

a,position

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM    Dependent Variable:    euc
No. Observations:    226        Method:                REML
No. Groups:          3          Scale:                37715.1840
Min. group size:     8          Log-Likelihood:       -1504.6715
Max. group size:     130        Converged:            Yes
Mean group size:     75.3
=====
```

```
-----
                Coef.    Std.Err.    z    P>|z|    [0.025    0.975]
-----
Intercept        519.107    51.900   10.002   0.000   417.385   620.828
position[T.off]   76.414    26.376    2.897   0.004    24.719   128.109
performer Var    5451.920    40.155
=====
```

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM    Dependent Variable:    F1
No. Observations:    226        Method:                REML
No. Groups:          3          Scale:                12890.0084
Min. group size:     8          Log-Likelihood:       -1385.8502
Max. group size:     130        Converged:            Yes
Mean group size:     75.3
=====
```

```
-----
                Coef.    Std.Err.    z    P>|z|    [0.025    0.975]
-----
Intercept        920.573    58.614   15.706   0.000   805.691   1035.455
position[T.off]   -33.269    15.409   -2.159   0.031   -63.469    -3.069
performer Var    9508.983    88.260
=====
```

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM    Dependent Variable:    F2
No. Observations:    226        Method:                REML
No. Groups:          3          Scale:                24349.8031
Min. group size:     8          Log-Likelihood:       -1455.2044
Max. group size:     130        Converged:            Yes
Mean group size:     75.3
=====
```

```
-----
                Coef.    Std.Err.    z    P>|z|    [0.025    0.975]
-----
Intercept        1447.862    31.204   46.400   0.000   1386.704   1509.021
position[T.off]   42.465    21.115    2.011   0.044     1.080    83.851
performer Var    1867.848    14.954
=====
```

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM    Dependent Variable:    F3
=====
```

No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	99166.8704
Min. group size:	8	Log-Likelihood:	-1614.4517
Max. group size:	130	Converged:	Yes
Mean group size:	75.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	2467.357	169.046	14.596	0.000	2136.034	2798.681
position[T.off]	-101.043	42.724	-2.365	0.018	-184.781	-17.305
performer Var	79818.608	259.049				

a,syllable

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	euc
No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	38900.3389
Min. group size:	8	Log-Likelihood:	-1508.3589
Max. group size:	130	Converged:	Yes
Mean group size:	75.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	572.745	58.011	9.873	0.000	459.045	686.444
syllable[T.2]	-25.083	26.399	-0.950	0.342	-76.824	26.658
performer Var	7316.238	51.524				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F1
No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	13028.3821
Min. group size:	8	Log-Likelihood:	-1387.0969
Max. group size:	130	Converged:	Yes
Mean group size:	75.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	891.464	60.036	14.849	0.000	773.795	1009.133
syllable[T.2]	22.451	15.276	1.470	0.142	-7.490	52.392
performer Var	9997.993	92.548				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F2
No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	24772.3316

Min. group size:	8	Log-Likelihood:	-1457.2145
Max. group size:	130	Converged:	Yes
Mean group size:	75.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	1469.280	33.264	44.170	0.000	1404.083	1534.476
syllable[T.2]	-2.116	21.062	-0.100	0.920	-43.397	39.166
performer Var	2112.912	16.948				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F3
No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	101070.4550
Min. group size:	8	Log-Likelihood:	-1616.5836
Max. group size:	130	Converged:	Yes
Mean group size:	75.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	2389.888	169.791	14.075	0.000	2057.103	2722.673
syllable[T.2]	48.360	42.548	1.137	0.256	-35.032	131.752
performer Var	80382.822	259.096				

a,position + syllable

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	euc
No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	37608.5752
Min. group size:	8	Log-Likelihood:	-1499.6285
Max. group size:	130	Converged:	Yes
Mean group size:	75.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	534.925	52.226	10.242	0.000	432.564	637.286
position[T.off]	80.466	26.517	3.035	0.002	28.494	132.439
syllable[T.2]	-34.311	26.137	-1.313	0.189	-85.538	16.916
performer Var	5135.298	38.382				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F1
No. Observations:	226	Method:	REML
No. Groups:	3	Scale:	12774.8732
Min. group size:	8	Log-Likelihood:	-1380.6884

Max. group size: 130 Converged: Yes
Mean group size: 75.3

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	908.065	58.364	15.559	0.000	793.673	1022.457
position[T.off]	-36.378	15.443	-2.356	0.018	-66.644	-6.111
syllable[T.2]	26.589	15.229	1.746	0.081	-3.259	56.437
performer Var	9276.156	86.500				

Mixed Linear Model Regression Results

Model: MixedLM Dependent Variable: F2
No. Observations: 226 Method: REML
No. Groups: 3 Scale: 24446.8925
Min. group size: 8 Log-Likelihood: -1451.1843
Max. group size: 130 Converged: Yes
Mean group size: 75.3

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	1451.239	32.898	44.113	0.000	1386.759	1515.719
position[T.off]	43.267	21.294	2.032	0.042	1.531	85.002
syllable[T.2]	-6.969	21.060	-0.331	0.741	-48.245	34.307
performer Var	1876.507	14.973				

Mixed Linear Model Regression Results

Model: MixedLM Dependent Variable: F3
No. Observations: 226 Method: REML
No. Groups: 3 Scale: 98710.1980
Min. group size: 8 Log-Likelihood: -1608.7626
Max. group size: 130 Converged: Yes
Mean group size: 75.3

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	2438.754	169.183	14.415	0.000	2107.161	2770.347
position[T.off]	-108.121	42.911	-2.520	0.012	-192.225	-24.017
syllable[T.2]	60.635	42.330	1.432	0.152	-22.329	143.600
performer Var	78795.664	256.304				

i,position

Mixed Linear Model Regression Results

Model: MixedLM Dependent Variable: euc
No. Observations: 135 Method: REML
No. Groups: 3 Scale: 193327.5852

Min. group size:	4	Log-Likelihood:	-1003.9136
Max. group size:	70	Converged:	Yes
Mean group size:	45.0		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	1337.723	130.984	10.213	0.000	1080.998	1594.447
position[T.off]	2.077	79.524	0.026	0.979	-153.787	157.941
performer Var	32583.850	110.217				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F1
No. Observations:	135	Method:	REML
No. Groups:	3	Scale:	9776.3091
Min. group size:	4	Log-Likelihood:	-806.8837
Max. group size:	70	Converged:	Yes
Mean group size:	45.0		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	462.801	59.460	7.783	0.000	346.262	579.341
position[T.off]	11.406	17.899	0.637	0.524	-23.677	46.488
performer Var	9394.023	113.469				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F2
No. Observations:	135	Method:	REML
No. Groups:	3	Scale:	159905.8521
Min. group size:	4	Log-Likelihood:	-990.9672
Max. group size:	70	Converged:	Yes
Mean group size:	45.0		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	1815.278	95.654	18.978	0.000	1627.799	2002.756
position[T.off]	11.121	72.420	0.154	0.878	-130.820	153.062
performer Var	16515.848	56.647				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F3
No. Observations:	135	Method:	REML
No. Groups:	3	Scale:	22073.3383
Min. group size:	4	Log-Likelihood:	-861.6128
Max. group size:	70	Converged:	Yes
Mean group size:	45.0		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
--	-------	----------	---	------	--------	--------

```

-----
Intercept          2764.614  117.794 23.470 0.000 2533.743 2995.486
position[T.off]    -83.059   26.906 -3.087 0.002 -135.794 -30.324
performer Var      39062.551  287.092
=====

```

i,syllable

Mixed Linear Model Regression Results

```

=====
Model:              MixedLM   Dependent Variable:  euc
No. Observations:   135       Method:              REML
No. Groups:         3         Scale:              192583.2083
Min. group size:    4         Log-Likelihood:     -1003.6855
Max. group size:    70        Converged:          Yes
Mean group size:    45.0

```

```

-----
                Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----
Intercept      1304.922  134.523  9.700  0.000  1041.262 1568.581
syllable[T.2]   55.632   76.591  0.726  0.468   -94.484  205.747
performer Var  32164.506  107.586
=====

```

Mixed Linear Model Regression Results

```

=====
Model:              MixedLM   Dependent Variable:  F1
No. Observations:   135       Method:              REML
No. Groups:         3         Scale:              9804.7263
Min. group size:    4         Log-Likelihood:     -807.1026
Max. group size:    70        Converged:          Yes
Mean group size:    45.0

```

```

-----
                Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----
Intercept      465.503   59.807  7.783  0.000   348.283 582.723
syllable[T.2]   3.397   17.307  0.196  0.844   -30.523  37.318
performer Var  9322.898  112.656
=====

```

Mixed Linear Model Regression Results

```

=====
Model:              MixedLM   Dependent Variable:  F2
No. Observations:   135       Method:              REML
No. Groups:         3         Scale:              159109.5381
Min. group size:    4         Log-Likelihood:     -990.6740
Max. group size:    70        Converged:          Yes
Mean group size:    45.0

```

```

-----
                Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----
Intercept      1785.706  100.263 17.810  0.000  1589.194 1982.218

```

```

syllable[T.2]      57.408    69.602  0.825 0.409  -79.010  193.826
performer Var 16553.634    56.193

```

=====

Mixed Linear Model Regression Results

=====

```

Model:              MixedLM    Dependent Variable:   F3
No. Observations:   135         Method:              REML
No. Groups:         3           Scale:              23709.7408
Min. group size:    4           Log-Likelihood:     -866.2337
Max. group size:    70          Converged:          Yes
Mean group size:    45.0

```

```

-----
              Coef.    Std.Err.    z    P>|z|    [0.025    0.975]
-----+-----
Intercept      2726.315    112.958  24.136  0.000  2504.922  2947.709
syllable[T.2]    3.378     26.913   0.126  0.900   -49.371    56.128
performer Var 35046.398    252.645
-----

```

i,position + syllable

=====

Mixed Linear Model Regression Results

=====

```

Model:              MixedLM    Dependent Variable:   euc
No. Observations:   135         Method:              REML
No. Groups:         3           Scale:              194058.5151
Min. group size:    4           Log-Likelihood:     -998.3716
Max. group size:    70          Converged:          Yes
Mean group size:    45.0

```

```

-----
              Coef.    Std.Err.    z    P>|z|    [0.025    0.975]
-----+-----
Intercept      1306.953    136.273   9.591  0.000  1039.862  1574.044
position[T.off]  -8.066     80.879  -0.100  0.921  -166.585   150.454
syllable[T.2]   56.971     78.040   0.730  0.465   -95.985   209.927
performer Var  31926.903    106.955
-----

```

=====

Mixed Linear Model Regression Results

=====

```

Model:              MixedLM    Dependent Variable:   F1
No. Observations:   135         Method:              REML
No. Groups:         3           Scale:              9850.5732
Min. group size:    4           Log-Likelihood:     -803.0952
Max. group size:    70          Converged:          Yes
Mean group size:    45.0

```

```

-----
              Coef.    Std.Err.    z    P>|z|    [0.025    0.975]
-----+-----
Intercept      461.981     60.351   7.655  0.000   343.695   580.267
position[T.off]  11.127     18.229   0.610  0.542   -24.602    46.855

```

```

syllable[T.2]      1.580   17.600 0.090 0.928 -32.915  36.076
performer Var    9409.610  113.420

```

=====

Mixed Linear Model Regression Results

=====

```

Model:              MixedLM   Dependent Variable:   F2
No. Observations:   135       Method:              REML
No. Groups:         3         Scale:              160319.9746
Min. group size:    4         Log-Likelihood:     -985.4613
Max. group size:    70        Converged:          Yes
Mean group size:    45.0

```

```

-----
                Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----+-----
Intercept      1785.380   102.649  17.393 0.000   1584.192  1986.568
position[T.off]    0.963    73.599   0.013 0.990  -143.288   145.214
syllable[T.2]     57.245    70.908   0.807 0.419   -81.732   196.221
performer Var  16621.256    56.396

```

=====

Mixed Linear Model Regression Results

=====

```

Model:              MixedLM   Dependent Variable:   F3
No. Observations:   135       Method:              REML
No. Groups:         3         Scale:              22175.4297
Min. group size:    4         Log-Likelihood:     -857.2062
Max. group size:    70        Converged:          Yes
Mean group size:    45.0

```

```

-----
                Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----+-----
Intercept      2754.890   117.761  23.394 0.000   2524.082  2985.698
position[T.off]  -86.081    27.360  -3.146 0.002  -139.705  -32.456
syllable[T.2]    17.322    26.405   0.656 0.512   -34.430    69.074
performer Var  38371.875   281.936

```

u,position

=====

Mixed Linear Model Regression Results

=====

```

Model:              MixedLM   Dependent Variable:   euc
No. Observations:   82       Method:              REML
No. Groups:         3         Scale:              17273.5755
Min. group size:    4         Log-Likelihood:     -511.8639
Max. group size:    44        Converged:          Yes
Mean group size:    27.3

```

```

-----
                Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----+-----
Intercept      638.048   177.412   3.596 0.000   290.327  985.769

```



```
position[T.off]    40.422    29.823 1.355 0.175 -18.030  98.873
performer Var    91937.555  732.070
```

=====

Mixed Linear Model Regression Results

=====

```
Model:              MixedLM    Dependent Variable:    F1
No. Observations:    82          Method:              REML
No. Groups:          3           Scale:              7730.5233
Min. group size:     4           Log-Likelihood:     -477.6166
Max. group size:     44          Converged:          Yes
Mean group size:     27.3
```

```
-----+-----+-----+-----+-----+-----+-----+
              Coef.   Std.Err.   z      P>|z|   [0.025   0.975]
-----+-----+-----+-----+-----+-----+-----+
Intercept          567.493    43.574 13.024 0.000   482.089   652.897
position[T.off]    -17.477    19.933 -0.877 0.381  -56.545    21.592
performer Var      4447.651    67.985
```

=====

Mixed Linear Model Regression Results

=====

```
Model:              MixedLM    Dependent Variable:    F2
No. Observations:    82          Method:              REML
No. Groups:          3           Scale:              13462.7576
Min. group size:     4           Log-Likelihood:     -501.5294
Max. group size:     44          Converged:          Yes
Mean group size:     27.3
```

```
-----+-----+-----+-----+-----+-----+-----+
              Coef.   Std.Err.   z      P>|z|   [0.025   0.975]
-----+-----+-----+-----+-----+-----+-----+
Intercept          1196.119   130.778 9.146 0.000   939.799  1452.440
position[T.off]      22.699    26.327 0.862 0.389  -28.901    74.299
performer Var      49357.199   451.501
```

=====

Mixed Linear Model Regression Results

=====

```
Model:              MixedLM    Dependent Variable:    F3
No. Observations:    82          Method:              REML
No. Groups:          3           Scale:              70692.7181
Min. group size:     4           Log-Likelihood:     -565.4662
Max. group size:     44          Converged:          Yes
Mean group size:     27.3
```

```
-----+-----+-----+-----+-----+-----+-----+
              Coef.   Std.Err.   z      P>|z|   [0.025   0.975]
-----+-----+-----+-----+-----+-----+-----+
Intercept          2252.914    92.661 24.313 0.000  2071.302  2434.527
position[T.off]     116.575    60.453 1.928 0.054   -1.910   235.061
performer Var      17554.011    76.619
```

=====

u,syllable

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM   Dependent Variable:  euc
No. Observations:     82        Method:             REML
No. Groups:           3         Scale:           17673.2152
Min. group size:      4         Log-Likelihood:   -512.7236
Max. group size:      44        Converged:        Yes
Mean group size:      27.3
=====
```

```
-----
              Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----
Intercept      656.214   177.800  3.691  0.000   307.733 1004.695
syllable[T.2]    4.924    31.302  0.157  0.875  -56.427   66.274
performer Var 92217.344  727.337
=====
```

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM   Dependent Variable:  F1
No. Observations:     82        Method:             REML
No. Groups:           3         Scale:           7764.6968
Min. group size:      4         Log-Likelihood:   -477.8275
Max. group size:      44        Converged:        Yes
Mean group size:      27.3
=====
```

```
-----
              Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----
Intercept      563.966    44.999 12.533  0.000   475.769 652.163
syllable[T.2] -10.992    20.848 -0.527  0.598  -51.853  29.870
performer Var 4831.306   73.003
=====
```

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM   Dependent Variable:  F2
No. Observations:     82        Method:             REML
No. Groups:           3         Scale:          13580.3661
Min. group size:      4         Log-Likelihood:   -501.8110
Max. group size:      44        Converged:        Yes
Mean group size:      27.3
=====
```

```
-----
              Coef.   Std.Err.   z    P>|z|   [0.025   0.975]
-----
Intercept      1212.427   129.437  9.367  0.000   958.734 1466.120
syllable[T.2]   -8.918    27.447 -0.325  0.745  -62.714   44.877
performer Var 48238.340  440.837
=====
```

Mixed Linear Model Regression Results

```
=====
Model:                MixedLM   Dependent Variable:  F3
No. Observations:     82        Method:             REML
=====
```

No. Groups:	3	Scale:	73517.5481
Min. group size:	4	Log-Likelihood:	-567.1079
Max. group size:	44	Converged:	Yes
Mean group size:	27.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	2293.083	100.961	22.713	0.000	2095.204	2490.962
syllable[T.2]	34.784	63.384	0.549	0.583	-89.447	159.015
performer Var	21005.736	87.942				

u,position + syllable

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	euc
No. Observations:	82	Method:	REML
No. Groups:	3	Scale:	17490.5467
Min. group size:	4	Log-Likelihood:	-507.4403
Max. group size:	44	Converged:	Yes
Mean group size:	27.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	640.908	176.828	3.624	0.000	294.332	987.485
position[T.off]	42.534	31.316	1.358	0.174	-18.843	103.911
syllable[T.2]	-7.674	32.495	-0.236	0.813	-71.364	56.016
performer Var	90827.199	720.369				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F1
No. Observations:	82	Method:	REML
No. Groups:	3	Scale:	7812.7862
Min. group size:	4	Log-Likelihood:	-473.5855
Max. group size:	44	Converged:	Yes
Mean group size:	27.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	569.765	45.183	12.610	0.000	481.208	658.322
position[T.off]	-15.756	20.913	-0.753	0.451	-56.744	25.233
syllable[T.2]	-6.274	21.828	-0.287	0.774	-49.056	36.507
performer Var	4695.260	71.314				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F2
No. Observations:	82	Method:	REML

No. Groups:	3	Scale:	13587.8392
Min. group size:	4	Log-Likelihood:	-497.0818
Max. group size:	44	Converged:	Yes
Mean group size:	27.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	1202.529	128.936	9.327	0.000	949.818	1455.239
position[T.off]	27.393	27.600	0.992	0.321	-26.703	81.489
syllable[T.2]	-17.047	28.651	-0.595	0.552	-73.201	39.108
performer Var	47549.967	434.875				

Mixed Linear Model Regression Results

Model:	MixedLM	Dependent Variable:	F3
No. Observations:	82	Method:	REML
No. Groups:	3	Scale:	71596.0699
Min. group size:	4	Log-Likelihood:	-560.3731
Max. group size:	44	Converged:	Yes
Mean group size:	27.3		

	Coef.	Std.Err.	z	P> z	[0.025	0.975]
Intercept	2252.559	97.197	23.175	0.000	2062.057	2443.062
position[T.off]	116.374	63.431	1.835	0.067	-7.948	240.696
syllable[T.2]	0.843	65.186	0.013	0.990	-126.919	128.605
performer Var	17663.301	76.820				

None