition overview by game in the weak demand experiments

|  | Finished: Time | Finished: Risk | Finished: Ambiguity Aversion | Finished: Effort 0 cent bonus | Finished: Effort 1 cent bonus | Finished: Lying | Finished: Dictator Game | Finished: Ult. Game 1 | Finished: Ult Game 2 | Finished: Trust Game 1 | Finished: Trust Game 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Panel A: Unconditional Means |  |  |  |  |  |  |  |  |  |  |  |
| Positive demand | $\begin{gathered} 0.991 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.987 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.985 \\ (0.009) \end{gathered}$ | $\begin{gathered} 0.951 \\ (0.015) \end{gathered}$ | $\begin{gathered} 0.937 \\ (0.017) \end{gathered}$ | $\begin{gathered} 0.991 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.992 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.994 \\ (0.006) \end{gathered}$ | $\stackrel{1.000}{(0.000)}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ |
| No demand |  | $\begin{gathered} 0.993 \\ (0.005) \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.980 \\ (0.009) \end{gathered}$ |  |  |  |  |
| Negative demand | $\begin{gathered} 0.986 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.984 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.990 \\ (0.007) \end{gathered}$ | $\begin{gathered} 0.966 \\ (0.013) \end{gathered}$ | $\begin{gathered} 0.955 \\ (0.015) \end{gathered}$ | $\begin{gathered} 0.995 \\ (0.005) \end{gathered}$ | $\begin{gathered} 0.989 \\ (0.006) \end{gathered}$ | $\begin{gathered} 0.989 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.986 \\ (0.008) \end{gathered}$ | $\begin{gathered} 1.000 \\ (0.000) \end{gathered}$ | $\begin{gathered} 0.980 \\ (0.010) \end{gathered}$ |
| Panel B: Differential attrition |  |  |  |  |  |  |  |  |  |  |  |
| Positive - Negative | $\begin{gathered} 0.004 \\ (0.010) \end{gathered}$ | $\begin{gathered} 0.004 \\ (0.011) \end{gathered}$ | $\begin{gathered} -0.005 \\ (0.011) \end{gathered}$ | $\begin{gathered} -0.014 \\ (0.020) \end{gathered}$ | $\begin{gathered} -0.018 \\ (0.023) \end{gathered}$ | $\begin{gathered} -0.004 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.003 \\ (0.008) \end{gathered}$ | $\begin{gathered} 0.005 \\ (0.009) \end{gathered}$ | $\begin{aligned} & 0.014^{*} \\ & (0.008) \end{aligned}$ | $\begin{gathered} 0.000 \\ (0.000) \end{gathered}$ | $\underset{(0.010)}{0.020^{* *}}$ |
| Positive - Neutral |  | $\begin{gathered} -0.005 \\ (0.009) \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.012 \\ (0.011) \end{gathered}$ |  |  |  |  |
| Negative - Neutral |  | $\begin{gathered} -0.009 \\ (0.010) \end{gathered}$ |  |  |  |  | $\begin{gathered} 0.009 \\ (0.011) \end{gathered}$ |  |  |  |  |
| Observations | 431 | 752 | 398 | 409 | 405 | 416 | 771 | 364 | 416 | 355 | 351 |

Notes: In Panel A we present unconditional the proportion of respondents who completed the experiment in the positive, negative and no-demand treatment arms respectively. In Panel B we assess whether there was differential attrition across treatment arms by examining differences in completion rates across demand treatment arms. In the demand treatments we reveal the experimental objective to our respondents. * denotes significance at 10 pct., ** at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

## B Online Appendix: Additional Figures

Figure A.1: Response to weak demand treatments by Incentives


Notes: This figure uses data from experiment 2 on MTurk. This figure displays the response to our weak demand treatments separately for the incentivized sample and the sample completing hypothetical choices. We display the average sensitivity along with the 95 percent confidence interval of the sensitivity. In these demand treatments we reveal the experimental hypothesis to our respondents.

Figure A.2: Gender Differences in response to weak demand treatments


Notes: This figure uses data from all incentivized MTurk experiments with weak demand treatments. This figure displays the sensitivity to our weak demand treatments for males and females separately. We display the average sensitivity along with the 95 percent confidence interval of the sensitivity. In these demand treatments we reveal the experimental hypothesis to our respondents.

Figure A.3: Response to weak demand treatments by attention


Notes: This figure displays the response to our weak demand treatments by our respondents' level of attention. We display the average sensitivity along with the 95 percent confidence interval of the sensitivity.In these demand treatments we reveal the experimental hypothesis to our respondents.

Figure A.4: Response to weak demand treatments by population


Notes: This figure uses data from all incentivized MTurk experiments with weak demand treatments. This figure displays the response to our weak demand treatments separately for the MTurk sample and the representative online sample. We display the average sensitivity at the game level along with the 95 percent confidence interval of the sensitivity. In these demand treatments we reveal the experimental hypothesis to our respondents.

Figure A.5: Response to strong demand treatments by attention (alternative measure)


Notes: This figure displays the response to our strong demand treatments separately for attentive and inattentive participants. Attention takes value one for respondents in the positive demand condition who thought the experimenter wanted a high action or for respondents who are in the negative demand condition and thought that the experimenter wanted a low value.

Figure A.6: Response to weak demand treatments for representative sample


Notes: This figure utilized data from the representative online panel using the strong demand treatments. It displays the response to our weak demand treatments separately for attentive and inattentive participants. Attentive participants are those who pass the attention screener.

Figure A.7: Response to strong demand treatments by gender using the representative sample


Notes: This figure utilized data from the representative online panel using the strong demand treatments. It displays the response to our weak demand treatments separately for attentive and inattentive participants. Attentive participants are those who pass the attention screener.

## C Theoretical Appendix

## C. 1 Derivation of $E\left[h \mid h^{L}\right]$

We suppress dependence on $\zeta$ to reduce clutter. After observing $h^{L}$, the decision-maker's posterior $E\left[h \mid h^{L}\right]$ equals $\operatorname{Pr}\left(h=1 \mid h^{L}\right) \times 1+\operatorname{Pr}(h=$ $\left.-1 \mid h^{L}\right) \times(-1)$ or

$$
\begin{aligned}
E\left[h \mid h^{L}=y\right] & =\operatorname{Pr}\left(h=1 \mid h^{L}=y\right)-\operatorname{Pr}\left(h=-1 \mid h^{L}=y\right) \\
& =\frac{A}{B} \\
A & =\operatorname{Pr}\left(h^{L}=y \mid h=1\right) \operatorname{Pr}(h=1)-\operatorname{Pr}\left(h^{L}=y \mid h=-1\right) \operatorname{Pr}(h=-1) \\
B & =\operatorname{Pr}\left(h^{L}=y \mid h=1\right) \operatorname{Pr}(h=1)+\operatorname{Pr}\left(h^{L}=y \mid h=-1\right) \operatorname{Pr}(h=-1)
\end{aligned}
$$

Since $\operatorname{Pr}\left(h=j \mid h^{L}=y\right)=\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{T}[y=j]$ and $\operatorname{Pr}(h=j)=\frac{1}{2}$ we have

$$
\begin{aligned}
A & =\frac{1}{2}\left[\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right)-\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right)\right] \\
& =\frac{1}{2} p^{L}(\mathbb{I}[y=1]-\mathbb{I}[y=-1])=\frac{1}{2} p^{L} h^{L} \\
B & =\frac{1}{2}\left[\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right)+\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right)\right] \\
& =\frac{1}{2}
\end{aligned}
$$

Therefore we can write:

$$
\begin{align*}
E\left[h \mid h^{L}(\zeta)\right] & =h^{L}(\zeta) p^{L}(\zeta)  \tag{16}\\
\operatorname{Pr}\left(h=1 \mid h^{L}(\zeta)\right) & =0.5\left(1+h^{L} p^{L}(\zeta)\right) \tag{17}
\end{align*}
$$

where the latter follows from the fact that $E\left[h \mid h^{L}(\zeta)\right]=2 \operatorname{Pr}\left(h=1 \mid h^{L}(\zeta)\right)-$ 1.

## C. 2 Derivation of $E\left[h \mid h^{T}, h^{L}\right]$

We have assumed that when $h^{T}=\emptyset, E\left[h \mid h^{T}, h^{L}\right]=E\left[h \mid h^{L}\right]$. After observing $h^{T} \neq \emptyset$, the participant forms a posterior:

$$
\begin{aligned}
E\left[h \mid h^{T}, h^{L}\right] & =\operatorname{Pr}\left(h=1 \mid h^{T}, h^{L}\right)-\operatorname{Pr}\left(h=-1 \mid h^{T}, h^{L}\right) \\
& =\frac{A}{B} \\
A & =\operatorname{Pr}\left(h^{T}=x \mid h=1, h^{L}=y\right) \operatorname{Pr}\left(h=1 \mid h^{L}=y\right) \\
& -\operatorname{Pr}\left(h^{T}=x \mid h=-1, h^{L}=y\right) \operatorname{Pr}\left(h=-1 \mid h^{L}=y\right) \\
B & =\operatorname{Pr}\left(h^{T}=x \mid h=1, h^{L}=y\right) \operatorname{Pr}\left(h=1 \mid h^{L}=y\right) \\
& +\operatorname{Pr}\left(h^{T}=x \mid h=-1, h^{L}=y\right) \operatorname{Pr}\left(h=-1 \mid h^{L}=y\right)
\end{aligned}
$$

Using the following

$$
\begin{array}{r}
\operatorname{Pr}\left(h^{T}=x \mid h=j, h^{L}=y\right)=\frac{1}{2}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=j] \\
\operatorname{Pr}\left(h=j \mid h^{L}=y\right)=\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=j]
\end{array}
$$

we have:

$$
\begin{aligned}
A & =\left(\frac{1}{2}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=1]\right)\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right) \\
& -\left(\frac{1}{2}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=-1]\right)\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right) \\
& =\frac{1}{2}\left(1-p^{T}\right) p^{L}(\mathbb{I}[y=1]-\mathbb{I}[y=-1]) \\
& +\frac{1}{2}\left(1-p^{L}\right) p^{T}(\mathbb{I}[x=1]-\mathbb{I}[x=-1]) \\
& +p^{T} p^{L}(\mathbb{I}[x=1] \mathbb{I}[y=1]-\mathbb{I}[x=-1] \mathbb{I}[x=-1]) \\
& =\frac{1}{2}\left(1-p^{T}\right) p^{L} h^{L}+\frac{1}{2}\left(1-p^{L}\right) p^{T} h^{T} \\
& +p^{T} p^{L}(\mathbb{I}[x=1] \mathbb{I}[y=1]-(1-\mathbb{I}[x=1])(1-\mathbb{I}[y=1])) \\
& =\frac{1}{2}\left(1-p^{T}\right) p^{L} h^{L}+\frac{1}{2}\left(1-p^{L}\right) p^{T} h^{T} \\
& +p^{T} p^{L}\left(\mathbb{I}[x=1]-\frac{1}{2}\right)+p^{T} p^{L}\left(\mathbb{I}[y=1]-\frac{1}{2}\right) \\
& =\frac{1}{2}\left(1-p^{T}\right) p^{L} h^{L}+\frac{1}{2}\left(1-p^{L}\right) p^{T} h^{T}+\frac{1}{2} p^{T} p^{L}\left(h^{T}+h^{L}\right) \\
& =\frac{1}{2}\left(p^{T} h^{T}+p^{L} h^{L}\right)
\end{aligned}
$$

$$
\begin{aligned}
B & =\left(\frac{1}{2}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=1]\right)\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right) \\
& +\left(\frac{1}{2}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=-1]\right)\left(\frac{1}{2}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right) \\
& =\frac{1}{2}\left(1-p^{T}\right)\left(1-p^{L}\right)+\frac{1}{2}\left(1-p^{T}\right) p^{L}(\mathbb{I}[y=1]+\mathbb{I}[y=-1]) \\
& +\frac{1}{2}\left(1-p^{L}\right) p^{T}(\mathbb{I}[x=1]+\mathbb{I}[x=-1]) \\
& +p^{T} p^{L}(\mathbb{I}[x=1] \mathbb{I}[y=1]+\mathbb{I}[x=-1] \mathbb{I}[y=-1]) \\
& =\frac{1}{2}\left(1-p^{T} p^{L}\right)+2 p^{T} p^{L} \mathbb{I}[x=1] \mathbb{I}[y=1] \\
& +p^{T} p^{L}\left[\left(\frac{1}{2}-\mathbb{I}[x=1]\right)+\left(\frac{1}{2}-\mathbb{I}[y=1]\right)\right] \\
& =\frac{1}{2}\left(1-p^{T} p^{L}\right)+2 p^{T} p^{L}\left(\frac{1}{2}\left(h^{T}+1\right)\right)\left(\frac{1}{2}\left(h^{L}+1\right)\right)-\frac{1}{2} p^{T} p^{L}\left(h^{T}+h^{L}\right) \\
& =\frac{1}{2}\left(1+p^{T} h^{T} p^{L} h^{L}\right)
\end{aligned}
$$

Which uses the facts that $\mathbb{I}[x=1]-\mathbb{I}[x=-1]=h^{T}, \mathbb{I}[x=1]+\mathbb{I}[x=$ $-1]=1$, and $\mathbb{I}[x=1]=\frac{1}{2}\left(h^{T}+1\right)$. Therefore we can write:

$$
\begin{align*}
E\left[h \mid h^{T}, h^{L}(\zeta)\right] & =\frac{h^{L}(\zeta) p^{L}(\zeta)+h^{T} p^{T}}{1+h^{L}(\zeta) p^{L}(\zeta) h^{T} p^{T}}  \tag{18}\\
\operatorname{Pr}\left(h=1 \mid h^{T}, h^{L}(\zeta)\right) & =0.5\left(1+\frac{h^{L}(\zeta) p^{L}(\zeta)+h^{T} p^{T}}{1+h^{L}(\zeta) p^{L}(\zeta) h^{T} p^{T}}\right) \tag{19}
\end{align*}
$$

where the latter follows from the fact that $E\left[h \mid h^{T}, h^{L}(\zeta)\right]=2 \operatorname{Pr}(h=$ $\left.1 \mid h^{T}, h^{L}(\zeta)\right)-1$.

## C. 3 Proof of Proposition 1 (Monotone demand treatment effects)

We are interested in the sign of $\phi\left(E\left[h \mid h^{T}, h^{L}(\zeta)\right]-E\left[h \mid h^{L}(\zeta)\right]\right)$. We have:

$$
\begin{aligned}
\phi\left(E\left[h \mid h^{T}, h^{L}(\zeta)\right]-E\left[h \mid h^{L}(\zeta)\right]\right) & =\phi\left(\frac{h^{L}(\zeta) p^{L}(\zeta)+h^{T} p^{T}}{1+h^{L}(\zeta) p^{L}(\zeta) h^{T} p^{T}}-h^{L}(\zeta) p^{L}(\zeta)\right) \\
& =\phi h^{T} p^{T} \frac{\left(1-h^{L}(\zeta)^{2} p^{L}(\zeta)^{2}\right)}{1+h^{L}(\zeta) p^{L}(\zeta) h^{T} p^{T}}
\end{aligned}
$$

Because we assumed that $p^{L}(\zeta)<1$, this expression has the same sign as $\phi h^{T} p^{T}$. We want to show that $\phi\left(E\left[h \mid h^{T}=1, h^{L}(\zeta)\right]-E\left[h \mid h^{L}(\zeta)\right]\right) \geq 0$ and $\phi\left(E\left[h \mid h^{T}=-1, h^{L}(\zeta)\right]-E\left[h \mid h^{L}(\zeta)\right]\right) \leq 0$. This follows trivially when $p^{T}=0$. When $p^{T}>0$ if follows if and only if $\phi \geq 0$.

## C. 4 Conditions for Monotone Sensitivity

Assumption 3 (monotone sensitivity) assumes that sensitivity $S(\zeta)=a^{+}(\zeta)-$ $a^{-}(\zeta)$ is (strictly) monotone in the size of the latent demand effect $\left|a^{L}(\zeta)-a(\zeta)\right|$. Here we examine cases under which that is and is not the case. We assume throughout that Assumptions 1 and 2 hold.

## C.4.1 Variation driven by $\phi$.

We are interested in how $\phi$ affects latent demand $\left(d\left|a^{L}(\zeta)-a(\zeta)\right| / d \phi\right)$ and sensitivity $(d S(\zeta) / d \phi)$. From (5) we obtain:

$$
\frac{d\left(a^{L}(\zeta)-a(\zeta)\right)}{d \phi}=-\frac{h^{L}(\zeta) p^{L}(\zeta)}{v_{11}\left(a^{L}(\zeta), \zeta\right)}
$$

which has the same sign as $h^{L}(\zeta)$, allowing us to write $\frac{d\left|a^{L}(\zeta)-a(\zeta)\right|}{d \phi}=$ $-\frac{p^{L}(\zeta)}{v_{11}\left(a^{L}(\zeta), \zeta\right)} \geq 0$.

Turning to sensitivity, we have:

$$
\begin{aligned}
\frac{d S(\zeta)}{d \phi} & =\frac{d a^{+}(\zeta)}{d \phi}-\frac{d a^{-}(\zeta)}{d \phi} \\
& =-\frac{1}{v_{11}\left(a^{+}(\zeta), \zeta\right)} \frac{h^{L}(\zeta) p^{L}(\zeta)+p^{T}}{1+h^{L}(\zeta) p^{L}(\zeta) p^{T}}+\frac{1}{v_{11}\left(a^{-}(\zeta), \zeta\right)} \frac{h^{L}(\zeta) p^{L}(\zeta)-p^{T}}{1-h^{L}(\zeta) p^{L}(\zeta) p^{T}}
\end{aligned}
$$

By Assumption 2, $h^{L}(\zeta) p^{L}(\zeta)+p^{T} \geq 0$ and $h^{L}(\zeta) p^{L}(\zeta)+p^{T} \leq 0$, so both terms are positive, i.e. $\frac{d S(\zeta)}{d \phi} \geq 0$. Therefore Monotone Sensitivity holds and any set of environments that differ only in $\phi$ constitutes a comparison class, i.e. for such environments, sensitivity is informative about the magnitude of latent demand effects.

Example 3. Suppose participant pool A is more concerned for pleasing the experimenter than participant pool B. Then latent demand effects and sensitivity will be larger in magnitude in participant pool A .

## C.4.2 Variation driven by $v$.

Suppose that $\zeta$ can be separated into a parameter, $z$, and a remainder term, $\zeta^{\prime}$, that $v$ is differentiable in $z$ and that $\phi, h^{L}$ and $p^{L}$ do not depend on $z$. $z$ could be a preference parameter (e.g. risk aversion) or a design parameter (e.g. the scale of incentives). We write $U\left(a, \zeta^{\prime}, z\right)=v\left(a, \zeta^{\prime}, z\right)+$ $a \phi\left(\zeta^{\prime}\right) E\left[h \mid \zeta^{\prime}\right]$ and modify the first-order conditions accordingly.

$$
\begin{aligned}
\frac{d\left(a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right)}{d z} & =\frac{d a^{L}\left(\zeta^{\prime}, z\right)}{d z}-\frac{d a\left(\zeta^{\prime}, z\right)}{d z} \\
& =-\left[\frac{v_{13}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}{v_{11}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}-\frac{v_{13}\left(a\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}{v_{11}\left(a\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}\right] \\
\frac{d S\left(\zeta^{\prime}, z\right)}{d z} & =-\left[\frac{v_{13}\left(a^{+}\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}{v_{11}\left(a^{+}\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}-\frac{v_{13}\left(a^{-}\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}{v_{11}\left(a^{-}\left(\zeta^{\prime}, z\right), \zeta^{\prime}, z\right)}\right]
\end{aligned}
$$

It is clear from inspecting these conditions that we need to know how $v_{13} / v_{11}$ varies with $a$, i.e.:

$$
\frac{\frac{v_{13}\left(a, \zeta^{\prime}, z\right)}{v_{11}\left(a, \zeta^{\prime}, z\right)}}{d a}=\frac{v_{11}\left(a, \zeta^{\prime}, z\right) v_{113}\left(a, \zeta^{\prime}, z\right)-v_{111}\left(a, \zeta^{\prime}, z\right) v_{13}\left(a, \zeta^{\prime}, z\right)}{v_{11}\left(a, \zeta^{\prime}, t z\right)}
$$

It is difficult to make general statements about these objects for general utility functions, so we focus attention on two special cases of interest.

Multiplicative separability. Suppose that $v\left(a, \zeta^{\prime}, z\right)=\nu\left(a, \zeta^{\prime}\right) f(z)$ and define $z$ such that $f^{\prime}(z)>0$. Then

$$
\begin{aligned}
\frac{d\left(a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right)}{d z} & =-f^{\prime}(z)\left[\frac{\nu_{1}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}{\nu_{11}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}-\frac{\nu_{1}\left(a\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}{\nu_{11}\left(a\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}\right] \\
& =-f^{\prime}(z) \frac{\nu_{1}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}{\nu_{11}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}
\end{aligned}
$$

Since by concavity $\nu_{1}\left(a, \zeta^{\prime}\right)>0$ for $a<a\left(\zeta^{\prime}, z\right)$ and $\nu_{1}\left(a, \zeta^{\prime}\right)<0$ for $a>a\left(\zeta^{\prime}, z\right)$, we have $\frac{d\left|a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right|}{d z} \leq 0$. Similarly

$$
\frac{d S(\zeta)}{d z}=-f^{\prime}(z)\left[\frac{\nu_{1}\left(a^{+}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}{\nu_{11}\left(a^{+}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}-\frac{\nu_{1}\left(a^{-}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}{\nu_{11}\left(a^{-}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}\right]
$$

Since $\nu_{1}\left(a^{+}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right) \leq 0$ and $\nu_{1}\left(a^{-}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right) \geq 0$, we have $\frac{d S(\zeta)}{d z} \leq 0$. Therefore Monotone Sensitivity holds and any set of environments that varies only in $z$ is a valid comparison set.

Intuitively, this case captures changes in the slope of payoffs that leave the optimal natural action unchanged. For example, an increase in the scale of incentives that makes the payoff function "more concave" around the natural action makes deviating from the natural action more costly and so decreases the magnitude of latent demand and sensitivity.

Example 4 (Belief scoring). Consider a belief-reporting task rewarded by a quadratic scoring rule. A risk-neutral participant reports a belief, $a$, which is the probability of an event $A$. He is paid $\frac{z}{2}\left[1-(\mathbb{I}[A]-a)^{2}\right]$ where $\mathbb{I}[A]=1$ if $A$ is true and 0 otherwise. The utility function is $U\left(a, \zeta^{\prime}, z\right)=\frac{z}{2}\left[1-\mu(1-a)^{2}-(1-\mu)(-a)^{2}\right]+a \phi\left(\zeta^{\prime}\right) E\left[h \mid \zeta^{\prime}\right]$, so $f(z)=z$. The optimal action solves $z\left[\mu\left(1-a^{*}\right)-(1-\mu) a^{*}\right]+\phi\left(\zeta^{\prime}\right) E\left[h \mid \zeta^{\prime}\right]=0$ or $a^{*}=\mu+\frac{\phi\left(\zeta^{\prime}\right) E\left[h \mid \zeta^{\prime}\right]}{z}$. Increases in $z$ are equivalent to decreases in $\phi$ and decrease both the magnitude of latent demand effects, and sensitivity.

Additive separability. Suppose that $v\left(a, \zeta^{\prime}, z\right)=v\left(a, \zeta^{\prime}\right)+a f(z)$ and define $z$ such that $f^{\prime}(z)>0$. Then:

$$
\frac{d\left(a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right)}{d z}=-f^{\prime}(z)\left[\frac{1}{\nu_{11}\left(a^{L}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}-\frac{1}{\nu_{11}\left(a\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}\right]
$$

and

$$
\frac{d S(\zeta)}{d z}=-f^{\prime}(z)\left[\frac{1}{\nu_{11}\left(a^{+}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}-\frac{1}{\nu_{11}\left(a^{-}\left(\zeta^{\prime}, z\right), \zeta^{\prime}\right)}\right]
$$

What matters in this case is how the concavity of $v$ (and therefore $\nu$ ) with respect to $a$ varies with $a$. Suppose $\nu_{111}<0$, so $\nu_{11}$ is decreasing in $a$, i.e. concavity is increasing. Then $\frac{d S(\zeta)}{d z}<0$, i.e. increases in $z$ decrease sensitivity. If $a^{L}\left(\zeta^{\prime}, z\right)>a\left(\zeta^{\prime}, z\right)$ then $\frac{d\left(a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right)}{d z}<0$ and if $a^{L}\left(\zeta^{\prime}, z\right)<a\left(\zeta^{\prime}, z\right)$ then $\frac{d\left(a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right)}{d z}>0$, so $\frac{d\left|a^{L}\left(\zeta^{\prime}, z\right)-a\left(\zeta^{\prime}, z\right)\right|}{d z}<0$ and Monotone Sensitivity holds. Monotone sensitivity also holds (with the inequalities reversed) for $\nu_{111}>0$.

Example 5 (Effort provision). A participant performs a real-effort task for piece rate $z$ with cost of effort $C(a), C^{\prime}>0, C^{\prime \prime}>0, C^{\prime \prime \prime}>0 . U\left(a, \zeta^{\prime}, z\right)=$
$z a-C(a)+a \phi\left(\zeta^{\prime}\right) E\left[h \mid \zeta^{\prime}\right]$. The optimal action $a^{*}$ solves $z-C^{\prime}\left(a^{*}\right)+$ $\phi\left(\zeta^{\prime}\right) E\left[h \mid \zeta^{\prime}\right]=0$. As $z$ increases, $a^{*}$ increases and responsiveness to latent demand or demand treatments decreases.

## C.4.3 Variation driven by inattention.

Suppose that with some probability $\xi$ the participant is an attentive type who pays careful attention to the decision-making environment, and with probability $1-\xi$, he is inattentive. When inattentive, he takes some action $a^{I}(\zeta) . a^{I}(\zeta)$ might be equal to $a(\zeta)$, in which case the participant is only inattentive to experimenter demand, but it might differ if the participant is also inattentive to other design features.

While until now we have treated the actions as those of a representative agent, for this analysis it is more natural to work with expected or average actions over a sample. Denote by $\bar{a}(\zeta)=\xi a(\zeta)+(1-\xi) a^{I}(\zeta)$ the expected natural action, define $\bar{a}^{L}(\zeta), \bar{a}^{+}(\zeta), \bar{a}^{-}(\zeta)$ equivalently and let $\bar{S}(\zeta)=\bar{a}^{+}(\zeta)-\bar{a}^{-}(\zeta)$. The latent demand effect is now equal to $\left|\bar{a}^{L}(\zeta)-\bar{a}(\zeta)\right|=\xi\left|a^{L}(\zeta)-a(\zeta)\right|$, while $\bar{S}(\zeta)=\xi S(\zeta)$. Hence, if the variation in latent demand effects is driven by variation in attention, $\xi$, Monotone Sensitivity will hold, and any set of environments that varies only in participant attentiveness is a valid comparison set. Note that since we have assumed the participant is inattentive to both latent demand and the demand treatment, bounding will hold if $p^{T} \geq p^{L}$ as before.

## C.4.4 Variation driven by beliefs.

Consider changes to the environment that influence behavior only by altering participants' beliefs about the experimenter's objective, i.e. we consider variation in $h^{L}(\zeta) p^{L}(\zeta)$. Call this term $H . a(\zeta)$ is unaffected, so:

$$
\frac{d\left(a^{L}(\zeta)-a(\zeta)\right)}{d H}=-\frac{\phi(\zeta)}{v_{11}\left(a^{L}(\zeta), \zeta\right)} \geq 0
$$

and therefore $\frac{d\left|a^{L}(\zeta)-a(\zeta)\right|}{d H}=-\frac{\phi(\zeta)}{v_{11}\left(a^{L}(\zeta), \zeta\right)} \times \operatorname{sign}\left(a^{L}(\zeta)-a(\zeta)\right)=-\frac{\phi(\zeta) h^{L}(\zeta)}{v_{11}\left(a^{L}(\zeta), \zeta\right)}$ which is positive when $h^{L}(\zeta)=1$ (because an increase in $H$ means the participant's beliefs are shifting toward certainty that the experimenter wants
a high action) and negative when $h^{L}(\zeta)=-1$ (because the participant is becoming more uncertain about the experimenter's wishes).

Next we turn to demand treatment effects. First we derive the response of the participant's posterior:

$$
\begin{aligned}
\frac{d \frac{H+h^{T} p^{T}}{1+H h^{T} p^{T}}}{d H} & =\frac{\left(1+H h^{T} p^{T}\right)-\left(H+h^{T} p^{T}\right) h^{T} p^{T}}{\left(1+H h^{T} p^{T}\right)^{2}} \\
& =\frac{1-\left(h^{T} p^{T}\right)^{2}}{\left(1+H h^{T} p^{T}\right)^{2}}=\frac{1-p^{T 2}}{\left(1+H h^{T} p^{T}\right)^{2}}
\end{aligned}
$$

So:

$$
\frac{d S(\zeta)}{d H}=-\phi(\zeta)\left(1-p^{T 2}\right)\left[\frac{1}{\left(1+H p^{T}\right)^{2} v_{11}\left(a^{+}(\zeta), \zeta\right)}-\frac{1}{\left(1-H p^{T}\right)^{2} v_{11}\left(a^{-}(\zeta), \zeta\right)}\right]
$$

The sign of this expression depends on the sign of $H$ and how $v_{11}$ changes with $a$. However, it is straightforward to see that Monotone Sensitivity will not hold in general, and in fact sensitivity will tend to be higher when latent demand is weaker. To see this, consider the simple case where $v_{11}$ is constant. Then we have:

$$
\begin{aligned}
\frac{d S(\zeta)}{d H} & =-\frac{\phi(\zeta)\left(1-p^{T 2}\right)}{v_{11}}\left[\frac{\left(1-H p^{T}\right)^{2}-\left(1+H p^{T}\right)^{2}}{\left(1+H p^{T}\right)^{2}\left(1-H p^{T}\right)^{2}}\right] \\
& =-\frac{\phi(\zeta)\left(1-p^{T 2}\right)}{v_{11}}\left[\frac{-4 H p^{T}}{\left(1+H p^{T}\right)^{2}\left(1-H p^{T}\right)^{2}}\right]
\end{aligned}
$$

which is positive when $h^{L}=-1$ and negative when $h^{L}=1$, i.e. it has the opposite sign to $\frac{d\left|a^{L}(\zeta)-a(\zeta)\right|}{d H}$. The reason is that as $H$ approaches zero, the participant becomes more uncertain about the experimenter's wishes and is therefore very responsive to the new information in the demand treatments. Meanwhile as $H$ approaches 1 or -1 , the participant is very confident about the value of $h$. Although his confidence can be undermined by a demand treatment in the opposite direction, he responds little to a demand treatment that confirms his beliefs, so sensitivity is low.

## C. 5 Extension: learning about $\phi$

An interpretation of our demand treatments is that they signal not only the direction of the experimenter's objective, but the salience or intensity of her preference over objectives. For instance "do me a favor" suggests that the choice is important. We now assume that the decision-maker's preferences are:

$$
U(a, \zeta)=v(a, \zeta)+a \phi(\zeta) E[g h \mid \zeta]
$$

where $g \in\{0,1\}$ captures whether conforming to $h$ is important (1) or unimportant ( 0 ) to the experimenter. $\phi$ remains the decision-maker's preference for pleasing the experimenter, which is now scaled by $g$, i.e. the decision-maker internalizes the perceived importance of the objective. We assume that $g$ and $h$ are believed independent (i.e. direction and importance are independent), so $E[g h \mid \zeta]=E[g \mid \zeta] E[h \mid \zeta]$. We also assume for simplicity is that the decision-maker's prior $E[g]=0.5$.

Now, $\zeta$ contains two signals, $h^{L}(\zeta)$, defined as before, and $g^{L}(\zeta) \in$ $\{0,1\}$, where $E\left[g \mid g^{L}(\zeta)\right]=E\left[g \mid g^{L}(\zeta), \zeta\right]$ (i.e. $g^{L}$ is a sufficient statistic). $g^{L}$ is believed to equal $g$ with probability $q^{L}(\zeta)<1$ and pure independent noise otherwise. We show below that $E\left[g \mid g^{L}(\zeta)\right]=\frac{1}{2}+q^{L}\left(g^{L}-\frac{1}{2}\right)$.

Similarly, a demand treatment is now two signals $\left(h^{T}, g^{T}\right)$, where $h^{T}$ is defined as before and $g^{T} \in\{0,1, \emptyset\} . g^{T}=\emptyset$ corresponds to the case where no treatment is used, $g^{T}=0$ signals to the participant that their action is not important to the experimenter, and $g^{T}=1$ signals that it is.

Conditional on sending a demand treatment, $g^{T}$ is believed to equal $g$ with probability $q^{T}$ and otherwise be pure noise independent of all other signals. We show below that the Bayesian posterior is:
$E\left[g \mid g^{T}, g^{L}(\zeta)\right]=\frac{\frac{1}{2}+q^{L}(\zeta)\left(g^{L}(\zeta)-\frac{1}{2}\right)+q^{T}\left(g^{T}-\frac{1}{2}\right)+q^{T} q^{L}(\zeta)\left(\mathbb{I}\left[g^{T}=g^{L}(\zeta)\right]-\frac{1}{2}\right)}{1+2 q^{T} q^{L}(\zeta)\left(\mathbb{I}\left[g^{T}=g^{L}(\zeta)\right]-\frac{1}{2}\right)}$
We assume that $g^{T}$ can be varied independently of $h^{T}$ and will be held constant within a typical pair of positive and negative demand treatments.

For bounding to hold, we now need:

$$
\phi(\zeta) E\left[g \mid g^{T}, g^{L}(\zeta)\right] E\left[h \mid h^{T}=0, h^{L}(\zeta)\right] \leq 0 \leq \phi(\zeta) E\left[g \mid g^{T}, g^{L}(\zeta)\right] E\left[h \mid h^{T}=1, h^{L}(\zeta)\right]
$$

Since $E\left[g \mid g^{T}, g^{L}(\zeta)\right] \geq 0$ our bounding condition does not depend on how the demand treatments affect beliefs about $g$, all we require is $\phi(\zeta) \geq 0$ and $p^{T} \geq p^{L}(\zeta)$ as before ${ }^{\text {1 }}$

However, beliefs about $g$ do affect the width of the bounds: sensitivity is increasing in $E\left[g \mid g^{T}, g^{L}(\zeta)\right]$. The tightest bounds are obtained when $E\left[g \mid g^{T}, g^{L}(\zeta)\right]=0$, which obtains when $g^{T}=0$ and $q^{T}=1$. More generally, the bounds are tightened by signaling that acting according to the experimenter's objective is not important $\left(g^{T}=0\right)$, or if $g^{T}=1$ by minimizing $q^{T}$. We suspect that it may be difficult in practice to both strongly signal the direction of the objective (large $p^{T}$ ), which is required for bounding, and that the objective is not important $\left(g^{T}=0\right)$, so reasonable demand treatments are likely to be those that strongly signal a directional objective while keeping salience low, i.e. large $p^{T}$ and small $q^{T}$ with $g^{T}=1$.

## C.5.1 Derivation of $E\left[g \mid g^{L}(\zeta)\right]$ and $E\left[g \mid g^{T}, g^{L}(\zeta)\right]$

Let the prior belief be $\frac{1}{2}$.

$$
\begin{aligned}
E\left[g \mid g^{L}=y\right] & =\operatorname{Pr}\left(g=1 \mid g^{L}=y\right) \\
& =\frac{A}{B} \\
A & =\operatorname{Pr}\left(g^{L}=y \mid g=1\right) \operatorname{Pr}(g=1) \\
B & =\operatorname{Pr}\left(g^{L}=y \mid g=1\right) \operatorname{Pr}(g=1)+\operatorname{Pr}\left(g^{L}=y \mid g=0\right) \operatorname{Pr}(g=0)
\end{aligned}
$$

[^4]We can write

$$
\phi(\zeta) \frac{E\left[h \mid h^{T}=0, h^{L}(\zeta)\right]}{E\left[h \mid h^{L}(\zeta)\right]} \leq \phi(\zeta) \frac{E\left[g \mid g^{L}(\zeta)\right]}{E\left[g \mid g^{T}, g^{L}(\zeta)\right]} \leq \phi(\zeta) \frac{E\left[h \mid h^{T}=1, h^{L}(\zeta)\right]}{E\left[h \mid h^{L}(\zeta)\right]}
$$

We see that $\phi(\zeta) \geq 0$ is necessary but not sufficient for monotone demand treatment effects, we also need that $E\left[g \mid g^{T}, g^{L}(\zeta)\right]$ is neither "too big" nor "too small" relative to $E\left[g \mid g^{L}(\zeta)\right]$. Intuitively, if $g^{T}=1$ the demand treatments shift all actions further away from the natural action, while if $g^{T}=0$. all actions are shifted toward the natural action. $g^{T}=1$ and $p^{T} \geq p^{L}$ are sufficient for monotone demand treatments to hold.

Since $\operatorname{Pr}\left(g=j \mid g^{L}=y\right)=\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{T}[y=j]$ and $\operatorname{Pr}(g=j)=\frac{1}{2}$ we have

$$
\begin{aligned}
A & =\frac{1}{2}\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{\mathbb { }}[y=1]\right) \\
& =\frac{1}{2}\left(\frac{1}{2}+q^{L}\left(g^{L}-\frac{1}{2}\right)\right) \\
B & =\frac{1}{2}\left[\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{T}[y=1]\right)+\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{I}[y=0]\right)\right] \\
& =\frac{1}{2}
\end{aligned}
$$

Therefore, $E\left[g \mid g^{L}(\zeta)\right]=\frac{1}{2}+q^{L}\left(g^{L}-\frac{1}{2}\right)$.
Turning to $E\left[g \mid g^{T}, g^{L}(\zeta)\right]$, we have assumed that when $g^{T}=\emptyset, E\left[g \mid g^{T}, g^{L}\right]=$ $E\left[g \mid g^{L}\right]$. After observing $g^{T} \neq \emptyset$, the participant forms a posterior:

$$
\begin{aligned}
E\left[g \mid g^{T}, g^{L}\right] & =\operatorname{Pr}\left(g=1 \mid g^{T}, g^{L}\right) \\
& =\frac{A}{B} \\
A & =\operatorname{Pr}\left(g^{T}=x \mid g=1, g^{L}=y\right) \operatorname{Pr}\left(g=1 \mid g^{L}=y\right) \\
B & =\operatorname{Pr}\left(g^{T}=x \mid g=1, g^{L}=y\right) \operatorname{Pr}\left(g=1 \mid g^{L}=y\right) \\
& +\operatorname{Pr}\left(g^{T}=x \mid g=0, g^{L}=y\right) \operatorname{Pr}\left(g=0 \mid g^{L}=y\right)
\end{aligned}
$$

Using the following

$$
\begin{array}{r}
\operatorname{Pr}\left(g^{T}=x \mid g=j, g^{L}=y\right)=\frac{1}{2}\left(1-q^{T}\right)+q^{T} \mathbb{I}[x=j] \\
\operatorname{Pr}\left(g=j \mid g^{L}=y\right)=\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{I}[y=j]
\end{array}
$$

we have:

$$
\begin{aligned}
A & =\left(\frac{1}{2}\left(1-q^{T}\right)+q^{T} \mathbb{I}[x=1]\right)\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{\mathbb { L }}[y=1]\right) \\
& =\left(\frac{1}{2}\left(1-q^{T}\right)+q^{T} g^{T}\right)\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} g^{L}\right) \\
& =\frac{1}{2}\left(1-q^{T}\right) q^{L} g^{L}+\frac{1}{2}\left(1-q^{L}\right) q^{T} g^{T} \\
& +\frac{1}{4}\left(1-q^{T}\right)\left(1-q^{L}\right)+q^{T} g^{T} q^{L} g^{L} \\
& =\frac{1}{2}\left(1+q^{T}\left(g^{T}-1\right)\right) q^{L} g^{L}+\frac{1}{2}\left(1+q^{L}\left(g^{L}-1\right)\right) q^{T} g^{T} \\
& +\frac{1}{4}\left(1-q^{T}\right)\left(1-q^{L}\right) \\
& =\frac{1}{2} q^{L} g^{L}+\frac{1}{2} q^{T} g^{T}-\frac{1}{2} q^{T} q^{L}\left(g^{L}\left(1-g^{T}\right)+g^{T}\left(1-g^{L}\right)\right) \\
& +\frac{1}{4}\left(1-q^{T}\right)\left(1-q^{L}\right) \\
& =\frac{1}{2} q^{L} g^{L}+\frac{1}{2} q^{T} g^{T}-\frac{1}{2} q^{T} q^{L}\left(\mathbb{I}\left[g^{L} \neq g^{T}\right]\right) \\
& +\frac{1}{4}-\frac{1}{4} q^{T}-\frac{1}{4} q^{L}+\frac{1}{4} q^{T} q^{L} \\
& =\frac{1}{2} q^{L}\left(g^{L}-\frac{1}{2}\right)+\frac{1}{2} q^{T}\left(g^{T}-\frac{1}{2}\right)-\frac{1}{2} q^{T} q^{L}\left(1-\mathbb{I}\left[g^{L}=g^{T}\right]\right) \\
& +\frac{1}{4}+\frac{1}{4} q^{T} q^{L} \\
& =\frac{1}{4}+\frac{1}{2} q^{L}\left(g^{L}-\frac{1}{2}\right)+\frac{1}{2} q^{T}\left(g^{T}-\frac{1}{2}\right) \\
& +\frac{1}{2} q^{T} q^{L}\left(\mathbb{T}\left[g^{T}=g^{L}\right]-\frac{1}{2}\right)
\end{aligned}
$$

$$
\begin{aligned}
B & =\left(\frac{1}{2}\left(1-q^{T}\right)+q^{T} \mathbb{I}[x=1]\right)\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{\mathbb { }}[y=1]\right) \\
& +\left(\frac{1}{2}\left(1-q^{T}\right)+q^{T} \mathbb{I}[x=0]\right)\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} \mathbb{I}[y=0]\right) \\
& =\left(\frac{1}{2}\left(1-q^{T}\right)+q^{T} g^{T}\right)\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L} g^{L}\right) \\
& +\left(\frac{1}{2}\left(1-q^{T}\right)+q^{T}\left(1-g^{T}\right)\right)\left(\frac{1}{2}\left(1-q^{L}\right)+q^{L}\left(1-g^{L}\right)\right) \\
& =\frac{1}{2}\left(1-q^{T}\right) q^{L} g^{L}+\frac{1}{2}\left(1-q^{L}\right) q^{T} g^{T} \\
& +\frac{1}{2}\left(1-q^{T}\right) q^{L}\left(1-g^{L}\right)+\frac{1}{2}\left(1-q^{L}\right) q^{T}\left(1-g^{T}\right) \\
& +\frac{1}{2}\left(1-q^{T}\right)\left(1-q^{L}\right) \\
& +q^{T} q^{L} g^{T} g^{L}+q^{T} q^{L}\left(1-g^{T}\right)\left(1-g^{L}\right) \\
& =\frac{1}{2}\left(1-q^{T}\right) q^{L}+\frac{1}{2}\left(1-q^{L}\right) q^{T}+\frac{1}{2}\left(1-q^{T}\right)\left(1-q^{L}\right) \\
& +q^{T} q^{L} \mathbb{\mathbb { } [ g ^ { T } = g ^ { L } ]} \\
& =\frac{1}{2}+q^{T} q^{L}\left(\mathbb{T}\left[g^{T}=g^{L}\right]-\frac{1}{2}\right)
\end{aligned}
$$

Therefore,

$$
E\left[g \mid g^{T}, g^{L}\right]=\frac{\frac{1}{2}+q^{L}\left(g^{L}-\frac{1}{2}\right)+q^{T}\left(g^{T}-\frac{1}{2}\right)+q^{T} q^{L}\left(\mathbb{I}\left[g^{T}=g^{L}\right]-\frac{1}{2}\right)}{1+2 q^{T} q^{L}\left(\mathbb{I}\left[g^{T}=g^{L}\right]-\frac{1}{2}\right)}
$$

## C. 6 Richer beliefs and correlated signals

In this section we extend the model to allow $h$ to take three values: $\{-1,0,1\}$, where $h=0$ captures the case where the experimenter wants the participant to choose the natural action. We call the action following $h^{T}=0$, $a^{0}(\zeta)$.

For simplicity we assume that the participant's prior belief is that each possibility is equally likely (i.e. is true with probability $1 / 3$ ), so $E[h]=0$. $\epsilon$ and $\eta$ are also believed to take each value with probability $1 / 3$ and are independent. $h^{L} \in\{-1,0,1\}$ and $h^{T} \in\{-1,0,1, \emptyset\}$ and $p^{L}$ and $p^{T}$ are defined as before. We maintain the assumption that the participant infers nothing when the experimenter does not send a demand treatment $\left(h^{T}=\right.$ $\emptyset)$.

We show below that the beliefs can be written as:

$$
\begin{align*}
E\left[h \mid h^{L}\right] & =p^{L} h^{L}  \tag{20}\\
E\left[h \mid h^{T}=\emptyset, h^{L}\right] & =p^{L} h^{L}  \tag{21}\\
E\left[h \mid h^{T}, h^{L}\right] & =\frac{\frac{1}{3}\left(1-p^{T}\right) p^{L} h^{L}+\frac{1}{3}\left(1-p^{L}\right) p^{T} h^{T}+p^{T} p^{L} h^{T} \mathbb{I}\left[h^{T}=h^{L}\right]}{\frac{1}{3}\left(1-p^{T} p^{L}\right)+p^{T} p^{L} \mathbb{I}\left[h^{T}=h^{L}\right]} \tag{22}
\end{align*}
$$

Bounding holds if $E\left[h \mid h^{T}=1, h^{L}\right] \geq 0$ and $E\left[h \mid h^{T}=-1, h^{L}\right] \leq 0$. It is straightforward to check that the condition is the same as before: $p^{T} \geq p^{L}$.

What purpose, then, do $h^{T}=0$ treatments serve? It is natural to think that demanding participants to take the natural action will eliminate demand effects, but under our assumptions, $h^{T}=0$ does not in general elicit the natural action. Instead latent demand still influences the participant's action. We have:

$$
E\left[h \mid h^{T}=0, h^{L}\right]=\frac{\frac{1}{3}\left(1-p^{T}\right) p^{L} h^{L}}{\frac{1}{3}\left(1-p^{T} p^{L}\right)+p^{T} p^{L} \mathbb{I}\left[h^{L}=0\right]}
$$

This expression equals zero if $p^{T}=1$ (the demand treatment is perfectly informative), or $p^{L} h^{L}=0$ (no latent demand), otherwise it has the same sign as $p^{L} h^{L}$. One interpretation is that while the participant takes at face value the experimenter's demand to choose the natural action, she might be unaware of the influence of other design features that nudge her in one direction or another.

Despite this negative result, $h^{T}=0$ treatments can still be useful. First, they are informative about the sign of the bias due to latent demand. This is because $E\left[h \mid h^{T}=0, h^{L}\right] \in\left[\min \left\{E\left[h \mid h^{L}\right], 0\right\}, \max \left\{E\left[h \mid h^{L}\right], 0\right\}\right]$ and therefore $a^{0}(\zeta) \in\left[\min \left\{a^{L}(\zeta), a(\zeta)\right\}, \max \left\{a^{L}(\zeta), a(\zeta)\right\}\right] \|^{2}$ The action taken when $h^{T}=0$ lies between the natural action and the action induced by latent demand, because the demand treatment shifts the participant's posterior toward zero.

Second, they can be used to obtain tighter bounds on $a(\zeta)$ if we know the direction of the latent demand effect. Suppose for example we know

[^5]that $a^{L}(\zeta) \geq a(\zeta)$ (either from prior information or because we ran a treatment with $h^{T}=0$ and verified that $\left.a^{0}(\zeta) \leq a^{L}(\zeta)\right)$. Then, the interval $\left[a^{-}(\zeta), a^{0}(\zeta)\right]$ gives a valid and tighter bound on $a(\zeta)$ than $\left[a^{-}(\zeta), a^{+}(\zeta)\right]$. Formally $\left.a(\zeta) \in\left[a^{-}(\zeta), a^{0}(\zeta)\right] \subseteq\left[a^{-}(\zeta), a^{+}(\zeta)\right]\right]^{3}$

Finally, there is one important case in which $h^{T}=0$ perfectly recovers the natural action, i.e. $a^{0}(\zeta)=a(\zeta)$. Suppose that instead of assuming that the signals $h^{T}$ and $h^{L}$ contain independent shocks, the participant perceives that $h^{L}$ is a noisy signal of $h^{T}$. Formally, he believes that with probability $p^{L}<1, h^{L}=h^{T}$ and with probability $\left(1-p^{L}\right), h^{L}=\epsilon$. Then, when $h^{T}$ and $h^{L}$ disagree, he knows that $h^{L}$ is pure noise, when they agree $h^{L}$ contains no more information than $h^{T}$. Hence, the participant disregards $h^{L}$ after observing $h^{T}$ and $E\left[h \mid h^{T}, h^{L}\right]=p^{T} h^{T}$. Then, sending $h^{T}=0$ recovers the natural action: $E\left[h \mid h^{T}=0, h^{L}\right]=0, \forall h^{L}$. An advantage of our bounds is that they are valid whether or not $h^{T}$ or $h^{L}$ are perceived as independent, in other words they are conservative relative to the approach of simply measuring $a^{0}(\zeta)$.

## C.6.1 Derivation of beliefs with ternary signals

Recall that now $h \in\{-1,0,1\}, h^{L} \in\{-1,0,1\}$ and $h^{T} \in\{-1,0,1, \emptyset\}$.
To avoid clutter we suppress dependence on $\zeta$. After observing $h^{L}$, the participant forms a posterior $E\left[h \mid h^{L}\right]=\operatorname{Pr}\left(h=1 \mid h^{L}\right) \times 1+\operatorname{Pr}(h=$ $\left.-1 \mid h^{L}\right) \times(-1)$. We can write this as:

$$
\begin{aligned}
E\left[h \mid h^{L}=y\right] & =\operatorname{Pr}\left(h=1 \mid h^{L}=y\right)-\operatorname{Pr}\left(h=-1 \mid h^{L}=y\right) \\
& =\frac{A}{B} \\
A & =\operatorname{Pr}\left(h^{L}=y \mid h=1\right) \operatorname{Pr}(h=1)-\operatorname{Pr}\left(h^{L}=y \mid h=-1\right) \operatorname{Pr}(h=-1) \\
B & =\operatorname{Pr}\left(h^{L}=y \mid h=1\right) \operatorname{Pr}(h=1)+\operatorname{Pr}\left(h^{L}=y \mid h=0\right) \operatorname{Pr}(h=0) \\
& +\operatorname{Pr}\left(h^{L}=y \mid h=-1\right) \operatorname{Pr}(h=-1)
\end{aligned}
$$

Since $\operatorname{Pr}\left(h=j \mid h^{L}=y\right)=\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{T}[y=j]$ and $\operatorname{Pr}(h=j)=\frac{1}{3}$ we

[^6]have
\[

$$
\begin{aligned}
A & =\frac{1}{3}\left[\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right)-\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right)\right] \\
& =\frac{1}{3} p^{L}[\mathbb{I}[y=1]-\mathbb{I}[y=-1]]=\frac{1}{3} p^{L} h^{L} \\
B & =\frac{1}{3}\left[\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right)+\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=0]\right)\right. \\
& \left.+\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right)\right] \\
& =\frac{1}{3}
\end{aligned}
$$
\]

So

$$
\begin{equation*}
E\left[h \mid h^{L}=y\right]=p^{L} h^{L} \tag{23}
\end{equation*}
$$

just as before. Turning to beliefs following the demand treatments, as before we assume that when $h^{T}=\emptyset, E\left[h \mid h^{T}, h^{L}\right]=E\left[h \mid h^{L}\right]$. We have:

$$
\begin{aligned}
E\left[h \mid h^{T}, h^{L}\right] & =\operatorname{Pr}\left(h=1 \mid h^{T}, h^{L}\right)-\operatorname{Pr}\left(h=-1 \mid h^{T}, h^{L}\right) \\
& =\frac{A}{B} \\
A & =\operatorname{Pr}\left(h^{T}=x \mid h=1, h^{L}=y\right) \operatorname{Pr}\left(h=1 \mid h^{L}=y\right) \\
& -\operatorname{Pr}\left(h^{T}=x \mid h=-1, h^{L}=y\right) \operatorname{Pr}\left(h=-1 \mid h^{L}=y\right) \\
B & =\operatorname{Pr}\left(h^{T}=x \mid h=1, h^{L}=y\right) \operatorname{Pr}\left(h=1 \mid h^{L}=y\right) \\
& +\operatorname{Pr}\left(h^{T}=x \mid h=0, h^{L}=y\right) \operatorname{Pr}\left(h=0 \mid h^{L}=y\right) \\
& +\operatorname{Pr}\left(h^{T}=x \mid h=-1, h^{L}=y\right) \operatorname{Pr}\left(h=-1 \mid h^{L}=y, h^{L}=y\right)
\end{aligned}
$$

Using

$$
\begin{array}{r}
\operatorname{Pr}\left(h^{T}=x \mid h=j, h^{L}=y\right)=\frac{1}{3}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=j] \\
\operatorname{Pr}\left(h=j \mid h^{L}=y\right)=\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=j]
\end{array}
$$

we have:

$$
\begin{aligned}
A & =\left(\frac{1}{3}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=1]\right)\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right) \\
& -\left(\frac{1}{3}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=-1]\right)\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right) \\
& =\frac{1}{3}\left(1-p^{T}\right) p^{L} \mathbb{I}[y=1]+\frac{1}{3}\left(1-p^{L}\right) p^{T} \mathbb{I}[x=1]+p^{T} p^{L} \mathbb{I}[x=1] \mathbb{I}[y=1] \\
& -\frac{1}{3}\left(1-p^{T}\right) p^{L} \mathbb{\mathbb { L }}[y=-1]-\frac{1}{3}\left(1-p^{L}\right) p^{T} \mathbb{I}[x=-1]-p^{T} p^{L} \mathbb{\mathbb { L }}[x=-1] \mathbb{\mathbb { L }}[y=-1] \\
& =\frac{1}{3}\left(1-p^{T}\right) p^{L} h^{L}+\frac{1}{3}\left(1-p^{L}\right) p^{T} h^{T}+p^{T} p^{L} h^{T} \mathbb{I}\left[h^{T}=h^{L}\right] \\
B & =\left(\frac{1}{3}\left(1-p^{T}\right)+p^{T} \mathbb{I}[x=1]\right)\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=1]\right) \\
& +\left(\frac{1}{3}\left(1-p^{T}\right)+p^{T} \mathbb{\mathbb { }}[x=0]\right)\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=0]\right) \\
& +\left(\frac{1}{3}\left(1-p^{T}\right)+p^{T} \mathbb{\mathbb { }}[x=-1]\right)\left(\frac{1}{3}\left(1-p^{L}\right)+p^{L} \mathbb{I}[y=-1]\right) \\
& =\frac{1}{3}\left(1-p^{T}\right)\left(1-p^{L}\right)+\frac{1}{3} p^{T}\left(1-p^{L}\right)(\mathbb{I}[x=1]+\mathbb{I}[x=0]+\mathbb{I}[x=-1]) \\
& +\frac{1}{3} p^{L}\left(1-p^{T}\right)(\mathbb{I}[y=1]+\mathbb{I}[y=0]+\mathbb{I}[y=-1]) \\
& +p^{T} p^{L}(\mathbb{I}[x=1] \mathbb{I}[y=1]+\mathbb{I}[x=0] \mathbb{I}[y=0]+\mathbb{I}[x=-1] \mathbb{I}[y=-1]) \\
& =\frac{1}{3}\left(1-p^{T} p^{L}\right)+p^{T} p^{L} \mathbb{I}\left[h^{T}=h^{L}\right]
\end{aligned}
$$

So

$$
\begin{equation*}
E\left[h \mid h^{T}, h^{L}\right]=\frac{\frac{1}{3}\left(1-p^{T}\right) p^{L} h^{L}+\frac{1}{3}\left(1-p^{L}\right) p^{T} h^{T}+p^{T} p^{L} h^{T} \mathbb{I}\left[h^{T}=h^{L}\right]}{\frac{1}{3}\left(1-p^{T} p^{L}\right)+p^{T} p^{L} \mathbb{I}\left[h^{T}=h^{L}\right]} \tag{24}
\end{equation*}
$$

## C. 7 Computing confidence intervals

## C.7.1 Confidence intervals for actions

Imbens and Manski (2004) show that asymptotically the probability that the estimate for the upper (lower) bound is lower (higher) than the true value can be ignored when making inference. Thus, one can construct one-sided intervals with confidence level $\alpha$ around both the upper and the lower bound. The 95 percent confidence interval for the true demand-free
behavior is thus given by:

$$
C I()=\left[a^{-}(\zeta)-\overline{C_{N}} \frac{\widehat{\sigma^{-}}}{\sqrt{N}}, a^{+}(\zeta)+\overline{C_{N}} \frac{\widehat{\sigma^{+}}}{\sqrt{N}}\right]
$$

Here, $\widehat{\sigma^{-}}=\sqrt{\operatorname{Var(a^{-}(\zeta ))}}$ and $\widehat{\sigma^{+}}=\sqrt{\operatorname{Var(a^{+}(\zeta ))}}$, and $\overline{C_{N}}$ satisfies

$$
\Phi\left(\overline{C_{N}}+\sqrt{N} \frac{a^{+}(\zeta)-a^{-}(\zeta)}{\max \left(\widehat{\sigma^{-}}, \widehat{\sigma^{+}}\right)}\right)-\Phi\left(-\overline{C_{N}}\right)=0.90
$$

The 95 percent confidence interval for the set $\left[a^{-}(\zeta), a^{+}(\zeta)\right]$ is given by:

$$
C I()=\left[a^{-}(\zeta)-\overline{C_{N}} \frac{\widehat{\sigma^{-}}}{\sqrt{N}}, a^{+}(\zeta)+\overline{C_{N}} \frac{\widehat{\sigma^{+}}}{\sqrt{N}}\right]
$$

where $\overline{C_{N}}$ satisfies

$$
\Phi\left(\overline{C_{N}}+\sqrt{N} \frac{a^{+}(\zeta)-a^{-}(\zeta)}{\max \left(\widehat{\sigma^{-}}, \widehat{\sigma^{+}}\right)}\right)-\Phi\left(-\overline{C_{N}}\right)=0.95
$$

## C.7.2 Confidence intervals for treatment effects

We also outline how one can compute confidence intervals for the treatment effects $\left[a\left(\zeta_{1}\right)-a\left(\zeta_{0}\right)\right]$ and for the set defined by the upper and lower bounds for treatment effects as given by our demand treatments ${ }^{1}\left[a\left(\zeta_{1}\right)-a\left(\zeta_{0}\right)\right] \in$ $\left[a^{-}\left(\zeta_{1}\right)-a^{+}\left(\zeta_{0}\right), a^{+}\left(\zeta_{1}\right)-a^{-}\left(\zeta_{0}\right)\right]$

For simplicity we denote the lower bound, $\left[a^{-}\left(\zeta_{1}\right)-a^{+}\left(\zeta_{0}\right)\right]$, as $T^{-}$and the upper bound, $\left[a^{+}\left(\zeta_{1}\right)-a^{-}\left(\zeta_{0}\right)\right]$, as $T^{+}$. The 95 percent confidence interval for the true demand-free treatment effect is given by:

$$
C I()=\left[T^{-}-\overline{C_{N}} \frac{\widehat{\sigma^{T-}}}{\sqrt{N}}, T^{+}+\overline{C_{N}} \frac{\widehat{\sigma^{T+}}}{\sqrt{N}}\right] .
$$

[^7]Here, $\widehat{\sigma^{T-}}=\sqrt{\operatorname{Var}\left(T^{-}\right)}$and $\widehat{\sigma^{T+}}=\sqrt{\left.\sqrt{\operatorname{Var}\left(T^{+}\right)}\right)}$, and $\overline{C_{N}}$ satisfies

$$
\Phi\left(\overline{C_{N}}+\sqrt{N} \frac{T^{+}-T^{-}}{\max \left(\widehat{\sigma^{T-}}, \widehat{\sigma^{T+}}\right)}\right)-\Phi\left(-\overline{C_{N}}\right)=0.90
$$

The 95 percent confidence interval for the set $\left[a^{-}\left(\zeta_{1}\right)-a^{+}\left(\zeta_{0}\right), a^{+}\left(\zeta_{1}\right)-\right.$ $\left.a^{-}\left(\zeta_{0}\right)\right]$ is as follows:

$$
C I()=\left[T^{-}-\overline{C_{N}} \frac{\widehat{\sigma^{T-}}}{\sqrt{N}}, T^{+}+\overline{C_{N}} \frac{\widehat{\sigma^{T+}}}{\sqrt{N}}\right]
$$

where

$$
\Phi\left(\overline{C_{N}}+\sqrt{N} \frac{T^{+}(\tau)-T^{-}(\tau)}{\max \left(\widehat{\sigma^{T-}}, \widehat{\sigma^{T+}}\right.}\right)-\Phi\left(-\overline{C_{N}}\right)=0.95
$$

## D Structural estimation appendix

This section outlines step by step how the parameters are constructed in our NLLS estimation of the structural model in section 4.5.

## D. 1 Data and parameter adjustments

First, we follow DP exactly in rounding effort scores to the nearest 100 (except for those in range [1,49] which we round to 25). This is because incentives were paid per 100 points, and we wish to avoid modeling effort choices that lie between two 100 point thresholds. We refer the reader to DP for further details.

Second, we make a couple of adjustments pre and post-estimation. First, we divide the rounded scores by 100 . In other words, if effort $a$ is measured in points, we compute $a^{\prime}=a / 100$ which is measured in hundreds of points. Second, we multiply the incentive, $\zeta$, which is measured in cents per point, by 100 to express it as $\zeta^{\prime}=100 \zeta$ which is measured in cents per 100 points. These transformations were helpful in achieving convergence of the estimator, which otherwise occasionally suffered from underflow problems. However they change the interpretation of the parameters. Specifically, the intrinsic motivation parameter $s$ and the preference for pleasing the experimenter, $\phi$, will both be measured in units equivalent to cents per 100 points, while the cost function parameters will be expressed for effort measured in hundreds of points.

To aid comparability with DP we therefore re-transform the parameters after estimation. DP present their estimates of incentive parameters (which in our case are $s$ and $\phi$ ) in the same units, cents per 100 points, so we do not need to correct them. $k$ and $\gamma$ are reported for effort measured in points, so we transform our estimates for comparability. We derive the adjustments as follows. First, for the power cost function, we have:

$$
U=\left(s+\zeta+\phi E\left[h \mid h^{T}, h^{L}\right]\right) a-\frac{k a^{1+\gamma}}{1+\gamma}
$$

Let $a^{\prime}=\frac{a}{100}$ and $\zeta^{\prime}=100 \zeta$. Then:

$$
\begin{aligned}
U & =\left(s+\frac{\zeta^{\prime}}{100}+\phi E\left[h \mid h^{T}, h^{L}\right]\right) 100 a^{\prime}-\frac{k\left(100 a^{\prime}\right)^{1+\gamma}}{1+\gamma} \\
& =\left(100 s+\zeta^{\prime}+100 \phi E\left[h \mid h^{T}, h^{L}\right]\right) a^{\prime}-\frac{k\left(100 a^{\prime}\right)^{1+\gamma}}{1+\gamma}
\end{aligned}
$$

giving rise to first-order condition:

$$
\begin{aligned}
0 & =\left(100 s+\zeta^{\prime}+100 \phi E\left[h \mid h^{T}, h^{L}\right]\right)-k a^{\prime \gamma} 100^{1+\gamma} \\
a^{\prime} & =\left(\frac{100 s+\zeta^{\prime}+100 \phi E\left[h \mid h^{T}, h^{L}\right]}{k 100^{1+\gamma}}\right)^{\frac{1}{\gamma}} \\
\log \left(a^{\prime}\right) & =\frac{1}{\gamma} \log \left(\frac{s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]}{k^{*}}\right)
\end{aligned}
$$

where $s^{*}=100 s, \phi^{*}=100 \phi$ and $k^{*}=100^{1+\gamma} k$. We leave $s^{*}$ and $\phi^{*}$, (which are in equivalent units to cents per 100 points) untransformed for comparability with DP. In the tables we report $k=k^{*} / 100^{1+\gamma}$ and its standard error, computed via the delta method.

For the exponential cost function we have:

$$
\begin{aligned}
U & =\left(s+\zeta+\phi E\left[h \mid h^{T}, h^{L}\right]\right) a-\frac{k}{\gamma} \exp (\gamma a) \\
& =\left(s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]\right) a^{\prime}-\frac{k}{\gamma} \exp \left(100 \gamma a^{\prime}\right)
\end{aligned}
$$

implying first-order condition:

$$
\begin{aligned}
0 & =s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]-100 k \exp \left(100 \gamma a^{\prime}\right) \\
a^{\prime} & =\frac{1}{100 \gamma} \log \left(\frac{s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]}{100 k}\right) \\
& =\frac{1}{\gamma^{*}} \log \left(\frac{s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]}{k^{*}}\right)
\end{aligned}
$$

where $s^{*}=100 s$, and $\phi^{*}=100 \phi$ as before, while $\gamma^{*}=100 \gamma, k^{*}=100 k$. In the tables we report $\gamma=\gamma^{*} / 100$ and $k=k^{*} / 100$.

## D. 2 Error term

To allow for the observed heterogeneity in effort, we follow DP in assuming heterogeneous effort costs, as follows. Let the cost of effort under power utility equal $k a^{1+\gamma}(1+\gamma)^{-1} \exp (-\gamma \epsilon)$ where $\epsilon \sim N\left(0, \sigma_{\epsilon}^{2}\right)$. Then our FOC becomes

$$
\begin{aligned}
0 & =\left(100 s+\zeta^{\prime}+100 \phi E\left[h \mid h^{T}, h^{L}\right]\right)-k a^{\prime \gamma} 100^{1+\gamma} \exp (-\gamma \epsilon) \\
a^{\prime} & =\left(\frac{100 s+\zeta^{\prime}+100 \phi E\left[h \mid h^{T}, h^{L}\right]}{k 100^{1+\gamma}}\right)^{\frac{1}{\gamma}} \exp (\epsilon) \\
\log \left(a^{\prime}\right) & =\frac{1}{\gamma} \log \left(\frac{100 s+\zeta^{\prime}+100 \phi E\left[h \mid h^{T}, h^{L}\right]}{k 100^{1+\gamma}}\right)+\epsilon
\end{aligned}
$$

where $\epsilon$ becomes the error term in our NLLS routine. For the exponential cost, we follow DP and assume effort cost is $k \gamma^{-1} \exp (\gamma a) \exp (-\gamma \epsilon)$. Then our FOC becomes

$$
\begin{aligned}
0 & =s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]-100 k \exp \left(100 \gamma a^{\prime}\right) \exp (-\gamma \epsilon) \\
a^{\prime} & =\frac{1}{100 \gamma} \log \left(\frac{s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]}{100 k}\right)+\frac{\epsilon}{100} \\
& =\frac{1}{\gamma^{*}} \log \left(\frac{s^{*}+\zeta^{\prime}+\phi^{*} E\left[h \mid h^{T}, h^{L}\right]}{k^{*}}\right)+\epsilon^{*}
\end{aligned}
$$

where $\epsilon^{*}=\epsilon / 100$ forms the error term in our estimation.

## D. 3 Estimating equation

Finally, in our estimation we sometimes need to estimate the product $\phi^{*} E\left[h \mid h^{L}\right]$. We estimate this product directly, then transform by dividing by $\phi^{*}$. Specifically, we estimate the following:

$$
\begin{aligned}
y_{i} & =\frac{1}{\beta_{0}} \log \left[\zeta_{i}^{\prime}+\beta_{1}+\beta_{2}\left({\left.\operatorname{pos} \_\operatorname{demand}_{i}-\text { neg_demand }_{i}\right)}+\beta_{3} \times \text { no_demand }_{i} \times \text { incentive_}_{-} 0 \mathrm{c}_{i}+\beta_{4} \times \text { no_demand }_{i} \times \text { incentive_ }^{2} \mathrm{c}_{i}\right.\right. \\
& \left.+\beta_{5} \times \text { no_demand }_{i} \times \text { incentive_ } 4 \mathrm{c}_{i}\right]-\frac{1}{\beta_{0}} \log \left(\beta_{6}\right)+\varepsilon_{i}
\end{aligned}
$$

where $y=\log \left(a^{\prime}\right)$ or $a^{\prime}$ respectively, pos_demand, neg_demand and no_demand are dummies for our positive, negative and no demand treatments, while incentive_Xc is a dummy for the treatment with X cents per 100 points. Parameters are as follows: $\beta_{0}=\gamma$ or $\gamma^{*}$ respectively, $\beta_{1}=s^{*}, \beta_{2}=\phi^{*}$, $\beta_{3}=\phi^{*} E\left[h \mid h^{L}(\zeta=0)\right], \beta_{4}=\phi^{*} E\left[h \mid h^{L}(\zeta=1)\right], \beta_{5}=\phi^{*} E\left[h \mid h^{L}(\zeta=4)\right]$ and $\beta_{6}=k^{*}$. We then compute the three values for $E\left[h \mid h^{L}\right]$ by dividing by $\beta_{2}$, i.e. $\beta_{3} / \beta_{2}, \beta_{4} / \beta_{2}$ and $\beta_{5} / \beta_{2}$. $\gamma$ and $k$ are computed by the transformations outlined above. Standard errors are computed by the delta method. In the specification where we restrict latent demand to be equal for the 1 cent and 4 cent treatments we impose $\beta_{4}=\beta_{5}$.

## D. 4 Predicted values

One use of our structural estimates is to compute predicted effort when latent demand is shut down, i.e. when $\phi E\left[h \mid h^{L}\right]=0$. To do this we need to make one more adjustment, namely to express intrinsic motivation in units of cents per point by dividing the estimates of $s^{*}$ by 100 , and to express $\zeta$ in cents per point (i.e. $0,0.01$ or 0.04 respectively). So, in terms of our estimated parameters, predicted effort (or log effort in the power cost case) is:

$$
\frac{1}{\gamma} \log \left(\frac{s+\zeta}{k}\right)
$$

## D. 5 Comparison with DP

Our parameter estimates are quite different from DP's, so we briefly explore why. DP (Figure 2) provide a graphical representation of their estimates in terms of marginal cost and marginal benefit of effort, which we can replicate here to compare our estimates. We focus on the exponential cost case, comparing our specification (4) (which assumes no latent demand and uses only the no demand treatment groups) with theirs from Table 5, panel A specification (4).5

[^8]Figure A. 8 plots, for our estimates and theirs, the marginal cost function, minus intrinsic motivation: $c^{\prime}(a)-s$. By the first-order condition, optimal effort is the point at which this function equals $\zeta$, which takes values in $\{0,0.01,0.04,0.1\}$. We also plot mean effort under each no demand treatment in our experiment and in DPs. It is immediately clear that the differences in the parameter estimates are driven by lower effort under the 0c and 1c treatments in our experiment than in DPs. ${ }^{6}$

Figure A.8: Marginal cost and benefit of effort (exponential), comparison with DellaVigna and Pope (2016)


[^9]
## E Online Appendix: Pre-specified Tables

## E. 1 Pre-analysis Plan 1

Table A.16: Strong Demand (Experiment 1)

|  | (1) | (2) | (3) | (4) | (5) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Positive Demand | $\begin{gathered} \hline 0.240^{* * *} \\ (0.035) \end{gathered}$ | $\begin{gathered} \hline 0.196^{* * *} \\ (0.049) \end{gathered}$ | $\begin{gathered} \hline 0.278^{* * *} \\ (0.048) \end{gathered}$ | $\begin{gathered} \hline 0.016 \\ (0.190) \end{gathered}$ | $\begin{gathered} \hline 0.453^{* * *} \\ (0.058) \end{gathered}$ |
| Negative Demand | $\begin{gathered} -0.248^{* * *} \\ (0.036) \end{gathered}$ | $\begin{gathered} -0.257^{* * *} \\ (0.051) \end{gathered}$ | $\begin{gathered} -0.269^{* * *} \\ (0.048) \end{gathered}$ | $\begin{aligned} & -0.208 \\ & (0.176) \end{aligned}$ | $\begin{gathered} -0.203^{* * *} \\ (0.055) \end{gathered}$ |
| Positive demand $\times$ interactant |  | $\begin{gathered} 0.089 \\ (0.070) \end{gathered}$ | $\begin{aligned} & -0.073 \\ & (0.070) \end{aligned}$ | $\begin{gathered} 0.235 \\ (0.193) \end{gathered}$ |  |
| Negative demand $\times$ interactant |  | $\begin{gathered} 0.019 \\ (0.072) \end{gathered}$ | $\begin{gathered} 0.041 \\ (0.072) \end{gathered}$ | $\begin{aligned} & -0.043 \\ & (0.179) \end{aligned}$ |  |
| Interactant |  | $\begin{aligned} & -0.091 \\ & (0.051) \end{aligned}$ | $\begin{aligned} & -0.044 \\ & (0.051) \end{aligned}$ | $\begin{aligned} & -0.083 \\ & (0.141) \end{aligned}$ |  |
| Positive Demand $\times$ Risk |  |  |  |  | $\begin{gathered} -0.255^{* *} \\ (0.084) \end{gathered}$ |
| Negative Demand $\times$ Risk |  |  |  |  | $\begin{aligned} & -0.033 \\ & (0.083) \end{aligned}$ |
| Positive Demand $\times$ Time |  |  |  |  | $\begin{gathered} -0.392^{* * *} \\ (0.085) \end{gathered}$ |
| Negative Demand $\times$ Time |  |  |  |  | $\begin{aligned} & -0.116 \\ & (0.087) \end{aligned}$ |
| Constant | $\begin{gathered} -0.145^{* * *} \\ (0.025) \end{gathered}$ | $\begin{gathered} -0.100^{* *} \\ (0.035) \end{gathered}$ | $\begin{gathered} -0.122^{* * *} \\ (0.034) \end{gathered}$ | $\begin{aligned} & -0.065 \\ & (0.139) \end{aligned}$ | $\begin{gathered} -0.335^{* * *} \\ (0.040) \end{gathered}$ |
| Interactant |  | Monetary Incentive | Male | Attention |  |
| Adjusted $R^{2}$ | 0.040 | 0.041 | 0.041 | 0.040 | 0.051 |
| Positive demand $\leq 0$ | 0.000 | 0.000 | 0.000 | 0.466 | 0.000 |
| Adjusted p-value | 0.010 | 0.001 | 0.001 | 0.307 | 0.001 |
| Negative demand $\geq 0$ | 0.000 | 0.000 | 0.000 | 0.118 | 0.000 |
| Adjusted p-value | 0.010 | 0.001 | 0.001 | 0.307 | 0.001 |
| Positive demand $=$ negative demand | 0.000 | 0.000 | 0.000 | 0.182 | 0.000 |
| Adjusted p-value | 0.010 | 0.001 | 0.001 | 0.307 | 0.001 |
| (Positive demand - negative demand)* interaction $=0$ |  | 0.319 | 0.105 | 0.105 |  |
| Adjusted p-value |  | 0.086 | 0.027 | 0.307 |  |
| Risk* $($ pos - neg $)=$ Time ${ }^{*}($ pos - neg $)$ |  |  |  |  | 0.533 |
| Adjusted p-value |  |  |  |  | 0.179 |
| Risk*(positive demand - negative demand) $=0$ |  |  |  |  | 0.007 |
| Adjusted p-value |  |  |  |  | 0.005 |
| Time* $($ positive demand - negative demand $)=0$ |  |  |  |  | 0.001 |
| Adjusted p-value |  |  |  |  | 0.001 |
| Joint F-test |  |  |  |  | . 001 |
| Observations | 4495 | 4495 | 4495 | 4495 | 4495 |

Notes: This table summarizes the results from experiment 1. The outcome variable is normalized at the game-level using the mean and standard deviation of the negative demand group. Robust standard errors are in parentheses. False-discovery rate adjusted p-values are in brackets. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.17: Beliefs about the experimental objective and hypothesis: Strong Demand

|  | Belief: <br> Want High | Belief: <br> Expect High |
| :--- | :---: | :---: |
| Positive - Negative | $0.275^{* * *}$ | $0.180^{* * *}$ |
| Adjusted p-value | $[0.017)$ | $(0.018)$ |
|  | $[0.001]$ | $[0.001]$ |
| Positive - Neutral | $0.160^{* * *}$ | $0.143^{* * *}$ |
| Adjusted p-value | $[0.017)$ | $(0.018)$ |
|  | $[0.001]$ | $[0.001]$ |
| Negative - Neutral | $-0.115^{* * *}$ | $-0.037^{* *}$ |
|  | $(0.018)$ | $(0.018)$ |
| Adjusted p-value | $[0.001]$ | $[0.007]$ |
|  |  |  |
| Mean (No Demand) | 0.542 | 0.450 |
| Observations | 4495 | 4495 |

Notes: The outcome variables take value one if the respondents believed that the experimenter wanted (column 1) or expected (column 2) a high action. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

## E. 2 Pre-analysis Plan 2

Table A.18: Weak Demand (Experiment 2)

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Positive Demand | $0.126^{* *}$ | $0.151^{*}$ | 0.083 | 0.067 | $0.203^{* * *}$ |
| Negative Demand | $(0.043)$ | $(0.060)$ | $(0.056)$ | $(0.116)$ | $(0.054)$ |
|  | -0.040 | 0.031 | -0.035 | -0.023 | -0.042 |
| Pos. demand $\times$ interactant | $(0.042)$ | $(0.060)$ | $(0.055)$ | $(0.109)$ | $(0.054)$ |
|  |  | -0.053 | 0.091 | 0.069 | -0.149 |
| Neg. demand $\times$ interactant |  | $(0.085)$ | $(0.086)$ | $(0.124)$ | $(0.085)$ |
|  | -0.142 | -0.011 | -0.019 | 0.007 |  |
| Interactant |  | $(0.083)$ | $(0.084)$ | $(0.118)$ | $(0.083)$ |
|  | -0.063 | -0.029 | $-0.218^{* *}$ | $0.193^{* *}$ |  |
| Interactant | $(0.060)$ | $(0.061)$ | $(0.081)$ | $(0.060)$ |  |
| Adjusted R-squared | 0.005 | Monetary Incentive | Male | Attention | Risk |
| Pos. demand $\leq 0$ | 0.010 | 0.005 | 0.009 | 0.012 |  |
| Adjusted p-value | 0.002 | 0.006 | 0.068 | 0.280 | 0.000 |
| Neg. demand $\geq 0$ | 0.010 | 0.020 | 0.150 | 0.970 | 0.010 |
| Adjusted p-value | 0.050 | 0.700 | 0.264 | 0.415 | 0.221 |
| Pos. demand $=$ neg. demand | 0.000 | 0.040 | 0.150 | 0.970 | 0.080 |
| Adjusted p-value | 0.010 | 0.060 | 0.034 | 0.448 | 0.000 |
| (Pos. - neg.) $\times$ interactant $=0$ |  | 0.283 | 0.150 | 0.970 | 0.010 |
| Adjusted p-value |  | 0.230 | 0.150 | 0.493 | 0.062 |
| Observations | 2964 | 2964 | 2964 | 2964 | 2964 |

Notes: This table summarizes the results from experiment 2 . The outcome variable is normalized at the game-level using the mean and standard deviation of the negative demand group. Robust standard errors are in parentheses. False-discovery rate adjusted p-values are in brackets. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.19: Difference in response to demand between experiment 1 and experiment 2

|  | $(1)$ | $(2)$ | $(3)$ |
| :--- | :---: | :---: | :---: |
| Positive Demand=1 | $0.126^{* *}$ | $0.203^{* * *}$ | 0.054 |
|  | $(0.043)$ | $(0.054)$ | $(0.065)$ |
| Experiment $1=1$ | $-0.135^{* *}$ | $-0.140^{*}$ | -0.125 |
|  | $(0.043)$ | $(0.056)$ | $(0.064)$ |
| Positive Demand=1 $\times$ Experiment $1=1$ | $0.202^{* * *}$ | $0.251^{* *}$ | 0.145 |
|  | $(0.060)$ | $(0.079)$ | $(0.090)$ |
| Negative Demand=1 | -0.040 | -0.042 | -0.035 |
|  | $(0.042)$ | $(0.054)$ | $(0.063)$ |
| Negative Demand=1 $\times$ Experiment $1=1$ | $-0.175^{* *}$ | $-0.161^{*}$ | $-0.202^{*}$ |
|  | $(0.059)$ | $(0.077)$ | $(0.088)$ |
| Constant | $-0.097^{* *}$ | $-0.195^{* * *}$ | -0.003 |
|  | $(0.030)$ | $(0.039)$ | $(0.046)$ |
| Sample | All | Dictator Game | Investment |
| Adjusted $R^{2}$ | 0.034 | 0.056 | 0.020 |
| $H_{0}:($ Positive Demand - Negative Demand)*Interaction $=0$ | 0.000 | 0.000 | 0.000 |
| Adjusted p-value | 0.001 | 0.001 | 0.001 |
| Observations | 5971 | 2990 | 2981 |

Notes: This table uses data from the investment game and dictator game in experiments 1 and 2. The dummy experiment 1 takes value 1 for respondents from experiment 1. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.20: Beliefs about the experimental objective and hypothesis: Weak Demand (Experiment 2)

|  | Belief: <br> Want High | Belief: <br> Expect High |
| :--- | :---: | :---: |
| Positive - Negative | $0.334^{* * *}$ | $0.403^{* * *}$ |
| Adjusted p-value | $[0.021)$ | $(0.020)$ |
|  | $[0.001]$ | $[0.001]$ |
| Positive - Neutral | $0.172^{* * *}$ | $0.217^{* * *}$ |
|  | $(0.022)$ | $(0.022)$ |
| Adjusted p-value | $[0.001]$ | $[0.001]$ |
|  |  |  |
| Negative - Neutral | $-0.162^{* * *}$ | $-0.186^{* * *}$ |
|  | $(0.022)$ | $(0.020)$ |
| Adjusted p-value | $[0.001]$ | $[0.001]$ |
| Mean (No Demand) | 0.485 | 0.392 |
| Observations | 2964 | 2964 |

Notes: This table uses data from all respondents who completed experiment 2. The outcome variables take value one if the respondents believed that the experimenter wanted (column 1) or expected (column 2) a high action. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.21: Beliefs about whether the experiment is incentivized
(1)

|  | Belief: Real Money |
| :--- | :---: |
| Monetary Incentive | $0.368^{* * *}$ |
|  | $(0.016)$ |
| Control Mean | 0.138 |
| $\mathrm{R}^{2}$ | 0.154 |
| Observations | 2964 |

Notes: This table uses data from all respondents who completed experiment 2 . The outcome variable takes value one if the respondent believes that the tasks in the experiment involve real money and value zero otherwise. Notes go here. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

| Table A.22: Attrition |  |
| :--- | :---: |
|  | $(1)$ |
|  | Finished |
| Positive Demand | 0.00285 |
|  | $(0.004)$ |
| Negative Demand | 0.00115 |
|  | $(0.004)$ |
| Mean (no demand) | 0.988 |
| $\mathrm{R}^{2}$ | 0.000141 |
| Observations | 2993 |

Notes: This table uses data from all respondents who started experiment 2. The outcome variable takes value one if the respondent completed the experiment. Finished takes value one for all respondents who completed the experiment. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

## E. 3 Pre-analysis Plan 3

Table A.23: Effort (z-scored) with strong demand

|  | $(1)$ | $(2)$ | $(3)$ |
| :--- | :---: | :---: | :---: |
| Positive Demand | $0.206^{* * *}$ | $0.328^{* * *}$ | $0.319^{* *}$ |
|  | $(0.061)$ | $(0.085)$ | $(0.107)$ |
| Negative Demand | $-0.309^{* * *}$ | $-0.447^{* * *}$ | -0.197 |
|  | $(0.061)$ | $(0.084)$ | $(0.103)$ |
| Positive demand $\times$ interactant |  | $-0.243^{*}$ | -0.197 |
|  |  | $(0.123)$ | $(0.129)$ |
| Negative demand $\times$ interactant |  | $0.288^{*}$ | -0.200 |
|  |  | $(0.121)$ | $(0.126)$ |
| Interactant |  | 0.091 | 0.143 |
|  |  | $(0.088)$ | $(0.093)$ |
| Constant | 0.069 | 0.023 | -0.012 |
|  |  | $(0.061)$ | $(0.078)$ |
| Interactant |  | $1-c e n t ~ i n c e n t i v e ~$ | Male |
| Adjusted $R^{2}$ | 0.047 | 0.060 | 0.047 |
| Positive demand $\leq 0$ | 0.000 | 0.000 | 0.001 |
| Adjusted p-value | 0.010 | 0.001 | 0.002 |
| Negative demand $\geq 0$ | 0.000 | 0.000 | 0.028 |
| Adjusted p-value | 0.010 | 0.001 | 0.018 |
| Positive demand $=$ negative demand | 0.000 | 0.000 | 0.000 |
| Adjusted p-value | 0.010 | 0.001 | 0.001 |
| (Positive demand - negative demand $)^{*}$ interaction $=0$ |  | 0.000 | 0.975 |
| Adjusted p-value |  | 0.001 | 0.322 |
| Observations | 1452 | 1452 | 1452 |

Notes: This table summarizes the results from experiment 3. The outcome variable is normalized at the game level using the mean and standard deviation of the negative demand group. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.24: Beliefs: Effort with strong demand
Belief: Belief:
Want High Expect High

| Positive - Negative | $0.459^{* * *}$ | $0.416^{* * *}$ |
| :--- | :---: | :---: |
|  | $(0.027)$ | $(0.028)$ |
| Adjusted p-value | $[0.001]$ | $[0.001]$ |
| Positive - Neutral | $0.168^{* * *}$ | $0.192^{* * *}$ |
| Adjusted p-value | $(0.026)$ | $(0.028)$ |
|  | $[0.001]$ | $[0.001]$ |
| Negative - Neutral | $-0.291^{* * *}$ | $-0.224^{* * *}$ |
|  | $(0.031)$ | $(0.031)$ |
| Adjusted p-value | $[0.001]$ | $[0.001]$ |
|  |  |  |
| Mean (No Demand) | 0.689 | 0.639 |
| Observations | 1452 | 1452 |

Notes: The outcome variables take value one if the respondents believed that the experimenter wanted (column 1) or expected (column 2) a high action. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.25: Attrition
(1)

|  | Finished |
| :--- | :---: |
| Positive Demand | 0.000252 |
|  | $(0.010)$ |
| Negative Demand | 0.00353 |
|  | $(0.010)$ |
| Mean (no demand) | 0.988 |
| $\mathrm{R}^{2}$ | 0.0000802 |
| Observations | 1753 |

Notes: The outcome variable takes value one if the respondent completed the experiment. Finished takes value one for all respondents who completed the experiment. * denotes significance at 10 pct., ** at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

## E. 4 Pre-analysis Plan 4

Table A.26: Demand: Representative Sample with strong and weak demand treatments (Experiment 4)

|  | $(1)$ | $(2)$ | $(3)$ | $(4)$ | $(5)$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Positive Demand | $0.284^{* * *}$ | $0.196^{* *}$ | $0.325^{* * *}$ | $0.247^{* * *}$ | $0.554^{* * *}$ |
| Negative Demand | $(0.055)$ | $(0.063)$ | $(0.063)$ | $(0.061)$ | $(0.064)$ |
|  | $-0.157^{* *}$ | -0.034 | $-0.221^{* * *}$ | -0.082 | -0.034 |
| Pos. demand $\times$ interactant | $(0.055)$ | $(0.064)$ | $(0.061)$ | $(0.060)$ | $(0.064)$ |
|  |  | $0.175^{* *}$ | -0.084 | 0.112 | $-0.538^{* * *}$ |
| Neg. demand $\times$ interactant |  | $(0.064)$ | $(0.064)$ | $(0.064)$ | $(0.062)$ |
|  | $-0.238^{* * *}$ | $0.136^{*}$ | $-0.219^{* * *}$ | $-0.251^{* * *}$ |  |
| Interactant | $(0.063)$ | $(0.064)$ | $(0.063)$ | $(0.063)$ |  |
| Adjusted R-squared |  |  | Strong Demand | Male | Attention |
| Pos. demand $\leq 0$ | 0.031 | 0.038 | 0.033 | 0.035 | 0.060 |
| Adjusted p-value | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 |
| Neg. demand $\geq 0$ | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 |
| Adjusted p-value | 0.002 | 0.297 | 0.000 | 0.086 | 0.297 |
| Pos. $=$ neg. demand | 0.010 | 0.080 | 0.010 | 0.020 | 0.080 |
| Adjusted p-value | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| (Pos. - neg.) $\times$ interactant $=0$ | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 |
| Adjusted p-value |  | 0.000 | 0.015 | 0.000 | 0.001 |
| Observations | 0.010 | 0.010 | 0.010 | 0.010 |  |

Notes: This table summarizes the results from experiment 4. The outcome variable is normalized at the game level using the mean and standard deviation of the negative demand group. ${ }^{*}$ denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.27: Demand Sensitivty by game: Representative vs. MTurk Sample

|  | $(1)$ | $(2)$ | $(3)$ |
| :--- | :---: | :---: | :---: |
| Positive Demand $=1$ | $0.256^{* * *}$ | $0.419^{* * *}$ | 0.091 |
|  | $(0.043)$ | $(0.057)$ | $(0.064)$ |
| Representative Sample=1 | $0.517^{* * *}$ | $0.848^{* * *}$ | $0.201^{* *}$ |
|  | $(0.054)$ | $(0.075)$ | $(0.075)$ |
| Positive Demand $=1 \times$ Representative Sample=1 | 0.028 | -0.076 | 0.124 |
|  | $(0.070)$ | $(0.097)$ | $(0.097)$ |
| Negative Demand=1 | $-0.153^{* * *}$ | -0.046 | $-0.256^{* * *}$ |
|  | $(0.042)$ | $(0.056)$ | $(0.061)$ |
| Negative Demand=1 $\times$ Representative Sample=1 | -0.004 | $-0.200^{*}$ | 0.169 |
|  | $(0.069)$ | $(0.096)$ | $(0.096)$ |
| Constant | $-0.216^{* * *}$ | $-0.335^{* * *}$ | $-0.099^{*}$ |
|  | $(0.031)$ | $(0.041)$ | $(0.045)$ |
| Sample | All | Dictator Game | Investment |
| Adjusted $R^{2}$ | 0.093 | 0.165 | 0.041 |
| $H_{0}:($ Positive Demand - Negative Demand) $*$ Repres. Sample $=0$ | 0.593 | 0.149 | 0.597 |
| Adjusted p-value | 0.805 | 0.805 | 0.805 |
| Observations | 5948 | 3004 | 2944 |

Notes: This table uses data from the incentivized MTurk respondents from experiments 1 and 2 and the representative online panel (experiment 4). Representative Sample is a dummy variable taking value 1 for respondents from the representative online panel and value zero for the MTurk respondents. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.28: Beliefs about the experimental objective and hypothesis: Represenrative Sample

|  | Belief: <br> Want High | Belief: <br> Expect High |
| :--- | :---: | :---: |
| Positive - Negative | $0.207^{* * *}$ | $0.205^{* * *}$ |
| Adjusted p-value | $[0.020)$ | $(0.020)$ |
|  | $0.001]$ | $[0.001]$ |
| Positive - Neutral | $0.068^{* * *}$ | $0.092^{* * *}$ |
|  | $(0.024)$ | $(0.025)$ |
| Adjusted p-value | $[0.001]$ | $[0.001]$ |
|  |  |  |
| Negative - Neutral | $-0.139^{* * *}$ | $-0.114^{* * *}$ |
|  | $(0.025)$ | $(0.025)$ |
| Adjusted p-value | $[0.001]$ | $[0.001]$ |
|  |  |  |
| Mean (No Demand) | 0.601 | 0.510 |
| Observations | 2939 | 2941 |

Notes: The outcome variables take value one if the respondents believed that the experimenter wanted (column 1) or expected (column 2) a high action. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

| Table A.29: Attrition |  |
| :--- | :---: |
|  | $(1)$ |
|  | Finished |
| Positive Demand | 0.00148 |
|  | $(0.005)$ |
| Negative Demand | -0.00223 |
|  | $(0.005)$ |
| Mean (no demand) | 0.988 |
| $\mathrm{R}^{2}$ | 0.000329 |
| Observations | 2966 |

Notes: The outcome variable takes value one if the respondent completed the experiment. Finished takes value one for all respondents who completed the experiment. * denotes significance at 10 pct., ** at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

## E. 5 Pre-analysis Plan 5

Table A.30: Differences in response to demand across games

|  | (1) | (2) |
| :---: | :---: | :---: |
| Sensitivity=1 | $1.024^{* *}$ |  |
|  | (0.127) | (0.120) |
| Ambiguity | 0.129 | 0.018 |
|  | (0.107) | (0.100) |
| DG | 0.079 | 0.037 |
|  | (0.090) | (0.078) |
| Effort: incentive | 0.316** | 0.104 |
|  | (0.101) | (0.098) |
| Effort: no incentive | -0.063 | 0.067 |
|  | (0.102) | (0.099) |
| Lying | 0.240* | 0.040 |
|  | (0.121) | (0.100) |
| Risk | 0.108 | 0.042 |
|  | (0.090) | (0.078) |
| Time | 0.076 | 0.036 |
|  | (0.098) | (0.097) |
| Trust | 0.126 | 0.033 |
|  | (0.106) | (0.104) |
| UG 1 | 0.129 | 0.032 |
|  | (0.115) | (0.102) |
| UG 2 | 0.233* | 0.041 |
|  | (0.115) | (0.098) |
| Sensitivity $=1 \times$ Ambiguity | -0.565*** | -0.110 |
|  | (0.160) | (0.157) |
| Sensitivity $=1 \times$ DG | -0.309* | -0.022 |
|  | (0.138) | (0.130) |
| Sensitivity $=1 \times$ Effort: incentive | -0.781*** | -0.204 |
|  | (0.153) | (0.153) |
| Sensitivity $=1 \times$ Effort: no incentive | -0.250 | -0.357* |
|  | (0.152) | (0.157) |
| Sensitivity $=1 \times$ Lying | $-0.427^{*}$ | -0.248 |
|  | (0.173) | (0.157) |
| Sensitivity $=1 \times$ Risk | -0.593*** | -0.157 |
|  | (0.136) | (0.131) |
| Sensitivity $=1 \times$ Time | -0.644*** | -0.288 |
|  | (0.144) | (0.154) |
| Sensitivity $=1 \times$ Trust | -0.470** | -0.209 |
|  | (0.160) | (0.159) |
| Sensitivity $=1 \times$ UG 1 | -0.338* | -0.113 |
|  | (0.168) | (0.165) |
| Sensitivity $=1 \times$ UG 2 | -0.277 | -0.014 |
|  | (0.168) | (0.157) |
| Constant | -0.361*** | -0.033 |
|  | (0.083) | (0.070) |
| Treatment | Strong | Weak |
| Adjusted $R^{2}$ | 0.084 | 0.007 |
| P-value(Omnibus F-Test) | 0.000 | 0.063 |
| Adjusted p-values | 0.001 | 0.043 |
| P-value(Omnibus F-Test): without effort tasks | 0.000 | 0.166 |
| Adjusted p-values | 0.001 | 0.090 |
| Observations | 7523 | 6599 |

Notes: We pool all observations across all experiments. denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

Table A.31: Differences in response to strong vs. weak demand treatments
(1)

|  | Z-scored behavior |
| :--- | :---: |
| Strong Demand $\times$ Sensitivity | $0.421^{* * *}$ |
|  | $(0.035)$ |
| Sensitivity | $0.153^{* * *}$ |
|  | $(0.025)$ |
| $\mathrm{R}^{2}$ | 0.0429 |
| Observations | 14122 |

Notes: We pool all observations across all experiments. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

## F Online Appendix: Balance Tables and Summary statistics

Table A.32: Balance Table: Experiment 1 (Strong Demand)
$\left.\begin{array}{lccccccc}\hline & \text { No demand } & \text { Pos. demand } & \text { Neg. demand } & \begin{array}{c}\text { P-value(Pos. demand }- \\ \text { no demand) }\end{array} & \begin{array}{c}\text { P-value(Neg. demand - } \\ \text { no demand) }\end{array} & \begin{array}{c}\text { P-value(Pos. demand - } \\ \text { neg. demand) }\end{array} \\ \hline \text { Observations }\end{array}\right)$

[^10]Table A.33: Balance Table: Experiment 2 (Weak Demand)

|  | No demand | Pos. demand | Neg. demand | P-value(Pos. demand no demand) | P-value(Neg. demand no demand) | P-value(Pos. demand neg. demand) | Observations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.466 | 0.466 | 0.478 | 0.984 | 0.577 | 0.592 | 2964 |
| Income | 51010.333 | 51307.604 | 52093.679 | 0.815 | 0.384 | 0.526 | 2625 |
| Age | 35.897 | 35.856 | 35.168 | 0.935 | 0.142 | 0.166 | 2964 |
| Household Size | 3.696 | 3.688 | 3.761 | 0.900 | 0.314 | 0.258 | 2964 |
| White | 0.784 | 0.760 | 0.748 | 0.203 | 0.055 | 0.526 | 2964 |
| Black | 0.070 | 0.076 | 0.077 | 0.593 | 0.557 | 0.963 | 2964 |
| Hispanic | 0.054 | 0.051 | 0.057 | 0.827 | 0.760 | 0.600 | 2964 |
| Asian | 0.066 | 0.070 | 0.089 | 0.714 | 0.056 | 0.124 | 2964 |
| Full-time employment | 0.494 | 0.464 | 0.468 | 0.185 | 0.249 | 0.854 | 2964 |
| Part-time employment | 0.130 | 0.099 | 0.125 | 0.032 | 0.735 | 0.069 | 2964 |
| Unemployed | 0.101 | 0.140 | 0.127 | 0.009 | 0.065 | 0.417 | 2964 |
| Bachelor Degree | 0.367 | 0.353 | 0.377 | 0.503 | 0.642 | 0.256 | 2964 |
| Conservative | 0.273 | 0.253 | 0.243 | 0.328 | 0.128 | 0.594 | 2941 |
| Number of HITs | 5849.696 | 5629.887 | 5403.884 | 0.693 | 0.415 | 0.673 | 2964 |

Notes: In this table we present evidence on the experimental integrity in experiment 2. The p-value of the joint F-test when comparing covariates in the positive and negative demand condition is 0.6464 . The p-value of the joint F-test when comparing covariates in the positive and no-demand demand condition is 0.2297 . The p-value of the joint F-test when comparing covariates in the negative and no-demand demand condition is 0.4443 .

Table A.34: Balance Table: Experiment 3 (Effort Experiment with strong demand)

|  | No demand | Pos. demand | Neg. demand | P-value(Pos. demand no demand) | P-value(Neg. demand no demand) | P-value(Pos. demand neg. demand) | Observations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.557 | 0.576 | 0.535 | 0.521 | 0.463 | 0.209 | 1699 |
| Income | 33600.823 | 32204.082 | 32458.333 | 0.164 | 0.261 | 0.814 | 1699 |
| Age | 37.449 | 37.378 | 36.556 | 0.922 | 0.213 | 0.300 | 1699 |
| Household Size | 3.750 | 3.780 | 3.763 | 0.724 | 0.879 | 0.847 | 1699 |
| White | 0.752 | 0.784 | 0.760 | 0.193 | 0.730 | 0.389 | 1699 |
| Black | 0.110 | 0.084 | 0.083 | 0.127 | 0.124 | 0.985 | 1699 |
| Hispanic | 0.055 | 0.024 | 0.046 | 0.006 | 0.479 | 0.072 | 1699 |
| Asian | 0.064 | 0.071 | 0.075 | 0.638 | 0.485 | 0.831 | 1699 |
| Full-time employment | 0.508 | 0.496 | 0.540 | 0.691 | 0.275 | 0.174 | 1699 |
| Part-time employment | 0.125 | 0.127 | 0.106 | 0.930 | 0.320 | 0.325 | 1699 |
| Unemployed | 0.106 | 0.122 | 0.106 | 0.368 | 0.972 | 0.428 | 1699 |
| Bachelor Degree | 0.395 | 0.355 | 0.371 | 0.157 | 0.396 | 0.611 | 1699 |
| Republican | 0.251 | 0.288 | 0.271 | 0.158 | 0.445 | 0.557 | 1699 |

Notes: In this table we present evidence on the integrity of the randomization in experiment 3. The p-value of the joint F-test when comparing covariates in the positive and negative demand condition is 0.8777 . The p-value of the joint F-test when comparing covariates in the positive and no-demand demand condition is 0.0966 . The p-value of the joint F-test when comparing covariates in the negative and no-demand demand condition is 0.4331 .

Table A.35: Balance Table: Experiment 4 (Representative Sample)

|  | No demand | Pos. demand | Neg. demand | P-value(Pos. demand no demand) | P-value(Neg. demand no demand) | P-value(Pos. demand neg. demand) | Observations |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.487 | 0.485 | 0.470 | 0.937 | 0.497 | 0.467 | 2941 |
| Income | 68432.773 | 65257.447 | 67142.857 | 0.233 | 0.632 | 0.393 | 2890 |
| Age | 47.923 | 46.922 | 47.853 | 0.226 | 0.933 | 0.168 | 2941 |
| Household Size | 3.335 | 3.311 | 3.335 | 0.694 | 0.998 | 0.648 | 2934 |
| White | 0.799 | 0.772 | 0.784 | 0.188 | 0.483 | 0.468 | 2935 |
| Black | 0.073 | 0.069 | 0.061 | 0.781 | 0.376 | 0.453 | 2935 |
| Hispanic | 0.051 | 0.064 | 0.061 | 0.262 | 0.373 | 0.794 | 2935 |
| Asian | 0.043 | 0.061 | 0.062 | 0.086 | 0.077 | 0.938 | 2935 |
| Full-time employment | 0.500 | 0.484 | 0.495 | 0.522 | 0.848 | 0.590 | 2941 |
| Part-time employment | 0.076 | 0.079 | 0.092 | 0.802 | 0.238 | 0.267 | 2941 |
| Unemployed | 0.067 | 0.050 | 0.052 | 0.136 | 0.191 | 0.822 | 2941 |
| Bachelor Degree | 0.329 | 0.352 | 0.329 | 0.326 | 1.000 | 0.238 | 2941 |
| Conservative | 0.350 | 0.351 | 0.351 | 0.958 | 0.980 | 0.974 | 2804 |

Notes: In this table we present evidence on the integrity of the randomization in experiment 4. The p-value of the joint F-test when comparing covariates in the positive and negative demand condition is 0.7723 . The p -value of the joint F -test when comparing covariates in the positive and no-demand demand condition is 0.4676 . The p-value of the joint F-test when comparing covariates in the negative and no-demand demand condition is 0.6403 .

Table A.36: Balance Table: Experiment 5 (Many Task experiment)

|  | Pos. demand | Neg. demand | P-value(Pos. demand - <br> neg. demand) | Observations |
| :--- | :---: | :---: | :---: | :---: |
| Male | 0.452 | 0.473 | 0.135 | 5068 |
| Income | 53223.655 | 52705.464 | 0.507 | 4500 |
| Age | 37.314 | 37.181 | 0.685 | 5068 |
| Household Size | 3.710 | 3.651 | 0.149 | 5068 |
| White | 0.769 | 0.774 | 0.626 | 5068 |
| Black | 0.077 | 0.072 | 0.479 | 5068 |
| Hispanic | 0.048 | 0.049 | 0.978 | 5068 |
| Asian | 0.077 | 0.078 | 0.880 | 5068 |
| Full-time employment | 0.513 | 0.517 | 0.785 | 5068 |
| Part-time employment | 0.116 | 0.113 | 0.748 | 5068 |
| Unemployed | 0.125 | 0.140 | 0.129 | 5068 |
| Bachelor Degree | 0.376 | 0.371 | 0.764 | 5068 |
| Conservative | 0.262 | 0.256 | 0.642 | 5042 |
| Number of HITs | 9341.149 | 8553.308 | 0.069 | 5068 |

Notes: In this table we present evidence on the integrity of the randomization in experiment 5. The p-value of the joint F-test when comparing covariates in the positive and negative demand condition is 0.2164 .

Table A.37: Balance Table: Experiment 6 (Effort Experiment with weak demand treatments)

|  | Pos. demand | Neg. demand | P-value(Pos. demand - <br> neg. demand) | Observations |
| :--- | :---: | :---: | :---: | :---: |
| Male | 0.545 | 0.557 | 0.748 | 775 |
| Income | 32235.142 | 32474.227 | 0.845 | 775 |
| Age | 37.323 | 37.668 | 0.685 | 775 |
| Household Size | 3.729 | 3.683 | 0.663 | 775 |
| White | 0.757 | 0.732 | 0.423 | 775 |
| Black | 0.083 | 0.082 | 0.991 | 775 |
| Hispanic | 0.054 | 0.072 | 0.306 | 775 |
| Asian | 0.080 | 0.075 | 0.780 | 775 |
| Full-time employment | 0.548 | 0.528 | 0.588 | 775 |
| Part-time employment | 0.129 | 0.093 | 0.107 | 775 |
| Unemployed | 0.127 | 0.124 | 0.903 | 775 |
| Bachelor Degree | 0.432 | 0.379 | 0.136 | 775 |
| Conservative | 0.264 | 0.325 | 0.066 | 770 |

Notes: In this table we present evidence on the integrity of the randomization in experiment 6 . The p-value of the joint $F$-test when comparing covariates in the positive and negative demand condition is 0.2556 .

Table A.38: Balance Table: Experiment 7 (Within-Experiment)

|  | Pos. demand | Neg. demand | P-value(Pos. demand - <br> neg. demand) |
| :--- | :---: | :---: | :---: |
| Observations |  |  |  |
| Income | 0.542 | 0.609 | 0.040 |
| Age | 53445.783 | 55169.713 | 0.345 |
| Household Size | 34.642 | 34.672 | 0.967 |
| White | 3.510 | 3.557 | 0.608 |
| Black | 0.730 | 0.737 | 0.814 |
| Hispanic | 0.079 | 0.079 | 0.974 |
| Asian | 0.069 | 0.054 | 0.358 |
| Full-time employment | 0.520 | 0.587 | 0.311 |
| Part-time employment | 0.137 | 0.092 | 0.045 |
| Unemployed | 0.141 | 0.117 | 0.033 |
| Bachelor Degree | 0.409 | 0.391 | 0.271 |
| Conservative | 0.234 | 0.224 | 0.580 |

Notes: In this table we present evidence on balance for experiment 7. The p-value of the joint F -test when comparing covariates in the positive and negative demand condition is 0.025 .

Table A.39: Summary Statistics: Pooled across all experiments

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.49 | 0.50 | 0.00 | 0.00 | 1.00 | 17942 |
| Income | 51960.66 | 33091.17 | 45000.00 | 5000.00 | 225000.00 | 16497 |
| Age | 38.44 | 13.10 | 35.00 | 17.00 | 116.00 | 17942 |
| Household Size | 3.63 | 1.40 | 3.00 | 2.00 | 13.00 | 17935 |
| White | 0.77 | 0.42 | 1.00 | 0.00 | 1.00 | 17936 |
| Black | 0.07 | 0.26 | 0.00 | 0.00 | 1.00 | 17936 |
| Hispanic | 0.05 | 0.22 | 0.00 | 0.00 | 1.00 | 17936 |
| Asian | 0.07 | 0.26 | 0.00 | 0.00 | 1.00 | 17936 |
| Full-time employment | 0.50 | 0.50 | 1.00 | 0.00 | 1.00 | 17942 |
| Part-time employment | 0.11 | 0.32 | 0.00 | 0.00 | 1.00 | 17942 |
| Unemployed | 0.12 | 0.32 | 0.00 | 0.00 | 1.00 | 17942 |
| Bachelor Degree | 0.37 | 0.48 | 0.00 | 0.00 | 1.00 | 17942 |
| Conservative | 0.27 | 0.44 | 0.00 | 0.00 | 1.00 | 16014 |
| Number of HITs | 8209.03 | 14913.36 | 2500.00 | 750.00 | 75000.00 | 12527 |

Notes: This table summarizes the main covariates of all respondents across all 6 experiments.

Table A.40: Summary Statistics: Experiment 1 (Strong demand)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.51 | 0.50 | 1.00 | 0.00 | 1.00 | 4495 |
| Income | 52447.60 | 26624.13 | 55000.00 | 5000.00 | 100000.00 | 4008 |
| Age | 36.34 | 11.26 | 33.00 | 19.00 | 88.00 | 4495 |
| Household Size | 3.66 | 1.40 | 3.00 | 2.00 | 11.00 | 4495 |
| White | 0.78 | 0.42 | 1.00 | 0.00 | 1.00 | 4495 |
| Black | 0.07 | 0.25 | 0.00 | 0.00 | 1.00 | 4495 |
| Hispanic | 0.05 | 0.23 | 0.00 | 0.00 | 1.00 | 4495 |
| Asian | 0.07 | 0.26 | 0.00 | 0.00 | 1.00 | 4495 |
| Full-time employment | 0.50 | 0.50 | 1.00 | 0.00 | 1.00 | 4495 |
| Part-time employment | 0.12 | 0.33 | 0.00 | 0.00 | 1.00 | 4495 |
| Unemployed | 0.14 | 0.34 | 0.00 | 0.00 | 1.00 | 4495 |
| Bachelor Degree | 0.37 | 0.48 | 0.00 | 0.00 | 1.00 | 4495 |
| Conservative | 0.24 | 0.43 | 0.00 | 0.00 | 1.00 | 4457 |
| Number of HITs | 9075.19 | 15743.81 | 2500.00 | 750.00 | 75000.00 | 4495 |

Notes: This table summarizes the main covariates of all respondents in experiment 1 .

Table A.41: Summary Statistics: Experiment 2 (Weak demand)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.47 | 0.50 | 0.00 | 0.00 | 1.00 | 2964 |
| Income | 51474.29 | 26146.68 | 55000.00 | 5000.00 | 100000.00 | 2625 |
| Age | 35.64 | 11.08 | 33.00 | 19.00 | 81.00 | 2964 |
| Household Size | 3.72 | 1.43 | 3.00 | 2.00 | 13.00 | 2964 |
| White | 0.76 | 0.42 | 1.00 | 0.00 | 1.00 | 2964 |
| Black | 0.07 | 0.26 | 0.00 | 0.00 | 1.00 | 2964 |
| Hispanic | 0.05 | 0.23 | 0.00 | 0.00 | 1.00 | 2964 |
| Asian | 0.07 | 0.26 | 0.00 | 0.00 | 1.00 | 2964 |
| Full-time employment | 0.48 | 0.50 | 0.00 | 0.00 | 1.00 | 2964 |
| Part-time employment | 0.12 | 0.32 | 0.00 | 0.00 | 1.00 | 2964 |
| Unemployed | 0.12 | 0.33 | 0.00 | 0.00 | 1.00 | 2964 |
| Bachelor Degree | 0.37 | 0.48 | 0.00 | 0.00 | 1.00 | 2964 |
| Conservative | 0.26 | 0.44 | 0.00 | 0.00 | 1.00 | 2941 |
| Number of HITs | 5626.60 | 12144.69 | 1500.00 | 750.00 | 75000.00 | 2964 |

Notes: This table summarizes the main covariates of all respondents in experiment 2 .

Table A.42: Summary Statistics: Experiment 3 (Effort Experiment: Strong demand)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.56 | 0.50 | 1.00 | 0.00 | 1.00 | 1699 |
| Income | 32875.22 | 17276.75 | 35000.00 | 5000.00 | 85000.00 | 1699 |
| Age | 37.18 | 12.33 | 36.00 | 21.00 | 70.00 | 1699 |
| Household Size | 3.76 | 1.39 | 4.00 | 2.00 | 12.00 | 1699 |
| White | 0.76 | 0.43 | 1.00 | 0.00 | 1.00 | 1699 |
| Black | 0.09 | 0.29 | 0.00 | 0.00 | 1.00 | 1699 |
| Hispanic | 0.04 | 0.20 | 0.00 | 0.00 | 1.00 | 1699 |
| Asian | 0.07 | 0.25 | 0.00 | 0.00 | 1.00 | 1699 |
| Full-time employment | 0.51 | 0.50 | 1.00 | 0.00 | 1.00 | 1699 |
| Part-time employment | 0.12 | 0.33 | 0.00 | 0.00 | 1.00 | 1699 |
| Unemployed | 0.11 | 0.31 | 0.00 | 0.00 | 1.00 | 1699 |
| Bachelor Degree | 0.38 | 0.48 | 0.00 | 0.00 | 1.00 | 1699 |
| Republican | 0.27 | 0.44 | 0.00 | 0.00 | 1.00 | 1699 |

Notes: This table summarizes the main covariates of all respondents in experiment 3 .

Table A.43: Summary Statistics: Experiment 4 (Representative sample)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.48 | 0.50 | 0.00 | 0.00 | 1.00 | 2941 |
| Income | 66641.87 | 52841.78 | 62500.00 | 7500.00 | 225000.00 | 2890 |
| Age | 47.49 | 16.38 | 47.00 | 17.00 | 116.00 | 2941 |
| Household Size | 3.33 | 1.25 | 3.00 | 2.00 | 13.00 | 2934 |
| White | 0.78 | 0.41 | 1.00 | 0.00 | 1.00 | 2935 |
| Black | 0.07 | 0.25 | 0.00 | 0.00 | 1.00 | 2935 |
| Hispanic | 0.06 | 0.24 | 0.00 | 0.00 | 1.00 | 2935 |
| Asian | 0.06 | 0.23 | 0.00 | 0.00 | 1.00 | 2935 |
| Full-time employment | 0.49 | 0.50 | 0.00 | 0.00 | 1.00 | 2941 |
| Part-time employment | 0.08 | 0.28 | 0.00 | 0.00 | 1.00 | 2941 |
| Unemployed | 0.05 | 0.23 | 0.00 | 0.00 | 1.00 | 2941 |
| Bachelor Degree | 0.34 | 0.47 | 0.00 | 0.00 | 1.00 | 2941 |
| Conservative | 0.35 | 0.48 | 0.00 | 0.00 | 1.00 | 2804 |

Notes: This table summarizes the main covariates of all respondents in experiment 4.

Table A.44: Summary Statistics: Experiment 5 (Many task experiment)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.46 | 0.50 | 0.00 | 0.00 | 1.00 | 5068 |
| Income | 52964.44 | 26194.53 | 55000.00 | 5000.00 | 100000.00 | 4500 |
| Age | 37.25 | 11.71 | 34.00 | 17.00 | 88.00 | 5068 |
| Household Size | 3.68 | 1.44 | 3.00 | 2.00 | 13.00 | 5068 |
| White | 0.77 | 0.42 | 1.00 | 0.00 | 1.00 | 5068 |
| Black | 0.07 | 0.26 | 0.00 | 0.00 | 1.00 | 5068 |
| Hispanic | 0.05 | 0.21 | 0.00 | 0.00 | 1.00 | 5068 |
| Asian | 0.08 | 0.27 | 0.00 | 0.00 | 1.00 | 5068 |
| Full-time employment | 0.51 | 0.50 | 1.00 | 0.00 | 1.00 | 5068 |
| Part-time employment | 0.11 | 0.32 | 0.00 | 0.00 | 1.00 | 5068 |
| Unemployed | 0.13 | 0.34 | 0.00 | 0.00 | 1.00 | 5068 |
| Bachelor Degree | 0.37 | 0.48 | 0.00 | 0.00 | 1.00 | 5068 |
| Conservative | 0.26 | 0.44 | 0.00 | 0.00 | 1.00 | 5042 |
| Number of HITs | 8951.11 | 15446.87 | 2500.00 | 750.00 | 75000.00 | 5068 |

Notes: This table summarizes the main covariates of all respondents in experiment 5.

Table A.45: Summary Statistics: Experiment 6 (Effort Experiment: Weak demand)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.55 | 0.50 | 1.00 | 0.00 | 1.00 | 775 |
| Income | 32354.84 | 16969.25 | 35000.00 | 5000.00 | 85000.00 | 775 |
| Age | 37.50 | 11.79 | 35.00 | 21.00 | 70.00 | 775 |
| Household Size | 3.71 | 1.46 | 3.00 | 2.00 | 10.00 | 775 |
| White | 0.74 | 0.44 | 1.00 | 0.00 | 1.00 | 775 |
| Black | 0.08 | 0.28 | 0.00 | 0.00 | 1.00 | 775 |
| Hispanic | 0.06 | 0.24 | 0.00 | 0.00 | 1.00 | 775 |
| Asian | 0.08 | 0.27 | 0.00 | 0.00 | 1.00 | 775 |
| Full-time employment | 0.54 | 0.50 | 1.00 | 0.00 | 1.00 | 775 |
| Part-time employment | 0.11 | 0.31 | 0.00 | 0.00 | 1.00 | 775 |
| Unemployed | 0.13 | 0.33 | 0.00 | 0.00 | 1.00 | 775 |
| Bachelor Degree | 0.41 | 0.49 | 0.00 | 0.00 | 1.00 | 775 |
| Conservative | 0.29 | 0.46 | 0.00 | 0.00 | 1.00 | 770 |

Notes: This table summarizes the main covariates of all respondents in experiment 6.

Table A.46: Summary Statistics: Experiment 7 (Within-Design)

|  | Mean | SD | Median | Min. | Max. | Obs. |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | 0.57 | 0.49 | 1.00 | 0.00 | 1.00 | 1824 |
| Income | 54273.18 | 25704.58 | 55000.00 | 5000.00 | 100000.00 | 1596 |
| Age | 34.66 | 10.81 | 32.00 | 19.00 | 83.00 | 1824 |
| Household Size | 3.53 | 1.40 | 3.00 | 2.00 | 13.00 | 1824 |
| White | 0.73 | 0.44 | 1.00 | 0.00 | 1.00 | 1824 |
| Black | 0.08 | 0.27 | 0.00 | 0.00 | 1.00 | 1824 |
| Hispanic | 0.06 | 0.24 | 0.00 | 0.00 | 1.00 | 1824 |
| Asian | 0.10 | 0.30 | 0.00 | 0.00 | 1.00 | 1824 |
| Full-time employment | 0.55 | 0.50 | 1.00 | 0.00 | 1.00 | 1824 |
| Part-time employment | 0.12 | 0.32 | 0.00 | 0.00 | 1.00 | 1824 |
| Unemployed | 0.13 | 0.34 | 0.00 | 0.00 | 1.00 | 1824 |
| Bachelor Degree | 0.40 | 0.49 | 0.00 | 0.00 | 1.00 | 1824 |
| Conservative | 0.23 | 0.42 | 0.00 | 0.00 | 1.00 | 1814 |

Notes: This table summarizes the main covariates of all respondents in experiment 7 .


[^0]:    Notes: The outcome variables take value one of the respondents believed that the experimenter wanted a high action. In Panel A we display the unconditional means and standard errors of those means in the positive, negative and no-demand treatment arms respectively. In Panel B we present the raw and z-scored sensitivity of beliefs to our demand treatments. In Panel C we display the sensitivity of beliefs in the positive and negative demand condition compared to the no-demand condition. In the demand treatments we reveal the experimental objective to our respondents. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

[^1]:    Notes: The outcome variables take value one of the respondents believed that the experimenter wanted a high action. In Panel A we display the unconditional means and standard errors of those means in the positive, negative and no-demand treatment arms respectively. In Panel B we present the raw and z-scored sensitivity of beliefs to our demand treatments. In Panel C we display the sensitivity of beliefs in the positive and negative demand condition compared to the no-demand condition. In the demand treatments we reveal the experimental hypothesis to our respondents. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

[^2]:    Notes: The outcome variables take value one of the respondents believed that the experimenter expected a high action. In Panel A we display the unconditional means and standard errors of those means in the positive, negative and no-demand treatment arms respectively. In Panel B we present the raw and z-scored sensitivity of beliefs to our demand treatments. In Panel C we display the sensitivity of beliefs in the positive and negative demand condition compared to the no-demand condition. In the demand treatments we reveal the experimental objective to our respondents. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

[^3]:    Notes: The outcome variables take value one of the respondents believed that the experimenter expected a high action. In Panel A we display the unconditional means and standard errors of those means in the positive, negative and no-demand treatment arms respectively. In Panel B we present the raw and z-scored sensitivity of beliefs to our demand treatments. In Panel C we display the sensitivity of beliefs in the positive and negative demand condition compared to the no-demand condition. In the demand treatments we reveal the experimental hypothesis to our respondents. * denotes significance at 10 pct., ${ }^{* *}$ at 5 pct., and ${ }^{* * *}$ at 1 pct. level.

[^4]:    ${ }^{1}$ For monotone demand treatment effects to hold, we require

    $$
    \phi(\zeta) E\left[g \mid g^{T}, g^{L}(\zeta)\right] E\left[h \mid h^{T}=0, h^{L}(\zeta)\right] \leq \phi(\zeta) E\left[g \mid g^{L}(\zeta)\right] E\left[h \mid h^{L}(\zeta)\right] \leq \phi(\zeta) E\left[g \mid g^{T}, g^{L}(\zeta)\right] E\left[h \mid h^{T}=1, h^{L}(\zeta)\right]
    $$

[^5]:    ${ }^{2}$ To see this, note that $\left|E\left[h \mid h^{L}\right]-E\left[h \mid h^{T}=0, h^{L}\right]\right| \geq 0$ and both have the same sign.

[^6]:    ${ }^{3}$ We thank Liad Weiss for pointing this out to us.

[^7]:    ${ }^{4}$ We provide a Stata package, demandbounds, which computes the upper and lower bound of confidence intervals for mean behavior and treatment effects.

[^8]:    ${ }^{5}$ DP's Figure 2 shows the comparison between predicted and observed mean effort, and is computed from their minimum distance estimation (MDE) parameters. Since we focus on NLLS estimation, the figure for the power cost is not very informative, because the estimation matches mean log effort (MDE matches mean effort). We therefore focus on the exponential case.

[^9]:    ${ }^{6}$ By construction our estimated function exactly equals mean effort at the treatment values. DP's marginal cost function does not pass through the 4 cent point because it was estimated from the 0,1 and 10 cent treatments with the 4 cent treatment included for out-of-sample evaluation. Other small differences due to rounding in their reported parameters.

[^10]:    Notes: In this table we present evidence on the experimental integrity in experiment 1. The p-value of the joint F-test when comparing covariates in the positive and negative demand condition is 0.9091 . The p-value of the joint F-test when comparing covariates in the positive and no-demand demand condition is 0.7123 . The p-value of the joint F -test when comparing covariates in the negative and no-demand demand condition is 0.2543 .

