

Model comparison and output for Experiment 1

Null models exploring best random structure

```
glmm1<-glmer(y~1+(1|birdID), family = poisson(link="log"), data=df)
glmm2<-glmer(y~1+(1|birdID)+(1|order), family = poisson(link="log"), data=df)
glmm3<-glmer(y~1+(order|birdID), family = poisson(link="log"), data=df)
glmm4<-glmer(y~1+(1|SEL_LINE/birdID), family = poisson(link="log"), data=df)
glmm5<-glmer(y~1+(1+1|SEL_LINE/birdID), family = poisson(link="log"), data=df)
glmm6<-glmer(y~1+(1|SEL_LINE/birdID)+(1|order), family = poisson(link="log"), data=df)
glmm7<-glmer(y~1+(1+1|SEL_LINE/birdID)+(1|order), family = poisson(link="log"), data=df)
```

Null model comparison (selecting model with lowest AIC-value)

Approach latency (in seconds)

	df	AICc
glmm1	2	778.5501
glmm2	3	606.9332
glmm3	4	203.1338
glmm4	3	781.4644
glmm5	3	781.4644
glmm6	4	610.2844
glmm7	4	610.2844

Attack latency (in seconds)

	df	AICc
glmm1	2	466.0373
glmm2	3	412.5194
glmm3	4	202.4106
glmm4	3	468.9515
glmm5	3	468.9515
glmm6	4	415.8820
glmm7	4	415.8820

Summary of full model with simplest random structure

```
glmer(y~SEL_LINE+noisetreatment+(1|birdID), family = poisson(link="log"), data=df)
```

Approach latency

Random effects:

Groups Name	Variance	Std.Dev.
birdID (Intercept)	1.098	1.048

Number of obs: 34, groups: birdID, 17

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	3.83332	0.39881	9.612	<2e-16 ***
SEL_LINESE	1.18641	0.51882	2.287	0.0222 *
noisetreatmentnoise	0.24144	0.02425	9.956	<2e-16 ***

Attack latency

Random effects:

Groups Name	Variance	Std.Dev.
birdID (Intercept)	1.316	1.147

Number of obs: 34, groups: birdID, 17

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	4.19188	0.43567	9.622	< 2e-16 ***
SEL_LINESE	0.93782	0.56728	1.653	0.098295 .
noisetreatmentnoise	0.08197	0.02263	3.621	0.000293 ***

Summary of full model with best fitted random structure

`glmer(y~SEL_LINE+noisetreatment+(order|birdID), family = poisson(link="log"), data=df)`

Approach latency

Random effects:

Groups Name	Variance	Std.Dev.	Corr
birdID (Intercept)	1.3070	1.1432	
order	0.4732	0.6879	-0.52

Number of obs: 34, groups: birdID, 17

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	3.8050	0.4081	9.325	< 2e-16 ***
SEL_LINESE	0.7717	0.5762	1.339	0.180446
noisetreatmentnoise	0.5778	0.1674	3.453	0.000555 ***

Attack latency

Random effects:

Groups Name	Variance	Std.Dev.	Corr
birdID (Intercept)	2.2226	1.4908	
order	0.8175	0.9042	-0.63

Number of obs: 34, groups: birdID, 17

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	4.1903	0.5249	7.983	1.43e-15 ***
SEL_LINESE	0.6211	0.6497	0.956	0.3391
noisetreatmentnoise	0.4601	0.2137	2.153	0.0313 *

Null models exploring best random structure for experiment 2

```
glmm1<-glmer(y~1+(1|birdID), family = poisson(link="log"), data=df)
glmm2<-glmer(y~1+(1|birdID)+(1|order), family = poisson(link="log"), data=df)
glmm3<-glmer(y~1+(order|birdID), family = poisson(link="log"), data=df)
```

Approach latency (in seconds)

	df	AICc
glmm1	2	1098.0117
glmm2	3	1040.8442
glmm3	4	418.5921

Attack latency (in seconds)

	df	AICc
glmm1	2	1028.555
glmm2	3	1030.790
glmm3	4	432.045

Summary of full model with best fitted random structure

```
glmer(y~target*noisetreatment+(order|birdID), family = poisson(link="log"), data=df)
```

Approach latency (in seconds)

Random effects:

Groups Name	Variance	Std.Dev.	Corr
birdID (Intercept)	0.57674	0.7594	
order	0.09232	0.3038	-0.69

Number of obs: 107, groups: birdID, 12

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	4.84369	0.18002	26.906	< 2e-16 ***
targetcolor	0.32886	0.02977	11.046	< 2e-16 ***
targetwhite	-0.75106	0.03621	-20.743	< 2e-16 ***
noisetreatmentnoise	-0.09716	0.03401	-2.857	0.00428 **
targetcolor:noisetreatmentnoise	-0.45977	0.04345	-10.583	< 2e-16 ***
targetwhite:noisetreatmentnoise	0.63173	0.04834	13.070	< 2e-16 ***

Attack latency (in seconds)

Random effects:

Groups Name	Variance	Std.Dev.	Corr
birdID (Intercept)	6.3684	2.5236	
order	0.1868	0.4322	-0.94

Number of obs: 104, groups: birdID, 12

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	4.97816	0.36050	13.809	< 2e-16 ***
targetcolor	0.35121	0.03236	10.853	< 2e-16 ***
targetwhite	-0.70663	0.04285	-16.490	< 2e-16 ***
noisetreatmentnoise	0.63045	0.02891	21.807	< 2e-16 ***
targetcolor:noisetreatmentnoise	-0.62856	0.03776	-16.648	< 2e-16 ***
targetwhite:noisetreatmentnoise	0.24316	0.04908	4.954	7.26e-07 ***

Effect of noise on attack latency during exp 3.

Models including choice of attack failed to run

```
glmm2<-glmer(y~noisetreatment +(order|birdID), family = poisson(link="log"), data=df)
```

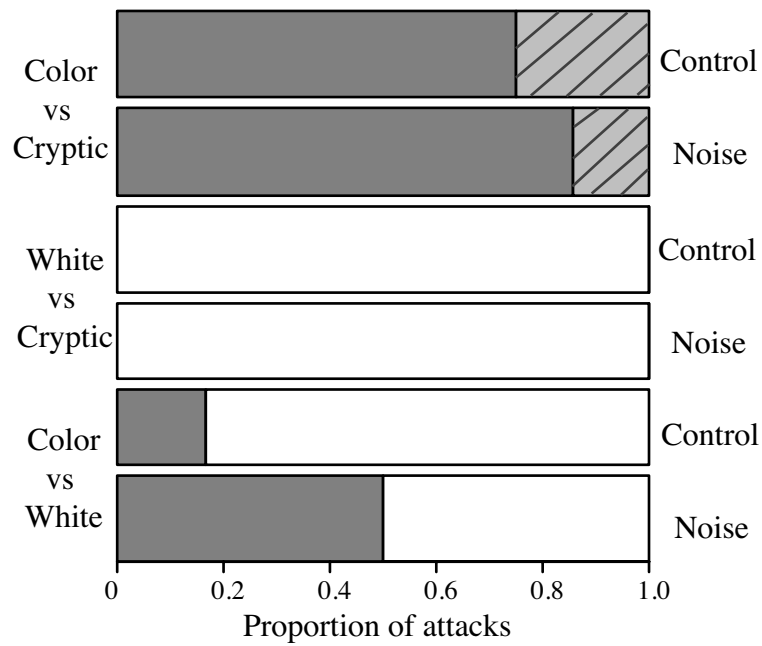
Random effects:

Groups Name	Variance	Std.Dev.	Corr
birdID (Intercept)	2.0671	1.4378	
order	0.4438	0.6662	-0.64

Number of obs: 43, groups: birdID, 11

Fixed effects:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	4.29257	0.34790	12.34	<2e-16 ***
noisetreatmentnoise	0.91707	0.03935	23.30	<2e-16 ***



Supplementary figure. Effect of crypsis on attack preference. Birds were given a choice to attack two prey targets that differ in their level of crypsis. During control trials, birds preferred to attack the visually most conspicuous prey: Colour (grey) over Cryptic (barred), White (white) over Cryptic and White over Colour.