

Team Reasoning, Cooperation, Coordination, and Evolution

Seminar WiSe 2022/23

LECTURERS

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SYNOPSIS AND OBJECTIVES

Team reasoning is an extension of classical game theory that aims at explaining coordination and cooperation in a broad array of contexts. It goes beyond classical game theory in assuming that the players can reason not only in the standard, individual mode, but also in the “we-mode”, i.e. taking the perspective of a team member or a team planner. This change of perspective involves both a transformation of the preferences and of the object of choices of the players. These assumptions are important departures from classical game theory, and as such raise the question of how plausible they are, and the conditions under which they can be expected to emerge. The goal of this seminar is to survey and discuss both the empirical and theoretical literatures aimed at underpinning the assumptions of the theory of team reasoning.

At the end of the seminar the students will be able to:

- Explain how the theory of team reasoning differs from standard game theory.
- Assess its success at explaining coordination and cooperation in games like “HiLo”, the Prisoners’ Dilemma, and the Stag Hunt.
- Present some of the main psychological determinants of team reasoning.
- Survey the existing models of its evolution.

TARGET GROUP

Advanced Bachelor’s students – and for selected topics also Master’s students – from:

- Philosophy & Economics

SEMINAR PLACES

- 16

LANGUAGE OF INSTRUCTION/ASSESSMENT

- Seminar: English
- Written work: English

DATES AND DEADLINES

- Introduction to team reasoning: **December 16th, 2022, 14 (c.t.) to 16.**
- Seminar: **January 27th-28th, 2023.**
- Submission of seminar papers: **March 31st, 2023.**

Subject to potential university-wide change, deadlines are final and will be strictly enforced.

ASSESSMENT

- P6.iv, V4/5 seminar 5 cp: presentation, comment, participation + 3500-4000 word seminar paper.
- P2*, P5* seminar 2 cp: presentation, comment, participation.

ENROLMENT/REGISTRATION:

The registration proceeds in two steps.

1. Course Registration on CampusOnline. You will then be automatically placed on the “waiting list” for the course.
2. Topic selection by contact with the lecturers (Ade and Roy).
Topics will be allocated on a **first-come-first-served** basis.

Registration is only complete when the topic has been agreed on and you have been assigned a place on CampusOnline. Deadline for a complete registration: **December 2nd, 2022, 12:00.**

SEMINAR STRUCTURE AND PRESENTATIONS:

- *Introduction to team reasoning:* On December 16th, from 14 (c.t.) to 16:00, the lecturers will give an introduction to the theory of team reasoning. The goal of this session is to give the students the background knowledge necessary for reading and understanding the seminar papers.
- *Seminar:* The seminar will consist of a combination of presentations by the lecturers and by the students. Each student will be allotted a 45 min slot in the course, where they will have to introduce one paper from the list below. Each student chooses, in agreement with the lecturers, which paper they wish to introduce. Depending on the papers, this introduction might take the form of a guided activity or a more classical presentation. In both cases the lecturers will provide specific instructions for the activity, or questions to be answered in the presentation. The exact form of that introduction will be decided case-by-case by the lecturers and the students together, prior to the seminar.

SEMINAR PAPERS

Your *seminar paper* should be on a well-defined issue related to a topic discussed in the seminar. The focus and the intended key references/data sources of your seminar paper should be coordinated with the lecturers before you start writing.

Please make sure when writing your paper that you maintain scholarly standards of presentation and citation. For guidance, please consult any of the research papers that can be found on either of our websites. We recommend that you use the author-date (Harvard) referencing system.

MANDATORY READING FOR ALL PARTICIPANTS

- Colman, A. M., and Gold, N. (2018). "Team reasoning: Solving the puzzle of coordination." *Psychonomic Bulletin & Review*, 25(5):1770–1783.

We will discuss these papers during the first session

THEMES

* = Advanced paper.

T1. Experimental Evidence

Mandatory reading: Section 6 of Gold, N. (2017) "Team reasoning: controversies and open research questions." *The Routledge Handbook of Collective Intentionality*. Routledge. 221-232.

Possible papers for presentation/activities:

- Colman, A. M., Pulford, B. D., and Lawrence, C. L. (2014). "Explaining strategic coordination: Cognitive hierarchy theory, strong stackelberg reasoning, and team reasoning." *Decision*, 1(1):35–58.5
- Colman, A. M., Pulford, B. D., and Rose, J.. (2008). "Collective rationality in interactive decisions: Evidence for team reasoning." *Acta psychologica* 128.2: 387-397.
- Thom, J. M., Afzal, U., and Gold, N.. "Testing team reasoning: Group identification is related to coordination in pure coordination games." *Judgment and Decision Making* 17.2 (2022): 284-314.

T2. Evolutionary Approaches

Mandatory reading: Ade, L., Roy, O. (2022). "Team Reasoning from an Evolutionary Perspective: Categorization and Fitness." *Logic and the Foundations of Game and Decision Theory (LOFT 2022)*. (Conference Paper)

Possible papers for presentation/activities:

- Amadae, S. M. and Lempert, D. (2015). "The long-term viability of team reasoning." *Journal of Economic Methodology*, 22(4):462–478.
- Angus, S. D. and Newton, J. (2015). "Emergence of Shared Intentionality is Coupled to the Advance of Cumulative Culture." *PLoS Computational Biology*, 11(10):e1004587.
- Rusch, H. (2019). "The evolution of collaboration in symmetric 2×2-games with imperfect recognition of types." *Games and Economic Behavior*, 114:118–127.

T3. Philosophy of Team Reasoning

Mandatory reading: Sections 4 and 5 of Gold, N. (2017) "Team reasoning: controversies and open research questions." *The Routledge Handbook of Collective Intentionality*. Routledge. 221-232.

Possible papers for presentation/activities:

- Sugden, R. (2015). "Team Reasoning and Intentional Cooperation for Mutual Benefit." *Journal of Social Ontology*, 1(1):143–166.
- Karpus, J. and Radzvilas, M. (2018). "Team reasoning and a measure of mutual advantage in games." *Economics & Philosophy*, 34(1):1–30.
- Hakli, R., Miller, K., and Tuomela, R. (2010). "Two kinds of we-reasoning." *Economics & Philosophy*, 26(3):291–320. (*philosophically advanced, further reading necessary)
- Petersson, B. (2017). "Team reasoning and collective intentionality." *Review of Philosophy and Psychology* 8.2: 199-218. (*)

Further Relevant Literature :

- Sugden, R. (1993). "Thinking as a Team: Towards an Explanation of Nonselfish Behavior." *Social Philosophy & Policy*, 10(1):69–89.
- Bacharach, M. (1999). "Interactive team reasoning: A contribution to the theory of cooperation." *Research in Economics*, 53(2):117–147.
- Bacharach, M. (2006). *Beyond Individual Choice: Teams and Frames in Game Theory*. Princeton University Press.
- Roemer, J. E. (2019). *How We Cooperate*. Yale University Press.
- List, C., and Pettit, P. (2011) *Group agency: The possibility, design, and status of corporate agents*. Oxford University Press.
- Gilbert, M. (1992). *On social facts*. Princeton University Press.
- Tuomela, R. (2013). *Social ontology: Collective intentionality and group agents*. Oxford University Press.
- Schwenkenbecher, A. (2020). *Getting our act together: a theory of collective moral obligations*. Routledge.
- Bratman, Michael E. (2013) *Shared agency: A planning theory of acting together*. Oxford University Press.