

This is an experiment in the economics of decision making. The Department of Economics at Trinity University has provided funds for this research. If you follow the instructions and make good decisions, you can earn an appreciable amount of money. At the end of today's session, you will be paid your earnings in private and in cash.

**It is important that you remain silent and do not look at other people's work. If you have any questions, or need assistance of any kind, please raise your hand and an experimenter will come to you. If you talk, laugh, exclaim out loud, etc. you will be asked to leave and you will not be paid. We expect and appreciate your cooperation.**

During today's session you will be making a total of twenty (20) decisions about making links with other agents in a network. Your earnings for the session will depend on the choices you make for each of these 20 decisions. The agents in the networks will be simulated by the computer, and do not represent other participants in today's session. Therefore, the choices of the other participants in the session will not affect your earnings, nor will your choices affect the earnings of any other participant. The 20 decisions you will make are independent; the choice you make for each decision will have no effect on your earnings from the other choices you make for any other decision.

In each decision, you will be in a network with eight other simulated agents. You will begin with pre-existing links to four (4) of those eight agents. We will refer to these four agents as your neighbors. You will have the opportunity to form an additional link with another simulated agent who is not currently your neighbor. Your earnings for a decision will be the total benefit you receive from the links you have with other agents, minus the cost of forming a link if you choose to form one. We will now explain in more detail how these benefits and costs are determined.

Forming a link with another agent can be beneficial to you. The benefit of forming a link with an agent will differ from agent to agent and from decision to decision. You will not know in advance the benefit from forming a potential link. However, before you make your decision, you will be told, for each of your four neighbors, the other agents with whom that neighbor has a link, and the total benefits the neighbor receives from all those links, including his link to you. Although you will not know the breakdown of how each neighbor's total benefit is computed, the benefit your neighbor receives from a link with any given agent in the network is the same benefit as you would receive from a link with that same agent.

**Example.** Suppose your four neighbors are named *A*, *B*, *C*, and *D*. The following table summarizes a hypothetical arrangement of the links in the network.

	<b>You</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>Benefit</b>
<b>You</b>		Linked	Linked	Linked	Linked					
<b>A</b>	Linked			Linked		Linked	Linked			500
<b>B</b>	Linked				Linked			Linked	Linked	350
<b>C</b>	Linked	Linked					Linked	Linked		480
<b>D</b>	Linked		Linked			Linked	Linked		Linked	600

In this network, neighbor *A* has links with *C*, *E*, and *F*, in addition to you, and has a total benefit of 500. Neighbor *B* has links with *D*, *G*, and *H*, in addition to you, and has a total benefit of 350. Neighbor *C* has links with *A*, *F*, and *G*, in addition to you, and has a total benefit of 480. Neighbor *D* has links with *B*, *E*, *F*, and *H*, in addition to you, and has a total benefit of 600. Again, you will not know exactly how each of these benefits is derived, but you do know that the total benefit is the sum of benefits from the individual links. So, neighbor *A*'s total benefit of 500 is the sum of his benefit from his link with you, the benefit of his link with *C*, the benefit of his link with *E*, and the benefit of his link with *F*. Also, while you do not know, for example, the benefit of his link with *E*, you do know that if you choose to form a link with *E*, your benefit from that link will be the same as *A*'s benefit from his link with *E*.

Forming links with agents is costly. The cost of forming a link with an agent who is not currently your neighbor will differ from agent to agent and from decision to decision. The cost to you of forming a link with each agent who is not currently your neighbor will be told to you before you make your choice for each decision.

**Example (continued).** Suppose in the example above, the costs of forming a link are as follows:

<b>Link with</b>	<b>Costs</b>
E	35
F	40
G	25
H	30

You may choose not to form a new link, or to form a new link with one other agent. If you

choose to link with *E*, you will incur a cost of 35; if you choose to link with *F*, you will incur a cost of 40; if you choose to link with *G*, you will incur a cost of 25; or, if you choose to link with *H*, you will incur a cost of 30. The costs of forming a link are independent of the benefit from that link, so a high cost of forming a link need not indicate a high benefit, or vice versa. If you choose to make a link, your earnings for that decision will be computed as the sum of your benefits from your five links (your four initial neighbors plus the agent you choose to link with), minus the specified cost of the link you choose to form. You always have the option of not forming a link. If you choose not to form a link, your earnings for that decision will be computed as the sum of your benefits from your four existing links with your neighbors.

For each decision, this information will be summarized on a decision screen like the one shown below. This sample decision screen shows the same information presented in the example above.

**You are neighbors with A, B, C, and D**

	You	A	B	C	D	E	F	G	H	Benefit
You		Linked	Linked	Linked	Linked					
A	Linked			Linked		Linked	Linked			500
B	Linked				Linked			Linked	Linked	350
C	Linked	Linked					Linked	Linked		480
D	Linked		Linked			Linked	Linked		Linked	600

Select a link to create

- Do not create a new link
- Create link with E for a cost of 35
- Create link with F for a cost of 40
- Create link with G for a cost of 25
- Create link with H for a cost of 30

**Confirm**

The top matrix in the decision screen shows the agents with whom each of your four neighbors is linked, and the total benefit each of your neighbors receives from those links. Below that matrix is a list of the possible links you can form, including an option not to form a link. To indicate which link to form, click on the box to the left of the name of the agent with whom you want to form the link. The name of the agent you have selected will change to boldface type, a check mark will appear in the box to the left of your selection, and the text on the button at the bottom of the

screen will change to read “Confirm link with” and the agent’s name. If you click on the selection not to form a link, that entry will appear in boldface type, a check mark will appear in the box to the left of that selection, and the button will change to read “Confirm choice of no link.” If you make a mistake, or change your mind, you can click on any other choice; your decision will only be final when you click the “Confirm...” button. Once you have finalized the choice you want to make, click the “Confirm...” button to indicate your final choice.

After you have confirmed your choice, the decision screen for the next decision will be shown. Recall that all decisions are independent. In each decision, the set of neighbors you will have will be different, the links your neighbors will have will be different, and the benefits and costs of forming a link with each agent will be different. In addition, the choices you make are independent; choices you made previously do not affect the current decision, and each choice you make affects only your earnings for the current decision, and not for any future decisions.

After you have made your choices for each of the 20 decisions, a screen will appear summarizing your total earnings for each decision and reporting your total earnings for the entire session. Once you have completed all 20 decisions, please wait patiently for further instructions.

If you have any questions, please raise your hand and an experimenter will come to you.