Figure 1.Primate basal ganglia model. Image taken from Rubchinsky et al [12]. In this model thebasal ganglia output and the motor thalamus have been underlined to show the connections in the BG.Note how the STN and the Striatum are connected to the basal ganglia output. In this figure black arrowsdenote inhibition and white arrows excitation

Figure 2.The impact of correlation in the BG output. In both A and B the raster plot in the bottom isa simulated set of 30 spiketrains from the SNr, and the upper part is a simulated thalamocortical neuronwith the 30 spiketrains as its only input. In both scenarios, a movement-related decrease in SNr activityis introduced at the 1 second mark (denoted by a red dashed line). (A) The SNr with a correlation of0 elicits one single rebound spike at the desired moment, with a TQ of 1, since no other spike can beobserved. (B) In this case, the SNr has a correlation of 0.5, which creates pauses that are capable ofeliciting undesired rebound spikes. The red rectangles seen in the top of the rasterplot indicate pauseshave a duration of 35 ms or more, which are capable of generating rebound spikes. In this case, the TQwould be 0.25, since out of 1 intended spike, 4 have occurred.