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The 3rd CeDEX China Workshop on Behavioural and Experimental Economics

8th – 9th June, 2024

*Venue: IEB 122
University of Nottingham Ningbo China*

Programme

Organizers:

Centre for Decisions Research and Experimental Economics (CeDEX China)
School of Economics, University of Nottingham Ningbo China



Saturday June 8

10:00 – 10:15 Opening Remarks

10:15 – 11:15 **Keynote 1: Tom Lane**, Newcastle University
Discrimination: Experimental Findings and Directions

11:15 – 12:15 **Keynote 2: Jie Zheng**, Shandong University
Human (In)Compliance to Extortions: Algorithm Awareness Matters

12:30 – 14:00 Lunch

Session 1: Field Experiment (Chair: Gergely Horvath)

14:00 – 14:35 **Shuhuai Zhang**, Tsinghua University
Trust-building in Medical Crowdfunding: A Field Experiment

14:35 – 15:10 **Xin Gu**, Xi'an Jiaotong-Liverpool University
Peer Effects on Working Adults' On-the-job Learning: Experimental Evidence from An Online Teacher Training Program

15:10 – 15:45 **Lijia Wei**, Wuhan University
Overcoming Medical Overuse with AI Assistance: An Experimental Investigation

15:45 – 16:15 **Group photo** and tea/coffee break

Session 2: Biases and Perceptions (Chair: Shuguang Jiang)

16:15 – 16:50 **Jingcheng Fu**, National University Singapore
Perceived correlations in risk attitudes

16:50 – 17:25 **Jaimie Lien**, Shandong University
"Deal or No Deal?": Spatial Set Representativeness in Dynamic Choice

18:30 Dinner



Sunday June 9

Session 3: Behavioural Theory (Chair: Jaimie Lien)

- 09:15 – 09:50** **Jingyi Shen**, University of Nottingham Ningbo China
On the Coarseness of Equilibrium Coalition Structures in Symmetric TU Games
- 09:50 – 10:25** **Xueheng Li**, Sun Yat-Sen University
The Structure and Gender Gap of Overconfidence
- 10:25 – 10:45** Tea/coffee break

Session 4: Choice and Cooperation (Chair: Lijia Wei)

- 10:45 – 11:20** **Lin Jing**, Dongbei University of Finance and Economics
Leadership Effectiveness in Multiple vs. Single Public Goods Games
- 11:20 – 11:55** **Mofei Jia**, Xi'an Jiaotong-Liverpool University
The impact of social status on the formation of collaborative ties and effort provision: An experimental study
- 11:55 – 12:30** **Shuguang Jiang**, Shandong University
War and Peace in Future Economic Prospects
- 12:30 – 14:00** Lunch

Session 5: “Ice-cream and Beer” aka Reputation and Beliefs (Chair: Xueheng Li)

- 14:00 – 14:35** **Gergely Horvath**, Duke Kunshan University
The Fragility of Reputation while Sustaining Cooperation
- 14:35 – 15:10** **Marcus Roel**, University of Nottingham Ningbo China
The Benefits of Being Misinformed: Information Moderation under Misperception



Abstract

Shuguang Jiang, Shandong University

War and Peace in Future Economic Prospects

Abstract: The Thucydides Trap theory postulates that a rising power will inevitably challenge the status of an established power, and the established power will also take measures to restrain and suppress the rising power. Conflict between the two is seen as unavoidable. We test whether future economic prospects matter. If future economic prospects are positive, both parties are more likely to engage in cooperation, whereas if prospects are negative, conflicts are more likely to arise. We use a lab experiment to test cooperation and conflict between a rising power and an established power and how future economic prospects affect the occurrence of conflict. We find fewer conflicts during the power shift when both parties are facing a growing pie compared to a shrinking pie, though Nash equilibrium predicts no differences.

Shuhuai Zhang, Tsinghua University

Trust-building in Medical Crowdfunding: A Field Experiment

Abstract: Trust in a two-sided market is crucial for buyers and sellers to exchange and transact on the platform. We designed a randomized field experiment on a leading medical crowdfunding platform in China to investigate how trust-building informational treatments affect charitable giving decisions. Our experiment considers two general strategies to build trust: third-party endorsement and platform internal regulations. On average, our interventions increase the likelihood of browsing and donating by 17% and 40%, respectively. We find no effect on the size of donations per transaction. Our analysis uncovers substantial diversity in the effects of the treatment, varying across different donor profiles and campaign characteristics. The findings imply that such trust-building tactics represent efficient and economical instruments for overcoming the pervasive market inefficiencies inherent in philanthropic endeavors.

Jaimie Lien, Shandong University

“Deal or No Deal?”: Spatial Set Representativeness in Dynamic Choice

Abstract: Studies of Representativeness Bias have typically focused on a sequence of realized outcomes over time, but scarcely examine the implications for the spatial domain. In this paper, we study the decisions of contestants in the well-known live television game show “Deal or No Deal?”. In the game, spatially displayed suitcases with randomly hidden monetary amounts are chosen sequentially by contestants, and the revealed amounts determine the certain payment offered in



contestants’ potential “deal”. We demonstrate that contestants’ choices in the game are consistent with the idea of “spatial set representativeness”. That is, to increase the quality of their potential deal, they distinctly exhibit negative spatial correlation between suitcase choices over time - a pattern which cannot be reconciled with a model of accurate perceptions about spatial probabilities.

Jie Zheng, Shandong University

Human (In)Compliance to Extortions: Algorithm Awareness Matters

Abstract: When confronting extortions or oppression, human may take actions to struggle against exploitation even at very high costs, eg. Spartacus Rebellion and workers organizing protests to demand better pay and benefits. Does such incompliance persist when the extortions are implemented by algorithms? This study uses an economic experiment to examine the behavioral responses of human subjects when confronted with an opponent employing an extortionate Zero-Determinant (ZD) strategy, either informed (under I condition) or uninformed (under U condition) that their opponent is an algorithm-based computer. The findings reveal a significant divergence in human behavior depending on their awareness of the opponent's algorithmic nature. In treatments with U condition, subjects demonstrated a propensity of incompliance, even at the expense of their own payoff. Conversely, in treatments with I condition, their rate of cooperation—and thus compliance—increased markedly. Further investigation into the relative income status (advantage, parity, or disadvantage) of human subjects vis-à-vis their opponents across various treatments suggested a nuanced impact of algorithm awareness on incompliance behavior. Subjects displayed a pronounced concern for their relative income status over their absolute income under U condition. However, this preoccupation with relative income status was supplanted by the pursuit of absolute payoff when exposed to I condition. This study provides insights into the influence of algorithm awareness on human economic behavior.

Lijia Wei, Wuhan University

Overcoming Medical Overuse with AI Assistance: An Experimental Investigation

Abstract: This study evaluates the effectiveness of Artificial Intelligence (AI) in mitigating medical overtreatment, a significant issue characterized by unnecessary interventions that inflate healthcare costs and pose risks to patients. We conducted a lab-in-the-field experiment at a medical school, utilizing a novel medical prescription task, manipulating monetary incentives and the availability of AI assistance among medical students using a three-by-two factorial design. We tested three incentive schemes: Flat (constant pay regardless of treatment quantity), Progressive (pay increases with the number of treatments), and Regressive (penalties for overtreatment) to assess their influence on the adoption and effectiveness of AI assistance. Our findings demonstrate that AI



significantly reduced overtreatment rates—by up to 62% in the Regressive incentive conditions where (prospective) physician and patient interests were most aligned. Diagnostic accuracy improved by 17% to 37%, depending on the incentive scheme. Adoption of AI advice was high, with approximately half of the participants modifying their decisions based on AI input across all settings. For policy implications, we quantified the monetary (57%) and non-monetary (43%) incentives of overtreatment and highlighted AI's potential to mitigate non-monetary incentives and enhance social welfare. Our results provide valuable insights for healthcare administrators considering AI integration into healthcare systems.

Lin Jing, Dongbei University of Finance and Economics

Leadership Effectiveness in Multiple vs. Single Public Goods Games

Abstract: The presence of multiple public goods greatly decreases the contribution level and the likelihood of successful coordination in threshold public goods games (TPGG). This paper investigates the effect of leadership in enhancing successful cooperation and coordination in TPGG with multiple public goods. We further explore the difference in the leadership effect between TPGG with multiple public goods and TPGG with single public goods, where theoretical equivalence is established. We have 5 treatments under investigation: 3G-None with three types of public goods and no leader is present; 3G-Chc with three types of public goods and a leader publicly choosing the type of public goods to contribute; 3G-Amt with three types of public goods and a leader publicly choosing both the type of public goods and the amount to contribute; 1G-None with one type of public goods and no leader is present, which is theoretically equivalent to 3G-Chc; and lastly, 1G-Amt with one type of public goods and a leader publicly choosing the amount to contribute, which is theoretically equivalent to 3G-Amt. The experiments feature both a between- and within-subject design. From the pooled experimental data, the results are consistent with our hypotheses. Specifically, 3G-Amt elicits higher contributions and public goods provisions than 3G-Chc, which performs better than 3G-None. There is no significant difference among the theoretically equivalent pairs (3G-Amt and 1G-Amt, 3G-Chc and 1G-None). However, the between-subject data shows that 3G-Chc elicits higher contributions and public goods provisions than 1G-none, and so does 3G-Amt than 1G-Amt. This suggests that followers depend more on a leader's choice in a complex environment than they do in a simple environment, which amplifies the effect of leadership on enhancing cooperation and coordination.



Cindy Jingcheng Fu, National University Singapore

Perceived correlations in risk attitudes

Abstract: We investigate the perceived links between risk preferences within and across domains defined over probability (low/moderate) and outcome (prospect/hazard). In an experimental setting, we first elicit subjects' risk taking behaviors in different domains, and then measure their beliefs about links of behaviors within the same domain and across different domains. We find that the majority of subjects guess the within-domain links to be positive and significantly higher than truth (i.e., underestimate noise). The guesses for cross-domain links are widely spread, and subjects give insufficient decision weights to the corresponding within-domain links when they evaluate a cross-domain link.

Gergely Horvath, Duke Kunshan University

The Fragility of Reputation while Sustaining Cooperation

Abstract: Reputation is a key cooperation-fostering mechanism, both in theoretical models and real-world scenarios (Manrique et al. 2021; Nowak, 2006; Takacs et al., 2021). However, real-life reputation systems are imperfect due to potentially noisy or manipulated information (Antonioni et al. 2016; Hilbe et al., 2018). Here, we experimentally study the robustness of the role of reputation when individuals can manipulate their public image and test to what extent the possibility to verify the accuracy of public information reinstates cooperation. As a control situation, we employ a standard repeated experimental protocol that combines reputation and network reciprocity, allowing people to observe others' past behavior and decide jointly with whom to interact and whether to cooperate or defect against all their network neighbors. In line with previous evidence, the level of cooperation is high and stable in this framework. In our first treatment condition, people can manipulate public information about their last action at a cost. Cooperation rates decline rapidly to zero in this framework, as about half of the participants engages in reputation manipulation. In our second treatment, in which subjects can both manipulate their public reputation but also verify others' reputations at a cost, neither the level nor the stability of cooperation recover fully. Rather, cooperation emerges to some extent but declines over time. These findings call for further investigation of the underlying mechanisms that contribute to the vital yet complex role of reputation systems in human societies.

Xueheng Li, Sun Yat-Sen University

The Structure and Gender Gap of Overconfidence

Abstract: Drawing from the psychology literature, we propose a theoretical framework to distinguish between three sources of overconfidence: prior overassessment, overplacement, and biased



information processing. Guided by theory, we design an experiment to examine these sources and their differences across genders. Participants complete a set of general knowledge questions and make guesses about their scores. As a combined outcome of prior overassessment and overplacement, participants significantly overestimate their scores, with males slightly more so than females. Prior overassessment is particularly severe among weaker male participants. When participants are given noisy signals about their scores, overestimation is significantly reduced. Strikingly, however, when informed of the score distribution from prior sessions, overestimation tends to increase. Both changes are consistent with a theory in which an agent, despite suffering from prior overassessment and overplacement, updates beliefs rationally according to Bayes' rule.

Tom Lane, Newcastle University

Discrimination: Experimental Findings and Directions

Abstract: Experiments studying discrimination in the lab and field have a long history and remain extremely popular in economics. Drawing upon my own experiences in this research area, and addressing methodological issues along the way, I will discuss what the literature has found and what remains to be discovered. I will suggest promising directions for those interested in researching the topic.

Xin Gu, Xi'an Jiaotong-Liverpool University

Peer Effects on Working Adults' On-the-job Learning: Experimental Evidence from An Online Teacher Training Program

Abstract: We study how revealing peers' past learning behaviors in a randomized controlled trial (RCT) affects individuals' subsequent online job training attendance and performance in a large online teacher training program. We use a 2x2 between-subject experiment design where participants receive text messages varying 1) whether participants are informed about their peers' average attendance rate only or additionally about their peers' maximum attendance duration and 2) whether the referent peers are tenured or non-tenured. We find significant treatment effects on the participants' attendance duration, mainly driven by knowing non-tenured peers' pre-treatment attendance duration rather than their attendance rate. More importantly, we utilize the unique weak competitive relationship between tenured and non-tenured teachers in the Chinese education system to largely exclude the competitiveness channel of peer effects and empirically verify the social conformity channel. Additionally, teaching loads, school types, and familiarity with work location also impact the responsiveness to peers' nudge information. Disentangling such social conformity sources of peer effects will have essential practical implications in a low competitive and sparsely interactive environment.



Marcus Roel, University of Nottingham Ningbo China

The Benefits of Being Misinformed: Information Moderation under Misperception

Abstract: We study how experts, who are more skilled at interpreting signals than the people they advise - e.g., due to skill, experience, or fewer psychological biases - communicate information in a sender-receiver model. A benevolent information moderator (i.e., sender) receive a signal about payoff relevant states from an experiment and decides whether to forward the signal truthfully to a decision maker (i.e., receiver) or garble its informational content. Critically, the moderator and decision maker may hold different ex-ante beliefs about the world (heterogeneous priors) or have alternative perceptions about (the signal accuracy of) the underlying information experiment, which turns the problem into a strategic interaction and creates opportunities for beneficial interventions. We characterize when manipulating information can be beneficial, both for a decision maker unaware of any interference (naive), and one who takes it into account (sophisticated). Our main result shows that with three or more states of nature, moderating information flows can lead to an improvement in welfare for any experiment, and which is true for any arbitrarily small difference in either their prior beliefs or their perceptions of the experiment. Our results highlight that disagreement is much more common than initially thought.

Jingyi Shen, University of Nottingham Ningbo China

On the Coarseness of Equilibrium Coalition Structures in Symmetric TU Games

Abstract: In symmetric games with transferable utility, we investigate coalition formation using two solution concepts: n^* (Bloch 1996, Ray and Vohra 1999) which is a focal prediction in a class of noncooperative games of coalitional bargaining, and the notion of equilibrium binding agreements (Ray and Vohra 1997) which represents the cooperative blocking approach. We provide a sufficient and necessary condition for these two solutions to coincide regarding coalition structures when there are three players. Our finding reveals that the coarsest equilibrium coalition structure (based on the notion of equilibrium binding agreements) is at least as fine as n^* . This result also holds for four-player games. However, when the number of players is at least five, the conclusion does not apply: the coarsest equilibrium coalition structure may be finer or coarser than n^* .

Mofei Jia, Xi'an Jiaotong-Liverpool University

The impact of social status on the formation of collaborative ties and effort provision: An experimental study

We study whether competition for social status induces higher effort provision and efficiency when individuals collaborate with their network neighbors. We consider a laboratory experiment in which individuals choose a costly collaborative effort and their network neighbors. They benefit from their neighbors' effort and effort choices of direct neighbors are strategic complements. We introduce



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two types of social status in a 2x2 factorial design: 1) individuals receive monetary benefits for incoming links representing popularity; 2) they receive feedback on their relative payoff ranking within the group. We find that link benefits induce higher effort provision and strengthen the collaborative ties relative to the Baseline treatment without social status. In contrast, the ranking information induces lower effort as individuals start competing for higher ranking. Overall, we find that social status has no significant impact on the number of links in the network and the efficiency of collaboration in the group.



Participants





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Accommodation, Transportation, and Visitor Guide


1. Visitor Pass

Please apply the visitor pass via: <https://visitor.nottingham.edu.cn/> -> Visitor -> Log in with your mobile phone number -> agree with the terms and conditions -> fill the visit information as below:

● Visit Information

 Gate of access *	UNNC GATE-1
 Visit Date *	2024-06-07 - 2024-06-09
 Purpose *	Meeting
 Drive	<input type="checkbox"/>

● Host

 History Host List

Fill in email * Claudia.Cai @nottingham.edu.cn

2. Hotel Information (on UNNC campus)

We have already reserved rooms at LA Hotel of University of Nottingham Ningbo China for all participants who confirmed with us, **please register with your national ID card or passport.**

3. Transportation

3.1 Plane

From Ningbo Lishe Airport

A taxi from the airport costs around 30 RMB for a 12km journey.

From Hangzhou Xiaoshan Airport

Take the shuttle bus from the airport to Hangzhou Train Station then get the high-speed train to Ningbo Train Station.

From Shanghai Hongqiao Airport

Transfer by foot to Hongqiao Train Station then get the high-speed train to Ningbo Train Station.



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From Shanghai Pudong Airport

Take a taxi or the Metro to Hongqiao Train Station, then take the high-speed train to Ningbo. A taxi to Hongqiao Train Station will take about one hour and costs around 250 RMB. To get to Hongqiao Train Station via Metro, take Line 2 and transfer at Guanglan Lu station.

3.2 Train (CHSR)

From Ningbo Railway Station

A taxi from the railway station costs around 30-40 RMB for a 10km journey.

Note: you can take Didi ONLY at North Square; and take taxi at both North and South Square.

3.3 Taxi

Show taxi drivers the following address to reach the University campus:

宁波市鄞州区高教园区泰康东路 199 号，宁波诺丁汉大学 1 号门

The University of Nottingham Ningbo China, Gate 1, 199 Taikang East Road, Ningbo



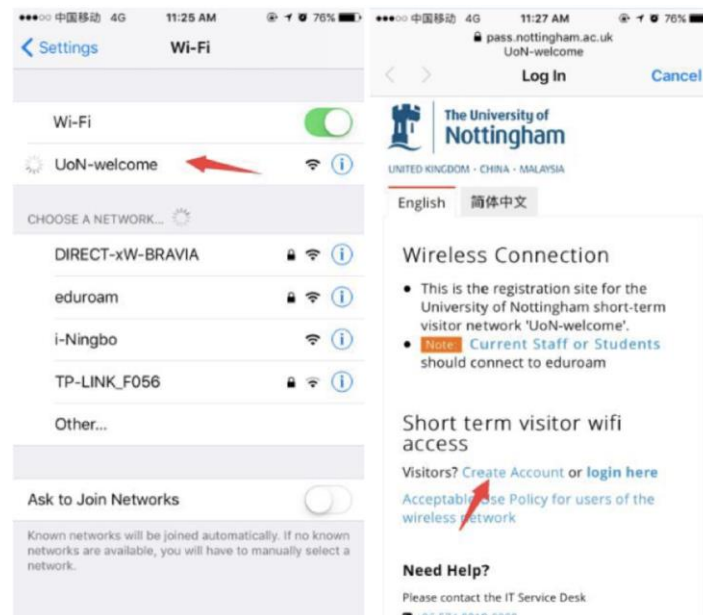
4. Wi-Fi access

Wi-Fi This is a quick configuration guide for connecting to the UNNC wireless network (SID: UoN-welcome).

1. Choose the WIFI SID: UoN-welcome on your mobile phone.
2. Click the Create Account for your first register.
3. Edit your detailed information to register.
4. Check and click the item: I accept the terms of use and click Register.
5. Click the Log in.
6. Click the activate in the mail from pass@nottingham.edu.cn

Note:

- a. After you activated, your account will be enabled. And its Expiration Time is 7 days later.
- b. Eduroam is available for those whose institutions subscribe to the global service.





5. Campus map

