Instructions

This is an experiment in the economics of decision-making. A research foundation has 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 experiments. 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 earnings. At this time, you will receive £5 as a participation fee (simply for showing up on time). Details of how you will make decisions will be provided below.

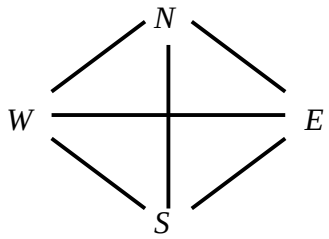
During the experiment we will speak in terms of experimental tokens instead of pounds. Your earnings will be calculated in terms of tokens and then exchanged at the end of the experiment into pounds at the following rate:

2 Tokens = 1 Pound

In this experiment, you will participate in 20 independent and identical (of the same form) rounds, each divided into two stages: a communication stage, which consists of 2 decision-turns, and an action stage, which consists of a single decision-turn. In each round you will be assigned to a position in a four-person network. In each decision-turn of a communication stage, you will be able to communicate with the other participants to whom you are connected in the network. That is, you will be able to send a message to the connected participants and receive messages from them.

Before the first round, you will be randomly assigned to one of the four network positions labeled *N*, *W*, *S*, or *E*. One fourth of the participants in the room will be designated as type-*N* participants, one fourth as type-*W* participants, one fourth as type-*S* participants and one fourth as type-*E* participants. Your type (*N*, *W*, *S*, or *E*) depends solely upon chance and will remain constant in all rounds throughout the experiment.

When you are asked to send your first message, the network and your type will be displayed at the top left hand side of the screen (see Attachment 1). It is also illustrated in the diagram below. A line segment between any two types indicates that the two types are connected and that they can communicate with each other: each can send a message to the other and receive a message from the other.



Note that in the network used in this experiment, each of the four type participants can communicate with all the other types.

A decision round

Next, we will describe in detail the process that will be repeated in all 20 rounds. Each round starts by having the computer randomly form four-person groups by selecting one participant of type-*N*, one of type-*W*, one of type-*S* and one of type-*E*, per group.

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 participant of type-*N* is equally likely to be chosen for that group, and similarly with participants of type-*W*, type-*S* and type-*E*. Groups are formed by the computer.

Each round in a group consists of two stages: first, communication stage, and second, action stage. Your final earnings will depend only on what you choose and what others in your group choose in the action stage. Four actions, *n*, *w*, *s* and *e*, are available in the action stage. The communication stage that precedes the action stage involves each participant sending messages. Four messages are available in the communication stage, and they shall be labeled by the same letters, *n*, *w*, *s* and *e*, as the actions available in the action stage. A message may indicate your intended action in the subsequent action stage. However, you do not have to follow your message when it comes to making an action choice. We now describe each of these two stages in more detail.

A communication stage

The communication stage itself consists of two decision-turns. At the beginning of the first decision-turn, you will be asked to choose a message – *n*, *w*, *s* or *e*. You will see four boxes, each labeled with a possible message, at the bottom left hand side of the screen. When you are ready to make your decision, simply use the mouse to click on one of them. You will then see a small pop-up window asking you to confirm your decision (see Attachment 2).

Once everyone in your group has confirmed a decision, each of the four type participants in your group will receive the messages chosen by all the other type participants. For example, if you are type-*E* participant, you will be informed of which message each of type-*N*, type-*W*, and type-*S* participants has chosen. This information is displayed at the middle right hand side of the screen (see Attachment 1). This completes the first of two decision-turns in the communication stage of this round.

This process will be repeated in the second decision-turn of the communication stage. Note again that when everyone in your group has made a decision in each decision-turn, your chosen message will be sent to each type participant in your group. Likewise, you will receive the messages chosen by all the other type participants.

An action stage

When the communication stage ends, each participant in your group will be asked to choose one action out of the four possible actions, *n*, *w*, *s*, or *e*, without knowing the action selected by each other. You will see four boxes, each labeled with a possible action, at the bottom left hand side of the screen (see Attachment 3). When you are ready to make your decision, simply use the mouse to click on one of them. This will end the action stage. When the action stage ends, the computer will inform everyone the choices of actions made by all the participants in your group and the earnings (see Attachment 4).

After you observe the results of the first round, the second round will start the computer randomly forming new groups of four participants. The process will be repeated until all the 20 independent and identical rounds are completed. At the end of the last round, you will be informed the experiment has ended.

Earnings

Your earnings in each round are determined solely by the action you choose and the actions the other participants in your group choose in the action stage. The messages you and other type participants have chosen in the preceding communication stage are irrelevant to earnings.

- If all the participants in your group choose action *n*, type-*N* participant in your group will receive 3 tokens and each of the other types (type-*W*, type-*S*, and type-*E*) in your group will receive 1 token.
- If all the participants in your group choose action *w*, type-*W* participant in your group will receive 3 tokens and each of the other types (type-*N*, type-*S*, and type-*E*) in your group will receive 1 token.
- If all the participants in your group choose action *s*, type-*S* participant in your group will receive 3 tokens and each of the other types (type-*N*, type-*W*, and type-*E*) in your group will receive 1 token.
- If all the participants in your group choose action *e*, type-*E* participant in your group will receive 3 tokens and each of the other types (type-*N*, type-*W*, and type-*S*) in your group will receive 1 token.
- Otherwise, that is, if all the participants in your group do not choose a common action, every participant in your group will receive 0 token.

For example, if type-*S* participant chooses action *s* and all the other types choose action *e*, every participant will receive 0 token. This information on earnings is displayed at the top of right hand side of the screens in both the communication stage and action stage (see Attachment 1 and 3).

Your final earnings in the experiment will be the sum of your earnings over the 20 rounds. At the end of the experiment, the tokens will be converted into money. 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 last round.

Your participation in the experiment and any information about your earnings will be kept strictly confidential. Your payments receipt is the only place in which your name is recorded.

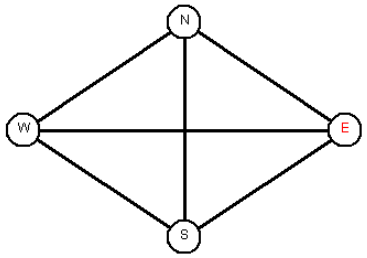
If there are no further questions, you are ready to start. An instructor will activate your program.

Attachment 1

Round

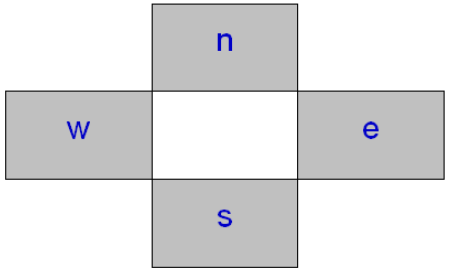
1 of 20

Stage 1 - Communication



You are a type- E participant

Please send other participants connected to you a message which may indicate your intended action in Stage 2



Payoffs in Stage 2

	N	E	S	W
All choose action n	3	1	1	1
All choose action e	1	3	1	1
All choose action s	1	1	3	1
All choose action w	1	1	1	3
Otherwise	0	0	0	0

Messages in Stage 1

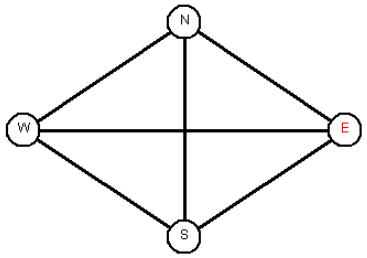
Turn	N	E	S	W
1	e	w	n	n

Attachment 2

Round

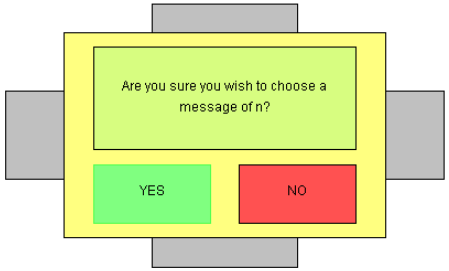
1 of 20

Stage 1 - Communication



You are a type- E participant

Please send other participants connected to you a message which may indicate your intended action in Stage 2



Payoffs in Stage 2

	N	E	S	W
All choose action n	3	1	1	1
All choose action e	1	3	1	1
All choose action s	1	1	3	1
All choose action w	1	1	1	3
Otherwise	0	0	0	0

Messages in Stage 1

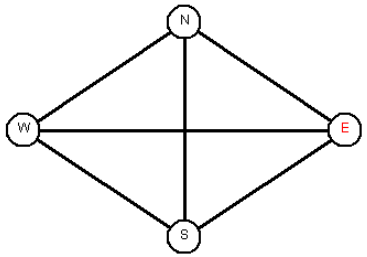
Turn	N	E	S	W
1	e	w	n	n

Attachment 3

Round

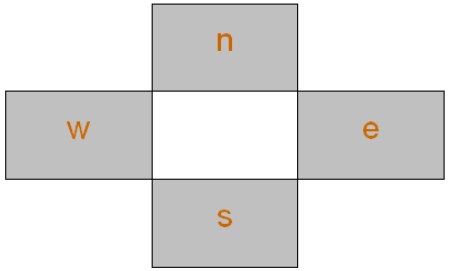
1 of 20

Stage 2 - Action



You are a type- E participant

Please choose your action



Payoffs in Stage 2

	N	E	S	W
All choose action n	3	1	1	1
All choose action e	1	3	1	1
All choose action s	1	1	3	1
All choose action w	1	1	1	3
Otherwise	0	0	0	0

Messages in Stage 1

Turn	N	E	S	W
1	e	w	n	n
2	s	n	e	w

Attachment 4

Round

1 of 20

You are a type-E participant. You chose the action e.

Action choices and payoffs of your group in this round are summarized below:

	N	E	S	W
Action	e	e	e	e
Payoff	0	0	0	0

Your total earnings so far are 0.

OK