

In the format provided by the authors and unedited.

An investigation of children's strategies for overcoming the tragedy of the commons

Rebecca Koomen * and Esther Herrmann

Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany. *e-mail: becky.koomen@gmail.com

Supplementary Tables

Supplementary Table 1. Model descriptions

Question	Dependent measure	Test predictors	Control predictors	Random intercepts	Random slopes	R-function	Error structure	Model diagnostics
Did success vary with condition or trial number?	Available eggs collected by dyad	Condition*Trial number ^z	Sex, offset term for # of eggs possible per condition	Dyad	Trial number ^z within dyad	glmer	Poisson	Overdispersion, Variance Inflation Factors (VIFs), stability
Did proportional self-distraction vary between conditions?	Number of dyadic game-irrelevant utterances	Condition	Trial number ^z , sex, offset term for # dyadic total utterances	Dyad	Trial number ^z within dyad	glmer	Poisson	Overdispersion, VIFs, stability
Did verbal inequality vary between conditions?	Difference in number of individual utterances	Condition	Trial number ^z , sex, offset term for # dyadic total utterances	Dyad	Trial number ^z within dyad	glmer	Poisson	Overdispersion, VIFs, stability
Did verbal inequality vary between conditions (with complete inequality trials removed)?	Difference in number of individual utterances	Condition	Trial number ^z , sex, offset term for # dyadic total utterances	Dyad	Trial number ^z within dyad	glmer	Poisson	Overdispersion, VIFs, stability
Did likelihood to reach terminal verbal strategy vary between conditions?	y/n reach terminal verbal strategy	Condition	Trial number ^z , sex	Dyad	Trial number ^z within dyad	glmer	Binomial	VIFs, stability
Does egg equality or verbal strategy predict success in the collective condition?	Number of collected eggs by dyad per trial	Egg equality ^z , verbal strategy ^z	Trial number ^z , sex	Dyad	Egg equality ^z , verbal strategy ^z , & Trial number ^z within dyad	glmer	Poisson	Overdispersion, VIFs, stability
Does verbal equality or proportional self-distraction predict success in the collective condition for trials with 1 or more utterances?	Number of collected eggs by dyad per trial	Verbal equality ^z , Prop. Self-distraction ^z	Trial number ^z , sex	Dyad	Verbal equality ^z , Prop. Self-distraction ^z , & Trial number ^z within dyad	glmer	Poisson	Overdispersion, VIFs, stability
Does verbal equality or verbal strategy predict egg equality in the collective condition?	Difference in individual eggs collected per trial	Verbal equality ^z , Verbal strategy ^z , Trial number ^z	Sex	Dyad	Verbal equality ^z , Verbal strategy ^z , & Trial number ^z within dyad	glmer	Poisson	Overdispersion, VIFs, stability

Supplementary Table 2. Frequency of collective condition trials (N=87) by equality of egg collection between partners according to final dyadic egg outcomes.

Egg outcome:	Equality 0-0.25	Equality 0.26-0.5	Equality 0.51-0.75	Equality 0.76-1
1	15	0	0	0
2	6	0	0	35
3	0	0	3	0
4	1	2	0	0
5	0	1	0	2
6	2	2	2	3
7	0	0	5	8

Supplementary Table 3. Full-null model comparisons

Question	χ^2	DF	<i>p</i>
Did success vary with condition or trial number?	27.718	3	<0.001
Did proportional self-distraction vary between conditions?	1.016	1	0.314
Did verbal inequality vary between conditions?	0.298	1	0.585
Did verbal inequality vary between conditions (with complete inequality removed)?	0.119	1	0.730
Did likelihood to reach terminal verbal strategy vary between conditions?	0.130	1	0.719
Do egg equality or verbal strategy predict success in the collective condition?	35.617	2	<0.001
Do verbal equality or proportional self-distraction predict success in the collective condition?	14.989	2	<0.001
Do verbal equality or verbal strategy predict egg equality in the collective condition?	3.954	3	0.266

Supplementary Table 4. Final model summaries

Question	Predictors	Estimate	Standard Error	X^2	DF	p
Did success vary with condition or trial number?	Intercept	-0.078	0.160			
	Condition ^{prll}	-0.910	0.183	20.547	1	<0.001
	Trial number ^z	0.094	0.038	5.989	1	0.014
	Sex ^{fem}	-0.419	0.183	5.076	1	0.024
Did proportional self-distraction vary between conditions?	Intercept	-1.404	0.205			
	Condition ^{prll}	-0.261	0.264			
	Trial number ^z	0.314	0.065			
	Sex ^{fem}	-0.838	0.258			
Did verbal inequality vary between conditions?	Intercept	-2.063	0.209			
	Condition ^{prll}	0.142	0.257			
	Trial number ^z	-0.011	0.083			
	Sex ^{fem}	-0.271	0.254			
Did verbal inequality vary between conditions (with complete inequality removed)?	Intercept	-2.017	0.193			
	Condition ^{prll}	-0.084	0.244			
	Trial number ^z	0.035	0.079			
	Sex ^{fem}	-0.497	0.238			
Did likelihood to reach terminal verbal strategy vary between conditions?	Intercept	-0.790	0.492			
	Condition ^{prll}	-0.200	0.557			
	Trial number ^z	-0.069	0.212			
	Sex ^{fem}	-0.562	0.565			
Do egg equality or verbal strategy predict success in the collective condition?	Intercept	1.172	0.098			
	Egg equality ^z	0.154	0.078	4.041	1	0.044
	Verbal strategy ^z	0.495	0.071	33.851	1	<0.001
	Trial number ^z	0.026	0.068	0.151	1	0.697
	Sex ^{fem}	-0.161	0.139	1.356	1	0.244
Do verbal equality or proportional self-distraction predict success in the collective condition?	Intercept	1.445	0.124			
	Verbal equality ^z	0.062	0.098	0.402	1	0.526
	Prop. Self-dist. ^z	0.306	0.085	12.194	1	<0.001
	Trial number ^z	-0.027	0.073	0.138	1	0.710
	Sex ^{fem}	-0.227	0.183	1.474	1	0.225
Do verbal equality or verbal strategy predict egg equality in the collective condition?	Intercept	-1.494	0.221			
	Verbal equality ^z	-0.209	0.232			
	Verbal strategy ^z	0.356	0.204			
	Trial number ^z	-0.111	0.126			
	Sex ^{fem}	-0.513	0.284			

^z denotes z-transformation

^{prll} denotes the parallel condition as reference category

^{fem} denotes female as reference category

Supplementary Methods: Table 5. Verbal coding categories, level 1

Primary Codes	Description
Unknown (u)	Any speech which is indecipherable, unclear or inaudible will be coded as “U” (Nicht verstehbar/ not understandable). Code-ambiguous utterances such as single-word responses, non-word sounds, and code-neutral phrases also fall within the Unknown category. Partially audible utterances that contain some decipherable words and some indecipherable words should only be coded as non-Unknown codes if they contain an object, subject, and verb, otherwise they fall automatically into the Unknown category. Any non-word utterances or sounds immediately following a CS or IS should be interpreted as possible rj or ag if they appear to show the behaviours associated with these codes.
Game-Irrelevant (i)	Any speech which does not directly pertain to the game, strategies, payoff, rules, or task setting. This includes personal details about the subjects, jokes, distraction games such as ‘ching-chang-chong’/‘rock-paper-scissors’, and non-game related informal conversation. Game irrelevant utterances can also include a piece of the apparatus (e.g. "armband", "Schale"/"bowl", "banana") but if uttered in the verbal context of a time or place physically or temporally removed from the immediate game room and time then they are coded as irrelevant UNLESS the utterance specifically pertains to a previous trial in the game context and is directly relevant to game strategy. For example, swinging on the banana would be coded as irrelevant even if it is in the present time and in the game room and makes reference to a piece of the game apparatus (banana) this activity is not directly pertaining to the game or its outcome. Any utterances in reference to these apparatus pieces that are not directly relevant to the game's current play are irrelevant and considered distraction techniques. Any repeated or synchronized (e.g. singing) utterances that are not directly pertaining to the game itself but appear to function to synchronize the subjects either verbally or non-verbally (e.g. counting, singing songs, stomping to a beat, etc.) are also categorized as game-irrelevant.
Game-Relevant (r)	Any speech pertaining to the game. All game-relevant speech, related directly to the game, the apparatus, rules, strategies, payoffs, and descriptions of the game itself. Game Relevant utterances pertain directly to the game or its outcomes and are referring to the immediate present circumstances in the game room in the present or in the past if specifically referring to a previous trial.

Supplementary Methods: Table 6. Verbal coding categories, level 2 (Game-relevant)

Game-Relevant Codes	Description
Collective Strategy (cs)	Any game-related speech regarding strategy that includes the behaviour of both subjects in a collective way. Strategies involve talk regarding the timing and amounts of taking magic water or opening/closing of Taps. Plural pronouns, plurally conjugated verbs, and collective target words such as "jeder,"/"everyone" "wir,"/"we" and "beiden"/"both". Strategy of play utterances that also ask for agreement from the other player are included in CSs such as "darf ich jetzt gehen?"/ "may I go now?" or "machen wir so?"/"do we do it like this?" CSs must be in the present or future tense, not past.
Individual Strategy (is)	Any game-related speech regarding strategy for play that indicates a one-player strategy of play. Strategies involve talk regarding the timing and amounts of taking magic water or opening/closing of Taps. ISs include self-directed speech about one's own strategies, other-directed speech about one's own strategies, and the speaker imposing a single-player rule or command on the other player. ISs can use classic or polite imperative form (e.g. "darfst"/"may", "kannst"/"can") or descriptive speech describing one player's own plan to play. Usage may include singularly conjugated verbs, single-word interjections, commands, generalized "man" subjects (as in the normative statement "one does not do this", or verb-less exclamations. ISs must be in the present or future tense, not past.
Descriptive/Other (d)	Any game-related speech that is not directly relevant to strategy of play. This includes descriptions of the game, the payoffs, the apparatus, or the play zone, or references to the game, apparatus, payoffs, or zone, that does not indicate in any way how the game is played. Utterances are also coded as descriptive when they are questions about the state of the game, or responses to questions about the state of the game. Any speech directed at E1 or E2 outside the testing room is also in this category. also descriptive are any strategy related speech in the past tense or referring to a strategy that has already been implemented. additionally, any speech referring to when the game ends, the timing of the end of the game, or the return of the E1 and E2 to the testing room are descriptive, even if all 6/12 eggs are up. Any strategy speech that is not functionally relevant to the game (i.e. does not involve realistic or physically possible movements of water into the egg cylinders such as blowing the cork up or making new magic water) are also coded as descriptive.
Agreement (ag)	Agreement utterances immediately (within 3 seconds) follow either collective or individual strategies, are direct responses to strategies, and are uttered by the subject who did not propose the strategy. They indicate acceptance of the proposed strategy. Utterances are only coded as a AG if they clearly indicate an agreement to accept a strategy with either 'ja' or another positive response (e.g. kopfnicken/head nod) or a repeating of the strategy in a positive tone or with a positive opinion expressed in relation to the strategy. Non-verbal agreements can also be coded as agreements when they involve a clear head nod (kopfnicken/head nod) in response to a proposed strategy followed as well by the appropriate behavioural response in continuation of the proposed strategy. I.e. if someone says let's open the tap and partner says "mmhmmh" and opens their tap this can be considered an agreement because the verbal response is positive in tone and the tap-opening behaviour reflects agreement. Also verbal re-stating of the originally proposed strategy in a positive manner is included as agreement. If agreement is expressed in the form of a new strategy proposal or alternative strategy proposal then this is coded as its respective strategy type and not a rejection. Must be future or present tense, not past.
Rejection (rj)	Protest utterances immediately (within 3 seconds) follow either collective or individual strategies, are direct responses to strategies, and are uttered by the subject who did not propose the strategy. They indicate a refusal to accept the proposed strategy. Utterances are only coded as a rejection if they clearly indicate a refusal to accept a strategy with either 'no' or another negative response (e.g. kopfschütteln/shaking head) or a repeating of the strategy in a negative tone or with a negative opinion expressed in relation to the strategy. Non-verbal agreements can also be coded as RJs when they involve a clear head shake (kopfschütteln) in response to a proposed strategy followed as well by the appropriate behavioural response in non-continuation of the proposed strategy. i.e. if someone says let's open the tap and partner says "mmhmmh" and does not open their tap this can be considered a RJ if the verbal response is negative in tone and the behaviour reflects rejection of the idea to open the tap. If rejection is expressed in the form of a new strategy proposal or alternative strategy proposal then this is coded as its respective strategy type and not a rejection. Must be present or future tense, not past.

Utterance = Each line in the transcript represents one utterance. Each "utterance" is defined as a single word, clause, or set of clauses (including complex sentences, and sentence chains) spoken by one subject, separated by a turn of conversation, an utterance from another speaker, or a group of words separated from one another by a pause of 2 seconds or more by the same speaker.

Supplementary Methods: Table 7. Final trial levels for coded verbal data

FINAL TRIAL

LEVELS:	Level definitions:
1	NO IS or CS utterances in trial
2	CONTAINS: ONLY IS utterances, NO: CS, AG, RJ
3	CONTAINS: IS+AG or IS+RJ or CS WITHOUT AG or RJ
4	CONTAINS: CS+AG or CS+RJ

Comprehension Questions:

1. Question: "Can you tell me what the two possibilities are with your tap?"
 - a. Answer: Open/close
2. Question: "What happens to the red cork when you open your tap?"
 - a. Answer: the cork sinks down
3. Question: "What happens to the red cork when you close your tap?"
 - a. Answer: the cork floats back up
4. Question: "What happens when the red cork goes too deep?"
 - a. Answer: all the water falls into the bucket

Coding & Analysis:

One verbal coder also acted as a second experimenter in the study and was therefore minimally aware of some of the study predictions but not of any results. The second was blind to study predictions and results.

Statistical Methods:

To account for the non-independence of the data set (i.e. repeated measures per dyad) we used GLMMs that allowed the inclusion of both fixed and random effects. When fitting GLMMs we included all possible random slopes components to keep type 1 error rates at the nominal level of 5% (1). For all models, we first compared a full model containing all fixed effects (i.e. test predictors (2) and control predictors) and random effects with a null model containing only control predictors and random effects. Only if this comparison revealed a significant effect of the test predictors as a whole, did we subsequently conduct likelihood ratio tests to reveal the effect of individual predictors.

Supplementary Methods: R script – Model 1: Did success vary with condition or trial number?

```
#full model
library(lme4)
glmer.control<-glmerControl(optCtrl=list(maxfun=1000000), optimizer="bobyqa")
full.pois<-glmer(eggs.past.min ~ condition*z.trial + sex +
offset(log(min.eggs.possible)) +
(1+z.trial||dyad),
data=model.data.pois, family="poisson", control=glmer.control)

#null model
null.pois<-glmer(eggs.past.min ~ sex + offset(log(min.eggs.possible)) +
(1+z.trial||dyad),
data=model.data.pois, family="poisson")

anova(null.pois, full.pois, test="Chisq")
#           Df      AIC      BIC logLik deviance  Chisq Chi Df Pr(>Chisq)
#null.pois  4 719.51 731.86 -355.76   711.51
#full.pois  7 697.79 719.41 -341.90   683.79 27.718      3 4.162e-06 ***

#test condition*trial # interaction - not significant
drop1p(model.res=full.pois, data=model.data.pois, contr=glmer.control)
#           logLik      AIC      Chisq Chi.Df Pr..Chisq.    n n.opt.warnings n.fun.warnings
#none      -341.8962 697.7924        NA      NA        NA 162              NA              NA
#sex        -344.4342 700.8685 5.076049      1 0.02425859 162              0              0
#cond:z.trial-342.4872 696.9745 1.182020      1 0.27694512 162              0              0

#final model
final.pois<-glmer(eggs.past.min ~ condition + z.trial + sex +
offset(log(min.eggs.possible)) +
(1+z.trial||dyad),
data=model.data.pois, family="poisson")

round(drop1p(model.res=final.pois, data=model.data.pois,
contr=glmer.control)$drop1.res,5)
#           logLik      AIC      Chisq Chi.Df Pr..Chisq.    n n.opt.warnings n.fun.warnings
#none      -342.4872 696.9745        NA      NA        NA 162              NA              NA
#condition -352.7609 715.5217 20.54727      1 0.00001 162              0              0
#z.trial   -345.4817 700.9634 5.98892      1 0.01440 162              0              0
#sex       -345.0253 700.0505 5.07605      1 0.02426 162              0              0

#####
```

Supplementary Methods: R script – Model 5 & 6: Do verbal strategy, egg equality, verbal equality, and/or proportion self-distraction predict success in the collective condition?

```
#####
#Model5: do egg equality or verbal strategy predict success in the collective condition?
#####
```

```
library(lme4)
glmer.control<-glmerControl(optCtrl=list(maxfun=1000000))#, optimizer="bobyqa"
ev.full<-glmer(eggs.collective ~ z.egg.equality + z.verbal.strategy + z.trial + sex +
  (1+z.egg.equality + z.verbal.strategy + z.trial||dyad),
  data=ev.model.data, family="poisson", control=glmer.control)

ev.null<-glmer(eggs.collective ~ z.trial + sex +
  (1+z.egg.equality + z.verbal.strategy + z.trial||dyad),
  data=ev.model.data, family="poisson", control=glmer.control)
anova(ev.null, ev.full, test="Chisq")
#           Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
#ev.null    7 295.20 311.13 -140.60   281.20
#ev.full    9 263.58 284.07 -122.79   245.58 35.617      2 1.845e-08 ***

ev.drop1<-drop1p(model.res=ev.full, data=ev.model.data, contr=glmer.control)
round(ev.drop1$drop1.res, 5)
#           logLik      AIC      Chisq Chi.Df Pr..Chisq.  n n.opt.warnings n.fun.warnings
#none          -122.7908 263.5816      NA      NA      NA 72              NA              NA
#z.egg.equality -124.8113 265.6225  4.04089      1  0.04441 72              0              0
#z.verbal.strategy -139.7163 295.4325 33.85090      1  0.00000 72              0              0
#z.trial          -122.8666 261.7331  0.15147      1  0.69714 72              0              0
#sex              -123.4689 262.9378  1.35612      1  0.24421 72              0              0
```

```
#####
#model6 - do verbal equality or self-distraction predict success in the collective
condition?
```

```
library(lme4)
#run these with bobyqa control because the reduced model testing for self.dist didn't
converge unless it was added
glmer.control.bobyqa<-glmerControl(optCtrl=list(maxfun=1000000), optimizer="bobyqa")#
vs.full<-glmer(eggs.collective ~ z.verbal.equality + z.prop.self.dist + z.trial + sex +
  (1+z.verbal.equality + z.prop.self.dist + z.trial||dyad),
  data=vs.model.data, family="poisson", control=glmer.control.bobyqa)

vs.null<-glmer(eggs.collective ~ z.trial + sex +
  (1+z.verbal.equality + z.prop.self.dist + z.trial||dyad),
  data=vs.model.data, family="poisson", control=glmer.control.bobyqa)
anova(vs.null, vs.full, test="Chisq")
#           Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
# vs.null    7 223.17 236.69 -104.583   209.17
# vs.full    9 212.18 229.56  -97.089   194.18 14.989      2 0.0005561 ***

vs.drop1<-drop1p(model.res=vs.full, data=vs.model.data, contr=glmer.control.bobyqa)
round(vs.drop1$drop1.res, 5)
#           logLik      AIC      Chisq Chi.Df Pr..Chisq.  n n.opt.warnings n.fun.warnings
# none          -97.08857 212.1772      NA      NA      NA 51              NA              NA
# z.verbal.equality -97.28979 210.5796  0.40243      1  0.52584 51              0              0
# z.prop.self.dist -103.18540 222.3708 12.19364      1  0.00048 51              0              0
# z.trial          -97.15779 210.3156  0.13843      1  0.70985 51              0              0
# sex              -97.82567 211.6513  1.47418      1  0.22469 51              0              0
```

Supplementary Methods: Original Data – egg collection per dyad per trial.

dyad	trial.no	sex	condition	baum.eggs	sonne.eggs	eggs.collective	eggs.possible
1	1	f	test	1	1	2	7
1	2	f	test	2	0	2	7
1	3	f	test	4	3	7	7
2	1	f	test	1	0	1	7
2	2	f	test	3	2	5	7
2	3	f	test	4	3	7	7
3	1	f	test	3	4	7	7
3	2	f	test	3	4	7	7
3	3	f	test	1	1	2	7
4	1	f	test	4	1	5	7
4	2	f	test	5	2	7	7
4	3	f	test	4	3	7	7
5	1	f	test	1	1	2	7
5	2	f	test	1	1	2	7
5	3	f	test	1	1	2	7
6	1	m	control	6	6	12	12
6	2	m	control	6	6	12	12
6	3	m	control	6	6	12	12
8	1	m	control	6	6	12	12
8	2	m	control	6	6	12	12
8	3	m	control	6	3	9	12
9	1	f	control	6	6	12	12
9	2	f	control	6	6	12	12
9	3	f	control	6	6	12	12
10	1	m	control	6	6	12	12
10	2	m	control	6	6	12	12
10	3	m	control	6	6	12	12
11	1	f	control	2	3	5	12
11	2	f	control	2	2	4	12
11	3	f	control	2	2	4	12
12	1	f	control	6	2	8	12
12	2	f	control	6	6	12	12
12	3	f	control	6	6	12	12
13	1	f	control	6	6	12	12
13	2	f	control	6	6	12	12
13	3	f	control	6	6	12	12
14	1	f	control	6	6	12	12
14	2	f	control	6	6	12	12
14	3	f	control	6	6	12	12
15	1	f	test	1	1	2	7
15	2	f	test	2	5	7	7

15	3	f	test	5	2	7	7
16	1	f	control	2	6	8	12
16	2	f	control	6	6	12	12
16	3	f	control	6	6	12	12
17	1	f	test	1	1	2	7
17	2	f	test	1	1	2	7
17	3	f	test	1	1	2	7
18	1	m	test	0	4	4	7
18	2	m	test	0	6	6	7
18	3	m	test	0	6	6	7
19	1	f	test	0	1	1	7
19	2	f	test	1	1	2	7
19	3	f	test	1	1	2	7
20	1	m	test	1	1	2	7
20	2	m	test	1	1	2	7
20	3	m	test	1	1	2	7
21	1	f	test	4	3	7	7
21	2	f	test	5	1	6	7
21	3	f	test	3	3	6	7
22	1	m	test	1	0	1	7
22	2	m	test	1	1	2	7
22	3	m	test	0	1	1	7
23	1	m	test	1	5	6	7
23	2	m	test	2	5	7	7
23	3	m	test	3	4	7	7
24	1	m	control	2	5	7	12
24	2	m	control	3	5	8	12
24	3	m	control	6	4	10	12
25	1	m	control	2	2	4	12
25	2	m	control	2	2	4	12
25	3	m	control	2	2	4	12
26	1	m	control	2	6	8	12
26	2	m	control	2	6	8	12
26	3	m	control	4	6	10	12
27	1	m	control	2	2	4	12
27	2	m	control	6	6	12	12
27	3	m	control	6	2	8	12
28	1	m	control	6	6	12	12
28	2	m	control	6	6	12	12
28	3	m	control	6	6	12	12
29	1	m	control	6	6	12	12
29	2	m	control	6	6	12	12
29	3	m	control	6	6	12	12
30	1	m	test	1	1	2	7

30	2	m	test	1	0	1	7
30	3	m	test	1	1	2	7
31	1	m	test	0	1	1	7
31	2	m	test	1	1	2	7
31	3	m	test	1	1	2	7
32	1	m	test	2	0	2	7
32	2	m	test	1	0	1	7
32	3	m	test	1	1	2	7
34	1	m	test	1	3	4	7
34	2	m	test	1	3	4	7
34	3	m	test	1	2	3	7
35	1	m	test	1	1	2	7
35	2	m	test	1	0	1	7
35	3	m	test	1	1	2	7
36	1	m	test	0	1	1	7
36	2	m	test	1	2	3	7
36	3	m	test	0	2	2	7
37	1	m	test	1	1	2	7
37	2	m	test	0	1	1	7
37	3	m	test	1	1	2	7
39	1	m	control	6	6	12	12
39	2	m	control	6	6	12	12
39	3	m	control	6	6	12	12
41	1	m	control	2	2	4	12
41	2	m	control	6	2	8	12
41	3	m	control	6	5	11	12
42	1	m	control	6	6	12	12
42	2	m	control	6	6	12	12
42	3	m	control	6	6	12	12
43	1	m	control	6	6	12	12
43	2	m	control	6	6	12	12
43	3	m	control	6	6	12	12
44	1	f	test	2	0	2	7
44	2	f	test	1	0	1	7
44	3	f	test	1	1	2	7
45	1	m	test	1	1	2	7
45	2	m	test	2	3	5	7
45	3	m	test	1	1	2	7
46	1	m	test	1	1	2	7
46	2	m	test	1	0	1	7
46	3	m	test	2	1	3	7
47	1	f	test	0	2	2	7
47	2	f	test	3	3	6	7
47	3	f	test	5	2	7	7

48	1	m	control	6	6	12	12
48	2	m	control	6	6	12	12
48	3	m	control	6	6	12	12
49	1	f	control	6	6	12	12
49	2	f	control	6	6	12	12
49	3	f	control	6	6	12	12
50	1	f	control	6	6	12	12
50	2	f	control	6	6	12	12
50	3	f	control	5	6	11	12
51	1	m	test	1	1	2	7
51	2	m	test	1	1	2	7
51	3	m	test	1	0	1	7
52	1	f	control	2	2	4	12
52	2	f	control	6	6	12	12
52	3	f	control	6	6	12	12
53	1	f	control	6	6	12	12
53	2	f	control	6	6	12	12
53	3	f	control	6	6	12	12
55	1	f	control	6	6	12	12
55	2	f	control	6	6	12	12
55	3	f	control	6	6	12	12
56	1	f	test	2	4	6	7
56	2	f	test	3	3	6	7
56	3	f	test	3	4	7	7
57	1	m	test	0	1	1	7
57	2	m	test	4	2	6	7
57	3	m	test	1	1	2	7
58	1	m	test	1	0	1	7
58	2	m	test	1	1	2	7
58	3	m	test	2	0	2	7
59	1	m	test	1	1	2	7
59	2	m	test	1	1	2	7
59	3	m	test	1	1	2	7

Supplementary References

1. Schielzeth H, Forstmeier W. Conclusions beyond support: overconfident estimates in mixed models. *Behavioral Ecology*. 2009;20(2):416-20.
2. Mundry R. Statistical issues and assumptions of phylogenetic generalized least squares. *Modern phylogenetic comparative methods and their application in evolutionary biology*: Springer; 2014. p. 131-53.