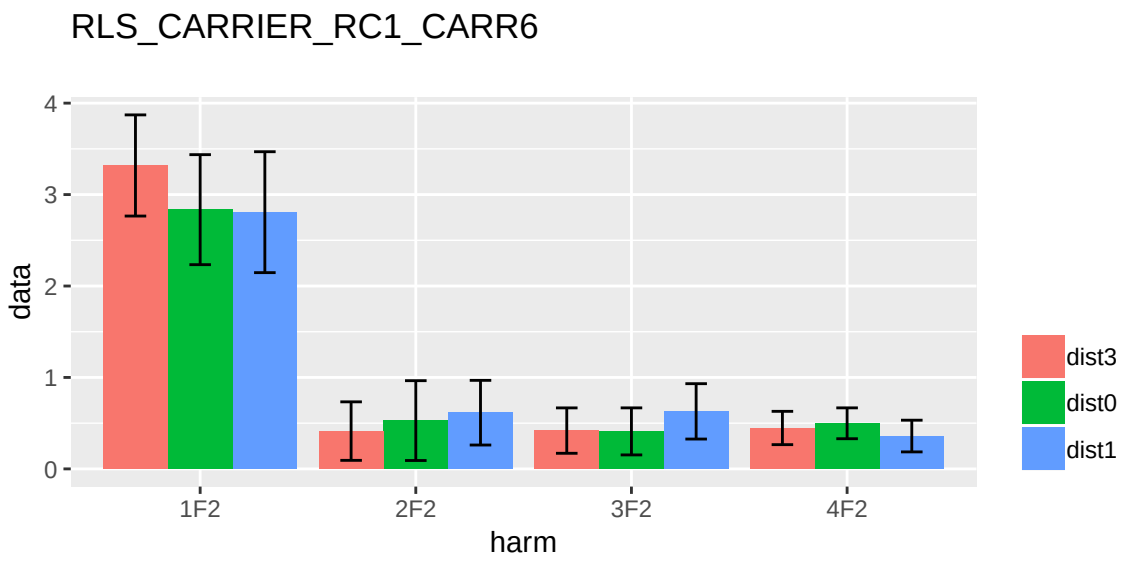
NUMEROSITY ANALYSIS RESULTS

```
top_folder = '/Users/kohler/Google Drive/Dropbox/WRITING/Articles/2019_KohlerNumerositySSVEP/figures/results/exp
counter = 0
for (q in c(1,2,3,4)) {
  for (c in c(6,8)) {
    cur_file = switch(q, "RLS_carrier_rc1_carr", "RLS_oddball_rc1_carr", "RLS_carrier_rc2_carr", "RLS_oddball_rc
    cur_csv <- sprintf('%s/%s%d_full_projected_all_trials.csv', top_folder, cur_file, c)
    cur_data <-data.frame( read.csv(file = cur_csv ) )
    cur_data$cond <- factor(cur_data$condition, levels(cur_data$condition)[c(3,1,2)])
    cur_data$harm <- cur_data$harmonic
    cur_data$harm_alt <- factor(cur_data$harmonic, levels(cur_data$harmonic)[c(2,1,3,4)])
    g <- ggplot(cur_data, aes(harm, data, fill = cond)) +
      stat_summary(geom = "bar", fun.y = mean, position=position_dodge()) +
      stat_summary(geom = "errorbar", fun.data = mean_se, width=.3, position=position_dodge(.9))
    g <- g + theme(legend.title=element_blank(),
      legend.justification=c(1,0),
      legend.background = element_blank()) +
      ggtitle(toupper(sprintf('%s%d\n',cur_file, c)))
    if (q == 1 && c == 6) {
      cat("RESULTS BELOW\n  ")
      cat("\n  ")
    }
    print(g)
    m1 <- lmer(data ~ cond * harm + (1|subject), cur_data)
    emm = emmeans(m1, ~ cond * harm, lmer.df = "satterthwaite")
    m2 <- lmer(data ~ cond + harm + (1|subject), cur_data)
    if (isSingular(m1)) {
      if (isSingular(m2)) {
        cat("WARNING: BOTH MODELS ARE SINGULAR!  ")
      } else {
        cat("WARNING: MODEL1 IS SINGULAR, BUT MODEL2 IS NOT!  ")
      }
    } else {
      cat("LOVELY: NONE OF THE MODELS ARE SINGULAR!  ")
    }
    if (!converge_ok(m1)) {
      if (!converge_ok(m2)) {
        cat("WARNING: BOTH MODELS DID NOT CONVERGE!\n\n")
      } else {
        cat("WARNING: MODEL1 DID NOT CONVERGE, BUT MODEL2 DID!\n\n")
      }
    } else {
      cat("LOVELY: BOTH MODELS CONVERGED!\n\n")
    }
    cat("ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS\n")
    print(anova(m1), type='pdf')
    cat("\nESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION\n")
    print(prettify(summary(pairs(emm, simple = "cond", adjust = "none"))))
    cat("\nTEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT\n")
    print(anova(m1, m2))
  }
}
```

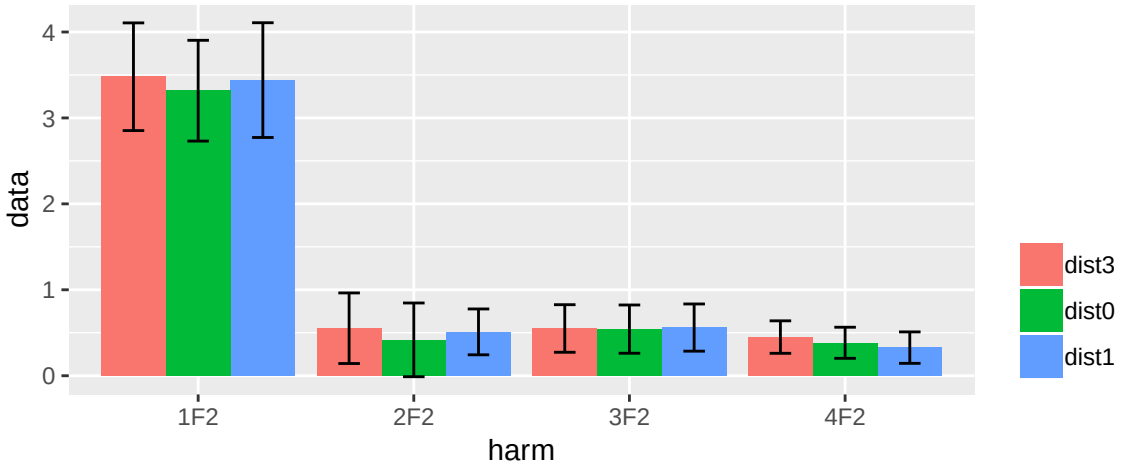
```
## RESULTS BELOW
##
```

##



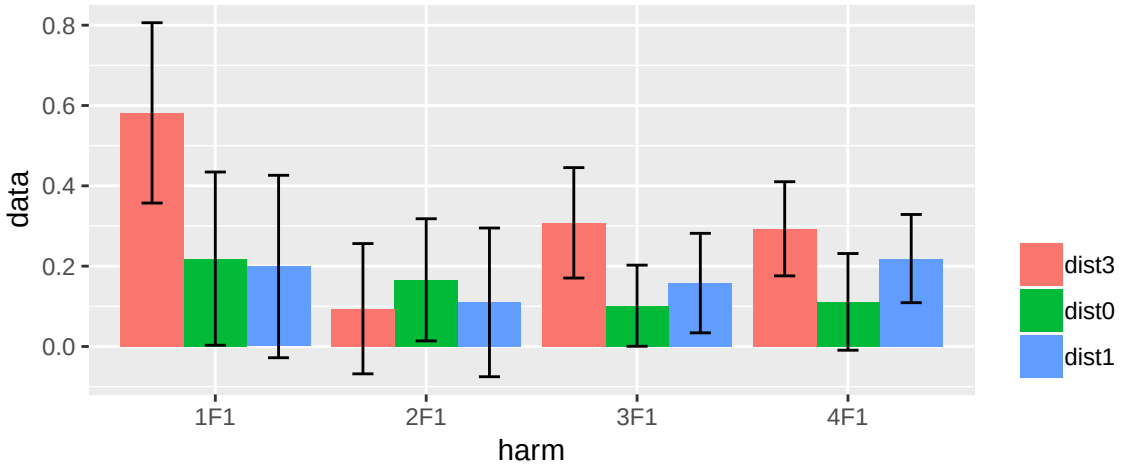

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond        0.200   0.100     2   154  0.0836 0.9199
## harm      212.272  70.757     3   154 59.0031 <2e-16 ***
## cond:harm   3.195   0.532     6   154  0.4440 0.8484
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##            contrast harm     estimate        SE  df    t.ratio   p.value
## 1   1 dist3 - dist0  1F2  0.483408479 0.3998686 154  1.2089183 0.2285471
## 2   2 dist3 - dist1  1F2  0.511023124 0.3998686 154  1.2779776 0.2031803
## 3   3 dist0 - dist1  1F2  0.027614645 0.3998686 154  0.0690593 0.9450320
## 4   4 dist3 - dist0  2F2 -0.115142962 0.3998686 154 -0.2879520 0.7737706
## 5   5 dist3 - dist1  2F2 -0.201511228 0.3998686 154 -0.5039436 0.6150212
## 6   6 dist0 - dist1  2F2 -0.086368266 0.3998686 154 -0.2159916 0.8292801
## 7   7 dist3 - dist0  3F2  0.008830539 0.3998686 154  0.0220836 0.9824099
## 8   8 dist3 - dist1  3F2 -0.210272088 0.3998686 154 -0.5258530 0.5997468
## 9   9 dist0 - dist1  3F2 -0.219102627 0.3998686 154 -0.5479366 0.5845288
## 10 10 dist3 - dist0  4F2 -0.051334788 0.3998686 154 -0.1283791 0.8980164
## 11 11 dist3 - dist1  4F2  0.087975623 0.3998686 154  0.2200113 0.8261537
## 12 12 dist0 - dist1  4F2  0.139310411 0.3998686 154  0.3483905 0.7280228
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 587.13 612.67 -285.56   571.13
## m1 14 596.30 641.00 -284.15   568.30 2.8297      6     0.8299
```

RLS_CARRIER_RC1_CARR8



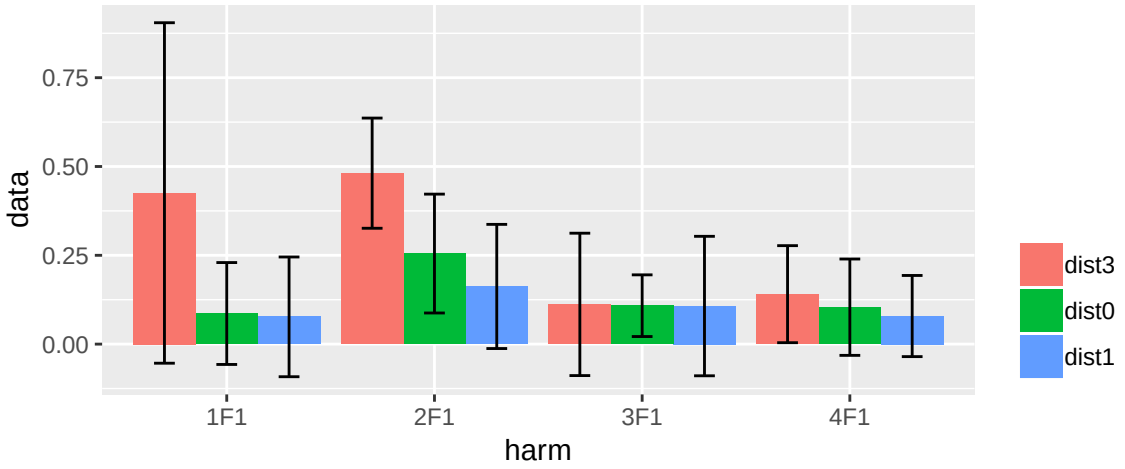

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond        0.259   0.129     2   154  0.1019 0.9032
## harm      291.384  97.128     3   154 76.4352 <2e-16 ***
## cond:harm   0.216   0.036     6   154  0.0283 0.9999
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##            contrast harm    estimate        SE  df     t.ratio   p.value
## 1   1 dist3 - dist0  1F2  0.16243456 0.4116188 154  0.39462378 0.6936665
## 2   2 dist3 - dist1  1F2  0.03923738 0.4116188 154  0.09532456 0.9241810
## 3   3 dist0 - dist1  1F2 -0.12319718 0.4116188 154 -0.29929922 0.7651153
## 4   4 dist3 - dist0  2F2  0.13536052 0.4116188 154  0.32884923 0.7427164
## 5   5 dist3 - dist1  2F2  0.04253188 0.4116188 154  0.10332832 0.9178368
## 6   6 dist0 - dist1  2F2 -0.09282864 0.4116188 154 -0.22552091 0.8218731
## 7   7 dist3 - dist0  3F2  0.00724635 0.4116188 154  0.01760452 0.9859771
## 8   8 dist3 - dist1  3F2 -0.01072360 0.4116188 154 -0.02605225 0.9792494
## 9   9 dist0 - dist1  3F2 -0.01796995 0.4116188 154 -0.04365677 0.9652346
## 10 10 dist3 - dist0  4F2  0.06643266 0.4116188 154  0.16139367 0.8719949
## 11 11 dist3 - dist1  4F2  0.12264568 0.4116188 154  0.29795939 0.7661358
## 12 12 dist0 - dist1  4F2  0.05621301 0.4116188 154  0.13656572 0.8915524
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 594.84 620.38 -289.42   578.84
## m1 14 606.66 651.36 -289.33   578.66 0.1819      6     0.9999
```

RLS_ODDBALL_RC1_CARR6

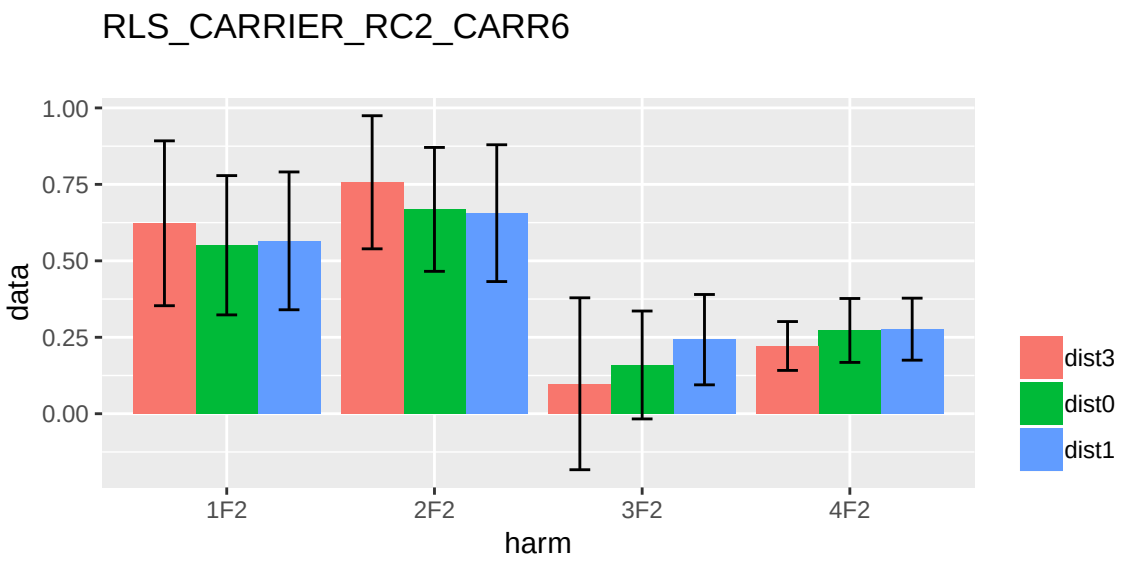



```
## WARNING: BOTH MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      1.0229 0.51147     2   168  1.2910 0.2777
## harm      1.0389 0.34631     3   168  0.8741 0.4558
## cond:harm 1.0040 0.16734     6   168  0.4224 0.8634
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##             contrast harm    estimate        SE  df     t.ratio    p.value
## 1    1 dist3 - dist0  1F1  0.36281403 0.2298395 168  1.57855387 0.11631947
## 2    2 dist3 - dist1  1F1  0.38249444 0.2298395 168  1.66418061 0.09794042
## 3    3 dist0 - dist1  1F1  0.01968041 0.2298395 168  0.08562675 0.93186510
## 4    4 dist3 - dist0  2F1 -0.07189634 0.2298395 168 -0.31281108 0.75481217
## 5    5 dist3 - dist1  2F1 -0.01579473 0.2298395 168 -0.06872072 0.94529365
## 6    6 dist0 - dist1  2F1  0.05610161 0.2298395 168  0.24409036 0.80745867
## 7    7 dist3 - dist0  3F1  0.20638085 0.2298395 168  0.89793466 0.37050544
## 8    8 dist3 - dist1  3F1  0.15005721 0.2298395 168  0.65287824 0.51472720
## 9    9 dist0 - dist1  3F1 -0.05632364 0.2298395 168 -0.24505642 0.80671183
## 10 10 dist3 - dist0  4F1  0.18194455 0.2298395 168  0.79161568 0.42970106
## 11 11 dist3 - dist1  4F1  0.07415749 0.2298395 168  0.32264904 0.74736224
## 12 12 dist0 - dist1  4F1 -0.10778706 0.2298395 168 -0.46896664 0.63970148
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 350.44 375.99 -167.22   334.44
## m1 14 359.75 404.45 -165.87   331.75 2.6949      6     0.8461
```

RLS_ODDBALL_RC1_CARR8

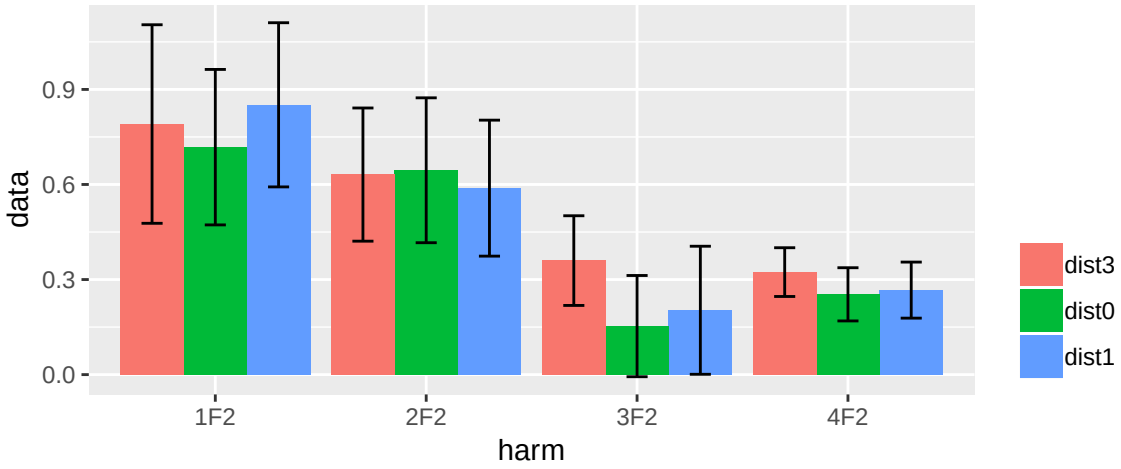



```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      1.15285 0.57642     2   154  0.9350 0.3948
## harm      1.11449 0.37150     3   154  0.6026 0.6143
## cond:harm 0.86813 0.14469     6   154  0.2347 0.9646
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##             contrast harm    estimate        SE  df     t.ratio   p.value
## 1    1 dist3 - dist0  1F1 0.339370833 0.2867019 154 1.183706287 0.2383533
## 2    2 dist3 - dist1  1F1 0.348783386 0.2867019 154 1.216536739 0.2256418
## 3    3 dist0 - dist1  1F1 0.009412553 0.2867019 154 0.032830452 0.9738523
## 4    4 dist3 - dist0  2F1 0.226285282 0.2867019 154 0.789270275 0.4311675
## 5    5 dist3 - dist1  2F1 0.318910055 0.2867019 154 1.112340250 0.2677253
## 6    6 dist0 - dist1  2F1 0.092624773 0.2867019 154 0.323069974 0.7470805
## 7    7 dist3 - dist0  3F1 0.003657791 0.2867019 154 0.012758167 0.9898372
## 8    8 dist3 - dist1  3F1 0.004662915 0.2867019 154 0.016263984 0.9870448
## 9    9 dist0 - dist1  3F1 0.001005124 0.2867019 154 0.003505817 0.9972073
## 10 10 dist3 - dist0  4F1 0.036675729 0.2867019 154 0.127922871 0.8983769
## 11 11 dist3 - dist1  4F1 0.061591786 0.2867019 154 0.214828670 0.8301851
## 12 12 dist0 - dist1  4F1 0.024916057 0.2867019 154 0.086905799 0.9308593
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 430.35 455.90 -207.18   414.35
## m1 14 440.85 485.55 -206.43   412.85 1.5019      6     0.9594
```



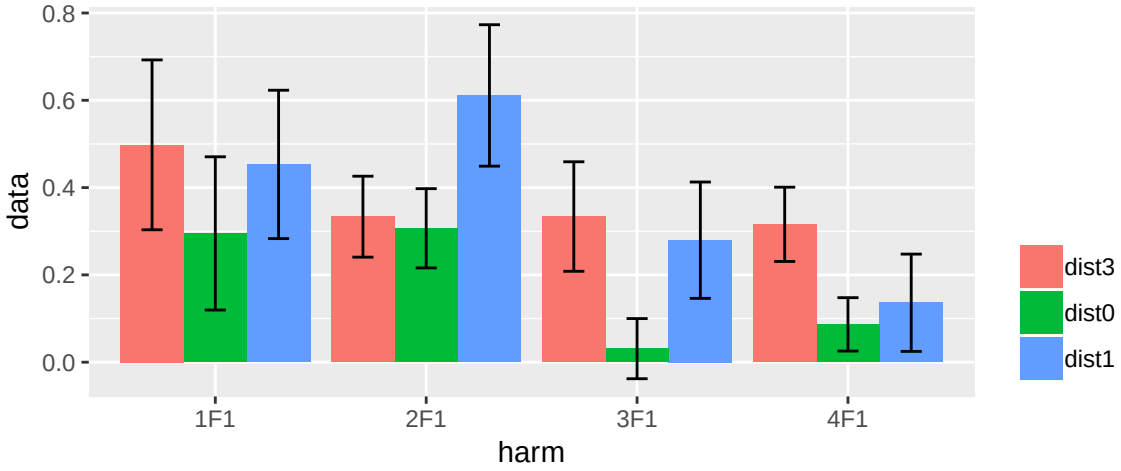

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond      0.0149 0.00744     2   154  0.0167 0.9834820
## harm      8.6039 2.86798     3   154  6.4250 0.0003964 ***
## cond:harm 0.3049 0.05081     6   154  0.1138 0.9946983
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##            contrast harm     estimate        SE  df     t.ratio   p.value
## 1   1 dist3 - dist0  1F2  0.071828598 0.2439611 154  0.29442649 0.7688285
## 2   2 dist3 - dist1  1F2  0.057472989 0.2439611 154  0.23558264 0.8140695
## 3   3 dist0 - dist1  1F2 -0.014355609 0.2439611 154 -0.05884385 0.9531528
## 4   4 dist3 - dist0  2F2  0.088687900 0.2439611 154  0.36353302 0.7167053
## 5   5 dist3 - dist1  2F2  0.101003648 0.2439611 154  0.41401545 0.6794388
## 6   6 dist0 - dist1  2F2  0.012315747 0.2439611 154  0.05048243 0.9598034
## 7   7 dist3 - dist0  3F2 -0.061486917 0.2439611 154 -0.25203579 0.8013495
## 8   8 dist3 - dist1  3F2 -0.144248607 0.2439611 154 -0.59127718 0.5552016
## 9   9 dist0 - dist1  3F2 -0.082761689 0.2439611 154 -0.33924139 0.7348901
## 10 10 dist3 - dist0  4F2 -0.050824245 0.2439611 154 -0.20832934 0.8352471
## 11 11 dist3 - dist1  4F2 -0.054976600 0.2439611 154 -0.22534990 0.8220058
## 12 12 dist0 - dist1  4F2 -0.004152355 0.2439611 154 -0.01702057 0.9864422
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 393.79 419.34 -188.90   377.79
## m1 14 405.06 449.76 -188.53   377.06 0.7302      6     0.9938
```

RLS_CARRIER_RC2_CARR8



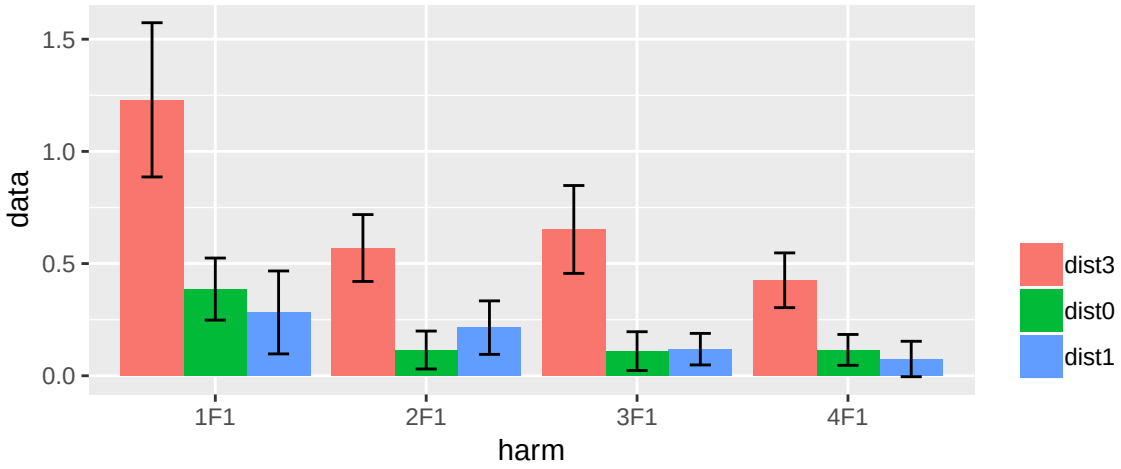

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond      0.2140  0.1070     2   154  0.2579    0.7730
## harm      9.5334  3.1778     3   154  7.6616 8.321e-05 ***
## cond:harm 0.3370  0.0562     6   154  0.1354    0.9915
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##             contrast harm    estimate        SE  df     t.ratio   p.value
## 1    1 dist3 - dist0  1F2  0.07297505 0.2351658 154  0.31031317 0.7567424
## 2    2 dist3 - dist1  1F2 -0.06065915 0.2351658 154 -0.25794201 0.7967960
## 3    3 dist0 - dist1  1F2 -0.13363420 0.2351658 154 -0.56825519 0.5706894
## 4    4 dist3 - dist0  2F2 -0.01358039 0.2351658 154 -0.05774815 0.9540241
## 5    5 dist3 - dist1  2F2  0.04277160 0.2351658 154  0.18187848 0.8559173
## 6    6 dist0 - dist1  2F2  0.05635199 0.2351658 154  0.23962663 0.8109384
## 7    7 dist3 - dist0  3F2  0.20674243 0.2351658 154  0.87913465 0.3806980
## 8    8 dist3 - dist1  3F2  0.15674794 0.2351658 154  0.66654216 0.5060620
## 9    9 dist0 - dist1  3F2 -0.04999449 0.2351658 154 -0.21259249 0.8319260
## 10 10 dist3 - dist0  4F2  0.07016915 0.2351658 154  0.29838157 0.7658142
## 11 11 dist3 - dist1  4F2  0.05682165 0.2351658 154  0.24162376 0.8093931
## 12 12 dist0 - dist1  4F2 -0.01334750 0.2351658 154 -0.05675781 0.9548117
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 384.19 409.73 -184.09   368.19
## m1 14 395.32 440.02 -183.66   367.32 0.8683      6     0.9901
```

RLS_ODDBALL_RC2_CARR6




```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value  Pr(>F)
## cond      1.44769 0.72384     2   154  3.7696 0.02522 *
## harm      2.18758 0.72919     3   154  3.7975 0.01159 *
## cond:harm 0.96378 0.16063     6   154  0.8365 0.54346
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##            contrast harm    estimate        SE  df    t.ratio    p.value
## 1   1 dist3 - dist0  1F1  0.20294695 0.1600089 154  1.2683479 0.20658774
## 2   2 dist3 - dist1  1F1  0.04487824 0.1600089 154  0.2804734 0.77949074
## 3   3 dist0 - dist1  1F1 -0.15806871 0.1600089 154 -0.9878745 0.32476368
## 4   4 dist3 - dist0  2F1  0.02661440 0.1600089 154  0.1663307 0.86811486
## 5   5 dist3 - dist1  2F1 -0.27776301 0.1600089 154 -1.7359223 0.08457766
## 6   6 dist0 - dist1  2F1 -0.30437741 0.1600089 154 -1.9022531 0.05900488
## 7   7 dist3 - dist0  3F1  0.30270420 0.1600089 154  1.8917961 0.06039538
## 8   8 dist3 - dist1  3F1  0.05418727 0.1600089 154  0.3386516 0.73533348
## 9   9 dist0 - dist1  3F1 -0.24851693 0.1600089 154 -1.5531445 0.12244130
## 10 10 dist3 - dist0  4F1  0.22919965 0.1600089 154  1.4324182 0.15405088
## 11 11 dist3 - dist1  4F1  0.17968990 0.1600089 154  1.1229995 0.26318541
## 12 12 dist0 - dist1  4F1 -0.04950975 0.1600089 154 -0.3094187 0.75742128
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 246.20 271.74 -115.10   230.20
## m1 14 252.91 297.61 -112.45   224.91 5.2918      6      0.507
```

RLS_ODDBALL_RC2_CARR8




```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!  LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond      11.7624  5.8812     2   154 18.8575 4.727e-08 ***
## harm       4.7903  1.5968     3   154  5.1199  0.002103 **
## cond:harm  2.0517  0.3419     6   154  1.0964  0.367033
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##             contrast harm    estimate        SE  df     t.ratio      p.value
## 1    1 dist3 - dist0  1F1  0.84346855 0.2039207 154  4.13625725 5.786860e-05
## 2    2 dist3 - dist1  1F1  0.94756777 0.2039207 154  4.64674592 7.190578e-06
## 3    3 dist0 - dist1  1F1  0.10409922 0.2039207 154  0.51048868 6.104401e-01
## 4    4 dist3 - dist0  2F1  0.45468754 0.2039207 154  2.22972706 2.721218e-02
## 5    5 dist3 - dist1  2F1  0.35488872 0.2039207 154  1.74032694 8.379916e-02
## 6    6 dist0 - dist1  2F1 -0.09979882 0.2039207 154 -0.48940011 6.252548e-01
## 7    7 dist3 - dist0  3F1  0.54233203 0.2039207 154  2.65952390 8.652841e-03
## 8    8 dist3 - dist1  3F1  0.53364313 0.2039207 154  2.61691470 9.757156e-03
## 9    9 dist0 - dist1  3F1 -0.00868890 0.2039207 154 -0.04260921 9.660683e-01
## 10 10 dist3 - dist0  4F1  0.31024409 0.2039207 154  1.52139564 1.302112e-01
## 11 11 dist3 - dist1  4F1  0.35090445 0.2039207 154  1.72078862 8.729762e-02
## 12 12 dist0 - dist1  4F1  0.04066036 0.2039207 154  0.19939298 8.422184e-01
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  8 328.19 353.73 -156.09   312.19
## m1 14 333.29 377.99 -152.64   305.29 6.9019      6       0.33
```