fMRI\_Trailer\_SNE

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# Summary:

### Individual Choice:

* Results show main effects for positive arousal and negative arousal in their expected directions. Also, there is a positive interaction between comedy and positive arousal. 🡪 These effects are seen in the simple and full models.
* From the neural sequence predictors, there is a trend main effect MPFC\_seg5. I would be cautious with this effect, as when looking at correlations it is not associated with w\_score for none of the genres. Last, there is an interaction between NAcc\_seg2 for comedy movies. 🡪None of these effects survive in the full model.
* From the peak predictors, there seems to be 3 positive main effects one for each ROI. Though, only NAcc and MPFC survive in the full model. Further, there are 2 positive interaction effects of NAcc and AIns with comedy, none surviving in the full model.

### Aggregate Choice:

* There seems to be a trend in that comedies make less money (type x comedy).
* We have no main nor interaction effects for choice and affect data.
* For the neural sequence predictors, there is a positive main effect for AIns. Also, a positive interaction effect for NAcc comedy. Maybe a negative interaction (MPFC x comedy) and positive (MPFC x horror).
* For neural peak predictors, there is a negative main effect for AIns. Also, there is a positive interaction between NAcc peak and comedy.

### Questions:

* Why there is no negative effects with peaks?
* Why there is a positive effect for AIns\_peak – w\_score and a negative effect for AIns\_peak – GrossM1? How correlated are w\_score and GrossM1? Ans: not correlated at all (~0.09).
  + AIns seg4 positive effect and AIns peak negative effect … ?

# Individual Choice Both Trailers.

## IndBoth: Sequence models.

## Comedy  
## Horror -1  
## Comedy 1

|  | Affect | Neuro seq | Affect & Neuro seq |
| --- | --- | --- | --- |
| (Intercept) | 0.012 | −0.003 | 0.010 |
|  | t = 0.245 | t = −0.044 | t = 0.189 |
|  | s.e. = 0.051, p-val = 0.807 | s.e. = 0.065, p-val = 0.965 | s.e. = 0.051, p-val = 0.850 |
| TypeComedy | −0.091+ | 0.191\*\* | −0.090+ |
|  | t = −1.780 | t = 2.929 | t = −1.753 |
|  | s.e. = 0.051, p-val = 0.075 | s.e. = 0.065, p-val = 0.003 | s.e. = 0.051, p-val = 0.080 |
| scale(Pos\_arousal\_scaled) | 0.582\*\*\* |  | 0.580\*\*\* |
|  | t = 20.583 |  | t = 20.450 |
|  | s.e. = 0.028, p-val = <0.001 |  | s.e. = 0.028, p-val = <0.001 |
| scale(Neg\_arousal\_scaled) | −0.167\*\*\* |  | −0.168\*\*\* |
|  | t = −4.381 |  | t = −4.376 |
|  | s.e. = 0.038, p-val = <0.001 |  | s.e. = 0.038, p-val = <0.001 |
| TypeComedy × scale(Pos\_arousal\_scaled) | 0.063\* |  | 0.061\* |
|  | t = 2.239 |  | t = 2.150 |
|  | s.e. = 0.028, p-val = 0.025 |  | s.e. = 0.028, p-val = 0.032 |
| TypeComedy × scale(Neg\_arousal\_scaled) | 0.043 |  | 0.039 |
|  | t = 1.128 |  | t = 1.005 |
|  | s.e. = 0.038, p-val = 0.259 |  | s.e. = 0.038, p-val = 0.315 |
| scale(NAcc\_seg2) |  | 0.030 | 0.001 |
|  |  | t = 0.964 | t = 0.046 |
|  |  | s.e. = 0.031, p-val = 0.335 | s.e. = 0.026, p-val = 0.964 |
| scale(AIns\_seg3) |  | 0.018 | 0.024 |
|  |  | t = 0.588 | t = 0.936 |
|  |  | s.e. = 0.031, p-val = 0.557 | s.e. = 0.026, p-val = 0.349 |
| scale(MPFC\_seg5) |  | 0.060+ | 0.038 |
|  |  | t = 1.925 | t = 1.465 |
|  |  | s.e. = 0.031, p-val = 0.055 | s.e. = 0.026, p-val = 0.143 |
| TypeComedy × scale(NAcc\_seg2) |  | 0.068\* | 0.042 |
|  |  | t = 2.208 | t = 1.644 |
|  |  | s.e. = 0.031, p-val = 0.027 | s.e. = 0.026, p-val = 0.101 |
| TypeComedy × scale(AIns\_seg3) |  | −0.008 | −0.007 |
|  |  | t = −0.271 | t = −0.265 |
|  |  | s.e. = 0.031, p-val = 0.786 | s.e. = 0.026, p-val = 0.791 |
| TypeComedy × scale(MPFC\_seg5) |  | 0.013 | −0.004 |
|  |  | t = 0.426 | t = −0.172 |
|  |  | s.e. = 0.031, p-val = 0.670 | s.e. = 0.026, p-val = 0.864 |
| SD (Intercept Trailer) | 0.190 | 0.327 | 0.193 |
|  | s.e. = , p-val = | s.e. = , p-val = | s.e. = , p-val = |
| SD (Intercept Participant) | 0.000 | 0.000 | 0.000 |
|  | s.e. = , p-val = | s.e. = , p-val = | s.e. = , p-val = |
| SD (Observations) | 0.769 | 0.928 | 0.768 |
|  | s.e. = , p-val = | s.e. = , p-val = | s.e. = , p-val = |
| R2 Marg. | 0.378 | 0.051 | 0.381 |
| AIC | 2253.6 | 2636.5 | 2292.9 |
| BIC | 2297.2 | 2689.8 | 2365.6 |
| * p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | |

## IndBoth: MP models.

## Comedy  
## Horror -1  
## Comedy 1

|  | Affect | Neuro seq | Affect & Neuro seq |
| --- | --- | --- | --- |
| (Intercept) | 0.012 | −0.001 | 0.012 |
|  | t = 0.245 | t = −0.011 | t = 0.236 |
|  | s.e. = 0.051, p-val = 0.807 | s.e. = 0.061, p-val = 0.991 | s.e. = 0.050, p-val = 0.813 |
| TypeComedy | −0.091+ | 0.190\*\* | −0.088+ |
|  | t = −1.780 | t = 3.090 | t = −1.751 |
|  | s.e. = 0.051, p-val = 0.075 | s.e. = 0.061, p-val = 0.002 | s.e. = 0.050, p-val = 0.080 |
| scale(Pos\_arousal\_scaled) | 0.582\*\*\* |  | 0.560\*\*\* |
|  | t = 20.583 |  | t = 19.558 |
|  | s.e. = 0.028, p-val = <0.001 |  | s.e. = 0.029, p-val = <0.001 |
| scale(Neg\_arousal\_scaled) | −0.167\*\*\* |  | −0.171\*\*\* |
|  | t = −4.381 |  | t = −4.485 |
|  | s.e. = 0.038, p-val = <0.001 |  | s.e. = 0.038, p-val = <0.001 |
| TypeComedy × scale(Pos\_arousal\_scaled) | 0.063\* |  | 0.056+ |
|  | t = 2.239 |  | t = 1.957 |
|  | s.e. = 0.028, p-val = 0.025 |  | s.e. = 0.029, p-val = 0.051 |
| TypeComedy × scale(Neg\_arousal\_scaled) | 0.043 |  | 0.037 |
|  | t = 1.128 |  | t = 0.978 |
|  | s.e. = 0.038, p-val = 0.259 |  | s.e. = 0.038, p-val = 0.328 |
| scale(NAcc\_avg\_peak\_yes\_pos2) |  | 0.124\*\*\* | 0.053\* |
|  |  | t = 4.047 | t = 2.044 |
|  |  | s.e. = 0.031, p-val = <0.001 | s.e. = 0.026, p-val = 0.041 |
| scale(AIns\_avg\_peak\_yes\_pos2) |  | 0.080\*\* | 0.043+ |
|  |  | t = 2.622 | t = 1.668 |
|  |  | s.e. = 0.031, p-val = 0.009 | s.e. = 0.026, p-val = 0.096 |
| scale(MPFC\_avg\_peak\_yes\_pos2) |  | 0.108\*\*\* | 0.056\* |
|  |  | t = 3.421 | t = 2.105 |
|  |  | s.e. = 0.031, p-val = <0.001 | s.e. = 0.026, p-val = 0.036 |
| TypeComedy × scale(NAcc\_avg\_peak\_yes\_pos2) |  | 0.062\* | 0.016 |
|  |  | t = 2.023 | t = 0.610 |
|  |  | s.e. = 0.031, p-val = 0.043 | s.e. = 0.026, p-val = 0.542 |
| TypeComedy × scale(AIns\_avg\_peak\_yes\_pos2) |  | 0.074\* | 0.037 |
|  |  | t = 2.413 | t = 1.436 |
|  |  | s.e. = 0.031, p-val = 0.016 | s.e. = 0.026, p-val = 0.151 |
| TypeComedy × scale(MPFC\_avg\_peak\_yes\_pos2) |  | −0.005 | −0.027 |
|  |  | t = −0.172 | t = −1.023 |
|  |  | s.e. = 0.031, p-val = 0.864 | s.e. = 0.026, p-val = 0.307 |
| SD (Intercept Trailer) | 0.190 | 0.304 | 0.184 |
|  | s.e. = , p-val = | s.e. = , p-val = | s.e. = , p-val = |
| SD (Intercept Participant) | 0.000 | 0.000 | 0.000 |
|  | s.e. = , p-val = | s.e. = , p-val = | s.e. = , p-val = |
| SD (Observations) | 0.769 | 0.908 | 0.764 |
|  | s.e. = , p-val = | s.e. = , p-val = | s.e. = , p-val = |
| R2 Marg. | 0.378 | 0.095 | 0.389 |
| AIC | 2253.6 | 2593.7 | 2280.6 |
| BIC | 2297.2 | 2647.1 | 2353.3 |
| * p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | |

# Aggregate Results Both Trailers.

## AggBoth: Seq Models.

## comedy  
## horror -1  
## comedy 1

|  | Affect GM1 | Choice GM1 | Neuro Seq GM1 | Affect Neuro Seq GM1 | Choice Neuro Seq GM1 |
| --- | --- | --- | --- | --- | --- |
| (Intercept) | 10.894\* | 15.207\*\*\* | 15.452\*\*\* | 6.709 | 13.800\*\*\* |
|  | t = 2.085 | t = 8.703 | t = 10.653 | t = 1.223 | t = 6.112 |
|  | s.e. = 5.224, p-val = 0.048 | s.e. = 1.747, p-val = <0.001 | s.e. = 1.450, p-val = <0.001 | s.e. = 5.486, p-val = 0.238 | s.e. = 2.258, p-val = <0.001 |
| Typecomedy | −11.126\* | −4.130\* | −2.072 | −2.503 | −0.265 |
|  | t = −2.130 | t = −2.363 | t = −1.428 | t = −0.456 | t = −0.117 |
|  | s.e. = 5.224, p-val = 0.044 | s.e. = 1.747, p-val = 0.026 | s.e. = 1.450, p-val = 0.168 | s.e. = 5.486, p-val = 0.654 | s.e. = 2.258, p-val = 0.908 |
| scale(Pos\_arousal\_scaled) | 0.812 |  |  | −6.011\* |  |
|  | t = 0.355 |  |  | t = −2.115 |  |
|  | s.e. = 2.288, p-val = 0.726 |  |  | s.e. = 2.842, p-val = 0.049 |  |
| scale(Neg\_arousal\_scaled) | −8.892 |  |  | −5.404 |  |
|  | t = −1.680 |  |  | t = −1.033 |  |
|  | s.e. = 5.293, p-val = 0.106 |  |  | s.e. = 5.232, p-val = 0.316 |  |
| Typecomedy × scale(Pos\_arousal\_scaled) | 1.945 |  |  | 3.828 |  |
|  | t = 0.850 |  |  | t = 1.347 |  |
|  | s.e. = 2.288, p-val = 0.404 |  |  | s.e. = 2.842, p-val = 0.196 |  |
| Typecomedy × scale(Neg\_arousal\_scaled) | −3.649 |  |  | −7.010 |  |
|  | t = −0.690 |  |  | t = −1.340 |  |
|  | s.e. = 5.293, p-val = 0.497 |  |  | s.e. = 5.232, p-val = 0.198 |  |
| scale(W\_score\_scaled) |  | 2.899 |  |  | −3.527 |
|  |  | t = 1.549 |  |  | t = −1.097 |
|  |  | s.e. = 1.871, p-val = 0.134 |  |  | s.e. = 3.214, p-val = 0.286 |
| Typecomedy × scale(W\_score\_scaled) |  | −0.137 |  |  | 3.279 |
|  |  | t = −0.073 |  |  | t = 1.020 |
|  |  | s.e. = 1.871, p-val = 0.942 |  |  | s.e. = 3.214, p-val = 0.320 |
| scale(NAcc\_seg1) |  |  | 0.902 | 0.859 | −0.581 |
|  |  |  | t = 0.583 | t = 0.536 | t = −0.286 |
|  |  |  | s.e. = 1.547, p-val = 0.566 | s.e. = 1.603, p-val = 0.599 | s.e. = 2.027, p-val = 0.778 |
| scale(AIns\_seg3) |  |  | 2.708+ | 4.569\* | 4.119+ |
|  |  |  | t = 1.757 | t = 2.601 | t = 1.969 |
|  |  |  | s.e. = 1.541, p-val = 0.093 | s.e. = 1.756, p-val = 0.019 | s.e. = 2.092, p-val = 0.064 |
| scale(MPFC\_seg5) |  |  | 1.301 | 2.124 | 3.392 |
|  |  |  | t = 0.796 | t = 1.076 | t = 1.322 |
|  |  |  | s.e. = 1.635, p-val = 0.435 | s.e. = 1.974, p-val = 0.297 | s.e. = 2.565, p-val = 0.202 |
| Typecomedy × scale(NAcc\_seg1) |  |  | 3.204+ | 2.913+ | 4.720\* |
|  |  |  | t = 2.071 | t = 1.818 | t = 2.328 |
|  |  |  | s.e. = 1.547, p-val = 0.051 | s.e. = 1.603, p-val = 0.087 | s.e. = 2.027, p-val = 0.031 |
| Typecomedy × scale(AIns\_seg3) |  |  | −0.369 | −0.992 | −1.642 |
|  |  |  | t = −0.240 | t = −0.565 | t = −0.785 |
|  |  |  | s.e. = 1.541, p-val = 0.813 | s.e. = 1.756, p-val = 0.580 | s.e. = 2.092, p-val = 0.442 |
| Typecomedy × scale(MPFC\_seg5) |  |  | −2.726 | −5.100\* | −4.940+ |
|  |  |  | t = −1.667 | t = −2.584 | t = −1.926 |
|  |  |  | s.e. = 1.635, p-val = 0.110 | s.e. = 1.974, p-val = 0.019 | s.e. = 2.565, p-val = 0.069 |
| Num.Obs. | 29 | 29 | 29 | 29 | 29 |
| R2 | 0.280 | 0.195 | 0.416 | 0.588 | 0.456 |
| R2 Adj. | 0.123 | 0.099 | 0.221 | 0.322 | 0.198 |
| AIC | 210.0 | 209.2 | 207.9 | 205.8 | 209.9 |
| BIC | 219.6 | 216.0 | 220.2 | 223.6 | 224.9 |
| * p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | | | |

## AggBoth: Modal Peak (MP) Models.

## comedy  
## horror -1  
## comedy 1

|  | Affect GM1 | Choice GM1 | Neuro MP GM1 | Affect Neuro MP GM1 | Choice Neuro MP GM1 |
| --- | --- | --- | --- | --- | --- |
| (Intercept) | 10.894\* | 15.207\*\*\* | 15.536\*\*\* | 14.176\* | 16.664\*\*\* |
|  | t = 2.085 | t = 8.703 | t = 11.338 | t = 2.821 | t = 10.192 |
|  | s.e. = 5.224, p-val = 0.048 | s.e. = 1.747, p-val = <0.001 | s.e. = 1.370, p-val = <0.001 | s.e. = 5.025, p-val = 0.012 | s.e. = 1.635, p-val = <0.001 |
| Typecomedy | −11.126\* | −4.130\* | −3.242\* | −12.318\* | −4.349\* |
|  | t = −2.130 | t = −2.363 | t = −2.366 | t = −2.451 | t = −2.660 |
|  | s.e. = 5.224, p-val = 0.044 | s.e. = 1.747, p-val = 0.026 | s.e. = 1.370, p-val = 0.028 | s.e. = 5.025, p-val = 0.025 | s.e. = 1.635, p-val = 0.015 |
| scale(Pos\_arousal\_scaled) | 0.812 |  |  | 1.861 |  |
|  | t = 0.355 |  |  | t = 0.653 |  |
|  | s.e. = 2.288, p-val = 0.726 |  |  | s.e. = 2.850, p-val = 0.523 |  |
| scale(Neg\_arousal\_scaled) | −8.892 |  |  | −8.790+ |  |
|  | t = −1.680 |  |  | t = −1.783 |  |
|  | s.e. = 5.293, p-val = 0.106 |  |  | s.e. = 4.929, p-val = 0.092 |  |
| Typecomedy × scale(Pos\_arousal\_scaled) | 1.945 |  |  | −1.289 |  |
|  | t = 0.850 |  |  | t = −0.452 |  |
|  | s.e. = 2.288, p-val = 0.404 |  |  | s.e. = 2.850, p-val = 0.657 |  |
| Typecomedy × scale(Neg\_arousal\_scaled) | −3.649 |  |  | −2.732 |  |
|  | t = −0.690 |  |  | t = −0.554 |  |
|  | s.e. = 5.293, p-val = 0.497 |  |  | s.e. = 4.929, p-val = 0.587 |  |
| scale(W\_score\_scaled) |  | 2.899 |  |  | 2.322 |
|  |  | t = 1.549 |  |  | t = 1.180 |
|  |  | s.e. = 1.871, p-val = 0.134 |  |  | s.e. = 1.967, p-val = 0.252 |
| Typecomedy × scale(W\_score\_scaled) |  | −0.137 |  |  | −2.371 |
|  |  | t = −0.073 |  |  | t = −1.205 |
|  |  | s.e. = 1.871, p-val = 0.942 |  |  | s.e. = 1.967, p-val = 0.243 |
| scale(NAcc\_avg\_peak\_yes\_pos2) |  |  | 3.774+ | 2.765 | 3.793 |
|  |  |  | t = 1.869 | t = 1.202 | t = 1.649 |
|  |  |  | s.e. = 2.019, p-val = 0.076 | s.e. = 2.300, p-val = 0.246 | s.e. = 2.300, p-val = 0.115 |
| scale(AIns\_avg\_peak\_yes\_pos2) |  |  | −3.089\* | −3.248+ | −3.166\* |
|  |  |  | t = −2.089 | t = −2.059 | t = −2.151 |
|  |  |  | s.e. = 1.479, p-val = 0.049 | s.e. = 1.577, p-val = 0.055 | s.e. = 1.472, p-val = 0.045 |
| scale(MPFC\_avg\_peak\_yes\_pos2) |  |  | −0.981 | −0.445 | −1.619 |
|  |  |  | t = −0.555 | t = −0.231 | t = −0.881 |
|  |  |  | s.e. = 1.766, p-val = 0.585 | s.e. = 1.931, p-val = 0.820 | s.e. = 1.837, p-val = 0.389 |
| Typecomedy × scale(NAcc\_avg\_peak\_yes\_pos2) |  |  | 5.841\*\* | 5.843\* | 5.868\* |
|  |  |  | t = 2.893 | t = 2.540 | t = 2.552 |
|  |  |  | s.e. = 2.019, p-val = 0.009 | s.e. = 2.300, p-val = 0.021 | s.e. = 2.300, p-val = 0.019 |
| Typecomedy × scale(AIns\_avg\_peak\_yes\_pos2) |  |  | 2.249 | 2.170 | 2.324 |
|  |  |  | t = 1.521 | t = 1.375 | t = 1.579 |
|  |  |  | s.e. = 1.479, p-val = 0.143 | s.e. = 1.577, p-val = 0.187 | s.e. = 1.472, p-val = 0.131 |
| Typecomedy × scale(MPFC\_avg\_peak\_yes\_pos2) |  |  | −0.953 | −0.998 | −0.302 |
|  |  |  | t = −0.540 | t = −0.517 | t = −0.164 |
|  |  |  | s.e. = 1.766, p-val = 0.595 | s.e. = 1.931, p-val = 0.612 | s.e. = 1.837, p-val = 0.871 |
| Num.Obs. | 29 | 29 | 29 | 29 | 29 |
| R2 | 0.280 | 0.195 | 0.459 | 0.561 | 0.516 |
| R2 Adj. | 0.123 | 0.099 | 0.278 | 0.278 | 0.287 |
| AIC | 210.0 | 209.2 | 205.7 | 207.6 | 206.5 |
| BIC | 219.6 | 216.0 | 218.0 | 225.4 | 221.5 |
| * p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001 | | | | | |