

# **Context in Experiments, Subject Pool Differences, and Real Effort Experiments**

## **Discrimination and Gender Differences**

How can we measure Discrimination? In what situations should it matter?

Field Data: Really difficult to measure discrimination and rule out other possibilities. For good empirical papers: Goldin and Rouse (2000), Black and Strahan (2001).

Experiments: What would be a good “task” to measure discrimination, and how can we measure it, without having subjects know what we are up to?

## Simple two player games: **Trust Game**

### **Berg, Dickhaut and McCabe (1995)**

Two Players: Player A and Player B are paired with one Player B. Player A receives 20 points, Player B receives nothing.

Player A: Decides if they want to transfer any amount  $x$  of the 20 points to player B, and if so, how much. The amount  $x$  they transfer will be tripled, so that Player B receives  $3x$ . Player B then decides whether to send back any amount of the money they have:  $0 \leq y \leq 3x$ . Player A receives  $y$ .

Player A:  $20 - x + y$

Player B:  $3x - y$

The subgame perfect equilibrium: Player B never returns any money (more money is better than less money), hence Player A should not send money in the first place.

Efficient outcome: Player A hands everything to Player B.

## **Results:**

Typically Player A sends a positive amount and Player B returns often an even larger amount.

They call this “positive reciprocity”

However note that the more Player A sends to Player B, the more Player B can send back, hence even if Player B simply sends back a random, feasible amount, we would observe that the more money Player A sends to Player B, the more Player B sends back.

Hence we should look at the percentage of money Player B sends back: No obvious significant correlations.

Use the trust game to study ethnic discrimination within the Israeli Jewish society.

**Trust and Discrimination in a Segmented Society: An Experimental Approach:**

Fershtman and Gneezy, QJE 2001.

Consider Trust between Players of Eastern ethnic origin (Sephardic Jew) and Western Ethnic Origin (Ashkenazic Jew).

**Background:**

Persistent social and economical gaps between the two ethnic groups. Gaps seem not to narrow over time. Earning gaps are mostly attributed to schooling gaps, and not to discrimination in the labor market.

To measure discrimination, the authors use the ethnicity of subjects.

**Experimental Procedure:**

966 Israeli students.

Use name lists from large classes to choose students with typical ethnic names.

Player B: Students from the University of Haifa and Academic College of Tel Aviv: 122 Western males, 135 Eastern males, 118 Western women and 108 Eastern women:

Player A: Undergraduates from Tel Aviv receive 20 shekels

They are told that the experiment is being constructed in pairs and they are already matched to another student from another university. The name of the person with whom they are matched appears on the bottom of the paper they received.

Then Player A decides how many shekels  $0 \leq x \leq 20$  to pass on to Player B, and writes down his or her name.

Player B receives  $3x$  shekels and decides how much to give back to Player A, seeing Player A's name.

After making the choice, each participant fills out a questionnaire that includes question on gender and birth place of parents.

Number of Pairs:

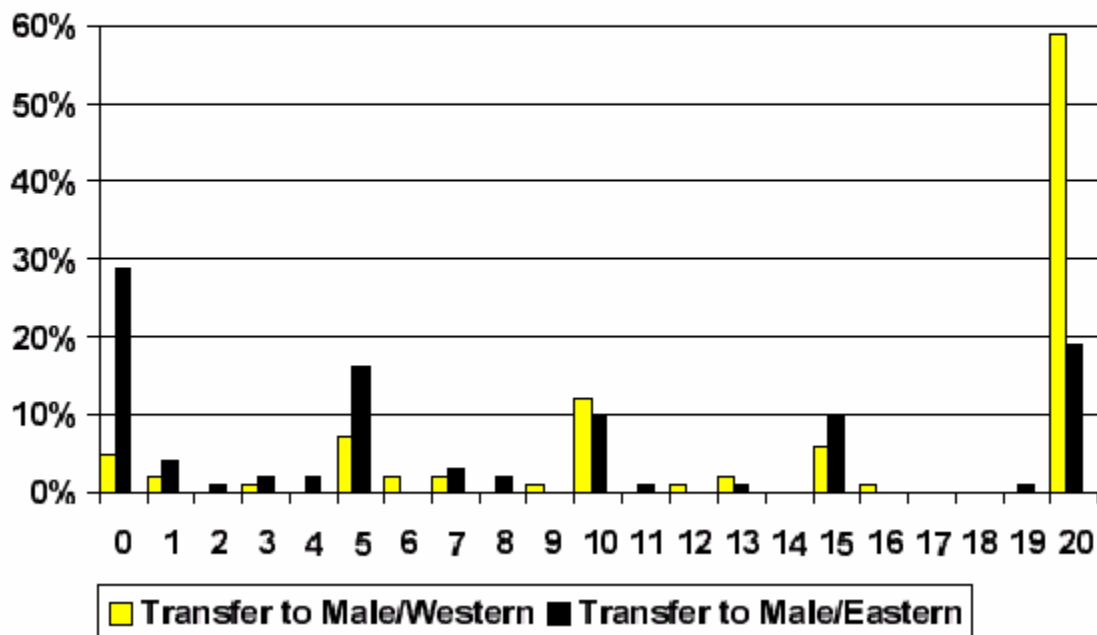
**PLAYER A**

	IM	WM	EM	IF	WF	EF	Sum
WM	31	23	15	23	16	14	122
EM	27	28	18	28	17	17	135
WF	22	22	21	23	14	16	118
EF	27	14	18	21	15	13	108
Total	107	87	72	95	62	60	483

## Results:

### *Segmented Society*

Figure 1: Transfer to male players



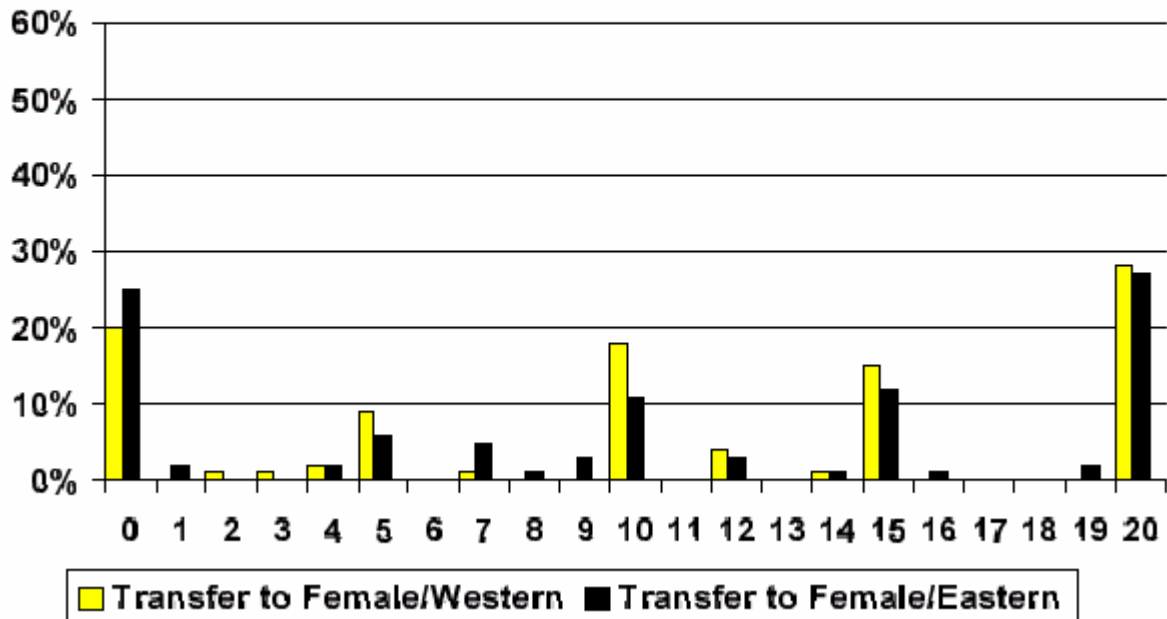
Average amount transferred to Western male: 15.15

Average amount transferred to Eastern male: 8.06

(significant difference  $P < .00$ ).

## *Gender and Discrimination*

Figure 2: Transfer to female players



Average transfer to women: 10.63 (=Average to all males)

Average amount transferred to Western female: 11.02

Average amount transferred to Eastern female: 10.41

No significant difference.

Transfer to

Western Male: 15.15 >> 11.02: Western Female.

Eastern Male: 8.06 << 10.41: Eastern Female.

## Who Discriminates?

Figure 3a: Transfer from Male to Male/Western and Male/Eastern

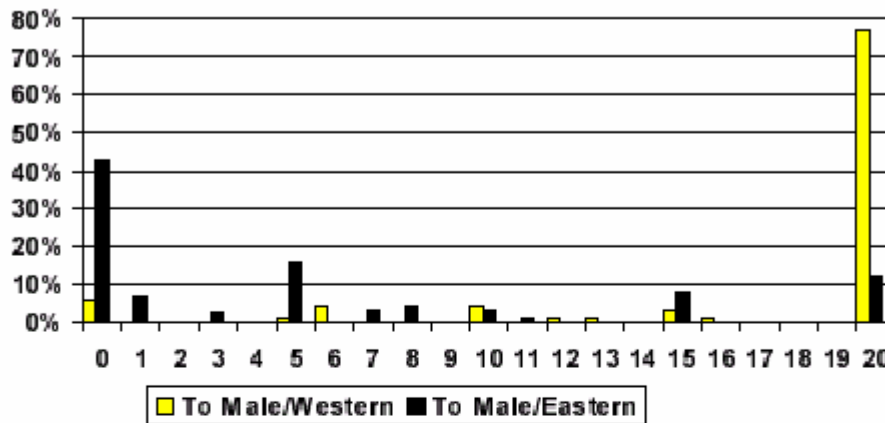
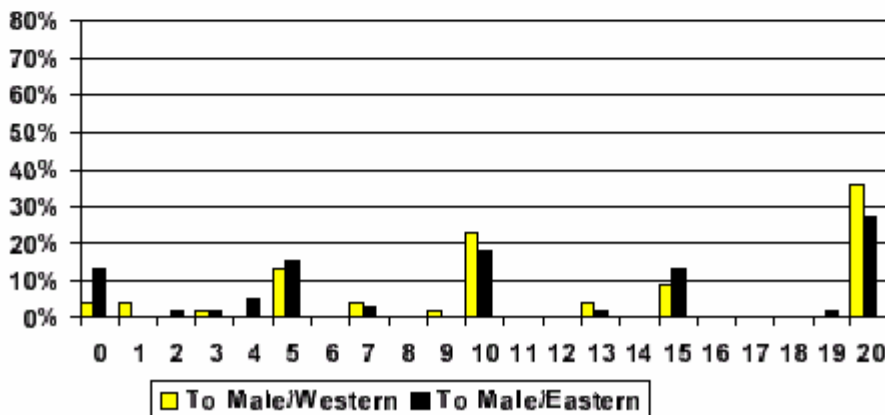


Figure 3b: Transfer from female to Male/Western and Male/Eastern



Average Transfer: Male to  
 Western Male: 17.16 >> 5.62: Eastern Male

Female to  
 Western Male: 12.53 = 10.94: Eastern Male  
 and the difference between Male and Female is significant.

Men seem to respond strongly to ethnic stereotypes, but women seem to disregard them. (Women do also not discriminate among women, i.e. send same amount to Eastern and Western Female)

***Trust among segments: Systematic Discrimination***  
 Does everybody just treat their own group the same?

Figure 4a: Transfer to Male/Western by males according to origin

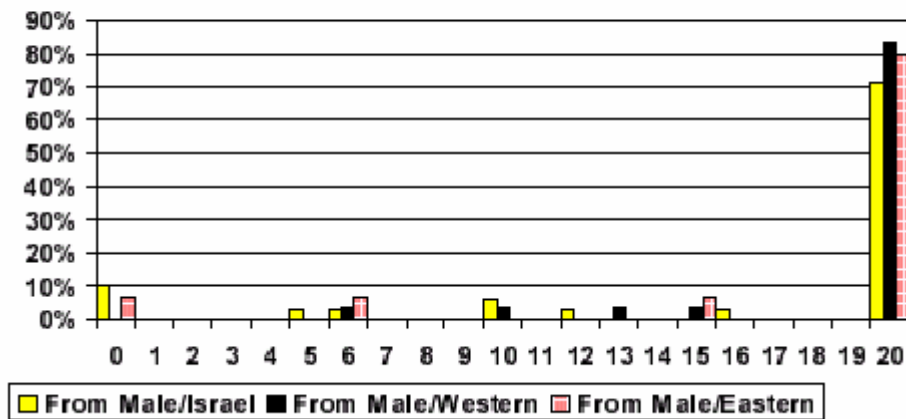
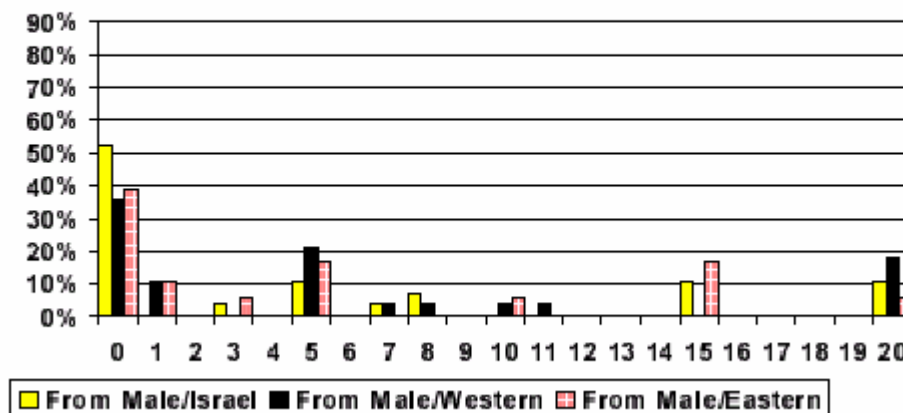


Figure 4b: Transfer to Male/Eastern by males according to origin



Everybody mistrusts Eastern Males.

### ***Is Discrimination Rational?***

Do people (males) of different ethnic background respond differently as Player B?

Have to compare among males who receive the same amount. Find no difference.

Amount by A	5	10	15	20
Western male	1.8	13	17.2	24.3
Eastern male	2.8	14.2	16.7	23.1

Average sent back by males according to ethnic background. No significant differences.

### **Conclusion**

“An important distinction between different forms of discrimination is the level of observability. Earnings and Education, which have been the focus of most studies, are variables for which data may be observable. An important aspect of discrimination deals, however, with interpersonal relations which are much more difficult to observe. If we are to devise public policies that are aimed at correcting for discrimination, it would probably be easier to implement such policies when the cases of discrimination are observable. When we consider trust and cooperation affected by ethnic affiliation, these forms of discrimination are not observable. We can legislate that wages and school admission should not be dependent on ethnic background or gender, but how can we legislate trust?”

## **Some final comments:**

- Use of Participants names to signal and determine ethnic origin.
- The Experiment allows to study discrimination in a way that is very difficult in field data.

Further study: In Belgium with the same method use people of French or Flemish background. Furthermore Gneezy and Fershtman try to distinguish between positive and negative discrimination.

For a related study in the US see: What is Social Capital? The Determinants of Trust and Trustworthiness: Glaeser, Laibson, Scheinkman and Soutter, QJE 2000

Combine survey with experiments.

First give students a long survey to fill out. Weeks later they play a trust game. Then you can study all kind of things.

In the next Experiment, we will also see differences between subjects, though now we focus on men and women, and we will also see a real effort experiment (as opposed to solely “picking a number”).