Laboratory experiments

The Dying Seminar

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4 different information treatments

• All treatments A B C & D
  ▪ for each individual, information on the individual threshold and payoffs

• Treatment A: ‘On line’ OL
  ▪ Each individual is given the additional following information:
    ▪ All individuals’ thresholds
    ▪ All ‘On line’ individual decisions
    ▪ Ex post: number of participants for each period of each seminar

• Treatment B: (ex post) # participants NP
  ▪ Each individual is given the additional following information:
    ▪ All individuals’ thresholds
    ▪ Ex post: number of participants for each period of each seminar

• Treatment C: (ex post) threshold reached H
  ▪ Each individual is given the additional following information
    ▪ Ex post: Individual threshold reached or not

• Treatment D: Payoff P
  ▪ No additional information (therefore, a subject who did not participate a seminar does not know whether his threshold would have been reached).
Putting the Dying Seminar into the lab.

• Seminars with $N = 16$ potential participants.

• In every treatment, the payoffs are the same for an individual seminar (one period):

  Individual endowment: 50 ¥ (with 100 ¥ = 1,45 €)

  – Non participant: 50 ¥
  – Participant with threshold reached: 200 ¥
  – Participant with threshold not reached: 0 ¥
Seminar 1

- **F2(Hi)**
- **F2bis(Hi)**
- **f2bis(Hi)**

Graph showing the relationship between **F2(Hi)** and **Hi**, with stable and fragile categories indicated.
Seminar # 2. Distribution of thresholds (IWP)

F1(Hi) vs Hi

stable

fragile

Hi

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Experiment: laboratory version of the Dying Seminar

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Seminar # 3. Distribution of thresholds (IWP)

![Graph showing distribution of thresholds (IWP)]
Seminar 3

The graph shows the number of periods (N(t)) over time for different treatments. The treatments are:
- Treatment A (green circles)
- Treatment B (blue triangles)
- Treatment C (red squares)
- Treatment D (black inverted triangles)

The x-axis represents the periods, and the y-axis represents the number of periods (N(t)).
Seminar 4

![Graph](image)

- **N(t)**
- **periods**

Legend:
- **Treatment A** (green circles)
- **Treatment B** (blue triangles)
- **Treatment C** (red squares)
- **Treatment D** (black inverted triangles)
Modeling

• Attraction dynamics
  ~ reinforcement learning
  ~ experience Weighted Attraction (EWA) learning scheme (Camerer, 2003)

• Numerical simulations
Treatment A

'On line':

- For each individual, information on his threshold and payoffs
- Each individual is given the additional following information:
  - All individuals’ thresholds
  - All 'On line' individual decisions
  - *Ex post*: number of participants for each period of each seminar
Treatment B: (ex post) # participants NP

- For each individual, information on his threshold and payoffs

- Each individual is given the additional following information
  - All individuals' thresholds
  - Ex post: number of participants for each period of each seminar
Treatment C: (ex post) threshold reached H

- For each individual, information on his threshold and payoffs

- Each individual is given the additional following information
  - Ex post: Individual threshold reached or not
Treatment D: Payoff $P$

- For each individual, information on his threshold and payoffs
- No additional information

(therefore, a subject who did not participate a seminar does not know whether his threshold would have been reached)
Conclusions - perspectives

• Good agreement with simple learning rule

• (Much) more participants in large experiments: are our results homothetic?
  What is a ‘large group’ in coordination and critical mass problems?

• More elaborate models of (thinking and) learning?