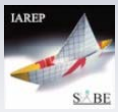
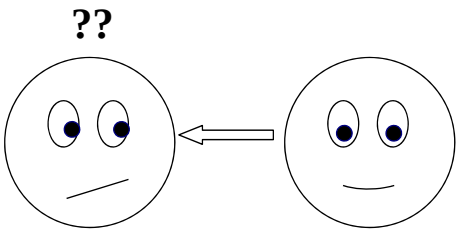
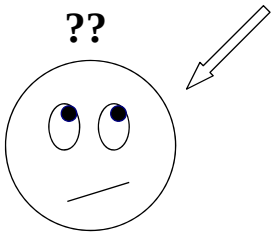
Insurance Behavior Under Strategic And State Uncertainty



Van Wolferen, Michalaszek, Tausch

Motivation - Definition

Strategic Uncertainty	State Uncertainty
 - Uncertainty concerning the actions of others	 Uncertainty concerning the distribution of the "state" of the world which is determined by nature

?? - Insure or not insure

Example

Situation:
- Order Item (150€) which you need in 7 days
- After 7 days completely useless
- Moreover, not returnable
- Delivery time stated to be 3 to 4 days

Strategic Uncertainty:

→ seller might not send you the product (in time)
→ seller responsible

State Uncertainty:

→ something beyond the seller's control happens, which leads to non-delivery (in time)

Example

Insurance?

No!

Yes!

Level	Price	Coverage
1	€ 4	€ 30
2	€ 8	€ 60
3	€ 12	€ 90
4	€ 16	€ 120
5	€ 20	€ 150

Research Method

- Online Questionnaire Study
- Software: Thesis Tools

Independent Variables:

- Demographic Variables
- Consideration for Future Consequences (CFC) Scale
- Risk Preferences (Holt and Laury (2002, AER))
- Income

CFC Scale

- Differences in the extent to which individuals are influenced by the immediate versus distant consequences of their behavior.

E.g.

1. I consider how things might be in the future, and try to influence those things with my day to day behavior.*

- 1.
- 2.
- 3.
- 4.
- 5.

4. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions.*

- 1
- 2
- 3
- 4
- 5

Risk Preferences (Holt and Laury)

The Ten Paired Lottery-Choice Decisions with Low Payoffs

Option A	Option B	Expected Payoff Difference
1/10 of $2.00, 9/10 of $1.60	1/10 of $3.85, 9/10 of $0.10	$1.17
2/10 of $2.00, 8/10 of $1.60	2/10 of $3.85, 8/10 of $0.10	$0.83
3/10 of $2.00, 7/10 of $1.60	3/10 of $3.85, 7/10 of $0.10	$0.50
4/10 of $2.00, 6/10 of $1.60	4/10 of $3.85, 6/10 of $0.10	$0.16
5/10 of $2.00, 5/10 of $1.60	5/10 of $3.85, 5/10 of $0.10	-$0.18
6/10 of $2.00, 4/10 of $1.60	6/10 of $3.85, 4/10 of $0.10	-$0.51
7/10 of $2.00, 3/10 of $1.60	7/10 of $3.85, 3/10 of $0.10	-$0.85
8/10 of $2.00, 2/10 of $1.60	8/10 of $3.85, 2/10 of $0.10	-$1.18
9/10 of $2.00, 1/10 of $1.60	9/10 of $3.85, 1/10 of $0.10	-$1.52
10/10 of $2.00, 0/10 of $1.60	10/10 of $3.85, 0/10 of $0.10	-$1.85

Research Method

- 4 Treatments differ in :
  → Strategic Uncertainty vs. State Uncertainty
  → Order of the different questions posed

	RA - Scenario	Scenario - RA
Strategic	20	27
State	17	31

- N= 95
- Average
- Gender: 45.3% Males

Hypotheses

People perceive strategic risk differently to state risk

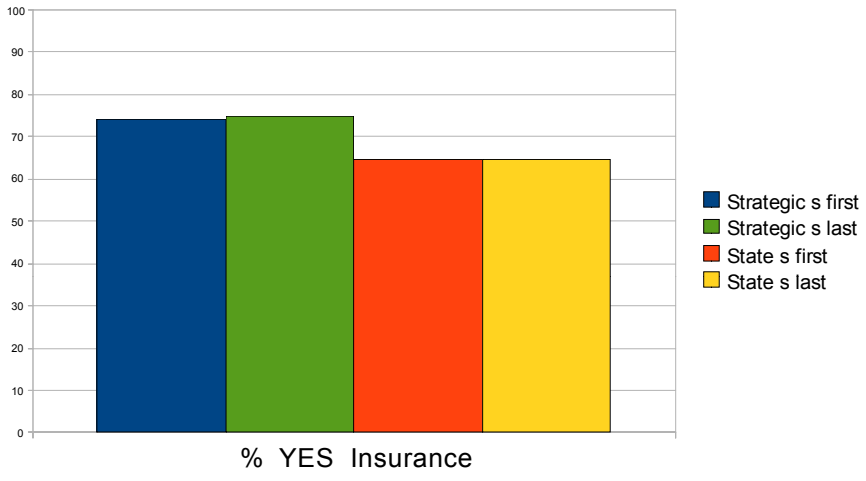
→ people might on average be more willing to insure against state uncertainty

Order effects

→ if risk attitude questions asked before the scenario question, more people go for insurance or insure on higher levels (esp. strategic uncertainty treatment)

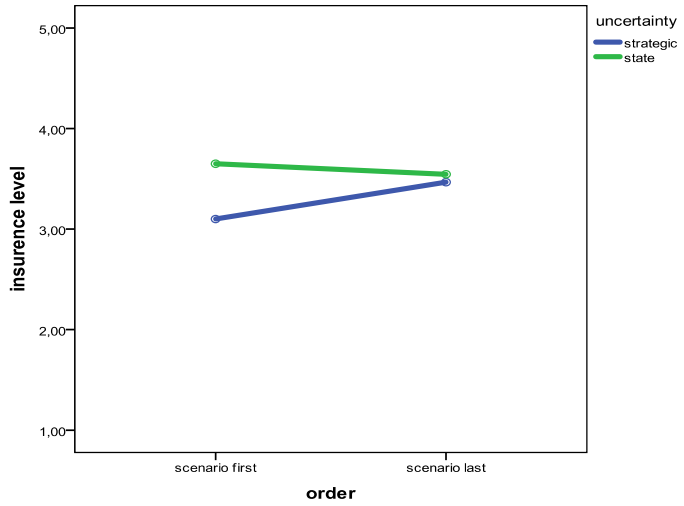
Results

- Binary choice insurance: *no sign. treatment effects*



Results

- Level of insurance: *no sign. treatment effects*



Results

CFC <> Insurance Behavior

- Yes/No – No relationship
- Insurance level – No relationship

Risk Attitudes <> Insurance Behavior

- Yes/No – No relationship
- Insurance level – positive relationship (β=.27, p=.03)

Income <> Insurance Level

- positive relationship (β=.30, p=.04)

Discussion

- Scenario could have been stronger
- Is there a market for insurance against social risks?
- Experiment might provide more convincing evidence

Спасибо!

Scenario Question – Strategic Uncertainty

Please imagine the following:

You are buying a product which is offered by the seller via an online trading platform. This product costs €150. You need to have this product within 7 days. After 7 days it will be completely useless to you. Moreover, you cannot return the product to the seller and get your money back. The delivery time is stated to be 3 to 4 days.

An independent insurance company offers an insurance that would protect you in case the seller does not send you the product in time.

Statistics tell you that in 8 to 12 out of every 100 online purchases, the seller does not send you the product in time.

Please decide whether you want to buy an insurance or not. If yes, please specify which level of insurance, displayed in the table below, you would buy.

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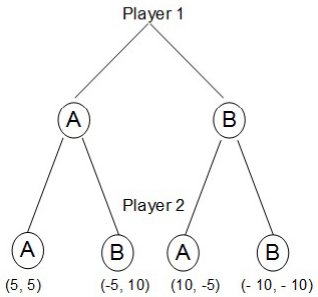
An independent insurance company offers an insurance that would protect you in case something beyond the seller's control happens, which hinders him to send you the product in time (e.g., delivery-truck has mechanical problems, storage room burns down, unexpected bad weather conditions, etcetera).

Statistics tell you that in 8 to 12 out of every 100 online purchases, something beyond the seller's control happens and the product is not delivered to you in time.

Please decide whether you want to buy an insurance or not. If yes, please specify which level of insurance, displayed in the table below, you would buy.

Implementation in the Laboratory

- Create Uncertainty Environment

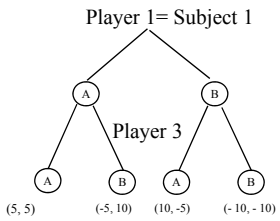


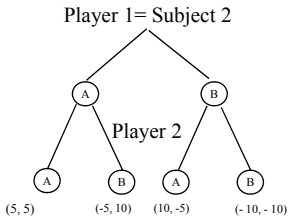
- Strategic: subject's outcome also depends on co-player's choices

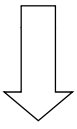
- State: Co-player's decision is randomly determined
→ no strategic aspect in there

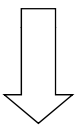
Implementation in the Laboratory

Without insurance:







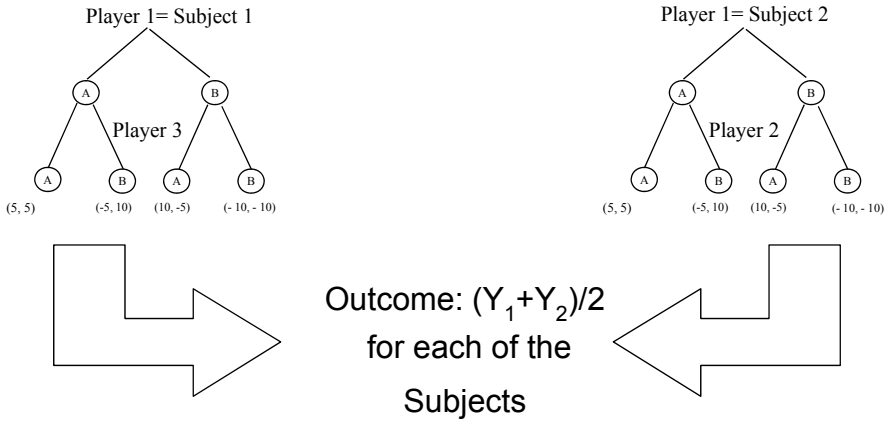


Outcome: Y_1

Outcome: Y_2

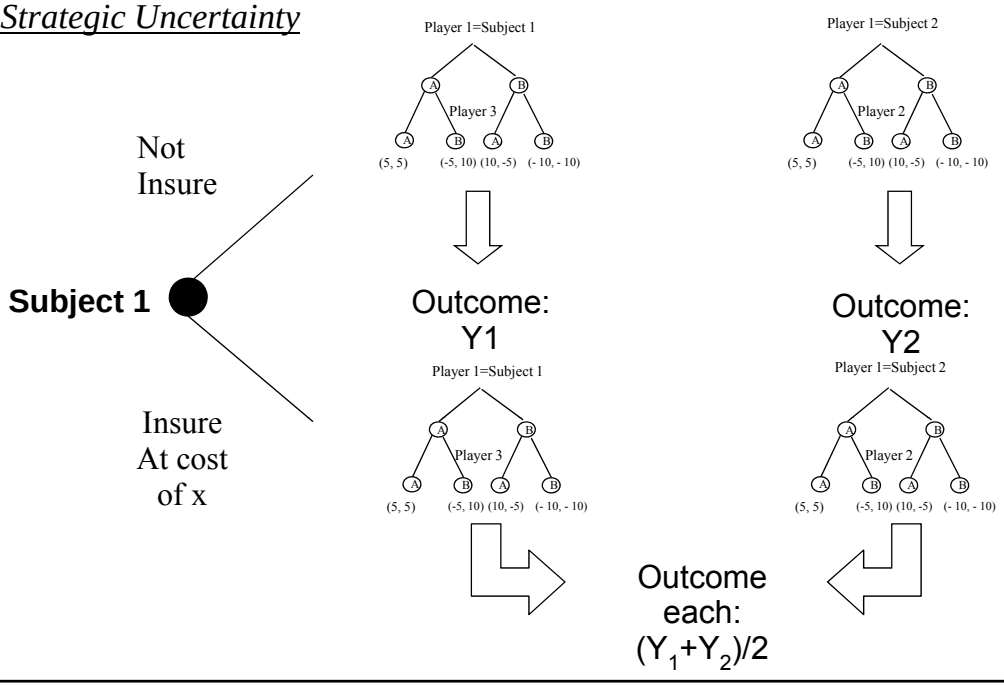
Implementation in the Laboratory

With insurance



Implementation in the Laboratory

Strategic Uncertainty



Implementation in the Laboratory

State Uncertainty