

(Dis)Honesty of groups: The effects of group size and gender composition

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(Full paper will be available before the conference)

Motivation

- ▶ **Decision-making by groups/teams** – rather than individuals – is ubiquitous.
- ▶ Group members often have to **reach a decision jointly** – possibly after extensive deliberation – rather than casting a formal vote.
 - ▶ Examples: Work teams, committees, groups of friends or family
- ▶ Groups typically **differ in size and (gender) composition**.
- ▶ **Immoral decisions** as one domain of particular interest.
 - ▶ Example: Work team deciding whether to provide **honest or dishonest** (i.e. sugarcoated) report to their supervisor.

Related literature (mostly experimental)

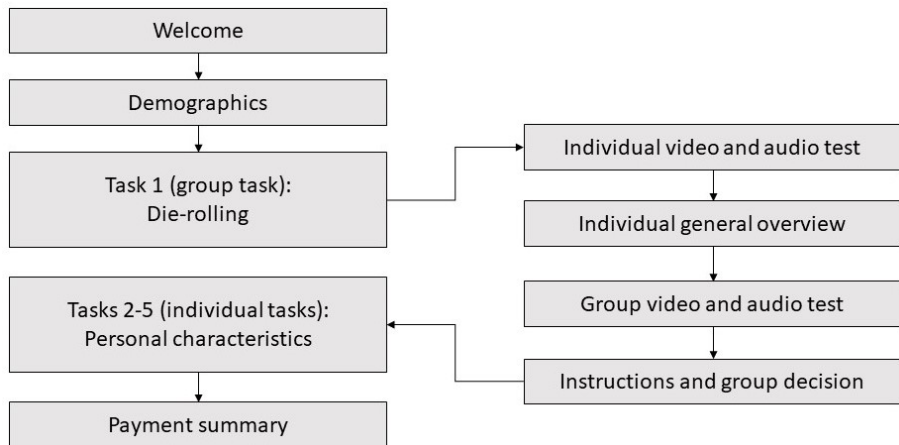
- ▶ **Decisions-making by groups (mainly dyads) versus individuals**
 - ▶ Surveys: Kugler/Kausel/Kocher (2012), Charness/Sutter (2012)
- ▶ **Unethical behavior by individuals and groups (mostly lying)**
 - ▶ Individual level: Fischbacher/Föllmi-Heusi (2013), Abeler/Nosenzo/Raymond (2019)
 - ▶ Do men lie more than women? e.g. Dreber/Johannesson (2008)
 - ▶ Groups: Dishonesty shift, e.g. Kocher/Schudy/Spantig (2018)
 - ▶ Underlying motives, e.g. Feess/Kerzenmacher/Muehlheusser (2023)
 - ▶ Male dyads lie more, Muehlheusser/Roider/Wallmeier (2015)
- ▶ **Impact of group gender diversity on decision-making**
 - ▶ Female quotas in leadership positions, e.g. Matsa/Miller (2013)

⇒ So far, no systematic analysis of group size and gender composition on dishonesty of groups ⇒ Aim of this paper

Summary: Our online group experiment

- ▶ Groups need to **jointly** decide whether to be honest or dishonest
- ▶ 18 treatments, systematically varying **group size** (from 2 to 5 members) and **group gender composition** (number of females in the group)
- ▶ Technical innovation: **Video chat tool** allowing **online face-to-face communication** among group members
- ▶ **Main findings:**
 - ❶ Dishonesty increases with group size
 - ❷ *All-male groups* are more dishonest than *all-female groups* and *almost all-male groups* (i.e. groups with 1 female)
 - ❸ When excluding all-male groups, no effect of group gender composition on dishonesty
⇒ watch out for all-male groups, just one female group member already quite effective in reducing dishonesty!

Experimental Design



- Focus on Task 1 (the group task) throughout this talk.

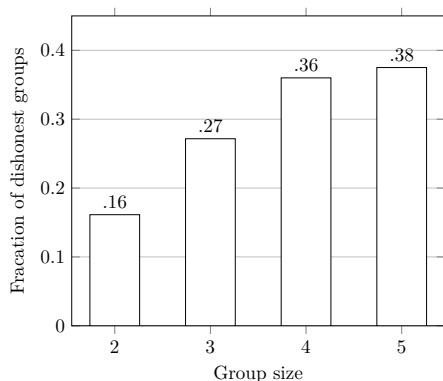
Group task: Reporting outcome of a die roll

- ▶ Subjects matched in groups
- ▶ Extending the die-roll setting of Fischbacher and Föllmi-Heusi (2013):
 - ▶ Group **observes (random) die roll** and is asked to **declare a number** $r \in \{1, \dots, 6\}$ to the experimenter.
 - ▶ Payoff π (in £) for each group member depending on number declared by group: $\pi = r$ for $r \leq 5$ and $\pi = 0$ for $r = 6$
 $\Rightarrow$ **incentive to lie** (unless number rolled is 5)
- ▶ Group members can get a positive payoff only upon reaching an **agreement** which number to declare (**unanimity**); otherwise $\pi = 0$
- ▶ To reach an agreement, group members can **discuss face-to-face** via a novel **online video chat tool** that we have implemented. [▶ Details](#)

Treatments and implementation

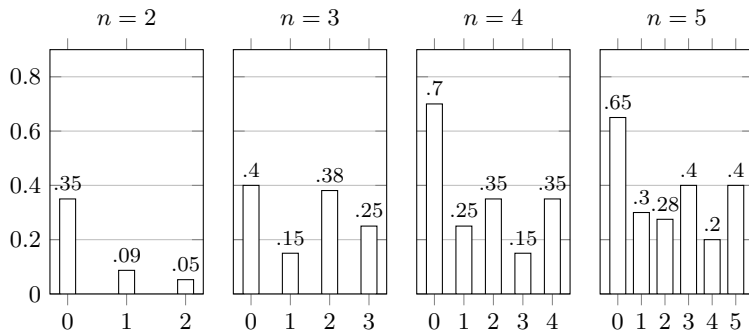
- ▶ We study group sizes $n \in \{2, 3, 4, 5\}$ and, for each n , all possible group gender compositions (number of females from 0 to n) $\Rightarrow$ **18 treatments**
- ▶ Online experiment (oTree), conducted in 2021/2022, recruitment via Prolific
- ▶ Aim: 20 (group) observations per treatment [▶ Details](#)
 - ▶ 1677 subjects (50.6% females, average age: 39.6)
 - ▶ Matched to **447 groups**
 - ▶ Average completion time (all tasks): ca. 30 minutes
 - ▶ Average payoff (all tasks): £5.43 (sd = 1.33)
- ▶ Throughout, focus on the 363 groups that have reached an agreement and had an incentive to lie (i.e. die outcome $\neq 5$)

Result: Dishonesty increases with group size



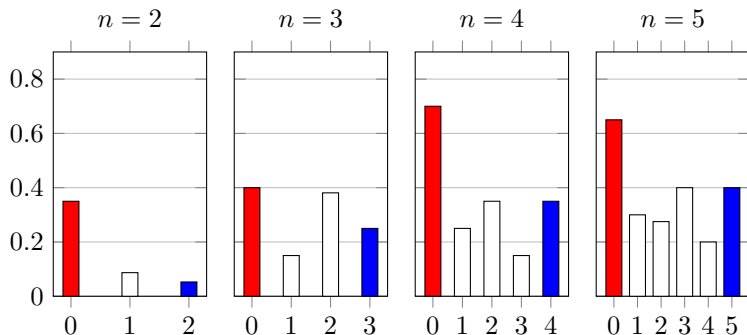
- ▶ Twice as high for $n = 4$ and $n = 5$ compared to $n = 2$
 - ▶ Jonckheere-Terpstra trend test ($p = 0.002$), some pairwise differences also significant
 - ▶ In line with **guilt sharing** (e.g. Rothenhäusler et al., 2018, Feess/Kerzenmacher/Muehlheusser, 2023)
- ▶ Further result: Group size has **no effect on intensity** of dishonesty. Conditional on lying, $r = 5$ virtually always.

Overview: Dishonesty by group size and group gender composition (number of females)



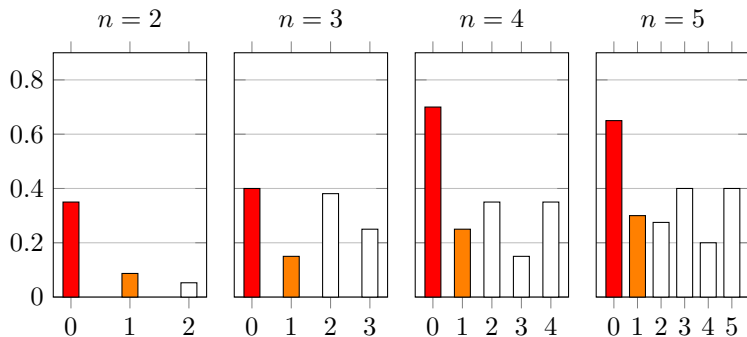
- Each of the 18 bars corresponds to 1 treatment

Result: **All-male groups** are more dishonest than **all-female groups**



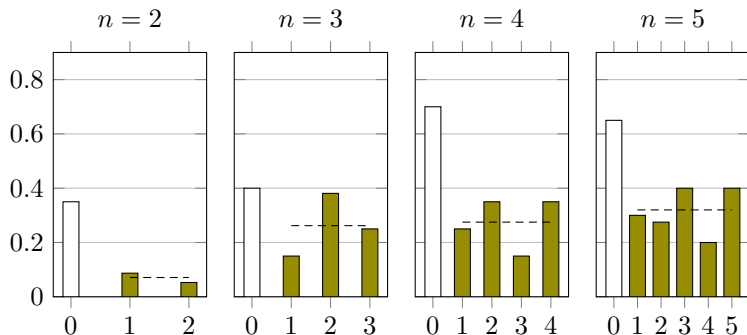
- ▶ Effect highly significant when pooling over n (Chi2, $p = 0.002$), for $n = 2, 4$ also within. Extends Muehlheusser et al. (2015, dyads only).
- ▶ Lying most prevalent in all-male groups, and often by a large margin...

Result: **All-male groups** are more dishonest than **almost all-male groups**



- ▶ Highly significant when pooling over n , and also within n (except $n = 3$)
- ▶ First female in group quite effective in bringing down dishonesty
- ▶ Less clear-cut for all-female and *almost all-female* groups [▶ Details](#)

Result: When excluding all-male groups, gender composition does not affect dishonesty



- For each n , Jonckheere-Terpstra test rejects presence of trend. Also, virtually all pairwise comparisons are insignificant
⇒ “All-male” versus “all other” group gender compositions

Conclusion and next steps

- ▶ Dishonesty by groups: effects of group size and group gender composition
 - ▶ More dishonesty in larger groups
 - ▶ (Only) all-male groups really stand out as “toxic”
 - ▶ Dishonesty not monotone decreasing with number of females in group, it is rather the **first female** making a big difference
- ▶ Possible channels? Consider **decision times** and **audio times** (as proxy for intensity of group discussion):
 - ▶ Preliminary result: While much less dishonest (compared to all-male groups), *almost all-male groups* neither need more time to reach an agreement, nor do they have more intensive discussions
 - ▶ **Hypothesis**: The pure presence of a female in the group suffices to break up the “boys’ social norm of cheating”
- ▶ Role of **personal characteristics** (tasks 2-5)

Thanks for your attention!

Questions/Comments? → gerd.muehlheusser@uni-hamburg.de

VIDEO CHAT



TASK DESCRIPTION: PLEASE READ IT NOW

- When the counter in the video **CLIP** has reached zero, all members of your group will see the same clip that shows the roll of a standard die. Each of the six possible numbers is equally likely.
- The die roll will be displayed for 10 seconds, and the task of your group is to memorize it.
- You can use the **VIDEO CHAT** to discuss the die roll within your group.
- As for payoffs, if not all group members report the same number within the time limit of 10 minutes, then every group member gets a payoff of 0. If all group members report the same number, then every group member gets a payoff as stated in the following table:

CLIP

02:45

Number reported by all group members	1	2	3	4	5	6
Payoff for each group member (in £)	0.50	1.00	1.50	2.00	2.50	0

- Practically, each group member makes an individual entry in the **DECISION WINDOW**. Entries may be adjusted at any time, and the decision window displays the most recent entry of each member. When all members have entered the same number, the group report will be locked in, resulting in the payoffs according to the above table.

DECISION WINDOW

You are group member 4

Enter/update your report and then press "Submit":

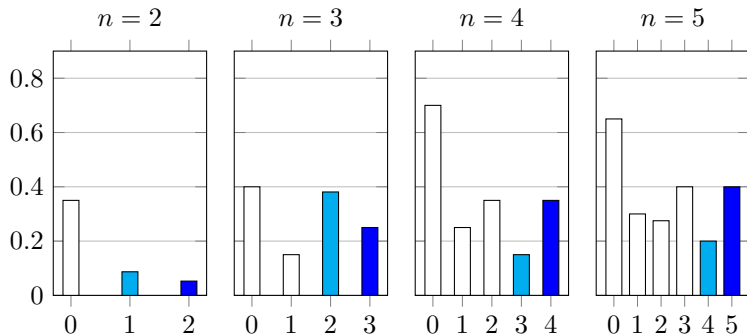
Group member	1	2	3	4
Number currently entered				

Identical numbers entered by all group members: **NO**

Once identical numbers have been entered by all group members and the group report has been locked in, click on any of the two circles below and then press "Next" to proceed.

► Back

Result: Less clear-cut when comparing all-female groups and almost all-female groups



► Back

Treatments and number of groups observations per treatment

Group size	No. of females per group						Total
	0	1	2	3	4	5	
2	25	29	23	-	-	-	77
3	25	25	24	25	-	-	99
4	25	27	23	30	24	-	129
5	20	25	24	22	27	24	142
	95	106	94	77	51	24	447

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