Figure S1. Kernel density plots of the Area under Curve (AuC), showing separately for each task (Flanker, Simon, Spatial Stroop), congruency condition (congruent vs. incongruent) and group (monolingual vs. bilingual) the distribution of raw AUC measures. Analysis was based on 40 bins of the z coordinates.






Stroop - incongruent


Figure S2. Flanker task: Velocity and acceleration profiles for each group (monolinguals vs. bilinguals). Analysis was based on Euclidean-based velocity/acceleration, and 20 "time bins". Velocity was calculated as distance (in standard coordinates) between subsequent coordinates at different raw time points; acceleration was computed from changes in velocity across time points.


## Acceleration



Figure S3. Simon task: Velocity and acceleration profiles for each group (monolinguals vs. bilinguals). Analysis was based on Euclidean-based velocity/acceleration, and 20 "time bins". Velocity was calculated as distance (in standard coordinates) between subsequent coordinates at different raw time points; acceleration was computed from changes in velocity across time points.



Figure S4. Spatial Stroop task: Velocity and acceleration profiles for each group (monolinguals vs. bilinguals). Analysis was based on Euclidean-based velocity/acceleration, and 20 "time bins". Velocity was calculated as distance (in standard coordinates) between subsequent coordinates at different raw time points; acceleration was computed from changes in velocity across time points.


Acceleration


