

Discrimination of four Canadian-French vowels by native
Canadian-English listeners - Supplementary materials

Félix Desmeules-Trudel^{1, a)} and Marc F. Joanisse¹

*Department of Psychology, Brain and Mind Institute, The University
of Western Ontario, London, Ontario, Canada*

fdesmeul@uwo.ca,

marcj@uwo.ca

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^{a)} Author to whom correspondence should be addressed.

Table 1. Mixed-effects model output - d' scores, different pairs, with [y]-[u] baseline.

| Random effects | | | | | |
|-----------------------|----------|------------|---------|-----------------|-----------------|
| Group | Variance | Std. Dev. | | | |
| Participant | 0.2512 | 0.5012 | | | |
| Residual | 0.1585 | 0.3982 | | | |
| Fixed effects | | | | | |
| | Estimate | Std. Error | df | <i>t</i> -value | <i>p</i> -value |
| Intercept | 0.822 | 0.08 | 133.351 | 10.27 | <0.001 |
| Contrast[y]-[e] | 1.02 | 0.07 | 320 | 14.5 | <0.001 |
| Contrast[y]-[ɑ] | 1.538 | 0.07 | 320 | 21.85 | <0.001 |
| Contrast[u]-[e] | 1.237 | 0.07 | 320 | 17.57 | <0.001 |
| Contrast[u]-[[ɑ] | 1.709 | 0.07 | 320 | 24.27 | <0.001 |
| Contrast[e]-[ɑ] | 1.213 | 0.07 | 320 | 17.23 | <0.001 |

Table 2. Mixed-effects model output - rate of correct responses, different pairs, with [y]-[u] baseline.

| Random effects | | | | | |
|-----------------------|----------|------------|--------|-----------------|-----------------|
| Group | Variance | Std. Dev. | | | |
| Participant | 0.4222 | 0.6498 | | | |
| Residual | 1.8193 | 1.3488 | | | |
| Fixed effects | | | | | |
| | Estimate | Std. Error | df | <i>t</i> -value | <i>p</i> -value |
| Intercept | 5.344 | 0.187 | 326.14 | 28.55 | <0.001 |
| Contrast[y]-[e] | 5.844 | 0.238 | 320 | 24.15 | <0.001 |
| Contrast[y]-[a] | 6.3 | 0.238 | 320 | 26.41 | <0.001 |
| Contrast[u]-[e] | 6.109 | 0.238 | 320 | 25.62 | <0.001 |
| Contrast[u]-[[a] | 6.266 | 0.238 | 320 | 26.28 | <0.001 |
| Contrast[e]-[a] | 6.016 | 0.238 | 320 | 25.23 | <0.001 |

Table 3. Mixed-effects model output - d' scores, different pairs, with [y]-[e] baseline.

| Random effects | | | | | |
|-----------------------|----------|------------|---------|-----------------|-----------------|
| Group | Variance | Std. Dev. | | | |
| Participant | 0.2512 | 0.5012 | | | |
| Residual | 0.1585 | 0.3982 | | | |
| Fixed effects | | | | | |
| | Estimate | Std. Error | df | <i>t</i> -value | <i>p</i> -value |
| Intercept | 1.842 | 0.08 | 133.351 | 23.03 | <0.001 |
| Contrast[y]-[u] | -1.02 | 0.07 | 320 | -14.5 | <0.001 |
| Contrast[y]-[ɑ] | 0.518 | 0.07 | 320 | 7.36 | <0.001 |
| Contrast[u]-[e] | 0.216 | 0.07 | 320 | 3.073 | 0.002 |
| Contrast[u]-[[ɑ] | 0.688 | 0.07 | 320 | 9.78 | <0.001 |
| Contrast[e]-[ɑ] | 0.192 | 0.07 | 320 | 2.73 | 0.007 |

Table 4. Mixed-effects model output - rate of correct responses, different pairs, with [y]-[e] baseline.

| Random effects | | | | | |
|------------------|----------|------------|--------|-----------------|-----------------|
| Group | Variance | Std. Dev. | | | |
| Participant | 0.4222 | 0.6498 | | | |
| Residual | 1.8193 | 1.3488 | | | |
| Fixed effects | | | | | |
| | Estimate | Std. Error | df | <i>t</i> -value | <i>p</i> -value |
| Intercept | 11.188 | 0.187 | 326.14 | 59.78 | <0.001 |
| Contrast[y]-[u] | -5.844 | 0.238 | 320 | -24.51 | <0.001 |
| Contrast[y]-[ɑ] | 0.453 | 0.238 | 320 | 1.9 | 0.06 |
| Contrast[u]-[e] | 0.266 | 0.238 | 320 | 1.11 | 0.27 |
| Contrast[u]-[[ɑ] | 0.422 | 0.238 | 320 | 1.77 | 0.08 |
| Contrast[e]-[ɑ] | 0.172 | 0.238 | 320 | 0.72 | 0.47 |

Table 5. Mixed-effects model output - rate of correct responses, same pairs, with [e]-[e] baseline.

| Random effects | | | | | |
|-----------------|----------|------------|-------|-----------------|-----------------|
| Group | Variance | Std. Dev. | | | |
| Participant | 4.488 | 2.118 | | | |
| Residual | 5.439 | 2.332 | | | |
| Fixed effects | | | | | |
| | Estimate | Std. Error | df | <i>t</i> -value | <i>p</i> -value |
| Intercept | 12.101 | 0.379 | 171.1 | 31.91 | <0.001 |
| Contrast[y]-[y] | 1.565 | 0.397 | 207 | 3.94 | <0.001 |
| Contrast[ɑ]-[ɑ] | 3.449 | 0.397 | 207 | 8.69 | <0.001 |
| Contrast[u]-[u] | 3.362 | 0.397 | 207 | 8.468 | <0.001 |