Statistical Analysis

# Revised model.

library(xtable)  
library(MASS)  
library(knitr)  
library(pscl)  
library(stargazer)  
library(tidyverse)  
library(pastecs)  
library(gmodels)  
library(pscl)  
  
#Read the dataset  
license.df<-read.csv("Data/AggreatedData.csv")  
license.df<-na.omit(license.df)  
license.df$key.event<-as.factor(license.df$key.event)  
license.df <- within(license.df, key.event <- relevel(key.event, ref = "1"))  
  
#1. Rename ES to “license\_choice” and then recode ES1 & ES3 as LC1 (label: no\_derivative), ES2 as LC2 (attribution), ES4 as LC3 (antibusiness)  
license.df <- license.df %>%   
 mutate(LC1 = ES1+ES3,  
 LC2 = ES2,  
 LC3 = ES4) %>%   
 select(-ES1,-ES2,-ES3,-ES4)  
  
  
#2. Rename design\_strategy as “appropriability\_strategy” and recode blended strategy as “private-collective”, and the others remain the same.   
license.df <- license.df %>%   
 rename(appropriability\_strategy = design.strategy)  
levels(license.df$appropriability\_strategy)[levels(license.df$appropriability\_strategy)=="blended"] <- "private-collective"  
  
#Define the reference (private)  
license.df <- within(license.df, appropriability\_strategy <- relevel(appropriability\_strategy, ref = "private"))

# Model 1: controls:

#model 1: controls  
m1 <- zeroinfl(out ~ files\_count+thing\_like\_count, data = license.df, dist = "negbin", EM = TRUE)  
save.image("outModel1p.RData")

##   
## Call:  
## zeroinfl(formula = out ~ files\_count + thing\_like\_count, data = license.df,   
## dist = "negbin", EM = TRUE)  
##   
## Pearson residuals:  
## Min 1Q Median 3Q Max   
## -0.44900 -0.15814 -0.07117 -0.06485 226.88401   
##   
## Count model coefficients (negbin with log link):  
## Estimate Std. Error z value Pr(>|z|)   
## (Intercept) 0.3939640 0.0356924 11.038 < 2e-16 \*\*\*  
## files\_count 0.0064517 0.0012261 5.262 1.43e-07 \*\*\*  
## thing\_like\_count 0.0042903 0.0001696 25.292 < 2e-16 \*\*\*  
## Log(theta) -1.6014818 0.0204767 -78.210 < 2e-16 \*\*\*  
##   
## Zero-inflation model coefficients (binomial with logit link):  
## Estimate Std. Error z value Pr(>|z|)   
## (Intercept) 3.561777 0.061739 57.691 <2e-16 \*\*\*  
## files\_count -0.005954 0.005505 -1.082 0.279   
## thing\_like\_count -0.190564 0.007525 -25.324 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1   
##   
## Theta = 0.2016   
## Number of iterations in BFGS optimization: 1   
## Log-likelihood: -2.431e+04 on 7 Df

m1 <- zeroinfl(made\_count ~ files\_count+thing\_like\_count, data = license.df, dist = "negbin", EM = TRUE)  
save.image("madeModel1p.RData")

##   
## Call:  
## zeroinfl(formula = made\_count ~ files\_count + thing\_like\_count,   
## data = license.df, dist = "negbin", EM = TRUE)  
##   
## Pearson residuals:  
## Min 1Q Median 3Q Max   
## -0.8097 -0.1969 -0.1094 -0.1087 30.3985   
##   
## Count model coefficients (negbin with log link):  
## Estimate Std. Error z value Pr(>|z|)   
## (Intercept) 2.245e-01 2.064e-02 10.874 <2e-16 \*\*\*  
## files\_count -6.387e-04 4.888e-04 -1.307 0.191   
## thing\_like\_count 4.863e-03 9.575e-05 50.786 <2e-16 \*\*\*  
## Log(theta) -4.221e-01 2.051e-02 -20.586 <2e-16 \*\*\*  
##   
## Zero-inflation model coefficients (binomial with logit link):  
## Estimate Std. Error z value Pr(>|z|)   
## (Intercept) 3.212230 0.047338 67.857 <2e-16 \*\*\*  
## files\_count -0.003389 0.004994 -0.679 0.497   
## thing\_like\_count -0.248668 0.008620 -28.849 <2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1   
##   
## Theta = 0.6556   
## Number of iterations in BFGS optimization: 1   
## Log-likelihood: -3.24e+04 on 7 Df

# Model 2: main effects all the independent variables:

m2 <- zeroinfl(out ~ appropriability\_strategy+ key.event+LC1+LC2+LC3+ files\_count+thing\_like\_count, data = license.df, dist = "negbin", EM = TRUE)  
save.image("outModel2p.RData")

##   
## Call:  
## zeroinfl(formula = out ~ appropriability\_strategy + key.event +   
## LC1 + LC2 + LC3 + files\_count + thing\_like\_count, data = license.df,   
## dist = "negbin", EM = TRUE)  
##   
## Pearson residuals:  
## Min 1Q Median 3Q Max   
## -0.49896 -0.16538 -0.07011 -0.05060 228.89979   
##   
## Count model coefficients (negbin with log link):  
## Estimate Std. Error z value  
## (Intercept) -0.5989127 0.0492746 -12.155  
## appropriability\_strategyprivate-collective 0.7852073 0.0515564 15.230  
## appropriability\_strategyfree-riding 0.7879921 0.0783208 10.061  
## key.event2 1.1188096 0.0528081 21.186  
## key.event3 0.3042144 0.0587165 5.181  
## LC1 0.0138061 0.0086386 1.598  
## LC2 0.0441007 0.0069077 6.384  
## LC3 0.0692520 0.0170182 4.069  
## files\_count -0.0025402 0.0006815 -3.727  
## thing\_like\_count 0.0032692 0.0001313 24.901  
## Log(theta) -1.3904602 0.0212573 -65.411  
## Pr(>|z|)   
## (Intercept) < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective < 2e-16 \*\*\*  
## appropriability\_strategyfree-riding < 2e-16 \*\*\*  
## key.event2 < 2e-16 \*\*\*  
## key.event3 2.21e-07 \*\*\*  
## LC1 0.109999   
## LC2 1.72e-10 \*\*\*  
## LC3 4.72e-05 \*\*\*  
## files\_count 0.000194 \*\*\*  
## thing\_like\_count < 2e-16 \*\*\*  
## Log(theta) < 2e-16 \*\*\*  
##   
## Zero-inflation model coefficients (binomial with logit link):  
## Estimate Std. Error z value  
## (Intercept) 1.697941 0.115767 14.667  
## appropriability\_strategyprivate-collective -0.813272 0.117442 -6.925  
## appropriability\_strategyfree-riding 0.653259 0.092007 7.100  
## key.event2 1.308460 0.118064 11.083  
## key.event3 1.791083 0.125552 14.266  
## LC1 0.248884 0.052544 4.737  
## LC2 0.120876 0.031681 3.815  
## LC3 -0.070116 0.116031 -0.604  
## files\_count -0.023484 0.008133 -2.888  
## thing\_like\_count -0.137939 0.005983 -23.056  
## Pr(>|z|)   
## (Intercept) < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective 4.36e-12 \*\*\*  
## appropriability\_strategyfree-riding 1.25e-12 \*\*\*  
## key.event2 < 2e-16 \*\*\*  
## key.event3 < 2e-16 \*\*\*  
## LC1 2.17e-06 \*\*\*  
## LC2 0.000136 \*\*\*  
## LC3 0.545657   
## files\_count 0.003882 \*\*   
## thing\_like\_count < 2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1   
##   
## Theta = 0.249   
## Number of iterations in BFGS optimization: 1   
## Log-likelihood: -2.361e+04 on 21 Df

m2 <- zeroinfl(made\_count ~ appropriability\_strategy+ key.event+LC1+LC2+LC3+ files\_count+thing\_like\_count, data = license.df, dist = "negbin", EM = TRUE)  
save.image("madeModel2p.RData")

##   
## Call:  
## zeroinfl(formula = made\_count ~ appropriability\_strategy + key.event +   
## LC1 + LC2 + LC3 + files\_count + thing\_like\_count, data = license.df,   
## dist = "negbin", EM = TRUE)  
##   
## Pearson residuals:  
## Min 1Q Median 3Q Max   
## -0.87685 -0.21718 -0.10656 -0.09198 43.18899   
##   
## Count model coefficients (negbin with log link):  
## Estimate Std. Error z value  
## (Intercept) 0.6292067 0.0298888 21.052  
## appropriability\_strategyprivate-collective 0.3156289 0.0284210 11.105  
## appropriability\_strategyfree-riding -0.0480955 0.0458640 -1.049  
## key.event2 -0.4951672 0.0304882 -16.241  
## key.event3 -0.9576447 0.0331098 -28.923  
## LC1 0.0259691 0.0053057 4.895  
## LC2 0.0296851 0.0038554 7.700  
## LC3 0.0252201 0.0084611 2.981  
## files\_count -0.0036270 0.0004505 -8.051  
## thing\_like\_count 0.0038240 0.0000823 46.462  
## Log(theta) -0.2628330 0.0212264 -12.382  
## Pr(>|z|)   
## (Intercept) < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective < 2e-16 \*\*\*  
## appropriability\_strategyfree-riding 0.29434   
## key.event2 < 2e-16 \*\*\*  
## key.event3 < 2e-16 \*\*\*  
## LC1 9.85e-07 \*\*\*  
## LC2 1.36e-14 \*\*\*  
## LC3 0.00288 \*\*   
## files\_count 8.22e-16 \*\*\*  
## thing\_like\_count < 2e-16 \*\*\*  
## Log(theta) < 2e-16 \*\*\*  
##   
## Zero-inflation model coefficients (binomial with logit link):  
## Estimate Std. Error z value  
## (Intercept) 2.693302 0.092075 29.251  
## appropriability\_strategyprivate-collective -0.108403 0.101130 -1.072  
## appropriability\_strategyfree-riding 0.817136 0.074247 11.006  
## key.event2 0.028131 0.092404 0.304  
## key.event3 0.002228 0.093823 0.024  
## LC1 0.076796 0.041842 1.835  
## LC2 -0.080705 0.020043 -4.027  
## LC3 -0.082102 0.089642 -0.916  
## files\_count 0.003276 0.001760 1.861  
## thing\_like\_count -0.198957 0.007540 -26.387  
## Pr(>|z|)   
## (Intercept) < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective 0.2838   
## appropriability\_strategyfree-riding < 2e-16 \*\*\*  
## key.event2 0.7608   
## key.event3 0.9811   
## LC1 0.0665 .   
## LC2 5.66e-05 \*\*\*  
## LC3 0.3597   
## files\_count 0.0627 .   
## thing\_like\_count < 2e-16 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1   
##   
## Theta = 0.7689   
## Number of iterations in BFGS optimization: 1   
## Log-likelihood: -3.17e+04 on 21 Df

# Model 3: interaction effects: Appropriation Strategy x Licence Choice (Hypothesis 3)

m3 <- zeroinfl(out ~ appropriability\_strategy+ key.event+LC1+LC2+LC3+ files\_count+thing\_like\_count+  
 (LC1\*key.event+LC2\*key.event+LC3\*key.event)+(appropriability\_strategy\*key.event), data = license.df, dist = "negbin", EM = TRUE)  
save.image("outModel3p.RData")

##   
## Call:  
## zeroinfl(formula = out ~ appropriability\_strategy + key.event +   
## LC1 + LC2 + LC3 + files\_count + thing\_like\_count + (LC1 \* key.event +   
## LC2 \* key.event + LC3 \* key.event) + (appropriability\_strategy \*   
## key.event), data = license.df, dist = "negbin", EM = TRUE)  
##   
## Pearson residuals:  
## Min 1Q Median 3Q Max   
## -0.50432 -0.16141 -0.07468 -0.04481 235.05104   
##   
## Count model coefficients (negbin with log link):  
## Estimate  
## (Intercept) -0.4139625  
## appropriability\_strategyprivate-collective 0.7517917  
## appropriability\_strategyfree-riding 0.5348316  
## key.event2 0.9308416  
## key.event3 -0.0323030  
## LC1 -0.0173742  
## LC2 0.0267680  
## LC3 0.0271215  
## files\_count -0.0036436  
## thing\_like\_count 0.0032735  
## key.event2:LC1 0.0481847  
## key.event3:LC1 0.0536148  
## key.event2:LC2 0.0072551  
## key.event3:LC2 0.0465195  
## key.event2:LC3 0.1277827  
## key.event3:LC3 0.2553683  
## appropriability\_strategyprivate-collective:key.event2 0.1878705  
## appropriability\_strategyfree-riding:key.event2 -0.2617150  
## appropriability\_strategyprivate-collective:key.event3 -0.1618142  
## appropriability\_strategyfree-riding:key.event3 0.8266782  
## Log(theta) -1.3690965  
## Std. Error z value  
## (Intercept) 0.0610626 -6.779  
## appropriability\_strategyprivate-collective 0.0912510 8.239  
## appropriability\_strategyfree-riding 0.1590969 3.362  
## key.event2 0.0796101 11.693  
## key.event3 0.0891661 -0.362  
## LC1 0.0133496 -1.301  
## LC2 0.0104126 2.571  
## LC3 0.0165088 1.643  
## files\_count 0.0009166 -3.975  
## thing\_like\_count 0.0001298 25.227  
## key.event2:LC1 0.0176649 2.728  
## key.event3:LC1 0.0175020 3.063  
## key.event2:LC2 0.0124255 0.584  
## key.event3:LC2 0.0134179 3.467  
## key.event2:LC3 0.0470708 2.715  
## key.event3:LC3 0.0639730 3.992  
## appropriability\_strategyprivate-collective:key.event2 0.1213677 1.548  
## appropriability\_strategyfree-riding:key.event2 0.1942530 -1.347  
## appropriability\_strategyprivate-collective:key.event3 0.1305695 -1.239  
## appropriability\_strategyfree-riding:key.event3 0.2148606 3.848  
## Log(theta) 0.0212539 -64.416  
## Pr(>|z|)   
## (Intercept) 1.21e-11 \*\*\*  
## appropriability\_strategyprivate-collective < 2e-16 \*\*\*  
## appropriability\_strategyfree-riding 0.000775 \*\*\*  
## key.event2 < 2e-16 \*\*\*  
## key.event3 0.717143   
## LC1 0.193098   
## LC2 0.010149 \*   
## LC3 0.100413   
## files\_count 7.04e-05 \*\*\*  
## thing\_like\_count < 2e-16 \*\*\*  
## key.event2:LC1 0.006378 \*\*   
## key.event3:LC1 0.002189 \*\*   
## key.event2:LC2 0.559292   
## key.event3:LC2 0.000526 \*\*\*  
## key.event2:LC3 0.006634 \*\*   
## key.event3:LC3 6.56e-05 \*\*\*  
## appropriability\_strategyprivate-collective:key.event2 0.121636   
## appropriability\_strategyfree-riding:key.event2 0.177887   
## appropriability\_strategyprivate-collective:key.event3 0.215236   
## appropriability\_strategyfree-riding:key.event3 0.000119 \*\*\*  
## Log(theta) < 2e-16 \*\*\*  
##   
## Zero-inflation model coefficients (binomial with logit link):  
## Estimate Std. Error  
## (Intercept) 2.861976 0.255247  
## appropriability\_strategyprivate-collective -1.094343 0.610654  
## appropriability\_strategyfree-riding -1.109992 0.346536  
## key.event2 -0.020479 0.269634  
## key.event3 0.436503 0.277734  
## LC1 0.144028 0.203083  
## LC2 -0.601578 0.191360  
## LC3 -0.830125 0.307190  
## files\_count -0.024072 0.008238  
## thing\_like\_count -0.132571 0.005867  
## key.event2:LC1 0.075134 0.212010  
## key.event3:LC1 0.058608 0.217512  
## key.event2:LC2 0.791350 0.193432  
## key.event3:LC2 0.693216 0.193942  
## key.event2:LC3 0.957277 0.353057  
## key.event3:LC3 0.864301 0.345934  
## appropriability\_strategyprivate-collective:key.event2 0.255819 0.630051  
## appropriability\_strategyfree-riding:key.event2 1.704710 0.369034  
## appropriability\_strategyprivate-collective:key.event3 0.465718 0.639977  
## appropriability\_strategyfree-riding:key.event3 2.301171 0.381738  
## z value Pr(>|z|)   
## (Intercept) 11.213 < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective -1.792 0.073120 .   
## appropriability\_strategyfree-riding -3.203 0.001360 \*\*   
## key.event2 -0.076 0.939459   
## key.event3 1.572 0.116029   
## LC1 0.709 0.478196   
## LC2 -3.144 0.001668 \*\*   
## LC3 -2.702 0.006886 \*\*   
## files\_count -2.922 0.003476 \*\*   
## thing\_like\_count -22.596 < 2e-16 \*\*\*  
## key.event2:LC1 0.354 0.723047   
## key.event3:LC1 0.269 0.787586   
## key.event2:LC2 4.091 4.29e-05 \*\*\*  
## key.event3:LC2 3.574 0.000351 \*\*\*  
## key.event2:LC3 2.711 0.006700 \*\*   
## key.event3:LC3 2.498 0.012474 \*   
## appropriability\_strategyprivate-collective:key.event2 0.406 0.684721   
## appropriability\_strategyfree-riding:key.event2 4.619 3.85e-06 \*\*\*  
## appropriability\_strategyprivate-collective:key.event3 0.728 0.466790   
## appropriability\_strategyfree-riding:key.event3 6.028 1.66e-09 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1   
##   
## Theta = 0.2543   
## Number of iterations in BFGS optimization: 1   
## Log-likelihood: -2.352e+04 on 41 Df

m3 <- zeroinfl(made\_count ~ appropriability\_strategy+ key.event+LC1+LC2+LC3+ files\_count+thing\_like\_count+  
 (LC1\*key.event+LC2\*key.event+LC3\*key.event)+(appropriability\_strategy\*key.event), data = license.df, dist = "negbin", EM = TRUE)  
save.image("madeModel3p.RData")

##   
## Call:  
## zeroinfl(formula = made\_count ~ appropriability\_strategy + key.event +   
## LC1 + LC2 + LC3 + files\_count + thing\_like\_count + (LC1 \* key.event +   
## LC2 \* key.event + LC3 \* key.event) + (appropriability\_strategy \*   
## key.event), data = license.df, dist = "negbin", EM = TRUE)  
##   
## Pearson residuals:  
## Min 1Q Median 3Q Max   
## -0.88456 -0.21882 -0.10366 -0.08642 45.41340   
##   
## Count model coefficients (negbin with log link):  
## Estimate  
## (Intercept) 6.960e-01  
## appropriability\_strategyprivate-collective 4.196e-01  
## appropriability\_strategyfree-riding 2.002e-02  
## key.event2 -5.422e-01  
## key.event3 -1.111e+00  
## LC1 -3.029e-03  
## LC2 1.312e-02  
## LC3 1.440e-02  
## files\_count -4.676e-03  
## thing\_like\_count 3.868e-03  
## key.event2:LC1 3.208e-02  
## key.event3:LC1 6.023e-02  
## key.event2:LC2 1.548e-02  
## key.event3:LC2 4.199e-02  
## key.event2:LC3 5.573e-02  
## key.event3:LC3 7.922e-02  
## appropriability\_strategyprivate-collective:key.event2 -1.252e-01  
## appropriability\_strategyfree-riding:key.event2 -4.744e-02  
## appropriability\_strategyprivate-collective:key.event3 -1.850e-01  
## appropriability\_strategyfree-riding:key.event3 -1.727e-01  
## Log(theta) -2.453e-01  
## Std. Error z value  
## (Intercept) 3.495e-02 19.914  
## appropriability\_strategyprivate-collective 5.251e-02 7.992  
## appropriability\_strategyfree-riding 9.624e-02 0.208  
## key.event2 4.561e-02 -11.888  
## key.event3 4.894e-02 -22.696  
## LC1 8.134e-03 -0.372  
## LC2 5.848e-03 2.244  
## LC3 9.102e-03 1.582  
## files\_count 5.447e-04 -8.586  
## thing\_like\_count 8.308e-05 46.559  
## key.event2:LC1 1.098e-02 2.922  
## key.event3:LC1 1.148e-02 5.245  
## key.event2:LC2 6.942e-03 2.230  
## key.event3:LC2 7.440e-03 5.644  
## key.event2:LC3 2.542e-02 2.192  
## key.event3:LC3 2.831e-02 2.798  
## appropriability\_strategyprivate-collective:key.event2 6.887e-02 -1.818  
## appropriability\_strategyfree-riding:key.event2 1.174e-01 -0.404  
## appropriability\_strategyprivate-collective:key.event3 7.362e-02 -2.513  
## appropriability\_strategyfree-riding:key.event3 1.281e-01 -1.348  
## Log(theta) 2.127e-02 -11.536  
## Pr(>|z|)   
## (Intercept) < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective 1.33e-15 \*\*\*  
## appropriability\_strategyfree-riding 0.83525   
## key.event2 < 2e-16 \*\*\*  
## key.event3 < 2e-16 \*\*\*  
## LC1 0.70959   
## LC2 0.02482 \*   
## LC3 0.11366   
## files\_count < 2e-16 \*\*\*  
## thing\_like\_count < 2e-16 \*\*\*  
## key.event2:LC1 0.00347 \*\*   
## key.event3:LC1 1.56e-07 \*\*\*  
## key.event2:LC2 0.02574 \*   
## key.event3:LC2 1.66e-08 \*\*\*  
## key.event2:LC3 0.02838 \*   
## key.event3:LC3 0.00515 \*\*   
## appropriability\_strategyprivate-collective:key.event2 0.06912 .   
## appropriability\_strategyfree-riding:key.event2 0.68623   
## appropriability\_strategyprivate-collective:key.event3 0.01196 \*   
## appropriability\_strategyfree-riding:key.event3 0.17762   
## Log(theta) < 2e-16 \*\*\*  
##   
## Zero-inflation model coefficients (binomial with logit link):  
## Estimate Std. Error  
## (Intercept) 2.983561 0.164225  
## appropriability\_strategyprivate-collective -0.305444 0.358507  
## appropriability\_strategyfree-riding -0.838914 0.264440  
## key.event2 -0.367939 0.178576  
## key.event3 -0.484359 0.176470  
## LC1 0.353342 0.142285  
## LC2 -0.255986 0.104059  
## LC3 -0.261248 0.188448  
## files\_count 0.003256 0.001676  
## thing\_like\_count -0.191105 0.007231  
## key.event2:LC1 -0.290500 0.157081  
## key.event3:LC1 -0.333490 0.153196  
## key.event2:LC2 0.237663 0.110241  
## key.event3:LC2 0.180171 0.106694  
## key.event2:LC3 0.569649 0.244692  
## key.event3:LC3 0.120208 0.232564  
## appropriability\_strategyprivate-collective:key.event2 -0.028620 0.391982  
## appropriability\_strategyfree-riding:key.event2 1.669621 0.285882  
## appropriability\_strategyprivate-collective:key.event3 0.421285 0.387618  
## appropriability\_strategyfree-riding:key.event3 1.911977 0.288891  
## z value Pr(>|z|)   
## (Intercept) 18.167 < 2e-16 \*\*\*  
## appropriability\_strategyprivate-collective -0.852 0.39422   
## appropriability\_strategyfree-riding -3.172 0.00151 \*\*   
## key.event2 -2.060 0.03936 \*   
## key.event3 -2.745 0.00606 \*\*   
## LC1 2.483 0.01302 \*   
## LC2 -2.460 0.01389 \*   
## LC3 -1.386 0.16565   
## files\_count 1.942 0.05208 .   
## thing\_like\_count -26.427 < 2e-16 \*\*\*  
## key.event2:LC1 -1.849 0.06440 .   
## key.event3:LC1 -2.177 0.02949 \*   
## key.event2:LC2 2.156 0.03110 \*   
## key.event3:LC2 1.689 0.09128 .   
## key.event2:LC3 2.328 0.01991 \*   
## key.event3:LC3 0.517 0.60524   
## appropriability\_strategyprivate-collective:key.event2 -0.073 0.94180   
## appropriability\_strategyfree-riding:key.event2 5.840 5.21e-09 \*\*\*  
## appropriability\_strategyprivate-collective:key.event3 1.087 0.27710   
## appropriability\_strategyfree-riding:key.event3 6.618 3.63e-11 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1   
##   
## Theta = 0.7824   
## Number of iterations in BFGS optimization: 1   
## Log-likelihood: -3.162e+04 on 41 Df