Teams versus Individuals in Pre-play Cheap Talk Communication

Online Appendix

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Subjects' action choices when both agents sent the same message

Figure A1 compares the relative frequency with which action A or B is chosen when both agents send the same message (excluding the dominant strategy types). Both individual and team play exhibit a similar pattern: higher types tend to play A more often, which is consistent with theoretical predictions. Due to the small sample problem for message pair MM, we focus on the other two message pairs. For message pair LL, it seems that there is no much difference between teams and individuals for action choices. For message pair HH, it appears that teams' behavior is more consistent with theoretical predictions: for types 4-5, the percentage of agents choosing A is about 85% for teams, while it is 63% for individuals. But this result should be interpreted with caution, as the sample size for individuals is small.

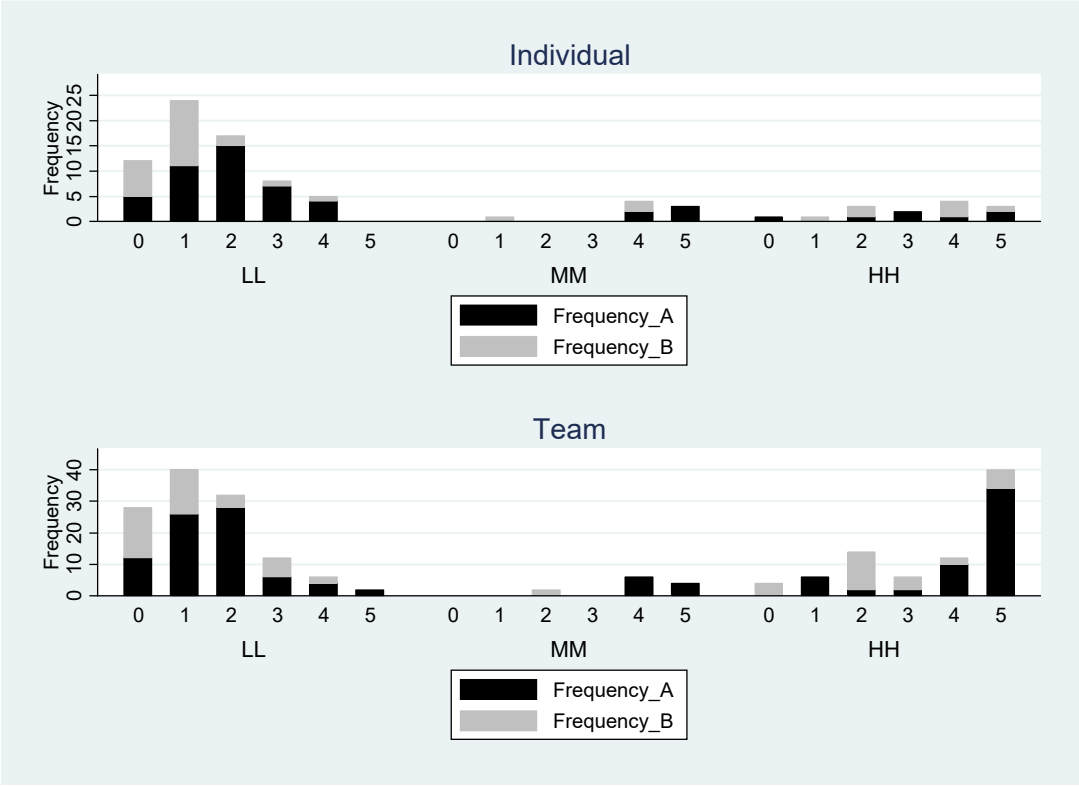

Fig. A1: Action Choices When Both Agents Send the Same Message

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Chat analysis: how type and period affect coding frequencies

To study how type and period affect coding frequencies, we construct panel data and run regressions by using a fixed effect model. The results are reported in the following tables.

Table A1: Coding Frequency by Period and Type (No Communication Treatment)

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Coding Freq	A1-CutStrat	A2-DominAware	A3-MaxMin	A4-OppProb
period	-0.0257***	-0.0111***	-0.0105***	-0.0103***	-0.000586
	(0.00346)	(0.00171)	(0.00178)	(0.00204)	(0.00193)
type	-0.0169***	0.00252	0.0114***	-0.00821**	-0.0193***
	(0.00577)	(0.00286)	(0.00296)	(0.00340)	(0.00321)
Constant	0.659***	0.146***	0.103***	0.221***	0.192***
	(0.0415)	(0.0205)	(0.0213)	(0.0244)	(0.0231)
Observations	636	636	636	636	636
R-squared	0.108	0.065	0.068	0.058	0.060
Number of id	36	36	36	36	36
Team FE	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Dependent variables: (1) is coding frequency of all action categories and (2)-(5) display the coding probability of each category.

In the no communication treatment, the overall coding frequency decreases in period; that is, teams chat less in later periods. One possible reason for this pattern is that in later periods subjects become familiar with the game (similar situations has been experienced before). Another finding is that the overall coding frequency decreases in type; that is, low types chat more. This pattern is reasonable as in the game low types' action choice is involved with higher risks.

Table A2: Coding Frequency by Period and Type (Communication Treatment, Actions)

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Coding Freq	A2-DominAware	A3-MaxMin	A4-OppProb	A6-OppMess
period	-0.00636*	-0.000320	-0.00293**	-0.000684	-0.00298
	(0.00358)	(0.00201)	(0.00135)	(0.00132)	(0.00241)
type	-0.00625	0.0409***	-0.00363	-0.00758***	-0.0348***
	(0.00634)	(0.00355)	(0.00238)	(0.00234)	(0.00426)
message	-0.0172	-0.0113	-1.88e-05	-0.000932	-0.0157
	(0.0187)	(0.0105)	(0.00704)	(0.00692)	(0.0126)
message_op	-0.00959	0.0115	-0.00850	-0.0147**	0.0106
	(0.0161)	(0.00905)	(0.00607)	(0.00597)	(0.0109)
Constant	0.659***	-0.0601**	0.101***	0.112***	0.364***
	(0.0497)	(0.0279)	(0.0187)	(0.0184)	(0.0334)
Observations	636	636	636	636	636
R-squared	0.014	0.205	0.019	0.036	0.136
Number of id	36	36	36	36	36
Team FE	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Dependent variables: (1) is coding frequency of all action categories and (2)-(5) display the coding probability of each category.

In the communication treatment, the coding frequency for all action categories (at the aggregate level) again decreases in period. However, the decrease is not as pronounced as in the no communication treatment (the coefficient changes from -0.026 to -0.006, and the significance level drops from 1% to 10%). One possible reason is that, with communication the number of possible scenarios increases significantly (adding 9 possible message pairs). As a result, in later periods subjects are less likely to encounter situations which are similar to the ones that they have experienced before. Another finding is that the coding frequency for all action categories does not change with type, which is different from the corresponding result in the no communication treatment. Probably, this is again because with communication subjects of all types chat more about how to interpret the messages before choosing actions.

Table A3: Coding Frequency by Period and Type (Communication Treatment, Messages)

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Coding Freq	M1-Honest	M2-Exagg	M3-NoInfo	Send NoInfo
period	-0.0107***	-0.00272	-0.00213	-0.00477***	-0.0115***
	(0.00345)	(0.00262)	(0.00222)	(0.00170)	(0.00272)
type	-0.0260***	-0.00667	-0.0155***	-0.00212	0.00446
	(0.00574)	(0.00436)	(0.00369)	(0.00282)	(0.00452)
Constant	0.667***	0.241***	0.198***	0.112***	0.243***
	(0.0419)	(0.0319)	(0.0270)	(0.0206)	(0.0330)
Observations	636	636	636	636	636
R-squared	0.049	0.006	0.030	0.014	0.030
Number of id	36	36	36	36	36
Team FE	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Dependent variables: (1) is coding frequency and (2)-(4) display the coding probability of each category.

(5) displays whether team sends message No Information

In the communication treatment, the coding frequency for all message categories also decreases in period. This is probably also due to the familiarity of situations in later periods. Second, in pater periods the coding frequency of NoInfo (M3) decreases, and so is the probability of sending no information. This indicates that gradually subjects learn that sending no information has no benefit.