

**APPENDIX 4****ANALYSIS OF VARIANCES OF AUDITORY EXPERIMENTS RESULTS IN CHAPTER 5**

## 4.1. ASW &amp; LEV – audio stimuli

## 4.1.1. ASW and seat

ANOVA Table  
for AASW

|          | DF | Sum of Squares | Mean Square | F-Value | P-Value | Lambda | Power |
|----------|----|----------------|-------------|---------|---------|--------|-------|
| Seat     | 11 | 137.031        | 12.457      | 4.727   | <.0001  | 51.996 | 1     |
| Residual | 84 | 221.375        | 2.635       |         |         |        |       |

Means Table for AASW

Effect: Seat

|      | Count | Mean  | Std. Dev. | Std. Err. |
|------|-------|-------|-----------|-----------|
| D12  | 8     | 5.75  | 1.909     | 0.675     |
| D17  | 8     | 5.625 | 1.847     | 0.653     |
| D7   | 8     | 6.375 | 1.302     | 0.46      |
| GA10 | 8     | 3.125 | 1.727     | 0.611     |
| GC10 | 8     | 3.5   | 1.309     | 0.463     |
| GE10 | 8     | 3     | 2.507     | 0.886     |
| I12  | 8     | 6     | 1.852     | 0.655     |
| I19  | 8     | 6.25  | 1.282     | 0.453     |
| I5   | 8     | 6     | 1.512     | 0.535     |
| M21  | 8     | 6     | 1.069     | 0.378     |
| M3   | 8     | 5.375 | 1.506     | 0.532     |
| O10  | 8     | 5.625 | 1.061     | 0.375     |

Fisher's PLSD for AASW

Effect: Seat

Significance Level: 5 %

|           | Mean Diff. | Crit. Diff | P-Value |   |
|-----------|------------|------------|---------|---|
| D12, D17  | 0.125      | 1.614      | 0.878   |   |
| D12, D7   | -0.625     | 1.614      | 0.4435  |   |
| D12, GA10 | 2.625      | 1.614      | 0.0017  | S |
| D12, GC10 | 2.25       | 1.614      | 0.0069  | S |
| D12, GE10 | 2.75       | 1.614      | 0.0011  | S |
| D12, I12  | -0.25      | 1.614      | 0.7588  |   |
| D12, I19  | -0.5       | 1.614      | 0.5396  |   |
| D12, I5   | -0.25      | 1.614      | 0.7588  |   |
| D12, M21  | -0.25      | 1.614      | 0.7588  |   |
| D12, M3   | 0.375      | 1.614      | 0.6453  |   |
| D12, O10  | 0.125      | 1.614      | 0.878   |   |
| D17, D7   | -0.75      | 1.614      | 0.3581  |   |
| D17, GA10 | 2.5        | 1.614      | 0.0028  | S |
| D17, GC10 | 2.125      | 1.614      | 0.0105  | S |

|            |        |       |        |   |
|------------|--------|-------|--------|---|
| D17, GE10  | 2.625  | 1.614 | 0.0017 | S |
| D17, I12   | -0.375 | 1.614 | 0.6453 |   |
| D17, I19   | -0.625 | 1.614 | 0.4435 |   |
| D17, I5    | -0.375 | 1.614 | 0.6453 |   |
| D17, M21   | -0.375 | 1.614 | 0.6453 |   |
| D17, M3    | 0.25   | 1.614 | 0.7588 |   |
| D17, O10   | 0      | 1.614 | .      |   |
| D7, GA10   | 3.25   | 1.614 | 0.0001 | S |
| D7, GC10   | 2.875  | 1.614 | 0.0007 | S |
| D7, GE10   | 3.375  | 1.614 | <.0001 | S |
| D7, I12    | 0.375  | 1.614 | 0.6453 |   |
| D7, I19    | 0.125  | 1.614 | 0.878  |   |
| D7, I5     | 0.375  | 1.614 | 0.6453 |   |
| D7, M21    | 0.375  | 1.614 | 0.6453 |   |
| D7, M3     | 1      | 1.614 | 0.2214 |   |
| D7, O10    | 0.75   | 1.614 | 0.3581 |   |
| GA10, GC10 | -0.375 | 1.614 | 0.6453 |   |
| GA10, GE10 | 0.125  | 1.614 | 0.878  |   |
| GA10, I12  | -2.875 | 1.614 | 0.0007 | S |
| GA10, I19  | -3.125 | 1.614 | 0.0002 | S |
| GA10, I5   | -2.875 | 1.614 | 0.0007 | S |
| GA10, M21  | -2.875 | 1.614 | 0.0007 | S |
| GA10, M3   | -2.25  | 1.614 | 0.0069 | S |
| GA10, O10  | -2.5   | 1.614 | 0.0028 | S |
| GC10, GE10 | 0.5    | 1.614 | 0.5396 |   |
| GC10, I12  | -2.5   | 1.614 | 0.0028 | S |
| GC10, I19  | -2.75  | 1.614 | 0.0011 | S |
| GC10, I5   | -2.5   | 1.614 | 0.0028 | S |
| GC10, M21  | -2.5   | 1.614 | 0.0028 | S |
| GC10, M3   | -1.875 | 1.614 | 0.0233 | S |
| GC10, O10  | -2.125 | 1.614 | 0.0105 | S |
| GE10, I12  | -3     | 1.614 | 0.0004 | S |
| GE10, I19  | -3.25  | 1.614 | 0.0001 | S |
| GE10, I5   | -3     | 1.614 | 0.0004 | S |
| GE10, M21  | -3     | 1.614 | 0.0004 | S |
| GE10, M3   | -2.375 | 1.614 | 0.0044 | S |
| GE10, O10  | -2.625 | 1.614 | 0.0017 | S |
| I12, I19   | -0.25  | 1.614 | 0.7588 |   |
| I12, I5    | 0      | 1.614 | .      |   |
| I12, M21   | 0      | 1.614 | .      |   |
| I12, M3    | 0.625  | 1.614 | 0.4435 |   |
| I12, O10   | 0.375  | 1.614 | 0.6453 |   |
| I19, I5    | 0.25   | 1.614 | 0.7588 |   |
| I19, M21   | 0.25   | 1.614 | 0.7588 |   |
| I19, M3    | 0.875  | 1.614 | 0.2841 |   |
| I19, O10   | 0.625  | 1.614 | 0.4435 |   |
| I5, M21    | 0      | 1.614 | .      |   |
| I5, M3     | 0.625  | 1.614 | 0.4435 |   |
| I5, O10    | 0.375  | 1.614 | 0.6453 |   |

|          |       |       |        |
|----------|-------|-------|--------|
| M21, M3  | 0.625 | 1.614 | 0.4435 |
| M21, O10 | 0.375 | 1.614 | 0.6453 |
| M3, O10  | -0.25 | 1.614 | 0.7588 |

ANOVA Table  
for ALEV

|          | DF | Sum of Squares | Mean Square | F-Value | P-Value | Lambda | Power |
|----------|----|----------------|-------------|---------|---------|--------|-------|
| Seat     | 11 | 242.115        | 22.01       | 7.421   | <.0001  | 81.636 | 1     |
| Residual | 84 | 249.125        | 2.966       |         |         |        |       |

Means Table for  
ALEV

Effect: Seat

|      | Count | Mean  | Std. Dev. | Std. Err. |
|------|-------|-------|-----------|-----------|
| D12  | 8     | 6.5   | 1.414     | 0.5       |
| D17  | 8     | 6.625 | 2.326     | 0.822     |
| D7   | 8     | 6.625 | 1.847     | 0.653     |
| GA10 | 8     | 2.875 | 1.808     | 0.639     |
| GC10 | 8     | 2.5   | 1.852     | 0.655     |
| GE10 | 8     | 2.375 | 1.061     | 0.375     |
| I12  | 8     | 6.25  | 1.832     | 0.648     |
| I19  | 8     | 6.25  | 1.832     | 0.648     |
| I5   | 8     | 6.125 | 2.1       | 0.743     |
| M21  | 8     | 6     | 1.069     | 0.378     |
| M3   | 8     | 4.875 | 1.727     | 0.611     |
| O10  | 8     | 5.375 | 1.302     | 0.46      |

Fisher's PLSD for ALEV

Effect: Seat

Significance Level: 5 %

|           | Mean Diff. | Crit. Diff | P-Value |   |
|-----------|------------|------------|---------|---|
| D12, D17  | -0.125     | 1.712      | 0.8849  |   |
| D12, D7   | -0.125     | 1.712      | 0.8849  |   |
| D12, GA10 | 3.625      | 1.712      | <.0001  | S |
| D12, GC10 | 4          | 1.712      | <.0001  | S |
| D12, GE10 | 4.125      | 1.712      | <.0001  | S |
| D12, I12  | 0.25       | 1.712      | 0.7723  |   |
| D12, I19  | 0.25       | 1.712      | 0.7723  |   |
| D12, I5   | 0.375      | 1.712      | 0.6643  |   |
| D12, M21  | 0.5        | 1.712      | 0.563   |   |
| D12, M3   | 1.625      | 1.712      | 0.0626  |   |
| D12, O10  | 1.125      | 1.712      | 0.1949  |   |
| D17, D7   | 0          | 1.712      | .       |   |
| D17, GA10 | 3.75       | 1.712      | <.0001  | S |
| D17, GC10 | 4.125      | 1.712      | <.0001  | S |
| D17, GE10 | 4.25       | 1.712      | <.0001  | S |
| D17, I12  | 0.375      | 1.712      | 0.6643  |   |
| D17, I19  | 0.375      | 1.712      | 0.6643  |   |

|            |        |       |        |   |
|------------|--------|-------|--------|---|
| D17, I5    | 0.5    | 1.712 | 0.563  |   |
| D17, M21   | 0.625  | 1.712 | 0.47   |   |
| D17, M3    | 1.75   | 1.712 | 0.0453 | S |
| D17, O10   | 1.25   | 1.712 | 0.1503 |   |
| D7, GA10   | 3.75   | 1.712 | <.0001 | S |
| D7, GC10   | 4.125  | 1.712 | <.0001 | S |
| D7, GE10   | 4.25   | 1.712 | <.0001 | S |
| D7, I12    | 0.375  | 1.712 | 0.6643 |   |
| D7, I19    | 0.375  | 1.712 | 0.6643 |   |
| D7, I5     | 0.5    | 1.712 | 0.563  |   |
| D7, M21    | 0.625  | 1.712 | 0.47   |   |
| D7, M3     | 1.75   | 1.712 | 0.0453 | S |
| D7, O10    | 1.25   | 1.712 | 0.1503 |   |
| GA10, GC10 | 0.375  | 1.712 | 0.6643 |   |
| GA10, GE10 | 0.5    | 1.712 | 0.563  |   |
| GA10, I12  | -3.375 | 1.712 | 0.0002 | S |
| GA10, I19  | -3.375 | 1.712 | 0.0002 | S |
| GA10, I5   | -3.25  | 1.712 | 0.0003 | S |
| GA10, M21  | -3.125 | 1.712 | 0.0005 | S |
| GA10, M3   | -2     | 1.712 | 0.0226 | S |
| GA10, O10  | -2.5   | 1.712 | 0.0047 | S |
| GC10, GE10 | 0.125  | 1.712 | 0.8849 |   |
| GC10, I12  | -3.75  | 1.712 | <.0001 | S |
| GC10, I19  | -3.75  | 1.712 | <.0001 | S |
| GC10, I5   | -3.625 | 1.712 | <.0001 | S |
| GC10, M21  | -3.5   | 1.712 | 0.0001 | S |
| GC10, M3   | -2.375 | 1.712 | 0.0071 | S |
| GC10, O10  | -2.875 | 1.712 | 0.0013 | S |
| GE10, I12  | -3.875 | 1.712 | <.0001 | S |
| GE10, I19  | -3.875 | 1.712 | <.0001 | S |
| GE10, I5   | -3.75  | 1.712 | <.0001 | S |
| GE10, M21  | -3.625 | 1.712 | <.0001 | S |
| GE10, M3   | -2.5   | 1.712 | 0.0047 | S |
| GE10, O10  | -3     | 1.712 | 0.0008 | S |
| I12, I19   | 0      | 1.712 | .      |   |
| I12, I5    | 0.125  | 1.712 | 0.8849 |   |
| I12, M21   | 0.25   | 1.712 | 0.7723 |   |
| I12, M3    | 1.375  | 1.712 | 0.1141 |   |
| I12, O10   | 0.875  | 1.712 | 0.3125 |   |
| I19, I5    | 0.125  | 1.712 | 0.8849 |   |
| I19, M21   | 0.25   | 1.712 | 0.7723 |   |
| I19, M3    | 1.375  | 1.712 | 0.1141 |   |
| I19, O10   | 0.875  | 1.712 | 0.3125 |   |
| I5, M21    | 0.125  | 1.712 | 0.8849 |   |
| I5, M3     | 1.25   | 1.712 | 0.1503 |   |
| I5, O10    | 0.75   | 1.712 | 0.3862 |   |
| M21, M3    | 1.125  | 1.712 | 0.1949 |   |
| M21, O10   | 0.625  | 1.712 | 0.47   |   |
| M3, O10    | -0.5   | 1.712 | 0.563  |   |

Scheffe for ALEV

Effect: Seat

Significance Level: 5 %

|            | Mean Diff. | Crit. Diff | P-Value |   |
|------------|------------|------------|---------|---|
| D12, D17   | -0.125     | 3.941      | >.9999  |   |
| D12, D7    | -0.125     | 3.941      | >.9999  |   |
| D12, GA10  | 3.625      | 3.941      | 0.1103  |   |
| D12, GC10  | 4          | 3.941      | 0.0426  | S |
| D12, GE10  | 4.125      | 3.941      | 0.03    | S |
| D12, I12   | 0.25       | 3.941      | >.9999  |   |
| D12, I19   | 0.25       | 3.941      | >.9999  |   |
| D12, I5    | 0.375      | 3.941      | >.9999  |   |
| D12, M21   | 0.5        | 3.941      | >.9999  |   |
| D12, M3    | 1.625      | 3.941      | 0.9786  |   |
| D12, O10   | 1.125      | 3.941      | 0.9991  |   |
| D17, D7    | 0          | 3.941      | .       |   |
| D17, GA10  | 3.75       | 3.941      | 0.0818  |   |
| D17, GC10  | 4.125      | 3.941      | 0.03    | S |
| D17, GE10  | 4.25       | 3.941      | 0.0208  | S |
| D17, I12   | 0.375      | 3.941      | >.9999  |   |
| D17, I19   | 0.375      | 3.941      | >.9999  |   |
| D17, I5    | 0.5        | 3.941      | >.9999  |   |
| D17, M21   | 0.625      | 3.941      | >.9999  |   |
| D17, M3    | 1.75       | 3.941      | 0.9622  |   |
| D17, O10   | 1.25       | 3.941      | 0.9977  |   |
| D7, GA10   | 3.75       | 3.941      | 0.0818  |   |
| D7, GC10   | 4.125      | 3.941      | 0.03    | S |
| D7, GE10   | 4.25       | 3.941      | 0.0208  | S |
| D7, I12    | 0.375      | 3.941      | >.9999  |   |
| D7, I19    | 0.375      | 3.941      | >.9999  |   |
| D7, I5     | 0.5        | 3.941      | >.9999  |   |
| D7, M21    | 0.625      | 3.941      | >.9999  |   |
| D7, M3     | 1.75       | 3.941      | 0.9622  |   |
| D7, O10    | 1.25       | 3.941      | 0.9977  |   |
| GA10, GC10 | 0.375      | 3.941      | >.9999  |   |
| GA10, GE10 | 0.5        | 3.941      | >.9999  |   |
| GA10, I12  | -3.375     | 3.941      | 0.1897  |   |
| GA10, I19  | -3.375     | 3.941      | 0.1897  |   |
| GA10, I5   | -3.25      | 3.941      | 0.2416  |   |
| GA10, M21  | -3.125     | 3.941      | 0.3016  |   |
| GA10, M3   | -2         | 3.941      | 0.9043  |   |
| GA10, O10  | -2.5       | 3.941      | 0.6721  |   |
| GC10, GE10 | 0.125      | 3.941      | >.9999  |   |
| GC10, I12  | -3.75      | 3.941      | 0.0818  |   |
| GC10, I19  | -3.75      | 3.941      | 0.0818  |   |
| GC10, I5   | -3.625     | 3.941      | 0.1103  |   |
| GC10, M21  | -3.5       | 3.941      | 0.1461  |   |
| GC10, M3   | -2.375     | 3.941      | 0.7429  |   |

|           |        |       |        |
|-----------|--------|-------|--------|
| GC10, O10 | -2.875 | 3.941 | 0.4419 |
| GE10, I12 | -3.875 | 3.941 | 0.0596 |
| GE10, I19 | -3.875 | 3.941 | 0.0596 |
| GE10, I5  | -3.75  | 3.941 | 0.0818 |
| GE10, M21 | -3.625 | 3.941 | 0.1103 |
| GE10, M3  | -2.5   | 3.941 | 0.6721 |
| GE10, O10 | -3     | 3.941 | 0.3689 |
| I12, I19  | 0      | 3.941 | .      |
| I12, I5   | 0.125  | 3.941 | >.9999 |
| I12, M21  | 0.25   | 3.941 | >.9999 |
| I12, M3   | 1.375  | 3.941 | 0.9946 |
| I12, O10  | 0.875  | 3.941 | >.9999 |
| I19, I5   | 0.125  | 3.941 | >.9999 |
| I19, M21  | 0.25   | 3.941 | >.9999 |
| I19, M3   | 1.375  | 3.941 | 0.9946 |
| I19, O10  | 0.875  | 3.941 | >.9999 |
| I5, M21   | 0.125  | 3.941 | >.9999 |
| I5, M3    | 1.25   | 3.941 | 0.9977 |
| I5, O10   | 0.75   | 3.941 | >.9999 |
| M21, M3   | 1.125  | 3.941 | 0.9991 |
| M21, O10  | 0.625  | 3.941 | >.9999 |
| M3, O10   | -0.5   | 3.941 | >.9999 |