Online Appendix

Online Appendix I: Proof of Proposition 1 and Numerical Analysis

Equilibrium of a Second-Price Auction with $I = \{2, 3\}$ We aim to find bidder 1's bid that is the best response to the value bidding of the two insiders, bidders 2 and 3. By symmetry, it suffices to focus on the case in which $s_2 \geq s_3$ so $v_2(s) \geq v_3(s)$, meaning that bidder 2 bids higher than bidder 3 does. Then, by bidding b, bidder 1 wins the object to obtain a payoff equal to $v_1(s) - v_2(s) = (a-1)(s_1 - s_2)$ when $b \geq v_2(s)$ and $s_2 \geq s_3$, which can be rewritten as $s_3 \leq \min\{b - as_2 - s_1, s_2\}$. Given this and the uniform distribution of signals, bidder 1's payoff from biding b is given as

$$\pi(b; s_1) = \int_0^{\min\{1, \frac{b-s_1}{a}\}} (a-1)(s_1 - s_2) \min\{b - as_2 - s_1, s_2\} ds_2.$$

This expression is maximized by setting $b = B_1(s_1)$ with $B_1(s_1)$ defined in (2).

Equilibrium of Second-Price Auction with $I = \{3\}$ Let $B : [0, 1] \to \mathbb{R}_+$ denote a symmetric, non-decreasing bidding strategy for the two outsiders. We first prove Proposition 1 to obtain a partial characterization of the monotone equilibrium bidding strategy for a general value distribution:

Proof of Proposition 1. To first show that $B(s) \geq (a+1)s$ for all $(0, 1]$, suppose by contradiction that bidder 1 with some signal $\hat{s} \in (0, 1]$ bids $B(\hat{s}) < (a+1)\hat{s}$. We consider this bidder's payoff at the margin, that is, when his bid is tied for highest with that of either bidder 2 or bidder 3. First, a tie with bidder 2 means that $s_2 = \hat{s}$, in which case bidder 1's (ex-post) payoff is equal to $v_1(s) - B(\hat{s}) > a\hat{s} + \hat{s} + s_3 - (a+1)\hat{s} = s_3 \geq 0$. Next, a tie with bidder 3 means that $v_3(s) = as_3 + \hat{s} + s_2 = B(\hat{s}) < (a+1)\hat{s}$, which implies that $as_3 < a\hat{s} - s_2$ so $s_3 < \hat{s}$. In this case, bidder 1's ex-post payoff is equal to $v_1(s) - v_3(s) = (a-1)(\hat{s} - s_3) > 0$. In sum, bidder 1 with $\hat{s}$ obtains a positive marginal payoff regardless whether he is tied with bidder 2 or bidder 3. Then, slightly increasing his bid from $B(\hat{s})$ is profitable.

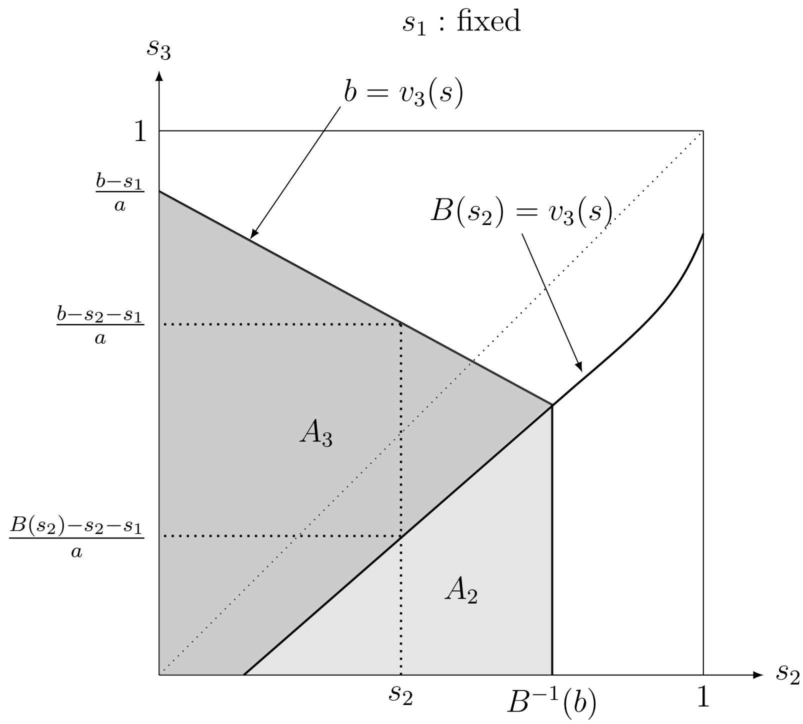
To next show that $B(s) \leq (a+2)s$ for all $s \in [0,1]$, we now suppose to the contrary that bidder 1 with some signal $\hat{s} \in [0,1]$ bids $B(\hat{s}) > (a+2)\hat{s}$. As previously, we consider this bidder's payoff at the margin. In the case of tying with bidder 2, we have $s_2 = \hat{s}$ and $v_3(s) = as_3 + 2\hat{s} \leq B(\hat{s})$, which implies that $s_3 \leq \frac{B(\hat{s})-2\hat{s}}{a}$. Then, bidder 1's (ex-post) payoff is

$$(a+1)\hat{s} + s_3 - B(\hat{s}) \leq (a+1)\hat{s} + \frac{B(\hat{s}) - 2\hat{s}}{a} - B(\hat{s}) = \frac{a-1}{a}[B(\hat{s}) - (a+2)\hat{s}] < 0$$

because $B(\hat{s}) > (a+2)\hat{s}$. When tied with bidder 3, we have $s_2 \leq \hat{s}$ and $v_3(s) = as_3 + \hat{s} + s_2 = B(\hat{s}) > (a+2)\hat{s}$, which implies that $s_3 > \hat{s}$. Then, the payoff of bidder 1 with $\hat{s}$ is $v_1(s) - v_3(s) = (a-1)(\hat{s} - s_3) < 0$. In sum, bidder 1 with $\hat{s}$ obtains a negative marginal payoff regardless of whether he is tied with bidders 2 or 3. Thus, it is profitable to slightly reduce his bid from $B(\hat{s})$.

To show (ii), we note that $B(1) \leq (a+2)$ by (i). Suppose by contradiction that $B(1) < a+2$. If an outsider i with signals $s_i = 1$ deviates to some bid greater than $B(1)$, it only increases his chance of winning against bidder 3, in which case his payoff increases by $v_i(1, s_{-i}) - v_3(1, s_{-i}) = (a-1)(1-s_3) > 0$. Then, this deviation is profitable. □

To go beyond the partial characterization in Proposition 1, we consider the problem faced by bidder 1 with any fixed signal $s_1 \in [0,1]$. By bidding b, he wins if $s_2 \leq B^{-1}(b)$ and $v_3(s) \leq b$. Then, his payment is equal to $v_3(s)$ if $v_3(s) \geq B(s_2)$, and equal to $B(s_2)$ otherwise. In the former case (the darker gray area A_3 in the following graph), his (ex-post) payoff is $v_1(s) - v_3(s) = (a-1)(s_1 - s_3)$ while in the latter case (the lighter gray area A_2 in the graph below), his payoff is $v_1(s) - B(s_2) = as_1 + s_2 + s_3 - B(s_2)$.



Given this and the uniform distribution of signals, the expected payoff of bidder 1 with s_1 can be written as

$$\pi(b;s_1) = \int_0^{B^{-1}(b)} \left[\int_{\max\{\frac{B(s_2)-s_2-s_1}{a},0\}}^{\min\{\frac{b-s_2-s_1}{a},1\}} (a-1)(s_1-s_3)ds_3 \right] ds_2$$
$$+ \int_0^{B^{-1}(b)} \left[\int_0^{\max\{\frac{B(s_2)-s_2-s_1}{a},0\}} (as_1+s_2+s_3-B(s_2))ds_3 \right] ds_2.$$

The first (resp., second) integration corresponds to bidder 1's payoff in the area A_3 (resp,. A_2). Then, the requirement to maximize this payoff by setting $b = B(s_1)$ yields a differential equation we we can use to solve for B. While we omit the detailed expression for this differential equation, it yields a linear solution below a threshold signal $\overline{s}$:

$$B(s_1) = \left(\frac{-7+7a+4a^2+\sqrt{1+14a-23a^2-8a^3+16a^4}}{2(-3+4a)} \right) s_1 \text{ for } s_1 \in [0,\overline{s}],$$

where the threshold $\overline{s}$ solves equation $\frac{B(s_1)-s_1}{a} = 1$.[25] Unfortunately, an analytical solution for B is unavailable beyond the range $[0, \overline{s}]$. Instead, we use a numerical method to draw the graph of B given as follows:

[25]For $a = 2$, $B(s_1) \simeq 3.44 s_1$ and $\overline{s} \simeq 0.82$

Online Appendix II

Sample Instructions: English auction with one insider

This is an experiment in the economics of decision-making. Research foundations have provided funds for conducting this research. Your earnings will depend partly on your decisions and partly on the decisions of the other participants in the experiment. If you follow the instructions and make careful decisions, you may earn a considerable amount of money.

At this point, check the name of the computer you are using as it appears on the top of the monitor. At the end of the experiment, you should use your computer name to claim your payments. At this time, you will receive £5 as a participation fee simply for showing up on time. In addition, you will receive £10 as an initial balance you will use in this experiment. Any positive or negative earnings incurred during the experiment will be added into this balance. Details of how you will make decisions will be provided below. During the experiment we will speak in terms of experimental tokens instead of pounds. Your payments will be calculated in terms of tokens and then exchanged at the end of the experiment into pounds at the following rate:

40 Tokens = 1 Pound

In this experiment, you will participate in 17 independent and identical (of the same form) auction rounds. In each round you will act as a bidder in an auction and compete for a single hypothetical object with other two participants in your group. Note that the first two rounds are practice rounds in which your earnings will not be counted for actual payoffs. The remaining 15 auction rounds are real and any positive or negative earnings will be counted for actual payoffs. If your balance during the experiment goes below zero, you will become inactive and be excluded for any remaining auction rounds and will receive only £5 participation fee at the end of the experiment.

An auction round

Next, we will describe in detail the process that will be repeated in all 17 rounds. Each round starts by having the computer randomly form three-participant groups. In each group, one participant is played by the computer (called a computer participant), while the other two participants are played by persons. The groups formed in each round depend solely upon chance and are independent of the groups formed in any of the other rounds. That is, in any group each active person is equally likely to be chosen for that group. In a case where any other person was excluded due to its negative balance, there is a chance that you may become inactive in a particular round when you are matched with that person who was excluded.

In the beginning of each round, each participant will be assigned a *signal* that will be randomly drawn from the set of integer numbers of tokens between 0 and 100 (numbers not including decimals). That is, any number from the set {0, 1, 2, …, 100} will be equally likely to be drawn. A signal you will be assigned in each round is independent of signals other participants will be assigned and is independent of a signal assigned to you in any of the other rounds. This will be done by the computer.

The result of your draw of a signal will be your private information and will not be shared with another person in your group during each round. On the other hand, the computer participant will know not only its own signal but also the signals of other two human participants.

The value of the object for each participant is determined by signals received by that participant and the other participants in the same group. Specifically, each participant's value is the sum of his or her own signal multiplied by two and signals received by the other two participants. The determination of your value can be summarized by the following formula:

$$\text{Your value} = 2 \times (\text{your signal}) + (\text{Other 1's signal}) + (\text{Other 2's signal})$$

The information about your signal and value will be displayed at the top of the screen (see Attachment 1). Note that Other 2 in the screen is the computer participant. Because the signals the other participants received are not shared with you, you will not know the exact number of your value.

To illustrate this more, consider an example in which your signal is 84 and the signals of the other two participants in your group, Other 1 and Other 2, are 43 and 26, respectively. The value for each participant will then be calculated to be

$$\text{Your value} = 2 \times 84 + 43 + 26 = 237$$

$$\text{Other 1's value} = 2 \times 43 + 84 + 26 = 196$$

$$\text{Other 2's value} = 2 \times 26 + 84 + 43 = 179$$

Because each human participant does not know the signals the other two participants received, each person will be only informed of his or her own value as

$$\text{Your value} = 2 \times 84 + ??? + ???$$

After every participant is assigned a signal, the bidding process will get started with ascending price clocks (number boxes) shown in the middle of the computer screen (see Attachment 1). The left-hand clock represents your bidding and the middle clock represents the bidding of another human participant, while the right-hand clock represents the bidding of the computer participant.

In the beginning of the bidding process, the three clocks will simultaneously start at -4 and synchronously move upwards by 1 unit per half second until one participant drops out. If one participant stops his clock, the remaining two participants will observe, at the next bid increment, that participant's clock having been stopped and turning red (see Attachment 2). There will then be 3 seconds of time pause. From then on the two remaining clocks will synchronously increase by 1 unit per second. If one more participant drops out, the auction will then be over. The last remaining participant will become a winner of the object and will pay *the price at which the second participant dropped out*. If all remaining participants dropped out at the same price level or if the price level reached 500 (the maximum bid allowed), the winner will then be selected at random from the set of active participants and pay the price at which this event occurred.

As soon as the price on your clock reaches the level you want to drop out, move the mouse over your clock (number box) and click on it. This will make you drop out of the bidding, that is, your clock stop. Once you have dropped out, you will not be allowed to re-enter the auction in this round. Note that you cannot stop your clock before the clock reaches 0 (the minimum bid allowed).

The computer participant will use a simple rule of drop-out decision: it will drop out at a price equal to its own value. The computer participant will always abide by this rule.

When the first round ends, the computer will inform you of the results of this round, which include bids you and other participants dropped out at, signals you and other participants received, values of the object, payments and earnings in the round (see Attachment 3)[1]. This completes the first auction round. To move on to the second round, press the OK button at the bottom right hand side of the screen (see Attachment 3).

After letting you observe the results of the first round, the second round will start by having the computer randomly form new groups of three participants and select signals for participants. You will be again asked to take part in the bidding process. After every participant has made a decision, you will observe the results of the second round. This process will be repeated until all the 17 independent and identical auction rounds are completed. At the end of the last round, you will be informed that the experiment has ended. Note again that the first two rounds are practice rounds in which your earnings will not be counted for actual payoffs.

Earnings

Your earnings in each round can be summarized by the following formula:

Earnings = (winning revenue) – (winning cost)

The winning revenue is the value assigned to you if you won the object and zero otherwise. The winning cost is the price paid by you. If you did not win the object, the winning cost is equal to zero. The difference between the winning revenue and winning cost will determine your earnings in each round.

Consider an example to understand the determination of earnings more easily. Suppose that signals assigned to you, another human participant, and the computer participant are 84, 43, and 26, respectively as below. Further, suppose that Other 1 dropped at 142 and Other 2 (the computer participant) dropped at 179 (equal to its own value), while you remained active.

[1] In the history box of bidding screen (see the bottom box in Attachment 2), in case you were the winner in a previous round, you bidding in that round is denoted by -999. This is simply a feature in the programming.

Participant	Signal	Value	Drop-out price	Earnings
You	84	$2 \times 84 + 43 + 26 = 237$	--	237 – 179 = 58
Other 1	43	$2 \times 43 + 84 + 26 = 196$	142	0
Other 2	26	$2 \times 26 + 84 + 43 = 179$	179	0

Because you were the last remaining bidder, you won the object and paid the price at which the second participant dropped out, 179. Your winning revenue is your own value, 237. Your winning cost is the price paid by you, 179. Therefore, your earnings will be given by

Your earnings = 237 – 179 = 58.

The other two participants' earnings will be equal to zero because they did not win the auction.

Consider another example in which your signal is 54, while signals of another human participant and the computer participant are 60 and 15, respectively. Suppose that Other 2 (the computer participant) dropped at 144 (its own value) and Other 1 dropped at 204, while you remained active.

Participant	Signal	Value	Drop-out price	Earnings
You	54	$2 \times 54 + 60 + 15 = 183$	--	183 – 204 = – 21
Other 1	60	$2 \times 60 + 54 + 15 = 189$	204	0
Other 2	15	$2 \times 15 + 54 + 60 = 144$	144	0

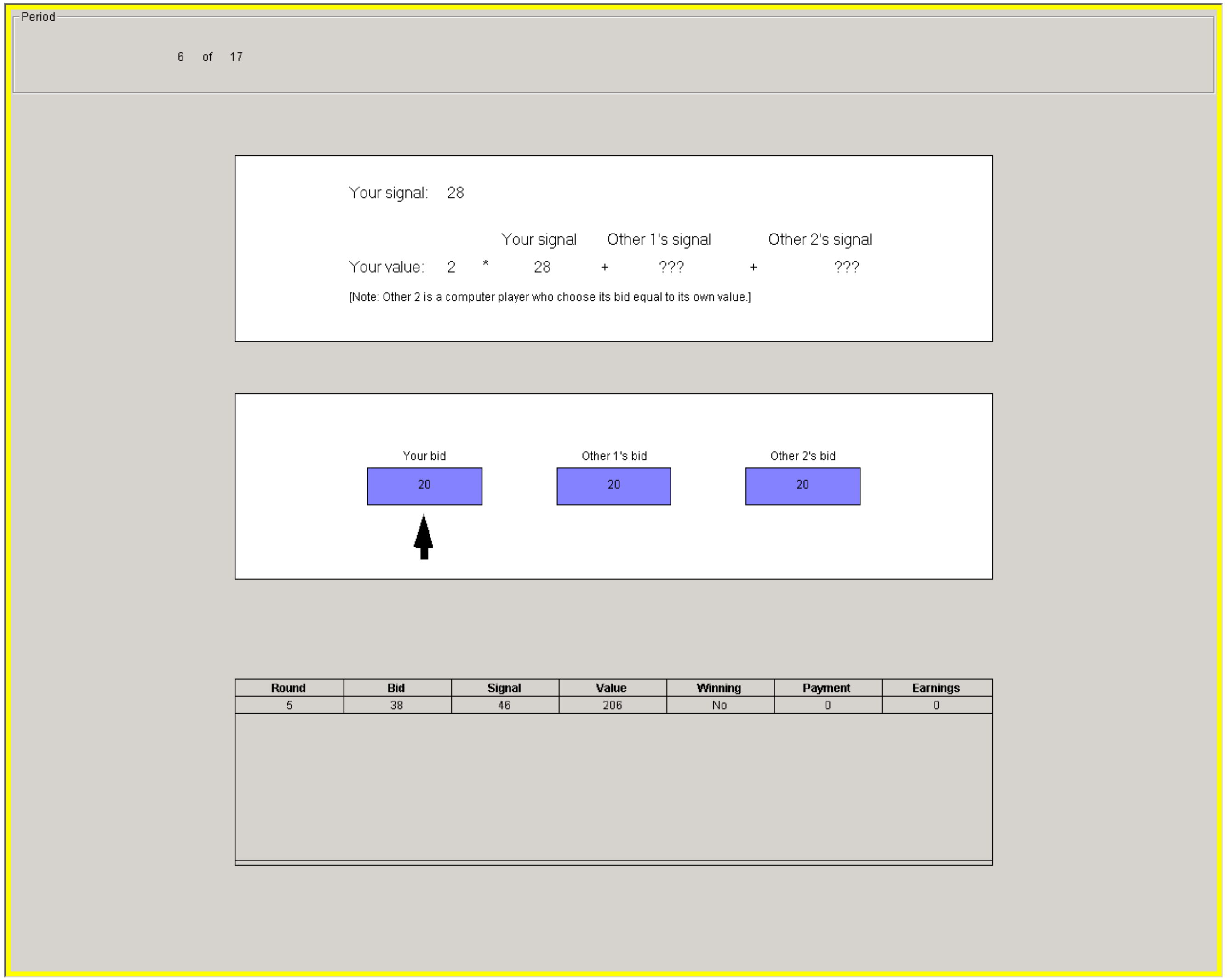
In this case, your value is 183, while the price you pay is 204. Thus, your earnings will be then 183 – 204 = – 21.

Your payoffs in the experiment will be the sum of your earnings over the 15 rounds after the first two practice rounds, whose tokens will be converted into pounds at the end of the experiment, *plus* the initial balance £10. In addition, you will receive £5 participation fee. You will receive your payment as you leave the experiment.

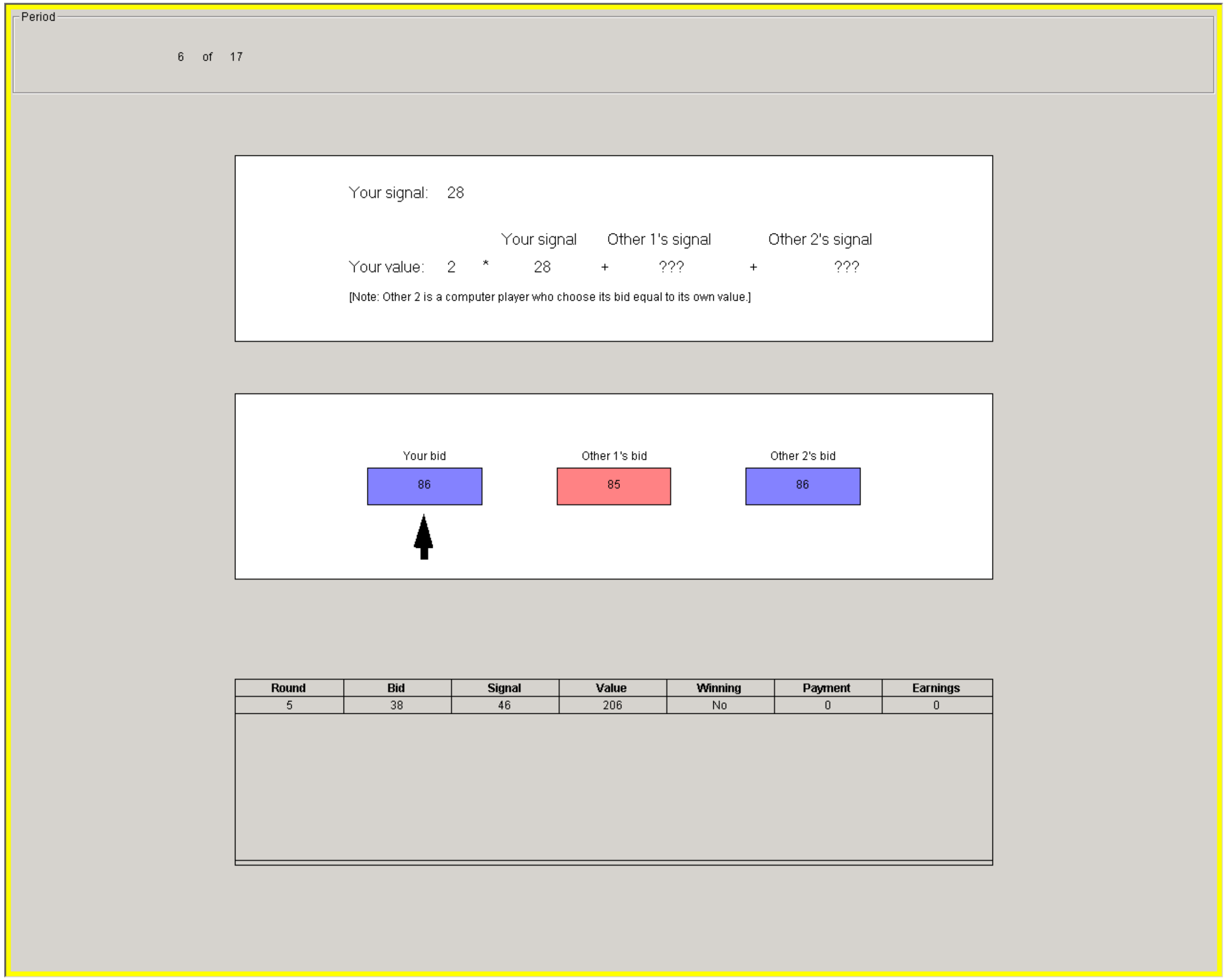
Rules

Please do not talk with anyone during the experiment. We ask everyone to remain silent until the end of the experiment. Your participation in the experiment and any information about your earnings will be kept strictly confidential. If there are no further questions, you are ready to start. An instructor will activate your program.

Attachment 1



Attachment 2



Attachment 3

Period

1 of 17

Bid choices and outcomes of your group in this round are summarized below.

Please press OK to continue.

Players	Bid	Signal	Value	Winning	Payment	Earnings
You	--	9	23	Yes	24	-1
Other 1	24	5	19	No	0	0
Other 2	14	0	14	No	0	0

OK

Online Appendix III

Regression analysis of observed revenues: alternative specifications

Variables	**English**	**SBSP**
$k = 1$	10.847***	10.861***
	(1.986)	(2.468)
$k = 2$	18.853***	10.435***
	(1.74)	(2.214)
$s_{(1)}$	0.975***	0.288
	(.227)	(.304)
$s_{(2)}$	2.037***	1.710***
	(.153)	(.197)
$s_{(3)}$	0.466**	1.075***
	(.226)	(.301)
$s_{(1)}^2$	0.006***	0.009***
	(.002)	(.003)
$s_{(2)}^2$	0.001	0.003
	(.002)	(.002)
$s_{(3)}^2$	0.002	-0.004
	(.002)	(.002)
$s_{(1)} \times s_{(2)}$	-0.007*	-0.014***
	(.003)	(.004)
$s_{(1)} \times s_{(3)}$	0	0.009**
	(.003)	(.004)
constant	2.36	15.850*
	(6.665)	(9.04)
# of obs.	1125	975
R^2	0.908	0.839
p-value H_0: $(k=0) = (k=1)$	0.000	0.000
p-value H_0: $(k=1) = (k=2)$	0.000	0.834

Note. Standard errors are reported in parentheses. *, **, and *** represent 10%, 5%, and 1% significance level, respectively. $s_{(1)}$ = min[**s**], $s_{(3)}$=max[**s**], $s_{(2)}$=med[**s**]

Regression analysis of observed revenues: alternative specifications

Variables	English	SBSP
$k = 1$	15.665**	17.633*
	(7.936)	(9.763)
$k = 2$	29.069*	24.29
	(15.381)	(18.879)
$s_{(1)}$	0.784***	0.626***
	(.048)	(.066)
$s_{(2)}$	2.053***	1.716***
	(.043)	(.059)
$s_{(3)}$	0.707***	0.622***
	(.051)	(.066)
$1[s_{(1)} = s_{(Insider)}]$	-10.971	-16.276*
	(7.892)	(9.833)
$1[s_{(2)} = s_{(Insider)}]$	-5.224	-19.698*
	(8.303)	(10.228)
$1[s_{(3)} = s_{(Insider)}]$	-23.238**	-31.405***
	(9.224)	(11.549)
$1[s_{(1)} = s_{(Insider)}]\times s_{(1)}$	0.245***	0.261***
	(.067)	(.092)
$1[s_{(2)} = s_{(Insider)}]\times s_{(2)}$	0.082	0.332***
	(.058)	(.075)
$1[s_{(3)} = s_{(Insider)}]\times s_{(3)}$	0.181***	0.310***
	(.066)	(.09)
constant	3.565	38.074***
	(4.217)	(5.168)
# of obs.	1125	975
R^2	0.91	0.844
p-value H_0: $(k=0) = (k=1)$	0.049	0.071
p-value H_0: $(k=1) = (k=2)$	0.084	0.484

Note. Standard errors are reported in parentheses. *, **, and *** represent 10%, 5%, and 1% significance level, respectively. $s_{(1)} = \min[\mathbf{s}]$, $s_{(3)}=\max[\mathbf{s}]$, $s_{(2)}=\text{med}[\mathbf{s}]$

Online Appendix IV: Maximum Likelihood Approach

The maximum likelihood approach addresses the censoring that exists in the observed data. It distinguishes between the observed drop-out bid $d_{s,ir}$ and the reservation bid $p_{s,ir}$. For ease of exposition denote, denote $g_1(i,r)$ for all $i \in N$ as the individual who first drops out from i's group in round r and the corresponding group as $g(i,r)$. Let $G_1(r)$ be the collection of all first bidders at round r. Therefore, for all $i \in G_1(r)$ we know $p_{1,ir} = d_{1,ir}$ but for the other two active bidders $j \in g(i,r) \setminus g_1(i,r)$ we only know that $p_{1,jr} > p_{1,g_1(j,r)r}$, implying that we observe a right-censored variable of their true drop-out price. For the second stage, we know that for bidder $g_2(i,r)$, who drops out second, his/her reservation bid is $p_{2,g_2(i,r)r} = d_{2,g_2(i,r)r}$; however, for the remaining bidder j we only know that $d_{2,jr} > d_{2,g_2(i,r)r}$, which again implies a right-censored variable.

Consider $\epsilon^k_{s,ir} = p^k_{s,ir} - \Gamma^k_{s,ir}$ where $\Gamma^k_{s,ir}$ follows from the right hand side of the regression equation. We know that $d_{s,g_1(i,r)r} = p_{s,ir}$ if and only if $i \in g_s(i,r)$. If we define $e^k_{s,ir} = d^k_{s,g_1(i,r)r} - \Gamma^k_{s,ir}$ $d_{s,g_1(i,r)r} = p_{s,ir}$ if and only if $e^k_{s,ir} = \epsilon^k_{s,ir}$.

Denoting $\theta^k_s = \left(\alpha_{\mathbf{s}}{}^k, \beta_{\mathbf{s}}{}^k, \delta_{\mathbf{s}}{}^k, \{\sigma_{s,i} : i : 1 \to N_k\}\right)$ and $D_s \equiv \left(d_{s,g_s(i,r)}\right)_{\forall i \in N_k, r \in R}$ the information on drop-out prices from the experiment, the density function associated with the first bidding function $p_{1,ir}$ is given by

$$f_{p_{1,ir}}(b \mid \cdot) = f(p_{1,ir} = d_{1,g_1 i,rr} \mid \cdot)^{\mathbf{1}_{[i \in g_1(i,r)]}} (1 - F(p_{1,ir} \leq d_{1,g_1 i,rr} \mid \cdot))^{\mathbf{1}_{[i \notin g_1(i,r)]}}.$$

Therefore, the maximum likelihood function is

$$L^k_1\left(\theta^k_1; D_1\right) = \prod_{r \in R} \prod_{i \in N_k} \left[\frac{1}{\sigma_i} \phi\left(\frac{e^k_{1,ir}}{\sigma_i}\right)\right]^{\mathbf{1}_{[i \in g_1(i,r)]}} \left[1 - \Phi\left(\frac{e^k_{1,ir}}{\sigma_i}\right)\right]^{\mathbf{1}_{[i \notin g_1(i,r)]}} \tag{13}$$

On the other hand, the maximum likelihood associated with the second bidders is

$$L^k_2\left(\theta^k_2; D_2\right) = \prod_{r \in R} \prod_{i \in N_k \setminus G_1(r)} \left[\frac{1}{\sigma_i} \phi\left(\frac{e^k_{2,ir}}{\sigma_i}\right)\right]^{\mathbf{1}_{[i \in g_2(i,r)]}} \left[1 - \Phi\left(\frac{e^k_{2,ir}}{\sigma_i}\right)\right]^{\mathbf{1}_{[i \notin g_2(i,r)]}} \tag{14}$$

This specification corresponds to a Partial maximum likelihood estimator. From Wooldridge (2003) we know that, once the variance matrix is corrected for within-subject dependence, the pooled partial maximum likelihood estimation analysis is consistent and asymptotically normal.

Online Appendix V

Table. Frequencies of negative surplus and average surplus

# of insiders	Ranking of values (*I* or *O*)	Second-price auction (1) Freq. negative	Second-price auction (2) Average	English auction (3) Freq. negative	English auction (4) Average	H_0: (1) = (3)	H_0: (2) = (4)
0	All	0.25	36.07	0.17	44.15	0.03	0.10
		(210)		(210)			
1	All	0.32	12.96	0.22	23.32	0.03	0.00
		(184)		(197)			
	I = (highest-value)	0.96	-21.78	0.95	-13.18	0.88	0.10
		(27)		(22)			
	I = (second highest-value)	0.11	19.29	0.01	28.07	0.02	0.05
		(70)		(72)			
	I = (lowest-value)	0.28	18.66	0.20	27.80	0.25	0.07
		(87)		(103)			
2	All	0.25	18.12	0.21	18.46	0.29	0.90
		(158)		(227)			
	O = (highest-value)	0.00	30.46	0.00	26.46	-	0.09
		(118)		(180)			
	O = (second highest-value)	1.00	-10.87	1.00	-10.00	-	0.75
		(30)		(44)			
	O = (lowest-value)	1.00	-40.50	1.00	-43.67	-	0.81
		(10)		(3)			

Note. The Bidder's surplus is defines as valuation minus price paid. The two columns on the right side report the *p*-value of the *t*-test for the null hypothesis that outcomes between the second-price auction and the English auction are equivalent. *I* denotes an insider and *O* an outsider. The number of observations is in parentheses. It excludes cases where Insiders win the auction. - No sufficient variation to compute significance tests

Table. Theoretical predictions on frequencies of negative surplus and average surplus

		Second-price auction			English auction				
		(1)	(2)		(3)	(4)			
# of insiders	Ranking of values (*I* or *O*)	Freq. negative	Average	N	Freq. negative	Average	N	H_0: (1) = (3)	H_0: (2) = (4)
0	All	0.07	62.06	(161)	0.00	55.53	(173)	0.00	0.16
1	All	0.06	32.16	(142)	0.00	34.22	(154)	0.00	0.45
	I = (highest-value)	0.75	-2.00	(4)	-	-	(0)	-	-
	I = (second highest-value)	0.00	29.32	(65)	0.00	28.79	(72)	-	0.87
	I = (lowest-value)	0.08	38.99	(73)	0.00	38.99	(82)	-	0.56
2	All	0.07	29.42	(120)	0.00	26.60	(179)	0.00	0.24
	O = (highest-value)	0.00	31.82	(112)	0.00	26.60	(179)	-	0.03
	O = (second highest-value)	1.00	-	(8)	-	-	(0)	-	-
	O = (lowest-value)	-	-	(0)	-	-	(0)	-	-

Note. The Bidder's surplus is defines as valuation minus price paid. The two columns on the right side report the *p*-value of the *t*-test for the null hypothesis that outcomes between the second-price auction and the English auction are equivalent. *I* denotes an insider and *O* an outsider. The number of observations is in parentheses. It excludes cases where Insiders win the auction. - No sufficient variation to compute significance tests