

Online Appendix (not for publication):

**How Did Distributional Preferences
Change During the Great Recession?**

Table 1: Impacts of Environments on Average Fraction of Tokens Allocated to *Self*

Dependent Variable: Average Fraction of Tokens Allocated to Self, $\pi_s/(\pi_s + \pi_o)$

<i>Sample:</i>	ALL SUBJECTS			CCEI ≥ 0.8			CCEI ≥ 0.9		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Panel A: Without session-level controls</i>									
Recession	0.144*** (0.014)	.	0.115*** (0.01)	0.164*** (0.02)	.	0.125*** (0.016)	0.184*** (0.021)	.	0.143*** (0.017)
Loss	.	0.106*** (0.03)	0.044*** (0.012)	.	0.124*** (0.034)	0.059*** (0.016)	.	0.135*** (0.04)	0.063*** (0.023)
Constant	0.8*** (0.01)	0.855*** (0.03)	0.8*** (0.01)	0.806*** (0.015)	0.868*** (0.033)	0.806*** (0.015)	0.814*** (0.015)	0.888*** (0.037)	0.813*** (0.015)
Session-level-controls	No	No	No	No	No	No	No	No	No
Observations	289	289	289	258	258	258	225	225	225
R^2	.	.	.	.	.	.	.	.	.
<i>Panel B: Including session-level controls</i>									
Recession	0.144*** (0.01)	.	0.121*** (0.007)	0.179*** (0.025)	.	0.121*** (0.008)	0.212*** (0.033)	.	0.133*** (0.011)
Loss	.	0.144*** (0.02)	0.036*** (0.008)	.	0.207*** (0.024)	0.097*** (0.01)	.	0.255*** (0.029)	0.132*** (0.012)
Constant	0.482*** (0.05)	0.519** (0.222)	0.481*** (0.042)	0.45*** (0.116)	0.488** (0.218)	0.454*** (0.038)	0.428*** (0.158)	0.456* (0.26)	0.415*** (0.064)
Session-level-controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	289	289	289	258	258	258	225	225	225
R^2	.	.	.	.	.	.	.	.	.

Robust standard errors clustered at the session level. Tobit specifications adjust for censoring of the dependent variable at 0 and 1. *, **, *** indicate 10, 5, 1 percent significance levels, respectively.

Table 2: Impacts of Environments on Estimated $\hat{\alpha}_n$ Parameters

<i>Sample:</i>	<i>Dependent Variable: Estimated $\hat{\alpha}_n$ Parameters</i>								
	ALL SUBJECTS			CCEI \geq 0.8			CCEI \geq 0.9		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Recession	0.104*** (0.014)	.	0.077*** (0.009)	0.109*** (0.019)	.	0.076*** (0.016)	0.123*** (0.021)	.	0.096*** (0.018)
Loss	.	0.079*** (0.022)	0.04*** (0.011)	.	0.088*** (0.024)	0.05*** (0.015)	.	0.087*** (0.029)	0.043** (0.018)
Constant	0.788*** (0.008)	0.826*** (0.019)	0.788*** (0.008)	0.798*** (0.013)	0.837*** (0.02)	0.798*** (0.013)	0.799*** (0.016)	0.85*** (0.025)	0.798*** (0.016)
Session-level-controls	No	No	No	No	No	No	No	No	No
Observations	289	289	289	258	258	258	225	225	225
R^2	.	.	.	.	.	.	.	.	.

Robust standard errors in parentheses. Tobit regressions adjust for censoring of the dependent variable at zero and one.

*, **, *** indicate 10, 5, 1 percent significance levels, respectively.

Table 3: Impacts of Environments on Estimated $\hat{\rho}_n$ Parameters

<i>Dependent Variable: Estimated $\hat{\rho}_n$ Parameters</i>									
<i>Sample:</i>	ALL SUBJECTS			CCEI ≥ 0.8			CCEI ≥ 0.9		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<i>Panel A: Quantile Regressions of 50th Percentile</i>									
Recession	0.402*** (0.128)	.	0.216 (0.159)	0.4*** (0.13)	.	0.334** (0.153)	0.378*** (0.122)	.	0.087 (0.182)
Loss	.	0.381*** (0.117)	0.23 (0.154)	.	0.337*** (0.117)	0.108 (0.15)	.	0.407*** (0.139)	0.35** (0.177)
Constant	0.089 (0.104)	0.155** (0.074)	0.089 (0.103)	0.114 (0.105)	0.219*** (0.073)	0.114 (0.102)	0.219** (0.1)	0.249*** (0.086)	0.219* (0.123)
<i>Panel B: Quantile Regressions of 25th Percentile</i>									
Recession	0.246 (0.19)	.	-0.018 (0.23)	0.174 (0.2)	.	-0.09 (0.311)	0.122 (0.233)	.	-0.281 (0.336)
Loss	.	0.351** (0.167)	0.369* (0.223)	.	0.488** (0.193)	0.579* (0.304)	.	0.604*** (0.182)	0.835** (0.327)
Constant	-0.326** (0.154)	-0.326*** (0.106)	-0.326** (0.149)	-0.254 (0.162)	-0.254** (0.12)	-0.254 (0.206)	-0.083 (0.19)	-0.132 (0.112)	-0.083 (0.227)
<i>Panel C: Quantile Regressions of 75th Percentile</i>									
Recession	0.472*** (0.091)	.	0.469*** (0.113)	0.376*** (0.085)	.	0.376*** (0.107)	0.371*** (0.089)	.	0.296*** (0.108)
Loss	.	0.33*** (0.115)	0.072 (0.11)	.	0.24** (0.103)	-0.003 (0.105)	.	0.259** (0.102)	0.158 (0.105)
Constant	0.367*** (0.074)	0.578*** (0.073)	0.367*** (0.073)	0.46*** (0.069)	0.593*** (0.064)	0.46*** (0.071)	0.479*** (0.072)	0.674*** (0.063)	0.479*** (0.073)
Observations	176	176	176	145	145	145	113	113	113

Standard errors in parentheses. Quantile regressions reported. *, **, *** indicate 10, 5, 1 percent significance levels, respectively. Sample restricted to subjects with average values of $\pi_s/(\pi_s + \pi_o)$, the fraction of tokens allocated to self, less than or equal to 0.99.

Figure 1: Histogram of Log Price of Redistribution by Environment

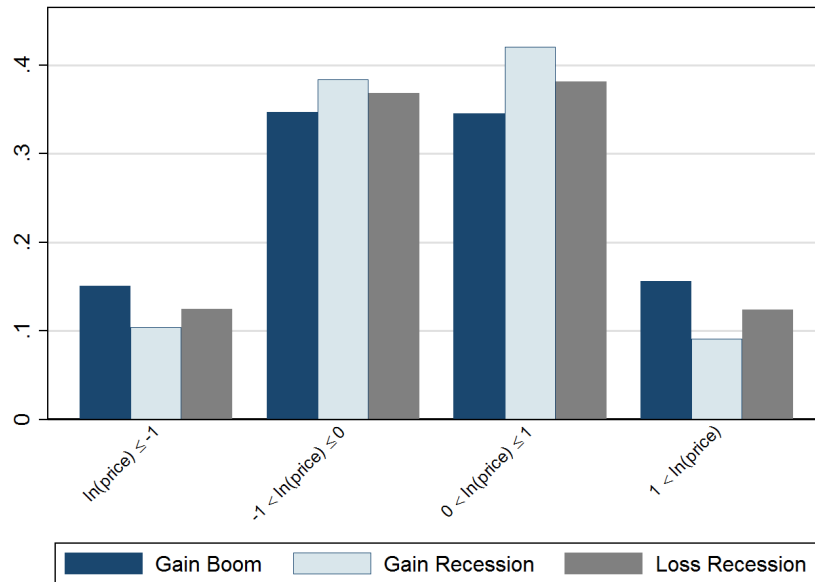


Figure 2: Undergraduate Student Self-Reported Family Income

(2010-11 inflation adjusted dollars)

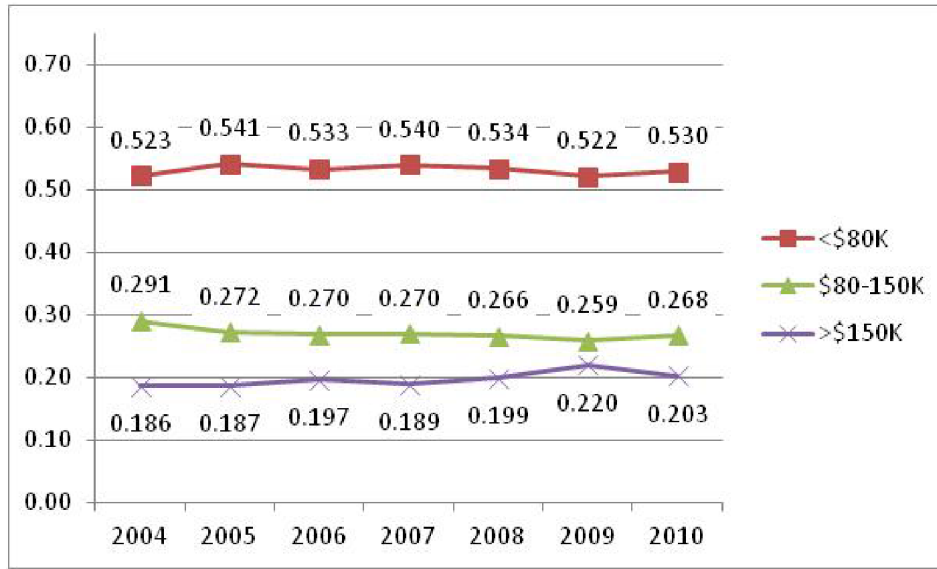


Figure 3: Percent of Undergraduate Students Receiving Pell Grants

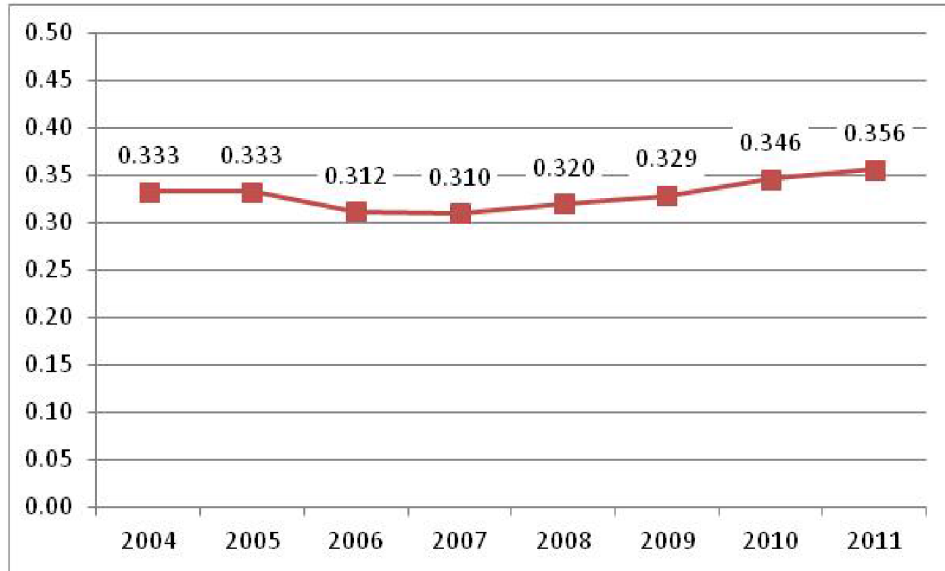


Figure 4: Ethnic Distribution of Undergraduate Enrollment

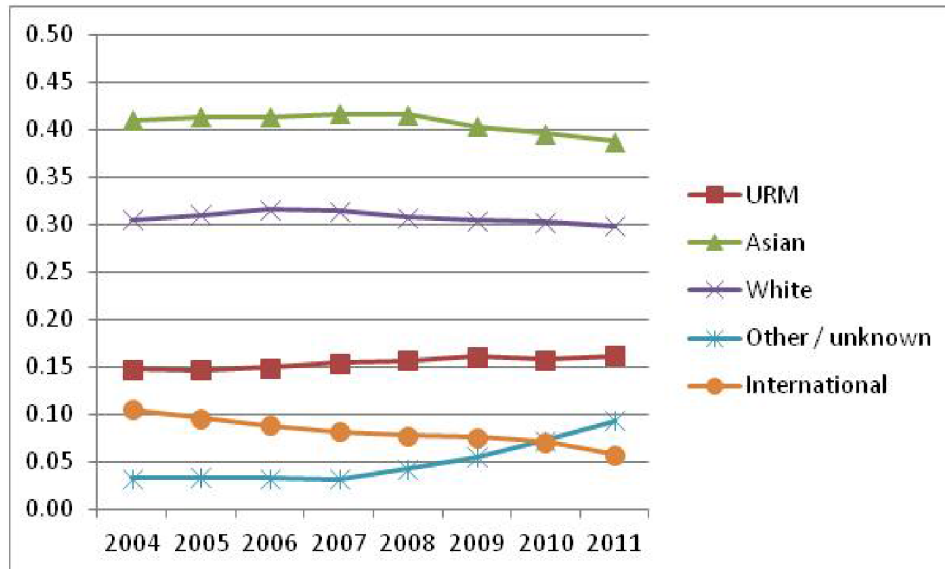
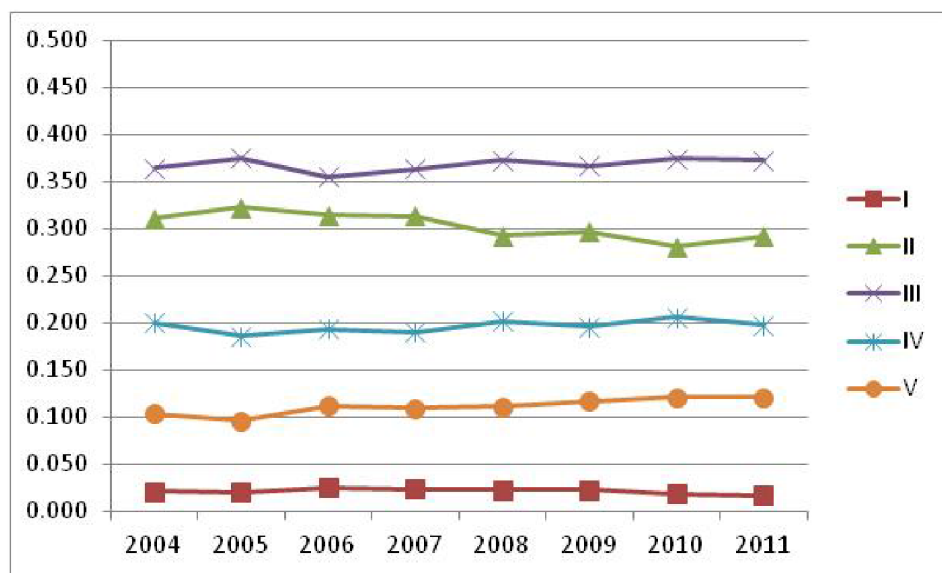
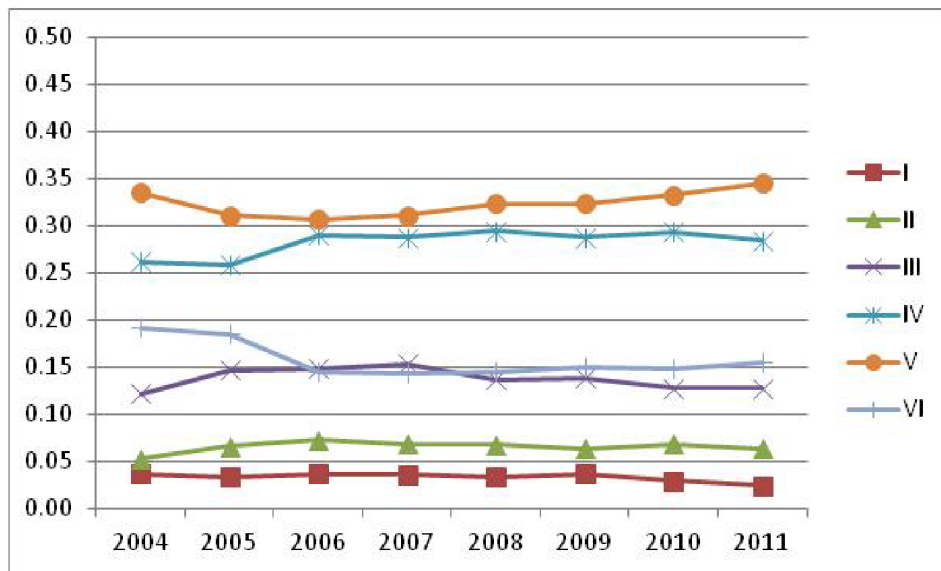


Figure 5: Social Class when Growing Up



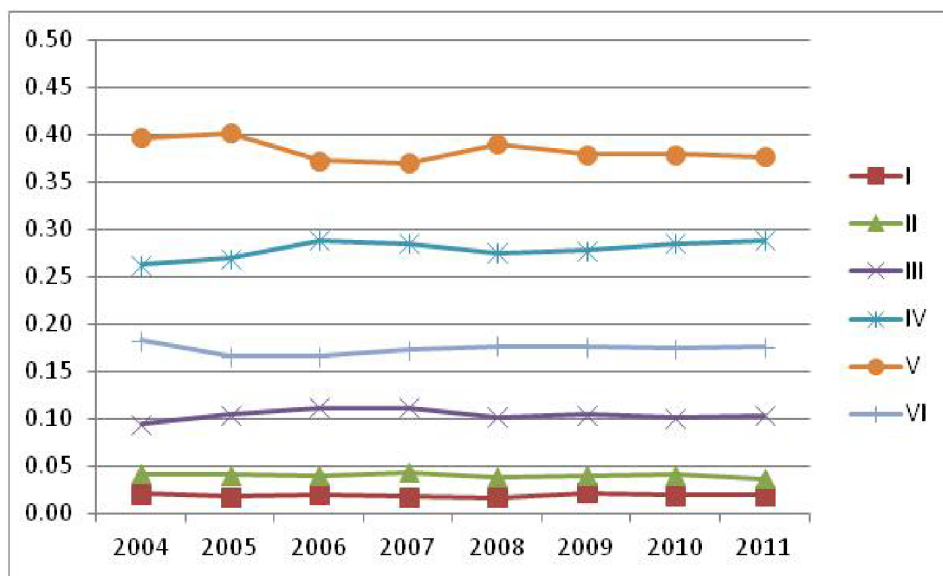
[I] Wealthy [II] Upper-middle or professional-middle [III] Middle-class [IV] Working-class
[V] Low-income or poor

Figure 6: Overall Social Experience



[I] Very dissatisfied [II] Dissatisfied [III] Somewhat dissatisfied [IV] Somewhat satisfied
[V] Satisfied [VI] Very satisfied

Figure 7: Overall Academic Experience



[I] Very dissatisfied [II] Dissatisfied [III] Somewhat dissatisfied [IV] Somewhat satisfied
 [V] Satisfied [VI] Very satisfied

Data sources: UC Berkeley Office of Planning and Analysis, Financial Aid and Scholarships Office, Cal Answers (Student Data Warehouse), and the University of California Undergraduate Experience Survey (UCUES). The UCUES is a system-wide survey about the experience of undergraduate students (see <http://studentsurvey.universityofcalifornia.edu>).

Experimental Instructions

Instructions for Gain-Boom Sessions:

Introduction

This is an experiment in decision-making. Research foundations have provided funds for conducting this research. Your payoffs will depend partly on your decisions and the decisions of the other participants and partly on chance. Please pay careful attention to the instructions as a considerable amount of money is at stake.

The entire experiment should be complete within an hour and a half. At the end of the experiment you will be paid privately. At this time, you will receive \$5 as a participation fee (simply for showing up on time). Details of how you will make decisions and receive payments will be provided below.

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

$$3 \text{ Tokens} = 1 \text{ Dollar}$$

A decision problem

In this experiment, you will participate repeatedly in 50 independent decision problems that share a common form. This section describes in detail the process that will be repeated in all decision problems and the computer program that you will use to make your decisions.

In each decision problem you will be asked to allocate tokens between yourself (Hold) and another person (Pass) who will be chosen at random from the group of participants in the experiment. The other person will not be told of your identity. Note that the person will be different in each problem. For each allocation, you and the other person will each receive tokens.

Each choice will involve choosing a point on a graph representing possible token allocations. In each choice, you may choose any Hold / Pass pair that is in the region that is shaded in gray. Examples of regions that you might face appear in Attachment 1.

Each decision problem will start by having the computer select such a region randomly from the set of regions that intersect with either the Hold-axis or the Pass-axis at 50 tokens or more. The regions selected for you in different decision problems are independent of each other and of the regions selected for any of the other participants in their decision problems.

For example, as illustrated in Attachment 2, choice A represents an allocation in which you Hold y tokens and Pass x tokens. Thus, if you choose this allocation, you will receive y tokens and the participant with whom you are matched in that round will receive x tokens. Another possible allocation is B , in which you receive w tokens, and person with whom you are matched receives z tokens.

To choose an allocation, use the mouse or the arrows on the keyboard to move the pointer on the computer screen to the allocation that you desire. At any point, you may either right-click or press the Space key to find out the allocation that the pointer is at.

When you are ready to make your decision, either left-click or press the Enter key to submit your chosen allocation. After that, confirm your decision by clicking on the Submit button or pressing the Enter key. Note that you can choose only Hold / Pass combinations that are in the gray region. To move on to the next round, press the OK button.

Next, you will be asked to make an allocation in another independent decision. This process will be repeated until all the 50 rounds are completed. At the end of the last round, you will be informed the experiment has ended.

Payoffs

Your payoffs are determined as follows. At the end of the experiment, the computer will randomly select one decision round from each participant to carry out. That participant will then receive the tokens that she held in this round, and the participant with whom she was matched will receive the tokens that she passed.

Each participant will therefore receive two groups of tokens, one based on her own decision to hold tokens and one based on the decision of another random participant to pass tokens. The computer will ensure that the same two participants are not paired twice.

The round selected and your choice and your payment for the round will be recorded in the large window that appears at the center of the program dialog window. At the end of the experiment, the tokens will be converted into money. Each token will be worth 1/3 Dollars. You will receive your payment as you leave the experiment.

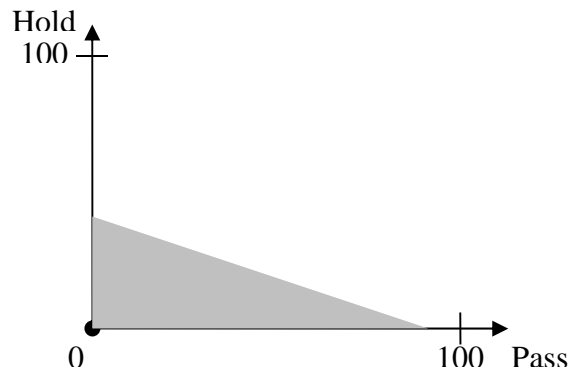
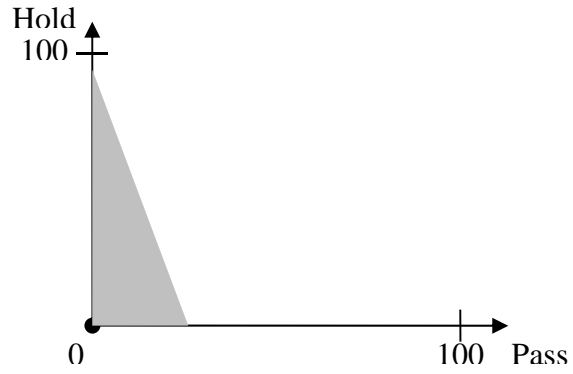
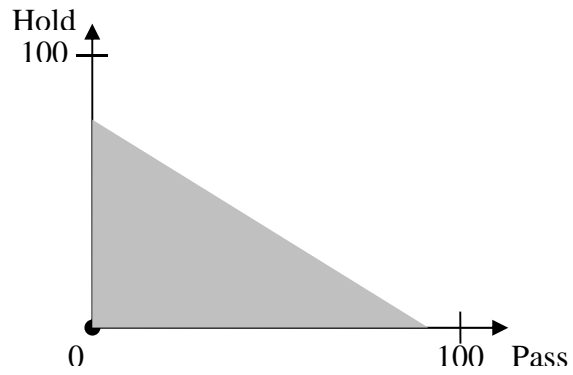
Rules

Your participation in the experiment and any information about your payoffs will be kept strictly confidential. Your payment-receipt and participant form are the only places in which your name and social security number are recorded.

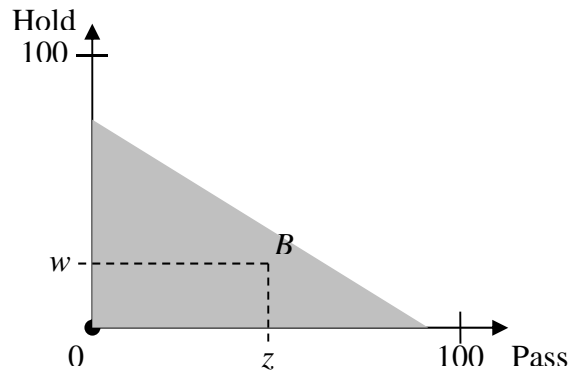
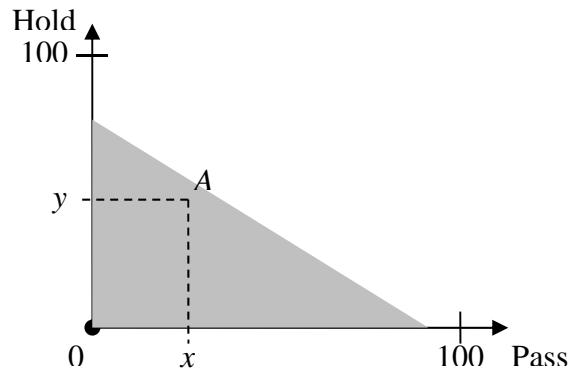
You will never be asked to reveal your identity to anyone during the course of the experiment. Neither the experimenters nor the other participants will be able to link you to any of your decisions. In order to keep your decisions private, please do not reveal your choices to any other participant.

Please do not talk with anyone during the experiment. We ask everyone to remain silent until the end of the last round. If there are no further questions, you are ready to start. An instructor will approach your desk and activate your program.

Attachment 1



Attachment 2



Instructions for Gain-Recession Sessions

Introduction

This is an experiment in decision-making. Your payoffs will depend partly on your decisions and on the decisions of the other participants and partly on chance. Funding for this experiment has been provided by the University of California and by public and private research foundations. Please pay careful attention to the instructions as a considerable amount of money is (potentially) at stake.

Your participation in the experiment and any information about your payoffs will be kept strictly confidential. Each participant will be assigned a participant ID number. This number will be used to record all data, and only the person(s) making payments (*not* the experimenters) will have both the list of participant ID numbers and names. Neither the experimenters nor the other participants will be able to link you to any of your decisions. Neither your name nor any other identifying information about you will be used in any final reports of the study.

The entire experiment should be complete within 1½ hours. Your earnings in the experiment will be \$5 as a participation fee (simply for showing up on time) plus whatever you earn in the experiment proper. You will be paid privately according to your participant ID number as you leave the room at the end of the experiment. You are free to leave at any time, but if you leave before the experiment is over, you will only receive the \$5 show-up fee. Details of how you will make decisions and receive payments will be provided below.

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

$$3 \text{ Tokens} = 1 \text{ Dollar}$$

The instructions will be read aloud by the experimenter, and you may also ask questions if anything is unclear. Once the experiment begins, we ask everyone to remain silent. In order to keep your decisions private, please do not reveal your choices to any other participant. If you have any questions, please raise your hand and an experimenter will approach your desk.

The computer program

In this experiment, you will participate in 50 independent decision problems that share a common form. This section describes in detail the process that will be repeated in all decision problems and the computer program that you will use to make your decisions. The computer program dialog window is shown in Attachment 1.

In each decision problem, you will be asked to allocate tokens between two accounts, labeled x and y . The x account corresponds to the x -axis (the horizontal axis) and the y account corresponds to the y -axis (the vertical axis) on a two-dimensional graph. Each choice will involve choosing a point on a line representing possible token allocations. Your payoff will be determined by the number of tokens in your x and y accounts, by the number of tokens in another participant's x and y accounts, and by chance. The instructions below will describe in detail how the payoff will be determined.

Each decision problem will start by having the computer select a line randomly from the set of lines that (i) intersect with at least one of the axes at 50 or more tokens and (ii) have no intercept above 100 tokens or below zero tokens. Examples of lines that you might face are

shown in Attachment 2. The lines selected for you in different decision problems are independent of each other and of the lines selected for any of the other participants in their decision problems, and will not depend on your choices in any of the earlier decision problems.

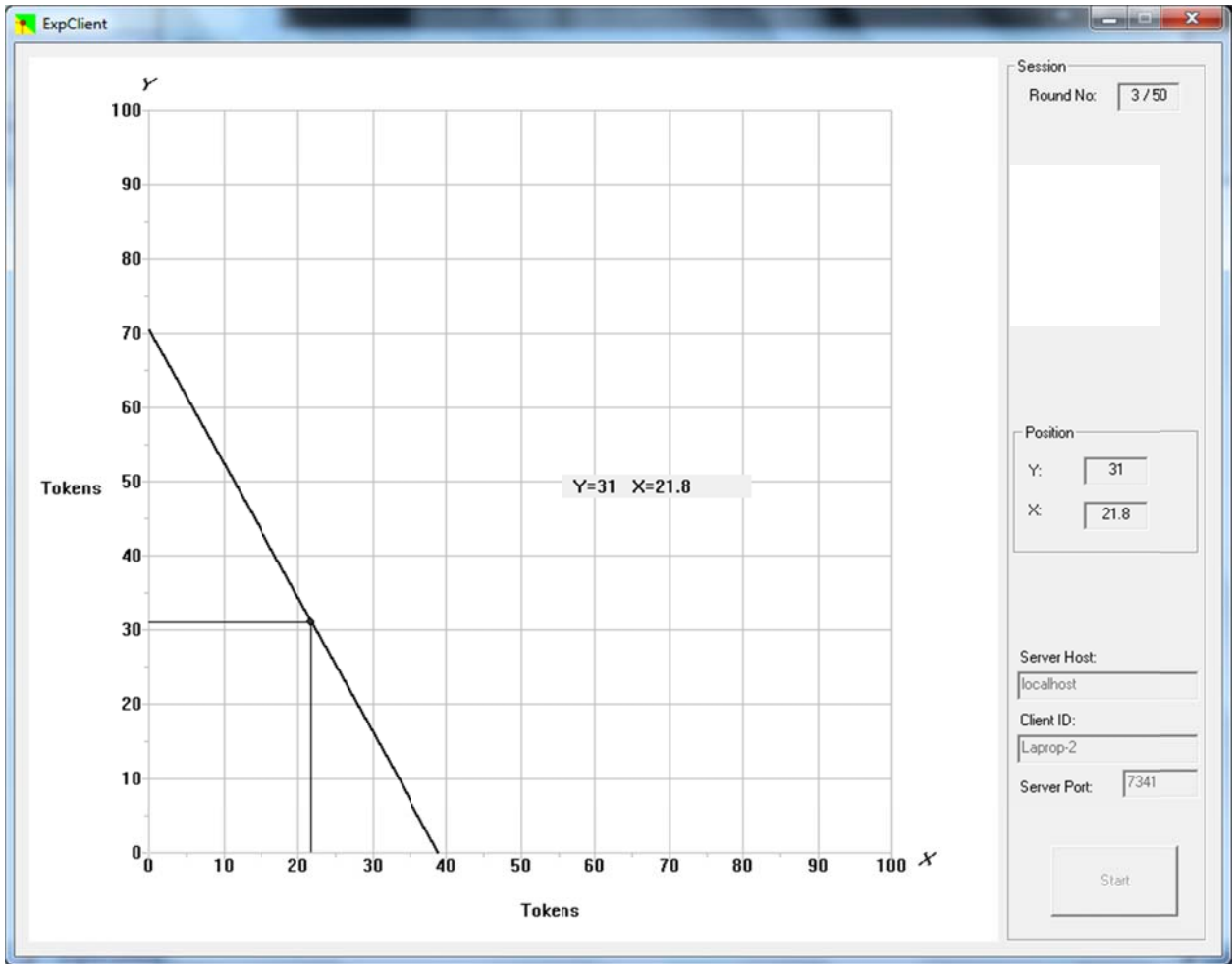
In each choice, you may choose any x and y pair that is on the line. For example, as illustrated in Attachment 3, choice **A** represents a decision to allocate q tokens to the x account and r tokens to the y account. Similarly, choice **B** represents a decision to allocate w tokens to the x account and z tokens to the y account. Note that these amounts can be less than zero.

To choose an allocation, use the mouse to move the pointer on the computer screen to the allocation that you desire. The computer will only allow you to choose x and y combinations that are on the line. When you are ready to make your decision, left-click to enter your chosen allocation. After that, confirm your decision by clicking on the Submit button. To move on to the next round, click the OK button. Once you have clicked the OK button, your decision cannot be revised. Next, you will be asked to make a decision in another independent decision. This process will be repeated until all 50 decision problems are completed. At that point, you may have to wait for other participants to finish.

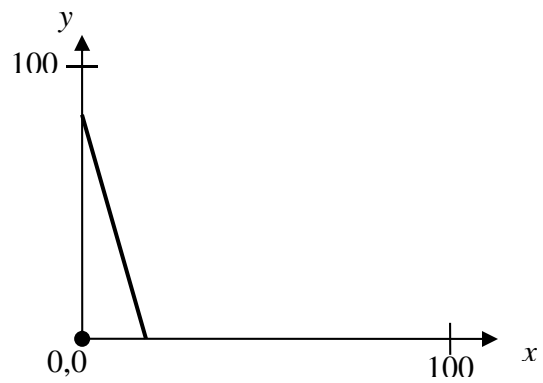
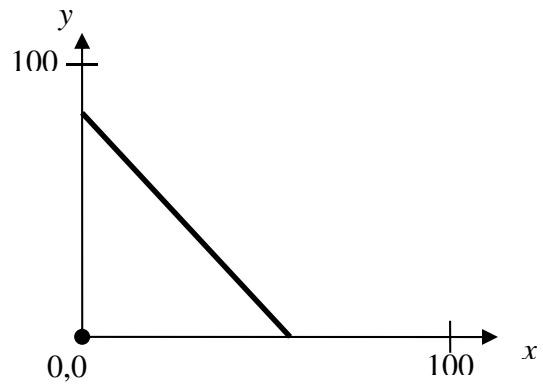
For each allocation that you make in the experiment, you will receive the number of tokens in your y account. Another person, who will be chosen at random (entirely dependent upon chance) from the group of participants in the experiment and who will remain anonymous, will receive the number of tokens in your x account. In addition, you will receive the number of tokens in the x account of a third person, also chosen at random (entirely dependent upon chance) from the group of participants in the experiment and who will remain anonymous. In the same way, the person who has been chosen to receive the tokens from your x account will receive those tokens plus the tokens in her own y account. Neither you nor any other participant will observe who allocated tokens to whom in any decision round. The computer will make sure that the participant to whom you allocate tokens does not allocate tokens to you (and vice versa).

Your total earnings in the experiment will be determined as follows. At the end of the experiment, the computer will randomly select one of the 50 decision problems to carry out for payoffs. The round selected depends solely upon chance. You will then receive the tokens you allocated to the y account in this round plus the tokens that the randomly chosen third person allocated to her or his x account in this round. You will therefore receive two groups of tokens: one based on your own decision to allocate tokens (y) and one based on the decision of another random participant to allocate tokens (x). At the end of the experiment, the tokens will be converted into money. Each token will be worth 33 Cents. You will receive your payment as you leave the experiment.

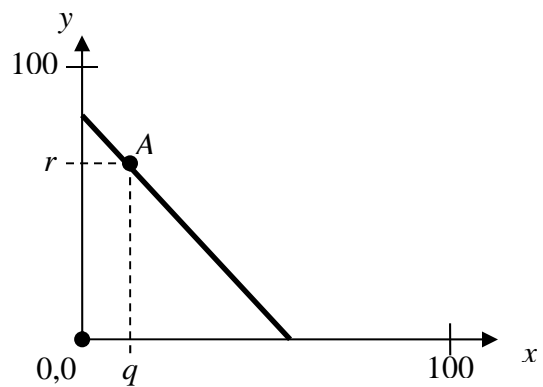
Attachment 1

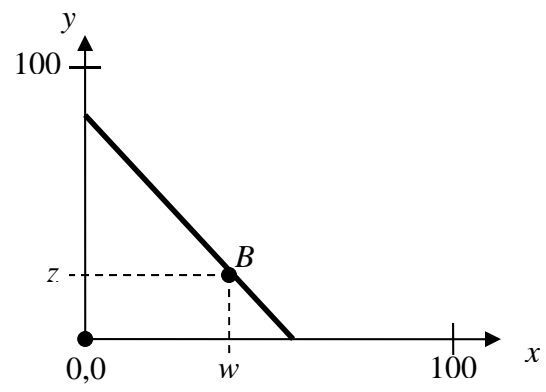


Attachment 2



Attachment 3





Instructions for Gain-Loss Sessions

Introduction

This is an experiment in decision-making. Your payoffs will depend partly on your decisions and on the decisions of the other participants and partly on chance. Funding for this experiment has been provided by the University of California and by public and private research foundations. Please pay careful attention to the instructions as a considerable amount of money is (potentially) at stake.

Your participation in the experiment and any information about your payoffs will be kept strictly confidential. Each participant will be assigned a participant ID number. This number will be used to record all data, and only the person(s) making payments (*not* the experimenters) will have both the list of participant ID numbers and names. Neither the experimenters nor the other participants will be able to link you to any of your decisions. Neither your name nor any other identifying information about you will be used in any final reports of the study.

The entire experiment should be complete within 1½ hours. Your earnings in the experiment will be \$5 as a participation fee (simply for showing up on time) plus whatever you earn in the experiment proper. You will be paid privately according to your participant ID number as you leave the room at the end of the experiment. You are free to leave at any time, but if you leave before the experiment is over, you will only receive the \$5 show-up fee. Details of how you will make decisions and receive payments will be provided below.

During the experiment we will speak in terms of experimental tokens instead of dollars. At the beginning of each period each participant receives an endowment of 200 tokens. Your earnings will be calculated in terms of tokens and then translated at the end of the experiment into dollars at the following rate:

$$5 \text{ Tokens} = 1 \text{ Dollar}$$

The instructions will be read aloud by the experimenter, and you may also ask questions if anything is unclear. Once the experiment begins, we ask everyone to remain silent. In order to keep your decisions private, please do not reveal your choices to any other participant. If you have any questions, please raise your hand and an experimenter will approach your desk.

The computer program

In this experiment, you will participate in 50 independent decision problems that share a common form. This section describes in detail the process that will be repeated in all decision problems and the computer program that you will use to make your decisions. The computer program dialog window is shown in Attachment 1.

In each decision problem, you will be asked to allocate tokens between two accounts, labeled x and y . The x account corresponds to the x -axis (the horizontal axis) and the y account corresponds to the y -axis (the vertical axis) on a two-dimensional graph. Each choice will involve choosing a point on a line representing possible token allocations. Your payoff will be determined by the number of tokens in your x and y accounts, by the number of tokens in another participant's x and y accounts, and by chance. The instructions below will describe in detail how the payoff will be determined.

Each decision problem will start by having the computer select a line randomly from the set of lines that (i) intersect with at least one of the axes at zero or more tokens and (ii) have no

intercept above 100 tokens or below -100 tokens. Examples of lines that you might face are shown in Attachment 2. The lines selected for you in different decision problems are independent of each other and of the lines selected for any of the other participants in their decision problems, and will not depend on your choices in any of the earlier decision problems.

In each choice, you may choose any x and y pair that is on the line. For example, as illustrated in Attachment 3, choice **A** represents a decision to allocate q tokens to the x account and r tokens to the y account. Similarly, choice **B** represents a decision to allocate w tokens to the x account and z tokens to the y account. Note that these amounts can be less than zero.

To choose an allocation, use the mouse to move the pointer on the computer screen to the allocation that you desire. The computer will only allow you to choose x and y combinations that are on the line. When you are ready to make your decision, left-click to enter your chosen allocation. After that, confirm your decision by clicking on the Submit button. To move on to the next round, click the OK button. Once you have clicked the OK button, your decision cannot be revised. Next, you will be asked to make a decision in another independent decision. This process will be repeated until all 50 decision problems are completed. At that point, you may have to wait for other participants to finish.

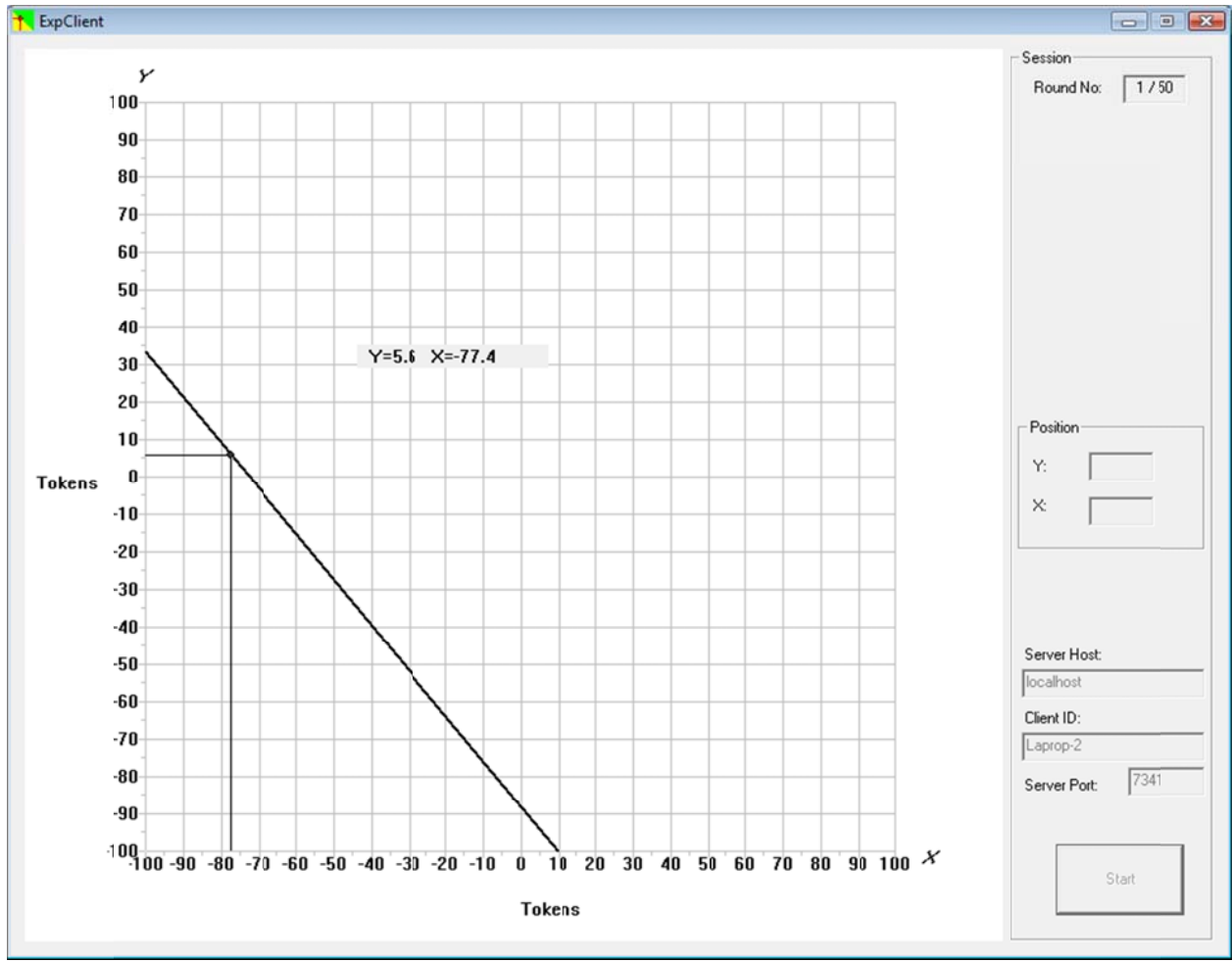
For each allocation that you make in the experiment, you will receive the number of tokens in your y account. Another person, who will be chosen at random (entirely dependent upon chance) from the group of participants in the experiment and who will remain anonymous, will receive the number of tokens in your x account. Note that these amounts can be less than zero. In addition, you will receive the number of tokens in the x account of a third person, also chosen at random (entirely dependent upon chance) from the group of participants in the experiment and who will remain anonymous. In the same way, the person who has been chosen to receive the tokens from your x account will receive those tokens plus the tokens in her own y account. Neither you nor any other participant will observe who allocated tokens to whom in any decision round. The computer will make sure that the participant to whom you allocate tokens does not allocate tokens to you (and vice versa).

Your total earnings in the experiment will be determined as follows. At the end of the experiment, the computer will randomly select one of the 50 decision problems to carry out for payoffs. The round selected depends solely upon chance. You will then receive the tokens you allocated to the y account in this round plus the tokens that the randomly chosen third person allocated to her or his x account in this round. You will therefore receive two groups of tokens: one based on your own decision to allocate tokens (y) and one based on the decision of another random participant to allocate tokens (x). Your total net earnings in tokens in the experiment cannot be negative and will be calculated as follows:

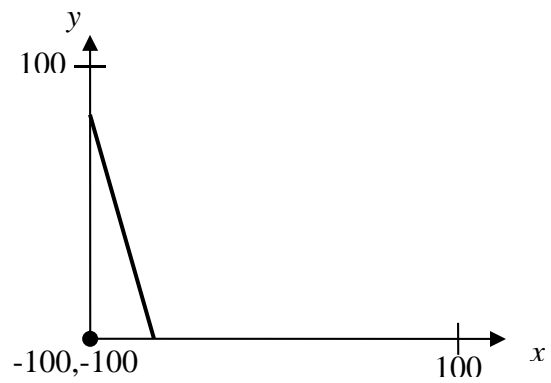
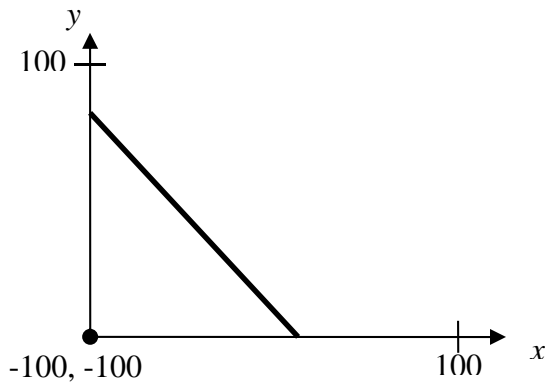
$$200 \pm y \pm x.$$

At the end of the experiment, the tokens will be converted into money. Each token will be worth 20 Cents. You will receive your payment as you leave the experiment.

Attachment 1



Attachment 2



Attachment 3

