Web Appendix: Subjects' Instructions

"Ignorance is bliss: an Experimental Study of the Use of Ambiguity and Vagueness in the Coordination Games with Asymmetric Payoffs"

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A: Instructions for Values-Intervals Treatment

This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a substantial amount of money, which will be paid to you at the end of the session.

The experiment in total consists of two parts: 20 identical decision rounds in each part. Before the start of each part you will be given the instructions for the following 20 decision rounds of the experiment.

The currency in this experiment is called tokens. All payoffs are denominated in this currency. Your payment in the experiment will consist of several parts: you will earn tokens for each part of the experiment, the total amount of which will be converted into US dollars using the rate **20 Tokens = $1**. In addition, you will get $5 participation fee if you complete the experiment. Payments for each part of the experiment are independent of each other and will be described to you in detail in the instructions. You will receive all the payments at the end of the experiment.

At the beginning of each round you will be randomly matched with another person participating in the experiment. One person in pair will be assigned to be **player BLUE** and the other **player RED**. The identity of the subject you are paired with will never be revealed to you and the subject you are paired with will never know your identity. Once the round is over, you will be re-matched with another person and again one of you will be assigned to be player BLUE and another player RED. On the top of the screen, you will be always told whether you are acting as player BLUE or RED in this round.

Instructions for the first part of the experiment.

Your decision in each round

Your task in each round is to choose one of two locations: Empire State Building or AXA center. The subject you are paired with also chooses between Empire State Building and AXA center. Each subject in the pair will make his/her choice without knowing what the other subject chooses. You can think of the following situation: you and the subject you are paired with decided to meet somewhere in New York. Unfortunately, you forgot to decide where exactly you are meeting and you have no way to communicate with each other. So, in each round you and your pair member independently choose one of two

possible locations: Empire State Building, which is the New York landmark or AXA center.

Your payoff in each round depends on the choices made by you and your pair member and number **x** randomly chosen by the computer at the beginning of each round. Number x can take four possible values: 1, 2, 3 or 4 – all occurring with equal chances. This means that the probability that 1 is chosen is equal to the probability that 2 (3, 4) is chosen and equals 25%.

Table below summarizes payoffs of both players, where player BLUE is row-chooser and player RED is column-chooser.

<div style="text-align:center">

player RED

</div>

		Empire State	**AXA center**
player BLUE	**Empire State**	$4x + 1$, $x + 7$	0 , 0
	AXA center	0 , 0 if $x < 4$ 25 , 25 if $x = 4$	$x + 7$, $4x + 1$

Here is how to read this payoff table. The table has four cells or boxes each determined by the choices made by subjects 1 and 2. For example, if both players choose Empire State, then the payoffs for each subject are given by the cell in the upper left hand corner of the table. In this cell there are two payoffs, one on the left and one on the right. The first payoff, $(4x + 1)$, is the payoff to player BLUE and the second, $(x + 7)$, is the payoff to player RED. If player BLUE chose Empire State and player RED chose AXA, the relevant cell would be the upper right hand corner cell and each subject gets zero tokens.

Note that your payoff depends on the **x** that was chosen by the computer. For example, say you were assigned to be player BLUE and chose AXA center. Say, also, that the subject you are paired with choose Empire State and computer randomly chose **x** = 4. Then both you and the subject you are paired with will get 25 tokens. If, on the other hand, computer chose x = 2, then both you and your pair member will get 0 tokens.

Before you and the person you are paired with will make the choice, you will both observe the number **x** that was picked by the computer. Also you will be shown the relevant payoff table with number **x** being substituted in the original payoff matrix described above. Then you will make your choice. You will finalize your choice by clicking the "Continue" button.

Information Feedback

After both you and the subject you are paired with have made their choices you will get to observe the actions taken by you and your pair member, and both of your payoffs. You

will then proceed to the next round which will be identical to the round you just finished except that at the beginning of the new round your will be randomly re-matched with another subject and a new value of **x** will be chosen and the associated payoff table shown to you. The **x** chosen for any given round will be independent of that chosen in any previous round. In other words, it will again be a number 1, 2, 3 or 4 with equal chances for each number to be chosen.

To determine your payment for the first part of the experiment we will sum up the number of tokens you earned in each of 20 rounds.

Instructions for the second part of the experiment.

In this part of the experiment everything stays the same as in part 1 except for one thing: you will not know the exact value of **x** before you get to choose between Empire State and AXA center. Instead, you, and the subject you are paired with, will hear one of the two possible announcements describing **x**: "**x** is 1, 2 or 3" or "**x** is 4". Notice, that announcement "x is 1, 2 or 3" is observed, it means that x equals 1, 2 and 3 with equal chance.

Information Feedback

After the announcement is made, both you and your pair member will choose between Empire State and AXA center. After both pair members made their choice you will observe the announcement about value of x, actual value of **x** picked by computer, payoff matrix with this value of **x** substituted in and the payoffs for this round. When a round is over you will proceed to the next round which will identical to the round you just finished except that you will be re-matched with another person and a new value of **x** will be chosen and a new announcement about its value will be made.

We will sum up the number of tokens you earned in each of 20 rounds. Your total earnings in this experiment consist of tokens earned in both parts of the experiment, which will be converted into US dollars using the conversion rate 20 tokens = $1 and participation fee of $5, which will be paid to you at the end of the experiment.

B: Instructions for Intervals-Values Treatment

This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a substantial amount of money, which will be paid to you at the end of the session.

The experiment in total consists of two parts: 20 identical decision rounds in each part. Before the start of each part you will be given the instructions for the following 20 decision rounds of the experiment.

The currency in this experiment is called tokens. All payoffs are denominated in this currency. Your payment in the experiment will consist of several parts: you will earn tokens for each part of the experiment, the total amount of which will be converted into US dollars using the rate **20 Tokens = $1**. In addition, you will get $5 participation fee if you complete the experiment. Payments for each part of the experiment are independent of each other and will be described to you in detail in the instructions. You will receive all the payments at the end of the experiment.

At the beginning of each round you will be randomly matched with another person participating in the experiment. One person in pair will be assigned to be **player BLUE** and the other **player RED**. The identity of the subject you are paired with will never be revealed to you and the subject you are paired with will never know your identity. Once the round is over, you will be re-matched with another person and again one of you will be assigned to be player **BLUE** and another player **RED**. On the top of the screen, you will be always told whether you are acting as player **BLUE** or **RED** in this round.

Instructions for the first part of the experiment.

Your decision in each round

Your task in each round is to choose one of two locations: Empire State Building or AXA center in the decision problem described below. The subject you are paired with also chooses between Empire State Building and AXA center. Each subject in the pair will make his/her choice without knowing what the other subject chooses. You can think of the following situation: you and the subject you are paired with decided to meet somewhere in New York. Unfortunately, you forgot to decide where exactly you are meeting and you have no way to communicate with each other. So, in each round you and your pair member independently choose one of two possible locations: Empire State Building, which is the New York landmark or AXA center.

Your payoff in each round depends on the choices made by you and your pair member and number **x** randomly chosen by the computer at the beginning of each round. Number **x** can take four possible values: 1, 2, 3 or 4 – all occurring with equal chances. This means that the probability that 1 is chosen is equal to the probability that 2 (3, 4) is chosen and equals 25%.

Table below summarizes the payoffs of both players, where player **BLUE** is row-chooser and player **RED** is column-chooser.

player RED

		Empire State	AXA center
player BLUE	**Empire State**	4x + 1 , x + 7	0 , 0
	AXA center	0 , 0 if x < 4 25 , 25 if x = 4	x + 7 , 4x + 1

Here is how to read this payoff table. The table has four cells or boxes each determined by the choices made by player **BLUE** and player **RED**. For example, if both players choose Empire State, then the payoffs for each subject are given by the cell in the upper left hand corner of the table. In this cell there are two payoffs, one on the left and one on the right. The first payoff, (4**x** + 1), is the payoff to player **BLUE** and the second, (**x** + 7), is the payoff to player **RED**. If player **BLUE** chose Empire State and player **RED** chose AXA, the relevant cell would be the upper right hand corner cell and all players get zero tokens.

Note that your payoff depends on the **x** that was chosen by the computer.
For example, say that **x** = 3 and both players chose Empire State. Then the payoff to the **BLUE** player would be 13 and the payoff to the **RED** player would be 10. If **x** = 1 and the same choices were made, then the **BLUE** player would get 5 and **RED** player would get 8 tokens. Finally, note that when **BLUE** player chooses AXA center and **RED** player chooses Empire State, payoffs depend on **x** in a special way. When **x** = 4, both **BLUE** and **RED** players get 25 tokens. If, on the other hand, **x** is 1, 2 or 3 then both players get zero tokens.

Before you and the person you are paired with will make the choice, you will be given some information about the value of **x**. You will not know the exact value of **x** before you get to choose between Empire State and AXA center. Instead, you, and the subject you are paired with, will hear one of the two possible announcements describing **x**: "**x** is 1, 2 or 3" or "**x** is 4". Notice, that if announcement "**x** is 1, 2 or 3" is observed, it means that **x** equals 1, 2 and 3 with equal chance, while if announcement "**x** is 4" is observed it means that **x** = 4 with certainty. After observing the announcements, you and your pair member will be asked to make your choice. You will finalize your choice by clicking the "Continue" button.

Information Feedback

After both pair members made their choice you will observe the announcement about value of **x**, actual value of **x** picked by computer, payoff matrix with this value of **x** substituted in and the payoffs for this round. When a round is over you will proceed to the next round which will identical to the round you just finished except that you will be re-matched with another person and a new value of **x** will be chosen and a new

announcement about its value will be made. The **x** chosen for any given round will be independent of that chosen in any previous round. In other words, it will again be a number 1, 2, 3 or 4 with equal chances for each number to be chosen.

To determine your payment for the first part of the experiment we will sum up the number of tokens you earned in each of 20 rounds.

<u>Here is how the payoff matrix look like for each value of x</u>

when x = 1

	Empire State	AXA center
Empire State	5 , 8	0 , 0
AXA center	0 , 0	8 , 5

when x = 2

	Empire State	AXA center
Empire State	9 , 9	0 , 0
AXA center	0 , 0	9 , 9

when x = 3

	Empire State	AXA center
Empire State	13 , 10	0 , 0
AXA center	0 , 0	10 , 13

when x = 4

	Empire State	AXA center
Empire State	17 , 11	0 , 0
AXA center	25 , 25	11 , 17

Instructions for the second part of the experiment.

In this part of the experiment everything stays the same as in part 1 except for one thing: both you and the subject you paired with will observe the number **x** that was picked by the computer. Also you will be shown the relevant payoff table with number **x** being substituted in the original payoff matrix described above. Then you will make your choice. You will finalize your choice by clicking the "Continue" button.

Information Feedback

After both you and the subject you are paired with have made their choices you will get to observe the actions taken by you and your pair member, and both of your payoffs. You will then proceed to the next round which will be identical to the round you just finished except that at the beginning of the new round your will be randomly re-matched with another subject and a new value of **x** will be chosen and the associated payoff table shown to you. The **x** chosen for any given round will be independent of that chosen in any previous round. In other words, it will again be a number 1, 2, 3 or 4 with equal chances for each number to be chosen.

To determine your payment for the second part of the experiment we will sum up the number of tokens you earned in each of 20 rounds. Your total earnings in this experiment consist of tokens earned in both parts of the experiment, which will be converted into US dollars using the conversion rate **20 tokens = $1** and participation fee of **$5**, which will be paid to you at the end of the experiment.

C: Instructions for Values-Words Treatment

This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a substantial amount of money, which will be paid to you at the end of the session.

The experiment in total consists of two parts: 20 identical decision rounds in each part. Before the start of each part you will be given the instructions for the following 20 decision rounds of the experiment.

The currency in this experiment is called tokens. All payoffs are denominated in this currency. Your payment in the experiment will consist of several parts: you will earn tokens for each part of the experiment, the total amount of which will be converted into US dollars using the rate **20 Tokens = $1**. In addition, you will get $5 participation fee if you complete the experiment. Payments for each part of the experiment are independent of each other and will be described to you in detail in the instructions. You will receive all the payments at the end of the experiment.

At the beginning of each round you will be randomly matched with another person participating in the experiment. One person in pair will be assigned to be **player BLUE** and the other **player RED**. The identity of the subject you are paired with will never be revealed to you and the subject you are paired with will never know your identity. Once the round is over, you will be re-matched with another person and again one of you will be assigned to be player BLUE and another player RED. On the top of the screen, you will be always told whether you are acting as player BLUE or RED in this round.

Instructions for the first part of the experiment.

Your decision in each round

Your task in each round is to choose one of two locations: Empire State Building or AXA center. The subject you are paired with also chooses between Empire State Building and AXA center. Each subject in the pair will make his/her choice without knowing what the other subject chooses. You can think of the following situation: you and the subject you are paired with decided to meet somewhere in New York. Unfortunately, you forgot to decide where exactly you are meeting and you have no way to communicate with each other. So, in each round you and your pair member independently choose one of two possible locations: Empire State Building, which is the New York landmark or AXA center.

Your payoff in each round depends on the choices made by you and your pair member and number **x** randomly chosen by the computer at the beginning of each round. Number x can take four possible values: 1, 2, 3 or 4 – all occurring with equal chances. This means that the probability that 1 is chosen is equal to the probability that 2 (3, 4) is chosen and equals 25%.

Table below summarizes payoffs of both players, where player BLUE is row-chooser and player RED is column-chooser.

<center><b style="color:red">player RED</center>

		Empire State	**AXA center**
player BLUE	**Empire State**	$4x + 1$, $x + 7$	0 , 0
	AXA center	0 , 0 if $x < 4$ 25 , 25 if $x = 4$	$x + 7$, $4x + 1$

Here is how to read this payoff table. The table has four cells or boxes each determined by the choices made by subjects 1 and 2. For example, if both players choose Empire State, then the payoffs for each subject are given by the cell in the upper left hand corner of the table. In this cell there are two payoffs, one on the left and one on the right. The first payoff, $(4x + 1)$, is the payoff to player BLUE and the second, $(x + 7)$, is the payoff

to player RED. If player BLUE chose Empire State and player RED chose AXA, the relevant cell would be the upper right hand corner cell and each subject gets zero tokens.

Note that your payoff depends on the **x** that was chosen by the computer. For example, say you were assigned to be player BLUE and chose AXA center. Say, also, that the subject you are paired with choose Empire State and computer randomly chose **x** = 4. Then both you and the subject you are paired with will get 25 tokens. If, on the other hand, computer chose x = 2, then both you and your pair member will get 0 tokens.

Before you and the person you are paired with will make the choice, you will both observe the number **x** that was picked by the computer. Also you will be shown the relevant payoff table with number **x** being substituted in the original payoff matrix described above. Then you will make your choice. You will finalize your choice by clicking the "Continue" button.

Information Feedback

After both you and the subject you are paired with have made their choices you will get to observe the actions taken by you and your pair member, and both of your payoffs. You will then proceed to the next round which will be identical to the round you just finished except that at the beginning of the new round your will be randomly re-matched with another subject and a new value of **x** will be chosen and the associated payoff table shown to you. The **x** chosen for any given round will be independent of that chosen in any previous round. In other words, it will again be a number 1, 2, 3 or 4 with equal chances for each number to be chosen.

To determine your payment for the first part of the experiment we will sum up the number of tokens you earned in each of 20 rounds.

Instructions for the second part of the experiment.

In this part of the experiment everything stays the same as in part 1 except for one thing: you will not know the exact value of **x** before you get to choose between Empire State and AXA center. Instead, you, and the subject you are paired with, will hear one of the two possible announcements describing **x**: "**x** is low" or "**x** is high".

Information Feedback

After the announcement is made, both you and your pair member will choose between Empire State and AXA center. After both pair members made their choice you will observe the announcement about value of x, actual value of **x** picked by computer, payoff matrix with this value of **x** substituted in and the payoffs for this round. When a round is over you will proceed to the next round which will identical to the round you just finished except that you will be re-matched with another person and a new value of **x** will be chosen and a new announcement about its value will be made.

We will sum up the number of tokens you earned in each of 20 rounds. Your total earnings in this experiment consist of tokens earned in both parts of the experiment, which will be converted into US dollars using the conversion rate 20 tokens = $1 and participation fee of $5, which will be paid to you at the end of the experiment.

D: Instructions for Real Announcers Values only Treatment

This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a substantial amount of money, which will be paid to you at the end of the session.

The experiment consists of 20 identical decision rounds. At the beginning of the experiment you will be randomly matched with two other subjects participating in the experiment. One subject in your group will be assigned to be player **GREEN**; the other subject will be player **RED** and the third subject – player **BLUE.** At the top of the screen you will be told whether you are acting as player **GREEN, RED** or **BLUE.** Subjects in your group and the roles assigned to them will not change for the whole experiment. The identity of the subjects in your group will never be revealed to you and subjects in your group will never know your identity.

The currency in this experiment is called tokens. All payoffs are denominated in this currency. The total amount of tokens you earn in the experiment will be converted into US dollars and paid to you at the end of the experiment. The conversion rate is 20 tokens = $1. In addition you will receive $5 participation fee if you complete the experiment. You will receive all the payments at the end of the experiment.

Your decision in each round

Each round of this experiment has the following flow of events:

- At the beginning of each round the computer will choose randomly a number which we will call **x**. Number **x** can take four possible values: 1, 2, 3 or 4 – all occurring with equal chances. This means that the probability that 1 is chosen is equal to the probability that 2 (3, 4) is chosen and equals 25%.

- Number **x** chosen by the computer is observed only by the player **GREEN**. Players **BLUE** and **RED** don't get to see the value of **x** drawn.

- After **GREEN** observes value of **x**, he makes an announcement about value of x, which is observed by both **RED** and **BLUE** players. The announcement can be any of the numbers 1, 2, 3 or 4.

- After the announcement is made, **RED** and **BLUE** each choose one of two locations: Empire State Building or AXA center in the decision problem described below. Both players **RED** and **BLUE** will make their choice without knowing what the other player has chosen and their payoffs will depend on the choices they make and the true value of **x**. You can think of the following situation: two people (players **RED** and **BLUE**) decided to meet somewhere in New York. Unfortunately, they forgot to decide where exactly they are meeting and they have no way to communicate with each other. So, in each round players **RED** and **BLUE** independently choose one of two possible locations: Empire State Building, which is the New York landmark or AXA center.

Payoffs

The payoff of each subject in a particular round depends on the number **x** chosen by the computer, and the options chosen by the **RED** and **BLUE** players. Table below summarizes the payoffs of players **RED** (column-chooser) and **BLUE** (row-chooser).

Payoff of player GREEN is the sum of payoff of RED and BLUE:

<div align="center">

player RED

</div>

		Empire State	AXA center
player BLUE	**Empire State**	$4x + 1$, $x + 7$	0 , 0
	AXA center	0 , 0 if $x < 4$ 25 , 25 if $x = 4$	$x + 7$, $4x + 1$

Here is how to read this payoff table. The table has four cells or boxes each determined by the choices made by player **BLUE** and player **RED**. For example, if both players choose Empire State, then the payoffs for each subject are given by the cell in the upper left hand corner of the table. In this cell there are two payoffs, one on the left and one on the right. The first payoff, $(4x + 1)$, is the payoff to player **BLUE** and the second, $(x + 7)$, is the payoff to player **RED**. The payoff of **GREEN** player is the sum of payoffs of **BLUE** and **RED**: $4x+1+x+7 = 5x+8$. If player **BLUE** chose Empire State and player **RED** chose AXA, the relevant cell would be the upper right hand corner cell and all players get zero tokens.

Note that your payoff depends on the **x** that was chosen by the computer. For example, say that **x** = 3 and both players chose Empire State. Then the payoff to the **BLUE** player would be 13, payoff to the **RED** player would be 10 and payoff to the **GREEN** player would be 23. If **x** = 1 and the same choices were made, then the **BLUE** player would get 5, **RED** player would get 8 and **GREEN** player would get 13. Finally, note that when **BLUE** player chooses AXA center and **RED** player chooses Empire State, payoffs depend on **x** in a special way. When **x** = 4, both **BLUE** and **RED** players get 25 tokens and **GREEN** player gets 50 tokens. If, on the other hand, **x** is 1, 2 or 3 then all players get zero tokens.

Players RED and BLUE will not know the exact value of x before they get to choose between Empire State and AXA center. Instead, they will observe an announcement describing x, made by GREEN.

Player GREEN can make any announcement describing the value of x. Recall, that GREEN observes the actual value of x drawn randomly by the computer. Also, recall that payoff of GREEN equals to the sum of payoffs of RED and BLUE, which depend on the actual value of x chosen by the computer and options chosen by RED and BLUE.

Here is how the payoff matrix look like for each value of x

when x = 1

	Empire State	AXA center
Empire State	5 , 8	0 , 0
AXA center	0 , 0	8 , 5

when x = 2

	Empire State	AXA center
Empire State	9 , 9	0 , 0
AXA center	0 , 0	9 , 9

when x = 3

	Empire State	AXA center
Empire State	13 , 10	0 , 0
AXA center	0 , 0	10 , 13

when x = 4

	Empire State	AXA center
Empire State	17 , 11	0 , 0
AXA center	25 , 25	11 , 17

What your screen looks like:

On the top of the screen you will see whether you are acting as player **BLUE**, **RED** or **GREEN**. All players in the group will also observe the payoff matrix described above.

Player **GREEN** will also observe the **actual value of x** that computer chose at random. Then player **GREEN** will be asked to make an **announcement about value of x** that will be observed by players **BLUE** and **RED**. Player **GREEN** will finalize his choice by clicking "Continue" button on the bottom of the screen.

Here is how the screen will look like for player **GREEN**:

After announcement is made, **BLUE** and **RED** both see the announcement and they are asked to choose between Empire State and AXA center B by clicking on the appropriate box on the bottom of the screen and then "Confirm" button.

Here is how the screen for players **BLUE** and **RED** looks like:

You are player BLUE. You are choosing ROWS.

Payoff matrix for RED and BLUE players.

	Empire State	AXA center
Empire State	4x + 1 , x + 7	0 , 0
AXA center	0 , 0 if x<4 25 , 25 if x=4	x + 7 , 4x + 1

GREEN player announced that "x is 2".

Please make a choice:

Empire State	AXA center

You are player RED. You are choosing COLUMNS.

Payoff matrix for RED and BLUE players.

	Empire State	AXA center
Empire State	4x + 1 , x + 7	0 , 0
AXA center	0 , 0 if x<4 25 , 25 if x=4	x + 7 , 4x + 1

GREEN player announced that "x is 2".

Please make a choice:

Empire State	AXA center

After both **RED** and **BLUE** players have made their choices, the following information will be observed by all players:

1) **actual value of x** chosen by computer
2) **announced value of x** made by **GREEN**

3) payoff matrix with **ACTUAL value of x** substituted in
4) **cell with relevant payoffs**, determined by the choices made by **RED** and **BLUE,** payoff of **GREEN** player equals the sum of payoffs of **BLUE** and **RED** players.

Then you will proceed to the next round which will identical to the round you just finished except that at the beginning of the new round a new value of **x** will be chosen.

Payment
The number of tokens you earn in this experiment will be converted to the US dollars using the conversion rate of 20 tokens = $1. In addition you will receive the participation fee of $5 if you complete the experiment.

E: Instructions for Real Announcers Unrestricted Treatment

This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a substantial amount of money, which will be paid to you at the end of the session.

The experiment consists of 20 identical decision rounds. At the beginning of the experiment you will be randomly matched with two other subjects participating in the experiment. One subject in your group will be assigned to be player **GREEN**; the other subject will be player **RED** and the third subject – player **BLUE.** At the top of the screen you will be told whether you are acting as player **GREEN, RED** or **BLUE.** Subjects in your group and the roles assigned to them will not change for the whole experiment. The identity of the subjects in your group will never be revealed to you and subjects in your group will never know your identity.

The currency in this experiment is called tokens. All payoffs are denominated in this currency. The total amount of tokens you earn in the experiment will be converted into US dollars and paid to you at the end of the experiment. The conversion rate is 20 tokens = $1. In addition you will receive $5 participation fee if you complete the experiment. You will receive all the payments at the end of the experiment.

Your decision in each round

Each round of this experiment has the following flow of events:

- At the beginning of each round the computer will choose randomly a number which we will call **x**. Number **x** can take four possible values: 1, 2, 3 or 4 – all occurring with equal chances. This means that the probability that 1 is chosen is equal to the probability that 2 (3, 4) is chosen and equals 25%.

- Number **x** chosen by the computer is observed only by the player **GREEN**. Players **BLUE** and **RED** don't get to see the value of **x** drawn.

- After **GREEN** observes value of **x**, he makes an announcement about value of x, which is observed by both **RED** and **BLUE** players. The announcement can be any of the numbers. i.e. "x is 1", "x is 2", "x is 3" or "x is 4" as well as any combination of these numbers, i.e. "x is 2 or 4", "x is 2, 3 or 4", "x is 1, 2 or 3" etc. On the screen, **GREEN** player will see four possible values of x (1, 2, 3 and 4) and will be asked to choose which values of x to announce to players **RED** and **BLUE**. There is a SELECT button adjacent to each number. If you would like to include a particular number in your announcement, please press SELECT button near it and the dark frame will appear indicating that this number is selected. There is also an UNSELECT button near each number which allows you to unselect the number that you don't want to include in your announcement. Remember you can choose as many numbers as you like. Once you made your selection, please click CONTINUE button and you will observe the announcement you chose. If you happy with this announcement, please click CONFIRM AND PROCEED button. If you want to change your announcement, you can click CHANGE ANNOUNCEMENT button and select again values you want to announce.

- After the announcement is made, **RED** and **BLUE** each choose one of two locations: Empire State Building or AXA center in the decision problem described below. Both players **RED** and **BLUE** will make their choice without knowing what the other player has chosen and their payoffs will depend on the choices they make and the true value of **x**. You can think of the following situation: two people (players **RED** and **BLUE**) decided to meet somewhere in New York. Unfortunately, they forgot to decide where exactly they are meeting and they have no way to communicate with each other. So, in each round players **RED** and **BLUE** independently choose one of two possible locations: Empire State Building, which is the New York landmark or AXA center.

Payoffs

The payoff of each subject in a particular round depends on the number **x** chosen by the computer, and the options chosen by the **RED** and **BLUE** players. Table below summarizes the payoffs of players **RED** (column-chooser) and **BLUE** (row-chooser).

Payoff of player GREEN is the sum of payoff of RED and BLUE:

<div align="center">

player RED

</div>

		Empire State	AXA center
player BLUE	**Empire State**	$4x + 1$, $x + 7$	0 , 0
	AXA center	0 , 0 if $x < 4$ 25 , 25 if $x = 4$	$x + 7$, $4x + 1$

Here is how to read this payoff table. The table has four cells or boxes each determined by the choices made by player **BLUE** and player **RED**. For example, if both players choose Empire State, then the payoffs for each subject are given by the cell in the upper left hand corner of the table. In this cell there are two payoffs, one on the left and one on the right. The first payoff, (4**x** + 1), is the payoff to player **BLUE** and the second, (**x** + 7), is the payoff to player **RED**. The payoff of **GREEN** player is the sum of payoffs of **BLUE** and **RED**: 4**x**+1+**x**+7 = 5**x**+8. If player **BLUE** chose Empire State and player **RED** chose AXA, the relevant cell would be the upper right hand corner cell and all players get zero tokens.

Note that your payoff depends on the **x** that was chosen by the computer. For example, say that **x** = 3 and both players chose Empire State. Then the payoff to the **BLUE** player would be 13, payoff to the **RED** player would be 10 and payoff to the **GREEN** player would be 23. If **x** = 1 and the same choices were made, then the **BLUE** player would get 5, **RED** player would get 8 and **GREEN** player would get 13. Finally, note that when **BLUE** player chooses AXA center and **RED** player chooses Empire State, payoffs depend on **x** in a special way. When **x** = 4, both **BLUE** and **RED** players get 25 tokens and **GREEN** player gets 50 tokens. If, on the other hand, **x** is 1, 2 or 3 then all players get zero tokens.

Players RED and BLUE will not know the exact value of x before they get to choose between Empire State and AXA center. Instead, they will observe an announcement describing x, made by GREEN.

Player GREEN can make any announcement describing the value of x. Recall, that GREEN observes the actual value of x drawn randomly by the computer. Also, recall that payoff of GREEN equals to the sum of payoffs of RED and BLUE, which depend on the actual value of x chosen by the computer and options chosen by RED and BLUE.

Here is how the payoff matrix look like for each value of x

when x = 1

	Empire State	AXA center
Empire State	5 , 8	0 , 0
AXA center	0 , 0	8 , 5

when x = 2

	Empire State	AXA center
Empire State	9 , 9	0 , 0
AXA center	0 , 0	9 , 9

when x = 3

	Empire State	AXA center
Empire State	13 , 10	0 , 0
AXA center	0 , 0	10 , 13

when x = 4

	Empire State	AXA center
Empire State	17 , 11	0 , 0
AXA center	25 , 25	11 , 17

What your screen looks like:

On the top of the screen you will see whether you are acting as player **BLUE**, **RED** or **GREEN**. All players in the group will also observe the payoff matrix described above.

Player **GREEN** will also observe the **actual value of x** that computer chose at random. Then player **GREEN** will be asked to make an **announcement about value of x** that will be observed by players **BLUE** and **RED**.

Here is how the screen will look like for player **GREEN**:

This is period 1 out of 20.
You are player **GREEN**. Your payoff is the sum of the payoffs obtained by players RED and BLUE in your group.

Payoff matrix for RED and BLUE players.

	Empire State	AXA center
Empire State	4x + 1 , x + 7	0 , 0
AXA center	0 , 0 if x<4 25 , 25 if x=4	x + 7 , 4x + 1

Value of x is 4.

Please choose which values of x you want to announce to players RED and BLUE
you can check as many values as you like

1	Select	Unselect
2	Select	Unselect
3	Select	Unselect
4	Select	Unselect	Continue

After announcement is made, **BLUE** and **RED** both see the announcement and they are asked to choose between Empire State and AXA center by clicking on the appropriate box on the bottom of the screen and then "Confirm" button.

Here is how the screen for players **BLUE** and **RED** looks like:

This is period 1 out of 20.
You are player BLUE. You are choosing ROWS.

Payoff matrix for RED and BLUE players.

	Empire State	AXA center
Empire State	$4x + 1$, $x + 7$	0 , 0
AXA center	0 , 0 if x<4 25 , 25 if x=4	$x + 7$, $4x + 1$

GREEN player announced that "x is 2".

Please make a choice:

| Empire State | AXA center |

This is period 1 out of 20.
You are player RED. You are choosing COLUMNS.

Payoff matrix for RED and BLUE players.

	Empire State	AXA center
Empire State	$4x + 1$, $x + 7$	0 , 0
AXA center	0 , 0 if x<4 25 , 25 if x=4	$x + 7$, $4x + 1$

GREEN player announced that "x is 2".

Please make a choice:

| Empire State | AXA center |

After both **RED** and **BLUE** players have made their choices, the following information will be observed by all players:

5) **actual value of x** chosen by computer
6) **announced value of x** made by **GREEN**
7) payoff matrix with **ACTUAL value of x** substituted in
8) **cell with relevant payoffs**, determined by the choices made by **RED** and **BLUE,** payoff of **GREEN** player equals the sum of payoffs of **BLUE** and **RED** players.

Then you will proceed to the next round which will identical to the round you just finished except that at the beginning of the new round a new value of **x** will be chosen.

Payment
The number of tokens you earn in this experiment will be converted to the US dollars using the conversion rate of 20 tokens = $1. In addition you will receive the participation fee of $5 if you complete the experiment.

F: Instructions for Values-Words Modified Treatment

This is an experiment in decision-making. If you follow the instructions and make good decisions, you can earn a substantial amount of money, which will be paid to you at the end of the session.

The experiment in total consists of two parts: 20 identical decision rounds in each part. Before the start of each part you will be given the instructions for the following 20 decision rounds of the experiment.

The currency in this experiment is called tokens. All payoffs are denominated in this currency. Your payment in the experiment will consist of several parts: you will earn tokens for each part of the experiment, the total amount of which will be converted into US dollars using the rate **20 Tokens = $1**. In addition, you will get $5 participation fee if you complete the experiment. Payments for each part of the experiment are independent of each other and will be described to you in detail in the instructions. You will receive all the payments at the end of the experiment.

At the beginning of each round you will be randomly matched with another person participating in the experiment. One person in pair will be assigned to be **player BLUE** and the other **player RED**. The identity of the subject you are paired with will never be revealed to you and the subject you are paired with will never know your identity. Once the round is over, you will be re-matched with another person and again one of you will be assigned to be player BLUE and another player RED. On the top of the screen, you will be always told whether you are acting as player BLUE or RED in this round.

Instructions for the first part of the experiment.

Your decision in each round

Your task in each round is to choose one of two locations: Empire State Building or AXA center. The subject you are paired with also chooses between Empire State Building and AXA center. Each subject in the pair will make his/her choice without knowing what the other subject chooses. You can think of the following situation: you and the subject you are paired with decided to meet somewhere in New York. Unfortunately, you forgot to decide where exactly you are meeting and you have no way to communicate with each other. So, in each round you and your pair member independently choose one of two possible locations: Empire State Building, which is the New York landmark or AXA center.

Your payoff in each round depends on the choices made by you and your pair member and number **x** randomly chosen by the computer at the beginning of each round. Number x can take four possible values: 1, 1.5, 3 or 4 – all occurring with equal chances. This means that the probability that 1 is chosen is equal to the probability that 1.5 (3, 4) is chosen and equals 25%.

Table below summarizes payoffs of both players, where player BLUE is row-chooser and player RED is column-chooser.

<p align="center"><strong style="color:red">player RED</p>

		Empire State	AXA center
player BLUE	**Empire State**	$4x + 1$, $x + 7$	0 , 0
	AXA center	$0 , 0$ if $x < 4$ $25 , 25$ if $x = 4$	$x + 7$, $4x + 1$

Here is how to read this payoff table. The table has four cells or boxes each determined by the choices made by subjects 1 and 2. For example, if both players choose Empire State, then the payoffs for each subject are given by the cell in the upper left hand corner of the table. In this cell there are two payoffs, one on the left and one on the right. The first payoff, $(4x + 1)$, is the payoff to player BLUE and the second, $(x + 7)$, is the payoff to player RED. If player BLUE chose Empire State and player RED chose AXA, the relevant cell would be the upper right hand corner cell and each subject gets zero tokens.

Note that your payoff depends on the **x** that was chosen by the computer. For example, say you were assigned to be player BLUE and chose AXA center. Say, also, that the subject you are paired with choose Empire State and computer randomly chose **x** = 4. Then both you and the subject you are paired with will get 25 tokens. If, on the other hand, computer chose x = 1, then both you and your pair member will get 0 tokens.

Before you and the person you are paired with will make the choice, you will both observe the number **x** that was picked by the computer. Also you will be shown the relevant payoff table with number **x** being substituted in the original payoff matrix described above. Then you will make your choice. You will finalize your choice by clicking the "Continue" button.

Information Feedback

After both you and the subject you are paired with have made their choices you will get to observe the actions taken by you and your pair member, and both of your payoffs. You will then proceed to the next round which will be identical to the round you just finished except that at the beginning of the new round your will be randomly re-matched with another subject and a new value of **x** will be chosen and the associated payoff table shown to you. The **x** chosen for any given round will be independent of that chosen in any previous round. In other words, it will again be a number 1, 1.5, 3 or 4 with equal chances for each number to be chosen.

To determine your payment for the first part of the experiment we will sum up the number of tokens you earned in each of 20 rounds.

Instructions for the second part of the experiment.

In this part of the experiment everything stays the same as in part 1 except for one thing: you will not know the exact value of **x** before you get to choose between Empire State and AXA center. Instead, you, and the subject you are paired with, will hear one of the two possible announcements describing **x**: "**x** is low" or "**x** is high".

Information Feedback

After the announcement is made, both you and your pair member will choose between Empire State and AXA center. After both pair members made their choice you will observe the announcement about value of x, actual value of **x** picked by computer, payoff matrix with this value of **x** substituted in and the payoffs for this round. When a round is over you will proceed to the next round which will identical to the round you just finished except that you will be re-matched with another person and a new value of **x** will be chosen and a new announcement about its value will be made.

We will sum up the number of tokens you earned in each of 20 rounds. Your total earnings in this experiment consist of tokens earned in both parts of the experiment, which will be converted into US dollars using the conversion rate 20 tokens = $1 and participation fee of $5, which will be paid to you at the end of the experiment.