Linear: steepness of the slope: farther from 0 > steeper

Quadratic: Bowness of the curve: farther from 0, earlier/less (-) or later/more (+) than baseline

+ U

Cubic: + N

| **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- |
| Intercept (*γ*00) | 1.701 | 0.152 | 11.183 | < .001 | SS anticipate earlier |
| stress\_sum (*γ*10) | −0.055 | 0.073 | −0.763 | .445 |  |
| pitch\_dev (*γ*20) | −0.151 | 0.219 | −0.691 | .489 |  |
| Time1 (*γ*30) | 5.703 | 0.444 | 12.849 | < .001 | SS anticipate more smoothly, L2 more abruptly |
| Time2 (*γ*01) | −0.381 | 0.324 | −1.174 | .241 |  |
| Time3 (*γ*11) | −1.336 | 0.183 | −7.301 | < .001 | L2 anticipate later |
| GroupAE (*γ*21) | −0.682 | 0.179 | −3.803 | < .001 | anticipate later |
| GroupAM (*γ*31) | −0.597 | 0.181 | −3.306 | < .001 | anticipate later |
| GroupIE (*γ*02) | −0.742 | 0.178 | −4.164 | < .001 | anticipate later |
| GroupIM (*γ*12) | −1.156 | 0.185 | −6.232 | < .001 | anticipate later |
| stress\_sum × pitch\_dev (*γ*22) | 0.085 | 0.352 | 0.241 | .810 |  |
| stress\_sum × Time1 (*γ*32) | −0.212 | 0.192 | −1.100 | .271 |  |
| stress\_sum × Time2 (*γ*03) | 0.333 | 0.118 | 2.821 | .005 | Pret anticipate earlier |
| stress\_sum × Time3 (*γ*13) | −0.026 | 0.142 | −0.185 | .854 |  |
| pitch\_dev × Time1 (*γ*23) | −1.294 | 0.723 | −1.791 | .073 |  |
| pitch\_dev × Time2 (*γ*33) | 0.115 | 0.511 | 0.225 | .822 |  |
| pitch\_dev × Time3 (*γ*04) | 0.386 | 0.394 | 0.979 | .328 |  |
| Time1 × GroupAE (*γ*14) | 1.545 | 0.511 | 3.022 | .003 | Steeper > Anticipate more abruptly |
| Time1 × GroupAM (*γ*24) | 0.512 | 0.515 | 0.995 | .320 |  |
| Time1 × GroupIE (*γ*34) | 0.742 | 0.508 | 1.459 | .145 |  |
| Time1 × GroupIM (*γ*05) | 0.970 | 0.529 | 1.834 | .067 |  |
| Time2 × GroupAE (*γ*15) | 1.963 | 0.421 | 4.667 | < .001 | More bowed > Anticipate less in advance |
| Time2 × GroupAM (*γ*25) | 1.825 | 0.423 | 4.309 | < .001 | More bowed > Anticipate less in advance |
| Time2 × GroupIE (*γ*35) | 2.008 | 0.418 | 4.805 | < .001 | More bowed > Anticipate less in advance |
| Time2 × GroupIM (*γ*06) | 1.771 | 0.435 | 4.072 | < .001 | More bowed > Anticipate less in advance |
| stress\_sum × pitch\_dev:Time1 (*γ*16) | −0.878 | 0.662 | −1.326 | .185 |  |
| stress\_sum × pitch\_dev:Time2 (*γ*26) | 0.532 | 0.661 | 0.804 | .421 |  |
| stress\_sum × pitch\_dev:Time3 (*γ*36) | 0.093 | 0.283 | 0.330 | .742 |  |
| stress\_sum × pitch\_dev:GroupAE (*γ*00) | −0.372 | 0.468 | −0.795 | .427 |  |
| stress\_sum × pitch\_dev:GroupAM (*γ*10) | −0.478 | 0.487 | −0.982 | .326 |  |
| stress\_sum × pitch\_dev:GroupIE (*γ*20) | 0.729 | 0.501 | 1.454 | .146 |  |
| stress\_sum × pitch\_dev:GroupIM (*γ*30) | 0.314 | 0.491 | 0.640 | .522 |  |
| stress\_sum × pitch\_dev:Time1:GroupAE (*γ*01) | 1.500 | 0.881 | 1.702 | .089 |  |
| stress\_sum × pitch\_dev:Time1:GroupAM (*γ*11) | 1.748 | 0.917 | 1.906 | .057 |  |
| stress\_sum × pitch\_dev:Time1:GroupIE (*γ*21) | −0.421 | 0.944 | −0.446 | .656 |  |
| stress\_sum × pitch\_dev:Time1:GroupIM (*γ*31) | 1.181 | 0.927 | 1.275 | .202 |  |
| stress\_sum × pitch\_dev:Time2:GroupAE (*γ*02) | 0.043 | 0.879 | 0.049 | .961 |  |
| stress\_sum × pitch\_dev:Time2:GroupAM (*γ*12) | 0.979 | 0.916 | 1.069 | .285 |  |
| stress\_sum × pitch\_dev:Time2:GroupIE (γ22) | −1.595 | 0.943 | −1.691 | .091 |  |
| stress\_sum × pitch\_dev:Time2:GroupIM (γ32) | −1.191 | 0.927 | −1.286 | .199 |  |

EN

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupIE (*γ*08) | −0.060 | 0.174 | −0.343 | .731 |  |
| fixed | Time1 × GroupIE (*γ*18) | −0.804 | 0.496 | −1.622 | .105 |  |
| fixed | Time2 × GroupIE (*γ*28) | 0.046 | 0.407 | 0.112 | .911 |  |
| fixed | stress\_sum × pitch\_dev:GroupIE (*γ*38) | 1.100 | 0.480 | 2.290 | .022 | IE anticipate more in preterit x better pitch /AE better in present x better pitch |
| fixed | stress\_sum × pitch\_dev:Time1:GroupIE (*γ*09) | −1.920 | 0.906 | −2.121 | .034 | IE less steep in both cases |
| fixed | stress\_sum × pitch\_dev:Time2:GroupIE (*γ*19) | −1.638 | 0.901 | −1.819 | .069 |  |

MA

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupIM (*γ*08) | −0.559 | 0.177 | −3.159 | .002 | Anticipate less |
| fixed | Time1 × GroupIM (*γ*18) | 0.457 | 0.504 | 0.907 | .365 |  |
| fixed | Time2 × GroupIM (*γ*28) | −0.054 | 0.415 | −0.130 | .896 |  |
| fixed | stress\_sum × pitch\_dev:GroupIM (*γ*38) | 0.792 | 0.471 | 1.680 | .093 |  |
| fixed | stress\_sum × pitch\_dev:Time1:GroupIM (*γ*09) | −0.566 | 0.889 | −0.637 | .524 |  |
| fixed | stress\_sum × pitch\_dev:Time2:GroupIM (*γ*19) | −2.171 | 0.889 | −2.441 | .015 | IM anticipate a bit more smoothly, especially present, but in preterit more variability where ^ pitch ^ anticipation, while AM ^ pitch ^ anticipation in present, and less variability in preterit |

ADV

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupAM (*γ*08) | 0.085 | 0.176 | 0.484 | .628 |  |
| fixed | Time1 × GroupAM (*γ*18) | −1.033 | 0.503 | −2.056 | .040 | Anticipate more smoothly |
| fixed | Time2 × GroupAM (*γ*28) | −0.138 | 0.413 | −0.334 | .738 |  |
| fixed | stress\_sum × pitch\_dev:GroupAM (*γ*38) | −0.106 | 0.460 | −0.231 | .817 |  |
| fixed | stress\_sum × pitch\_dev:Time1:GroupAM (*γ*09) | 0.248 | 0.865 | 0.287 | .774 |  |
| fixed | stress\_sum × pitch\_dev:Time2:GroupAM (*γ*19) | 0.936 | 0.865 | 1.083 | .279 |  |

INT

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupIM (*γ*08) | −0.414 | 0.179 | −2.310 | .021 | Anticipate less |
| fixed | Time1 × GroupIM (*γ*18) | 0.228 | 0.511 | 0.446 | .655 |  |
| fixed | Time2 × GroupIM (*γ*28) | −0.238 | 0.420 | −0.565 | .572 |  |
| fixed | stress\_sum × pitch\_dev:GroupIM (*γ*38) | −0.414 | 0.501 | −0.827 | .408 |  |
| fixed | stress\_sum × pitch\_dev:Time1:GroupIM (*γ*09) | 1.602 | 0.947 | 1.693 | .091 |  |
| fixed | stress\_sum × pitch\_dev:Time2:GroupIM (*γ*19) | 0.404 | 0.945 | 0.428 | .669 |  |

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | Intercept (*γ*00) | 1.677 | 0.160 | 10.469 | < .001 | SS anticipate more than anybody else |
| fixed | stress\_sum (*γ*10) | −0.039 | 0.074 | −0.528 | .597 |  |
| fixed | rhythm\_dev (*γ*20) | −0.410 | 0.601 | −0.681 | .496 |  |
| fixed | Time1 (*γ*30) | 5.988 | 0.467 | 12.831 | < .001 | More steeper slopes for L2 > more abruptly |
| fixed | Time2 (*γ*01) | −0.505 | 0.344 | −1.466 | .143 |  |
| fixed | Time3 (*γ*11) | −1.335 | 0.184 | −7.253 | < .001 | More bowed > start later |
| fixed | GroupAE (*γ*21) | −0.636 | 0.197 | −3.232 | .001 | SS anticipate more than anybody else |
| fixed | GroupAM (*γ*31) | −0.569 | 0.189 | −3.002 | .003 | SS anticipate more than anybody else |
| fixed | GroupIE (*γ*02) | −0.690 | 0.191 | −3.615 | < .001 | SS anticipate more than anybody else |
| fixed | GroupIM (γ12) | −1.161 | 0.185 | −6.265 | < .001 | SS anticipate more than anybody else |
| fixed | stress\_sum × rhythm\_dev (γ22) | 0.030 | 0.620 | 0.048 | .962 |  |
| fixed | stress\_sum × Time1 (γ32) | −0.045 | 0.195 | −0.230 | .818 |  |
| fixed | stress\_sum × Time2 (γ03) | 0.273 | 0.120 | 2.273 | .023 | L2 later exp in present tense |
| fixed | stress\_sum × Time3 (γ13) | −0.079 | 0.147 | −0.539 | .590 |  |
| fixed | rhythm\_dev × Time1 (γ23) | 2.435 | 1.962 | 1.241 | .215 |  |
| fixed | rhythm\_dev × Time2 (γ33) | −1.301 | 1.405 | −0.926 | .354 |  |
| fixed | rhythm\_dev × Time3 (γ04) | 0.166 | 1.026 | 0.162 | .871 |  |
| fixed | Time1 × GroupAE (γ14) | 1.200 | 0.560 | 2.142 | .032 | AE espe more abruptly |
| fixed | Time1 × GroupAM (γ24) | 0.173 | 0.539 | 0.321 | .748 |  |
| fixed | Time1 × GroupIE (γ34) | 0.423 | 0.544 | 0.777 | .437 |  |
| fixed | Time1 × GroupIM (γ05) | 0.571 | 0.528 | 1.083 | .279 |  |
| fixed | Time2 × GroupAE (γ15) | 2.150 | 0.460 | 4.672 | < .001 | All later bc # larger > more bowed > less spread > more concentrated |
| fixed | Time2 × GroupAM (γ25) | 1.968 | 0.443 | 4.443 | < .001 | All later bc # larger > more bowed > less spread > more concentrated |
| fixed | Time2 × GroupIE (γ35) | 2.147 | 0.447 | 4.806 | < .001 | All later bc # larger > more bowed > less spread > more concentrated |
| fixed | Time2 × GroupIM (γ06) | 1.912 | 0.433 | 4.412 | < .001 | All later bc # larger > more bowed > less spread > more concentrated |
| fixed | stress\_sum × rhythm\_dev:Time1 (γ16) | 3.069 | 1.142 | 2.688 | .007 | In pret better synch > smoother antic, in pres more variability |
| fixed | stress\_sum × rhythm\_dev:Time2 (γ26) | 1.047 | 1.141 | 0.917 | .359 |  |
| fixed | stress\_sum × rhythm\_dev:Time3 (γ36) | 0.703 | 1.141 | 0.616 | .538 |  |
| fixed | stress\_sum × rhythm\_dev:GroupAE (γ00) | −0.945 | 1.397 | −0.676 | .499 |  |
| fixed | stress\_sum × rhythm\_dev:GroupAM (γ10) | 1.120 | 1.541 | 0.726 | .468 |  |
| fixed | stress\_sum × rhythm\_dev:GroupIE (γ20) | −0.919 | 1.249 | −0.736 | .462 |  |
| fixed | stress\_sum × rhythm\_dev:GroupIM (γ30) | −0.596 | 1.047 | −0.570 | .569 |  |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupAE (γ01) | −5.621 | 2.579 | −2.179 | SS | Closer to synch, better AE, but no difference in AE, and SS more smoothly than AE. |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupAM (γ11) | −1.823 | 2.851 | −0.640 | .522 |  |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupIE (γ21) | −14.501 | 2.309 | −6.281 | < .001 | Too soon rhythm > better present  Closer > preterit |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupIM (γ31) | 1.758 | 1.937 | 0.908 | .364 |  |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupAE (γ02) | 1.911 | 2.579 | 0.741 | .459 |  |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupAM (γ12) | −2.529 | 2.851 | −0.887 | .375 |  |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupIE (γ22) | 4.980 | 2.309 | 2.157 | .031 | Present closer less synch anticipate earlier in IE, no difference in SS |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupIM (γ32) | −2.200 | 1.936 | −1.136 | .256 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupAE (γ03) | 3.337 | 2.579 | 1.294 | .196 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupAM (γ13) | −1.463 | 2.851 | −0.513 | .608 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupIE (γ23) | 3.893 | 2.309 | 1.686 | .092 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupIM (γ33) | −3.201 | 1.936 | −1.653 | .098 |  |

EN

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupIE (*γ*08) | −0.054 | 0.174 | −0.310 | .757 |  |
| fixed | Time1 × GroupIE (*γ*18) | −0.778 | 0.496 | −1.566 | .117 |  |
| fixed | Time2 × GroupIE (*γ*28) | −0.003 | 0.408 | −0.008 | .994 |  |
| fixed | stress\_sum × rhythm\_dev:GroupIE (*γ*38) | 0.025 | 1.575 | 0.016 | .987 |  |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupIE (*γ*48) | −8.880 | 2.909 | −3.053 | .002 | IE less steep than AE, especially in preterit, and closer to synch better |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupIE (*γ*09) | 3.068 | 2.909 | 1.055 | .292 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupIE (*γ*19) | 0.557 | 2.909 | 0.191 | .848 |  |

MA

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupIM (*γ*08) | −0.593 | 0.176 | −3.372 | < .001 | IM anticipate less |
| fixed | Time1 × GroupIM (*γ*18) | 0.398 | 0.500 | 0.796 | .426 |  |
| fixed | Time2 × GroupIM (*γ*28) | −0.056 | 0.411 | −0.135 | .893 |  |
| fixed | stress\_sum × rhythm\_dev:GroupIM (*γ*38) | −1.716 | 1.640 | −1.047 | .295 |  |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupIM (*γ*48) | 3.582 | 3.035 | 1.180 | .238 |  |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupIM (*γ*09) | 0.329 | 3.034 | 0.108 | .914 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupIM (*γ*19) | −1.738 | 3.034 | −0.573 | .567 |  |

Adv

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupAM (*γ*08) | 0.068 | 0.176 | 0.385 | .700 |  |
| fixed | Time1 × GroupAM (*γ*18) | −1.027 | 0.502 | −2.046 | .041 | AM anticipate more smoothly |
| fixed | Time2 × GroupAM (*γ*28) | −0.182 | 0.412 | −0.442 | .658 |  |
| fixed | stress\_sum × rhythm\_dev:GroupAM (*γ*38) | 2.064 | 1.822 | 1.133 | .257 |  |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupAM (*γ*48) | 3.797 | 3.367 | 1.128 | .259 |  |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupAM (*γ*09) | −4.440 | 3.367 | −1.319 | .187 |  |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupAM (*γ*19) | −4.799 | 3.367 | −1.425 | .154 |  |

Int

| **effect** | **Parameter** | **Estimate** | **SE** | ***t*** | ***p*** |  |
| --- | --- | --- | --- | --- | --- | --- |
| fixed | GroupIM (*γ*08) | −0.471 | 0.175 | −2.685 | .007 | IM anticipate less |
| fixed | Time1 × GroupIM (*γ*18) | 0.149 | 0.500 | 0.298 | .766 |  |
| fixed | Time2 × GroupIM (*γ*28) | −0.235 | 0.410 | −0.574 | .566 |  |
| fixed | stress\_sum × rhythm\_dev:GroupIM (*γ*38) | 0.324 | 1.367 | 0.237 | .813 |  |
| fixed | stress\_sum × rhythm\_dev:Time1:GroupIM (*γ*48) | 16.256 | 2.529 | 6.428 | < .001 | In preterit IM smoother than IE, and while rhythm no difference in IM, in IE more synchronization = more anticipation |
| fixed | stress\_sum × rhythm\_dev:Time2:GroupIM (*γ*09) | −7.175 | 2.529 | −2.838 | .005 | In preterit IM later than IE, and while rhythm no difference in IM, in IE more synchronization = more anticipation |
| fixed | stress\_sum × rhythm\_dev:Time3:GroupIM (*γ*19) | −7.100 | 2.529 | −2.808 | .005 | IM no different, but IE better synch better pret |