

Web Appendix to “Field Centipedes”

Ignacio Palacios-Huerta

London School of Economics

Oscar Volij

Ben-Gurion University

This Appendix collects the instructions used in the experiments of “Field Centipedes.” For Spanish-speaking individuals, the original instructions were in Spanish. For non-Spanish speaking individuals, the instructions were in English.

In section I of this Appendix, we provide the instructions used in the one-shot experiments both with chess players at the chess tournaments and with students at the Universidad del País Vasco, that is the experiments described in section II of “Field Centipedes.” The only difference in the instructions across the three tournaments is the heading of the instructions, which indicates the name of the tournament and the date. We include in this section the instructions given in the XXII Open International Chess Tournament Sestao 2006 in the Club Ajedrez Sestao on June 17-18, 2006. The heading of the instructions used with students only had the location (Universidad del País Vasco) and the month (September 2006).

In section II of this Appendix, we provide the instructions used in the experiments with ten repetitions whose protocol, design and results are discussed in section III of “Field Centipedes.”

Both sections I and II of this Appendix show the instructions given to the WHITE players. The instructions given to the BLACK players are the same except for the words in brackets or otherwise noted.

I. EXPERIMENTAL INSTRUCTIONS FOR ONE-SHOT CENTIPEDE GAME EXPERIMENTS

(in Section II of “Field Centipedes”)

XXII Open International Chess Tournament Sestao 2006

Club Ajedrez Sestao • June 17-18, 2006

Decision Making Experiment

INSTRUCTIONS

Thank you for participating in this experiment in decision-making behaviour. You will be paid for your participation in cash, immediately at the end of the experiment. What you earn depends partly on your decisions and partly on the decisions of the player with whom you will play in a game. A research foundation has contributed the money for this study.

It is critically important that you strictly follow the rules of this experiment. If you disobey the rules, we will have to ask you to leave the experiment.

In case you have any questions after reading these instructions, please let the supervisor know and he will answer them.

Description of the task

You will be participating in a simple game. The game will be played only once. It requires 2 players, one will be called the WHITE player and the other the BLACK player, which will take turns in sequence.

You will either play as the WHITE player or as the BLACK player.

When it is his turn to play, a player has to choose between two decisions:

- STOP
- or
- CONTINUE.

As soon as any player chooses to STOP, the game ends.

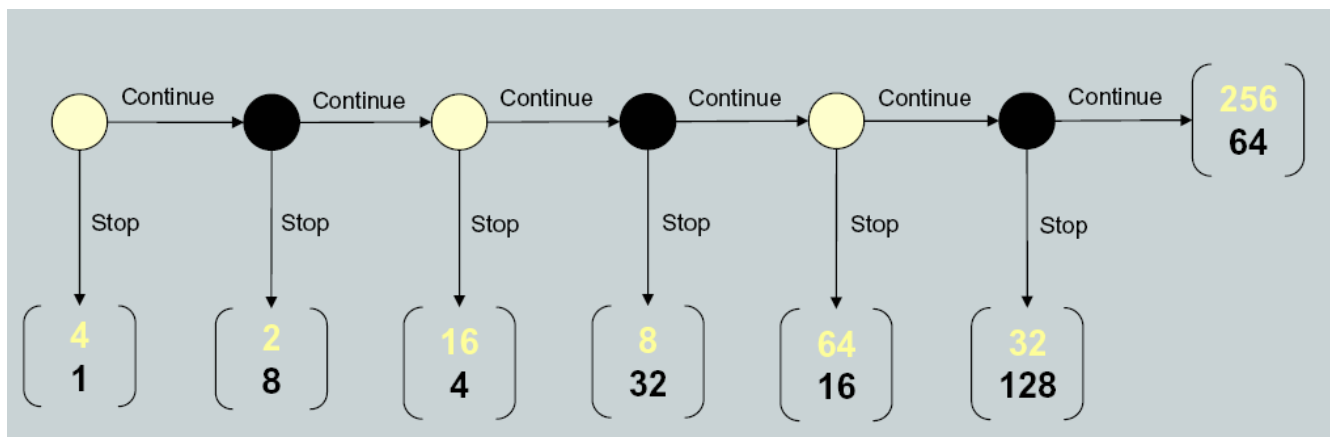
If a player chooses to CONTINUE, then the other player will be faced with the same choice: STOP or CONTINUE. If he is the last player in the sequence, the game will end no matter what decision he makes.

The WHITE player will begin, that is he must make the first decision. Each player will have a maximum of three decisions to make. As indicated above, the game will end as soon as one player chooses to STOP.

Below is a pictorial representation of the game. The color of the circles (WHITE or BLACK) identifies which player makes a decision, either STOP or CONTINUE, given that the game has progressed to that circle. The arrows pointing right and down represent the two decisions. The terminal brackets contain the payoff information. The game will end at one of these seven terminal brackets.

All the payoffs are in Euros. As you may see, the top number in each bracket is in WHITE color; it identifies the payoff for the WHITE player. The bottom number is in BLACK color, and identifies the payoff for the BLACK player.

The game will start with the WHITE player at the farthest left decision node.



Please take some time now to study the game and its possible payoffs.

Players

You have been selected to play as the WHITE [BLACK] player, so you [the White Player] will begin the game at the farthest left decision node.

The BLACK [WHITE] player is right now in a separate room in this building. He has read the same instructions you are reading under the supervision of an experimenter. He has been notified that he will play as a BLACK [WHITE] player, and that you are right now in a different room. You will not know his identity, nor will he know your identity. You will be in touch exclusively through SMS communication using this telephone/blackberry which will be operated by the experimenter under your supervision. Any other form of communication during the entire experiment is strictly forbidden.

Procedure

To make your decision, please do the following:

1. Circle the action you want to take in the figure that is enclosed in the last page of these instructions, that is circle either the word STOP or the word CONTINUE.
2. Then, the experimenter will send a SMS to the Black [White] player using this telephone/blackberry indicating to him what your choice is. You may check that the experimenter does send him your choice.
3. The Black [White] player will then send you an SMS with the word “OK” confirming that he has received your SMS.
4. When is your turn to play:
 - if you choose to STOP, the game will end;
 - if you choose to CONTINUE, then it is his turn [unless you are at the very last node]. He will then have to make his decision, and you will have to wait until he communicates this decision to you through a SMS.
5. When you receive his decision, send him back a SMS reply with the word “OK” to indicate that you have received his decision. Circle his decision in the figure, that is circle the word STOP or CONTINUE. If he has decided to STOP, the game will be over. But if he has decided to CONTINUE, it is then your turn to make a decision (unless, of course, he was in his last decision node).¹ Then proceed as you did before.

1. Sentence in parenthesis omitted for the Black player.

Summary: Summing up, the game follows the following basic sequence. The WHITE player begins and makes his decision. If he chooses to STOP then the game is over. If he chooses to CONTINUE, then the BLACK player will make his choice. Again, if he then chooses to STOP the game is over. But if he chooses to CONTINUE, then it is the WHITE player's turn to move. These sequential choices continue until the trial ends, that is until either you stop it or he stops it, or until the final node (the one farthest right one) is reached.

Final Step of the Procedure: As soon as the game ends, you must sign your name in the figure where you have circled your choices and the choices of the Black [White] player, give it to the supervisor, and he will then pay you both your payoffs in cash.

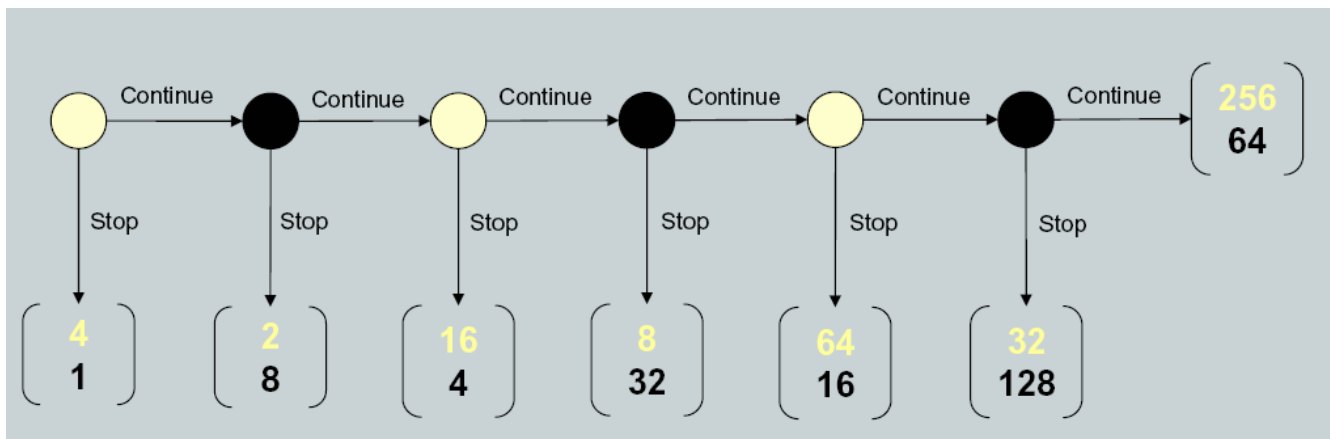
Do you have any questions?

Please indicate to the supervisor that you have completed reading the instructions, and that you have no more questions about how to proceed. The supervisor will then start the experiment in just a few minutes.

Remember, you are the WHITE [BLACK] player so you [the WHITE player] will begin the game.

[Therefore, you must wait until you get a SMS message with the first decision he makes. Send him a SMS with the word "OK" after you receive it. If chooses to stop, the game is over; if he chooses to continue, then make your choice by proceeding as indicated in the instructions.]

Figure where to circle YOUR CHOICES and the CHOICES OF THE BLACK [WHITE] PLAYER:



Sign your name here:

II. EXPERIMENTAL INSTRUCTIONS FOR CENTIPEDE GAME LABORATORY

EXPERIMENTS WITH REPETITIONS (in Section III in “Field Centipedes”)

Decision Making Experiment

INSTRUCTIONS

Thank you for participating in this experiment in decision-making behaviour. You will be paid for your participation in cash. What you earn depends partly on your decisions and partly on the decisions of the player with whom you will play in a game. A research foundation has contributed the money for this study.

It is critically important that you strictly follow the rules of this experiment. If you disobey the rules, we will have to ask you to leave the experiment.

In case you have any questions after reading these instructions, please let the supervisor know and he will answer them.

A. DESCRIPTION OF THE TASK

You will be participating in a simple game. Next, we describe the game, and later we describe how it will actually be played.

The game requires 2 players, one will be called the WHITE player and the other the BLACK player, which will take turns in sequence. You will either play as the WHITE player or as the BLACK player.

When it is his turn to play, a player has to choose between two decisions:

- STOP
- or
- CONTINUE.

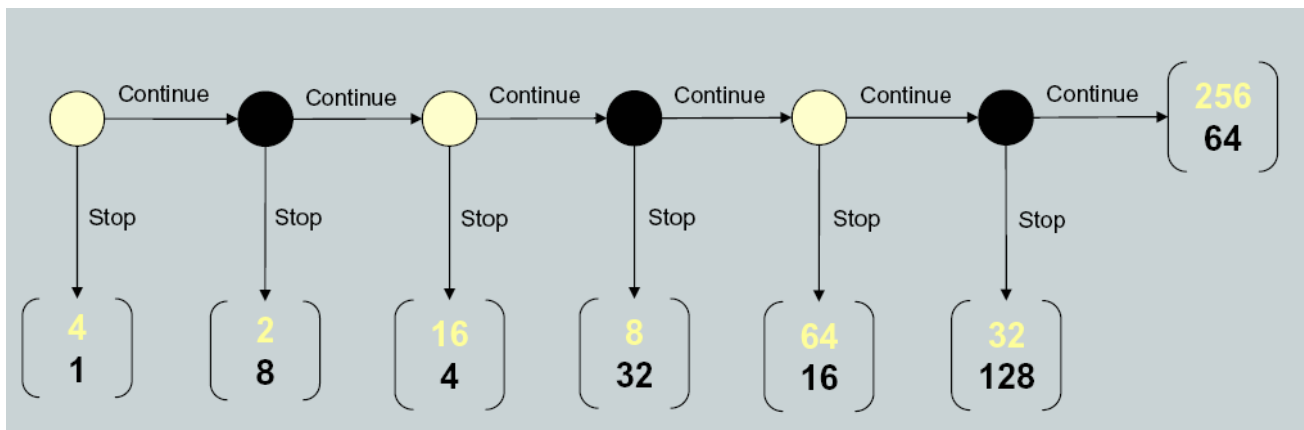
As soon as any player chooses to STOP, the game ends. If, on the other hand, a player chooses to CONTINUE, then the other player will be faced with the same choice: STOP or CONTINUE. If he is the last player in the sequence, the game will end no matter what decision he makes.

The WHITE player will begin, that is he must make the first decision. Each player will have a maximum of three decisions to make. As indicated above, the game will end as soon as one player chooses to STOP.

Below is a pictorial representation of the game. The color of the circles (WHITE or BLACK) identifies which player makes a decision, either STOP or CONTINUE, given that the game has progressed to that circle. The arrows pointing right and down represent the two decisions. The terminal brackets contain the payoff information. The game will end at one of these seven terminal brackets.

All the payoffs are in Euros. As you may see, the top number in each bracket is in WHITE color; it identifies the payoff in euros for the WHITE player. The bottom number is in BLACK color, and identifies the payoff in euros for the BLACK player.

The game will start with the WHITE player at the farthest left decision node.



Please take now some time to study the game and its possible payoffs.

[[The experimenter gives the subjects 1 minute]]

[[This paragraph was included for treatments I and IV, but not for treatments II and III]]

Next, subjects will be divided into two groups, containing 10 subjects each. As will be explained below, after this division each of you will be taken individually to a private room where you will play the game, after the experimenter gives you further instructions.

The groups will be labeled the WHITE group and the BLACK group. To determine which color are you, please select an envelope as the experimenter passes by you.

[[Experimenter passes out envelopes]]

Please open the envelope. You will find a small card that is either WHITE or BLACK. If you got WHITE, you will be WHITE for the whole experiment. If you got BLACK, you will be BLACK for the whole experiment. Please remember which color are you.

An experimenter will take you now to an individual room where you will play the game after receiving further instructions. Please, remain silent, and follow the experimenter and his indications at all times.

Do you have any questions?

[Instructions given after subjects have been placed in individual rooms]

B. INSTRUCTIONS ABOUT HOW TO PLAY THE GAME

Players and Games

Twenty subjects have been divided into two groups, containing 10 subjects each. The groups may be labeled the WHITE group, which has 10 WHITE subjects, and the BLACK group, which has 10 BLACK subjects. You are one of the members of the WHITE [BLACK] group. Each subject of each group is, like you, in a different individual room with no contact with any other player.

The BLACK [WHITE] group is formed by ten college students/chess players and your WHITE [BLACK] group by ten college students/chess players.¹

The experiment consists of 10 games, that is you will play 10 times the game just described.

In each game you are matched with a different player of the opposite color from yours. That is, since you are WHITE [BLACK] player, in each game you are matched with a different BLACK [WHITE] player. Given that there are ten subjects of each color, this means that you will be matched with each of the subjects of the other color exactly once.

1. In treatment I, this sentence indicates that both the White and Black groups are formed by college students, in treatment II that the White group is formed by college students and the Black group by chess players, in treatment III that the White group is formed by chess players and the Black group by college students, and in treatment IV that both the White and Black groups are formed by chess players.

As indicated above, each of BLACK and WHITE players is right now in a separate room in this building, and each of them knows the color he is. They have all read the same instructions you are reading under the supervision of an experimenter. You will not know the identity of the players with whom you will be matched, nor any of them will ever know your identity. You will be in touch exclusively through SMS communication using this telephone/blackberry,

[The experimenter shows it to the subject]

which will be operated by the experimenter under your supervision. Any other form of communication during the entire experiment is strictly forbidden. The experimenter will provide the numbers of all BLACK [WHITE] players for the SMS messages.

Procedure to play the first game

You have been selected to play as the WHITE [BLACK] player, so you [the White Player] will begin the game at the farthest left decision node.

Here we describe the procedure to play the first game, and below how to play the rest of the 10 games.

In order to make your decision, you must do the following:

1. Circle the action you want to take in the figure that is enclosed in the last page of these instructions, that is circle either the word STOP or the word CONTINUE.
2. Then, the experimenter will send a SMS to the Black [White] player using this telephone/blackberry indicating to him what your choice is. You may check that the experimenter does send him your choice.
3. The Black [White] player will then send you an SMS with the word “OK” confirming that he has received your SMS.
4. When is your turn to play:
 - if you choose to STOP, the game will end;
 - if you choose to CONTINUE, then it is his turn [unless you are at the very last node]. He will then have to make his decision, and you will have to wait until he communicates this decision to you through a SMS.

5. When you receive his decision, send him back a SMS reply with the word “OK” to indicate that you have received his decision. Circle his decision in the figure, that is circle either the word STOP or CONTINUE. If he has decided to STOP, the game will be over. But if he has decided to CONTINUE, it is then your turn to make a decision (unless, of course, he was in his last decision node).² Then proceed as you did before.

Summary of the game: The game always follows the same basic sequence. The WHITE player begins and makes his decision. If he chooses to STOP then the game is over. If he chooses to CONTINUE, then the BLACK player will make his choice. Again, if he then chooses to STOP the game is over. But if he chooses to CONTINUE, then it is the WHITE player’s turn to move. These sequential choices continue until the trial ends, that is until either you stop it or he stops it, or until the final node--the one farthest right one--is reached.

Final step of the procedure: As soon as the game ends, you must sign your name in the figure where you have circled your choices and the choices of the Black [White] player, give it to the supervisor, and he will then pay you your payoff in cash. The player with whom you played in the game will do the same (record his and your choices, sign his name and turn the sheet in to the experimenter that is with him) and he will give receive his payoff.

This is how the first game will be played.

Do you have any questions?

2. This sentence in parenthesis was omitted in the Black player instructions.

Procedure to play the rest of the games

The rest of the games will be played exactly like the first one. The experimenter will give you a different experiment sheet for each of the games like the one you have at the end of these instructions where you will have to circle your choices and those of the other player. The experimenter will use, under your supervision, the same telephone/blackberry to get in touch through SMS communication with a different BLACK [WHITE] player each time. As indicated earlier, the experimenter will provide the SMS number for each of the ten games.

After each one of the ten games ends, the experimenter will pay you in cash your payoff.

Do you have any questions?

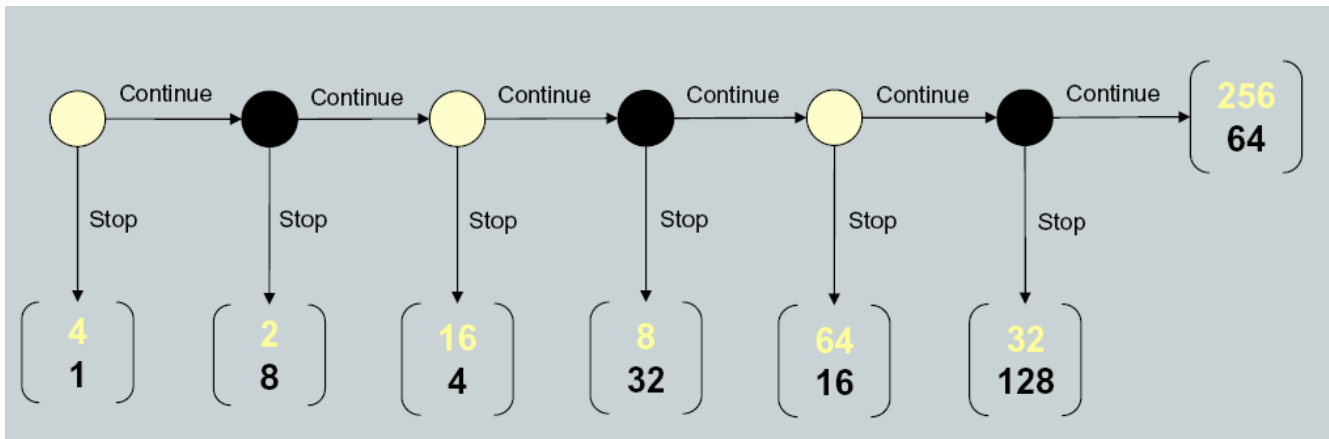
Please indicate to the supervisor that you have completed reading the instructions, that you have no more questions about how to proceed and that you are ready to play the game. The supervisor will then start the experiment in just a few minutes.

Remember, you are the WHITE [BLACK] player so you [the WHITE player] will begin the game.

[Therefore, you must wait until you get a SMS message with the first decision he makes. Send him a SMS with the word “OK” after you receive it. If chooses to stop, the game is over; if he chooses to continue, then make your choice by proceeding as indicated in the instructions.]

EXPERIMENT SHEET

Circle YOUR CHOICES and the CHOICES OF THE BLACK [WHITE] PLAYER in this figure:



Write your name here:

Your signature:

HAND THIS SHEET BACK TO THE EXPERIMENTER WHEN THE GAME IS OVER

For experimenter use only

ID# White player:

ID# Black player:

Treatment-Session-Game number: