WHAT IF WOMEN EARNED MORE THAN THEIR SPOUSE?
AN EXPERIMENTAL INVESTIGATION OF WORK DIVISION IN COUPLES

HÉLÈNE COUPRIE
THEMA, Université de Cergy-Pontoise

FRANÇOIS COCHARD
CRESE, Université de Franche-Comté

ASTRID HOPFENSITZ
Toulouse School of Economics
1. Motivation

2. Games and Predictions

3. Experiment and Results
1. Motivation

Labor specialization in the couple

- Males tend to specialize into labor market work
- Females tend to specialize into domestic work

Which causes to this phenomenon?

- Differences between costs and benefits de coût/bénéfices for men/women?
- Social Norms?
Experiments realized on true couples

- Risky choices situations (comparisons of lotteries)
  Bateman and Munro (2003, 2005); De Palma, Picard, Ziegelmeyer (2008, 2010); Carlsson, Martinsson, Qing, Sutter (2009); Robinson (2008)

- Investment, savings decisions
  Ashraf (2004); Mani (2008)

- Cooperation games in social dilemmas
  Peters, Ünür, Clarke, Schulze (2004); Iversen, Jackson, Kebede, Munro, Verschoor (2006); Mani (2010)
  ➔ More cooperation within couples than between strangers, but efficiency is not at its maximum.
Wage rate differentials and Time allocation

Trade-off between Efficiency and Equality

- This division between labor and domestic work implies a large income inequality within the couple
- Women generally have a lower wage rate than their spouse, they tend to specialize into domestic work
- However, women with higher wage rate than their spouse are also in this situation → puzzle?

Economic Theory

- Preference and Productivity M/F Differences
- But econometric control of these aspects is very imperfect
- Experiment is useful and throws a new light on this

What is the impact of gender on labor division choice?
2. Games and Predictions

Public Good contribution games, Symmetric and Asymmetric

Symmetric Game

Investment choice into a Private Good and / or a Public Good

- The Private Good brings 10 points per unit invested
- The Public Good brings 6 points per unit invested

(to the 2 partners)

Efficiency implies that both partners should invest all their units available in the public good
Asymmetric Game

*Investment choice into a Private and/or Public Good*

- **1 Desadvantaged Player:**
  - The Private Good brings **10 points** per unit invested
  - The Public Good brings 6 points per unit invested
    (to the 2 partners)

- **1 Advantages Player:**
  - The Private Good brings **13 points** per unit invested
  - The Public Good brings 6 points per unit invested
    (to the 2 partners)

*Efficient Behavior implies that*

- The Desadvantaged player invests all in the Public Good
- The Advantages Player invests all in the Private Good
Treatments

- **Gender:** Who is advantaged, “between” treatment
  The male or the woman who is designed to be advantaged keeps this position during the whole experiment

- **Realism of the task, “within” treatment**
  - Abstract Task (allocate 20 tokens between private and public good investment)
  - Task Contextualized with Time (allocate 20 intervalles de seconds time intervalls, so a total of 5 minuts)
  - Task Contextualized with the option to take leisure during the experiment

- **Information, “between” treatment**
  Decisions and individual gains are revealed inside the couple
Vous travaillez actuellement sur la tâche A

<table>
<thead>
<tr>
<th>CHARLIER Marie-Hélène</th>
<th>06 32 39 60 69</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUCHAUD Franck</td>
<td>04 95 41 67 87</td>
</tr>
<tr>
<td>PROFIT Christophe</td>
<td>01 87 20 72 15</td>
</tr>
<tr>
<td>BEKKAL Bernard</td>
<td>03 39 73 68 66</td>
</tr>
</tbody>
</table>

Quel est le numéro de CHARLIER Marie-Hélène ?

Attention, vous n'avez saisi aucun numéro depuis 15 secondes.

Veuillez saisir le numéro de téléphone demandé.
Predictions

If labor specialization in the couple is caused by differences in productivity or gain, *gender neutrality* should be observed:

- Results should be the same whoever is advantaged in the game (man or woman)

If labor specialization is caused by internalized social norms:

- Woman are going to invest more in the public good when they are advantaged
3. EXPERIMENT AND RESULTS

Experiment of June 2010 in Toulouse

- 86 couples (living together for at least one year)
- Interface computerized in Visual Basic
- Sessions of 6 couples, duration 2 hours
- Men and Women are geographically separated in the laboratory
- Average Gain: 100 € per couple
- Age: Men: 36 years / Women: 35 years
- 59% of couples are married or signed a civil union contract “pacs”
- Average duration of the couple relationship: 9 years
- 40% of participant couples have one or more children
Investment into the Public Good

Symmetric game

Asymmetric game

Contribution to public good

Advantaged spouse

Disadvantaged spouse

Advantaged spouse

Disadvantaged spouse
Investment into the Public Good

Symmetric game

Asymmetric game
Effect of Treatment Gender

- **Symmetric game**
  - Advantaged spouse: $p = 0.118$
  - Disadvantaged spouse: $p = 0.540$

- **Asymmetric game**
Effect of Treatment Gender

Contribution to public good

Symmetric game

Advantaged spouse: p = 0.118
Disadvantaged spouse: p = 0.540

Asymmetric game

Advantaged spouse: p = 0.305
Disadvantaged spouse: p = 0.224

Effect of Treatment Gender

Gender
## Effect of treatment: information

### Symmetric Game

#### Advantaged player:

<table>
<thead>
<tr>
<th>Context</th>
<th>I: Public information (n=22)</th>
<th>P: Private information (n=64)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17.55</td>
<td>16.49</td>
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</table>

#### Disadvantaged player:

<table>
<thead>
<tr>
<th>Context</th>
<th>I: Public information (n=22)</th>
<th>P: Private information (n=64)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>17.05</td>
<td>16.28</td>
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</table>

* n.s.
### Effect of treatment: information

#### Asymmetric Game

<table>
<thead>
<tr>
<th>Context</th>
<th>Advantaged player:</th>
<th>Disadvantaged player:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I: Public information (n=22)</td>
<td>P: Private information (n=64)</td>
</tr>
<tr>
<td></td>
<td>4.80</td>
<td>4.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n.s.</td>
</tr>
<tr>
<td></td>
<td>I: Public information (n=22)</td>
<td>P: Private information (n=64)</td>
</tr>
<tr>
<td></td>
<td>17.18</td>
<td>16.23</td>
</tr>
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<td></td>
<td></td>
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Effect of Context

Symmetric Game

**Advantaged player:**

<table>
<thead>
<tr>
<th>Context</th>
<th>I: Public information (n=22)</th>
<th>P: Private information (n=64)</th>
<th>All (n=86)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>16.82</td>
<td>15.30</td>
<td><strong>15.69</strong></td>
</tr>
<tr>
<td>Real leisure</td>
<td>17.86</td>
<td>16.92</td>
<td><strong>17.16</strong></td>
</tr>
<tr>
<td>Real no leisure</td>
<td>17.95</td>
<td>16.88</td>
<td><strong>17.15</strong></td>
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**Disadvantaged player:**

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<tr>
<td>Abstract</td>
<td>16.68</td>
<td>15.45</td>
<td><strong>15.77</strong></td>
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<tr>
<td>Real leisure</td>
<td>16.64</td>
<td>16.64</td>
<td><strong>16.64</strong></td>
</tr>
<tr>
<td>Real no leisure</td>
<td>17.82</td>
<td>16.75</td>
<td><strong>17.02</strong></td>
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</table>
## Effect of Context

### Asymmetric Game

#### Advantaged player:

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</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>4.55</td>
<td>5.63</td>
<td><strong>5.35</strong></td>
</tr>
<tr>
<td>Real leisure</td>
<td>5.14</td>
<td>3.78</td>
<td><strong>4.13</strong></td>
</tr>
<tr>
<td>Real no leisure</td>
<td>4.73</td>
<td>4.23</td>
<td><strong>4.36</strong></td>
</tr>
</tbody>
</table>

#### Disadvantaged player:

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<tr>
<td>Abstract</td>
<td>16.68</td>
<td>15.31</td>
<td><strong>15.66</strong></td>
</tr>
<tr>
<td>Real leisure</td>
<td>17.32</td>
<td>16.60</td>
<td><strong>16.79</strong></td>
</tr>
<tr>
<td>Real no leisure</td>
<td>17.55</td>
<td>16.41</td>
<td><strong>16.70</strong></td>
</tr>
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</table>
To Summarize

Efficiency level is around 80%

- Robust to **who** is advantaged in the household
- Robust to the **public** or **privateness** of **gains** and **decisions**
- Robust to the presence of a **leisure during the experiment option**

**Efficiency** is sensibly **higher** when time is allocated (compared to tokens-money):
  - Decisions are more intuitive and less cognitives
CONCLUSION

- Efficiency Rate is around 80%
- There is a propensity to pay for a “symbolic” equality of incomes within the couple
- Results are neutral with respect to gender considerations
- Thus we did not find any evidence of internalized social norms in this experiment
## Treatments

3. Privacy of information (between subjects):
   - I (informed): both spouses learn each other's earnings at the end
   - P (private): own earnings are private information and spouse is not informed.

<table>
<thead>
<tr>
<th>N= 86 couples</th>
<th>I: informed about others earnings</th>
<th>P: earnings private information</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (men favored)</td>
<td>11 couples</td>
<td>32 couples</td>
</tr>
<tr>
<td>W (women favored)</td>
<td>11 couples</td>
<td>32 couples</td>
</tr>
<tr>
<td></td>
<td>22 couples</td>
<td>64 couples</td>
</tr>
</tbody>
</table>
Contribution to total efficiency

Asymmetric game

Efficiency of decisions in %

- Female advantaged: p = 0.039
- Male advantaged: ns