Supplemental Text 2

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Variable names and description:

A: count of alternated visits
BreedingYear: year during which the brood was raised
BroodRef: unique identifier for broods
ChickAgeCat: the chick age as a categorical variable (chicks are routinely recorded at 6 and 10 days old, recordings deviating from that were pooled according to whether they were inferior, or superior (or equal) to 10)
DVDInfoChickNb: the best estimate of the number of chicks at time of recording
DVDRef: nest watch unique identifier
HatchingDayAfter0401: the numbers of day after the first of April of that year
MPriorResidence: whether or not (1/0) a male had nested in this nest box prior to the breeding attempt recorded
PairBroodNb: the number of brood a pair already reared together (successfully or unsuccessfully, including the brood of interest)
PairID: combination of the social parents IDs
PairIDYear: combination of the Pair ID and the breeding year
ParentsAge: average of both parents age (in this population, pairs are assortatively mated for age, correlation between male and female age is r= 0.34, p <0.0001)
RelTimeHrs: the time, relative to sunrise, at which the video was taken
rowID: observation level ID
S: count of synchroneous visits
SocialDadID: unique idenifier for male parent observed caring for a brood
SocialMumID: unique idenifier for female parent observed caring for a brood
TotalProRate: the total number of visits provided by both partners divided by the entire duration of the nest watch in hours
Type: the type of data (observed ("z_Obsv") or randomized ("Exp")
VisitRateDifference: the difference in visit rate per hour between the partner

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Predictors of coordination

Alternation

```
## Generalized linear mixed model fit by maximum likelihood (Laplace Approximation) ['glmerMod']
##  Family: poisson  ( log )
## Formula: A ~ Type * scale(ParentsAge) + Type * scale(HatchingDayAfter0401) +
##     Type * scale(PairBroodNb) + Type * scale(DVDInfoChickNb) +
##     Type * ChickAgeCat + Type * scale(RelTimeHrs) + Type * MPriorResidence +
##     Type * scale(TotalProRate) + Type * scale(VisitRateDifference) +
##     (1 | BroodRef) + (1 | SocialMumID) + (1 | SocialDadID) +
##     (1 | PairID) + (1 | BreedingYear) + (1 | PairIDYear) + (1 |      DVDRef) + (1 | rowID)
##    Data: MY_TABLE_perDVD_long
## Control: glmerControl(optimizer = "bobyqa")
##
##      AIC      BIC   logLik deviance df.resid
##  17591.2  17761.2  -8767.6  17535.2     3170
##
## Scaled residuals:
##     Min      1Q  Median      3Q     Max
## -4.1065 -0.3318  0.0476  0.3775  1.6533
##
## Random effects:
##  Groups       Name        Variance  Std.Dev.
##  rowID        (Intercept) 0.0000000 0.00000
##  DVDRef       (Intercept) 0.0174908 0.13225
##  BroodRef     (Intercept) 0.0071555 0.08459
##  PairIDYear   (Intercept) 0.0029059 0.05391
##  PairID       (Intercept) 0.0000000 0.00000
##  SocialMumID  (Intercept) 0.0003230 0.01797
##  SocialDadID  (Intercept) 0.0005549 0.02356
##  BreedingYear (Intercept) 0.0009226 0.03037
## Number of obs: 3198, groups:
## rowID, 3198; DVDRef, 1599; BroodRef, 872; PairIDYear, 546; PairID, 443; SocialMumID, 290; SocialDadID, 280; BreedingYear, 12
##
## Fixed effects:
##                                      Estimate Std. Error z value             Pr(>|z|)
## (Intercept)                         2.7006047  0.0163234  165.44 < 0.0000000000000002 ***
## Typez_Obsv                          0.0955885  0.0145448    6.57      0.0000000000496 ***
```

```
## scale(ParentsAge)                       -0.0363686  0.0114500   -3.18              0.00149 **
## scale(HatchingDayAfter0401)              0.0063874  0.0087336    0.73              0.46456
## scale(PairBroodNb)                       0.0154411  0.0118719    1.30              0.19338
## scale(DVDInfoChickNb)                    0.0449820  0.0096733    4.65      0.0000033176145 ***
## ChickAgeCatAge10                        -0.0788861  0.0158692   -4.97      0.0000006659921 ***
## scale(RelTimeHrs)                       -0.0170679  0.0081321   -2.10              0.03583 *
## MPriorResidenceTRUE                      0.0180885  0.0175580    1.03              0.30291
## scale(TotalProRate)                      0.4505385  0.0100739   44.72 < 0.0000000000000002 ***
## scale(VisitRateDifference)              -0.1873943  0.0088413  -21.20 < 0.0000000000000002 ***
## Typez_Obsv:scale(ParentsAge)            -0.0070065  0.0116504   -0.60              0.54757
## Typez_Obsv:scale(HatchingDayAfter0401) -0.0041037  0.0092877   -0.44              0.65860
## Typez_Obsv:scale(PairBroodNb)            0.0015400  0.0119930    0.13              0.89783
## Typez_Obsv:scale(DVDInfoChickNb)        -0.0126860  0.0106066   -1.20              0.23168
## Typez_Obsv:ChickAgeCatAge10             -0.0193630  0.0187363   -1.03              0.30139
## Typez_Obsv:scale(RelTimeHrs)            -0.0079952  0.0090420   -0.88              0.37657
## Typez_Obsv:MPriorResidenceTRUE           0.0009645  0.0184301    0.05              0.95826
## Typez_Obsv:scale(TotalProRate)           0.0123925  0.0102975    1.20              0.22880
## Typez_Obsv:scale(VisitRateDifference)  -0.0179941  0.0097157   -1.85              0.06402 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation matrix not shown by default, as p = 20 > 12.
## Use print(x, correlation=TRUE)  or
##   vcov(x)     if you need it
```

Synchrony

```
## Generalized linear mixed model fit by maximum likelihood (Laplace Approximation) ['glmerMod']
##  Family: poisson  ( log )
## Formula: S ~ Type * scale(ParentsAge) + Type * scale(HatchingDayAfter0401) +
##     Type * scale(PairBroodNb) + Type * scale(DVDInfoChickNb) +
##     Type * ChickAgeCat + Type * scale(RelTimeHrs) + Type * MPriorResidence +
##     Type * scale(TotalProRate) + Type * scale(VisitRateDifference) +
##     (1 | BroodRef) + (1 | SocialMumID) + (1 | SocialDadID) +
##     (1 | PairID) + (1 | BreedingYear) + (1 | PairIDYear) + (1 |      DVDRef) + (1 | rowID)
##    Data: MY_TABLE_perDVD_long
```

```
## Control: glmerControl(optimizer = "bobyqa")
##
##      AIC      BIC   logLik deviance df.resid
##  15246.3  15416.3  -7595.2  15190.3     3170
##
## Scaled residuals:
##     Min      1Q  Median      3Q     Max
## -3.2096 -0.4098  0.0079  0.3397  1.8140
##
## Random effects:
##  Groups       Name        Variance             Std.Dev.
##  rowID        (Intercept) 0.000000000000000000 0.0000000000
##  DVDRef       (Intercept) 0.038890799171147690 0.1972075028
##  BroodRef     (Intercept) 0.009127119141879058 0.0955359573
##  PairIDYear   (Intercept) 0.008200794558676250 0.0905582385
##  PairID       (Intercept) 0.000000000000000000 0.0000000000
##  SocialMumID  (Intercept) 0.000000000000005506 0.0000000742
##  SocialDadID  (Intercept) 0.000000000000000000 0.0000000000
##  BreedingYear (Intercept) 0.001607736413916966 0.0400965886
## Number of obs: 3198, groups:
## rowID, 3198; DVDRef, 1599; BroodRef, 872; PairIDYear, 546; PairID, 443; SocialMumID, 290; SocialDadID, 280; BreedingYear, 12
##
## Fixed effects:
##                                      Estimate Std. Error z value             Pr(>|z|)
## (Intercept)                          1.952239   0.022441   87.00 < 0.0000000000000002 ***
## Typez_Obsv                           0.098021   0.020249    4.84        0.00000129339 ***
## scale(ParentsAge)                   -0.035943   0.015627   -2.30               0.0214 *
## scale(HatchingDayAfter0401)          0.016187   0.012068    1.34               0.1798
## scale(PairBroodNb)                   0.014099   0.016179    0.87               0.3835
## scale(DVDInfoChickNb)                0.080168   0.013574    5.91        0.00000000351 ***
## ChickAgeCatAge10                    -0.009505   0.022066   -0.43               0.6666
## scale(RelTimeHrs)                   -0.001611   0.011258   -0.14               0.8862
## MPriorResidenceTRUE                 -0.001473   0.024058   -0.06               0.9512
## scale(TotalProRate)                  0.688638   0.013808   49.87 < 0.0000000000000002 ***
## scale(VisitRateDifference)          -0.182004   0.011360  -16.02 < 0.0000000000000002 ***
## Typez_Obsv:scale(ParentsAge)        -0.011816   0.015356   -0.77               0.4416
## Typez_Obsv:scale(HatchingDayAfter0401)  0.002616   0.012498    0.21               0.8342
## Typez_Obsv:scale(PairBroodNb)        0.004958   0.015825    0.31               0.7541
## Typez_Obsv:scale(DVDInfoChickNb)    -0.011873   0.014382   -0.83               0.4091
```

```
## Typez_Obsv:ChickAgeCatAge10             0.008623   0.024789    0.35               0.7280
## Typez_Obsv:scale(RelTimeHrs)           -0.003006   0.011942   -0.25               0.8013
## Typez_Obsv:MPriorResidenceTRUE          0.003897   0.024391    0.16               0.8731
## Typez_Obsv:scale(TotalProRate)          0.004829   0.012880    0.37               0.7077
## Typez_Obsv:scale(VisitRateDifference)  -0.000616   0.011714   -0.05               0.9581
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation matrix not shown by default, as p = 20 > 12.
## Use print(x, correlation=TRUE)  or
##   vcov(x)     if you need it
```