

Fig. 1. Activity of a cell in SMA exhibiting selective relation to a remembered sequential movement. Time of occurrence of neuronal discharge is displayed as dots, with each row representing a trial. Arrows correspond to the time when the first second and third key was touched. This cell was active when the animal touched three keys with a remembered, fixed sequence (bottom rows), but inactive when the sequence was randomized and informed by visual cues (top rows). The details of the data recording and handling are given in Tanji et al. (1988)

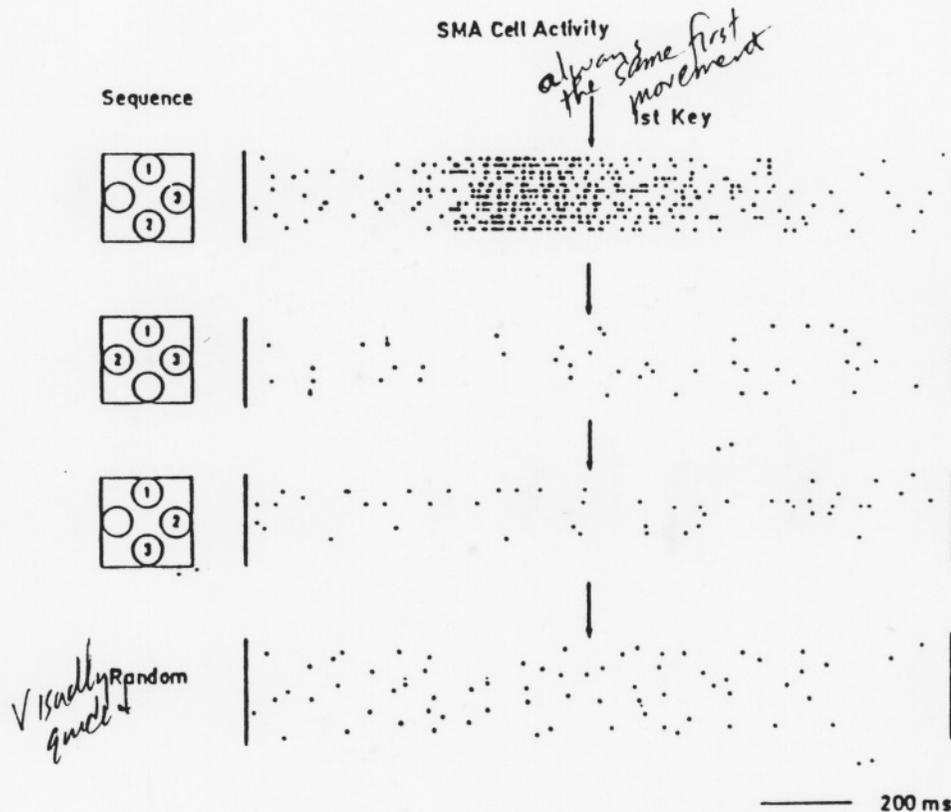


Fig. 2. Discharge of an SMA cell whose activity was specifically related to a particular sequence of key-touch movements. The cell discharges vigorously preceding the animal's sequential touching of three keys in the order of top-bottom-right, provided that the sequence is remembered (top). The same cell is not active when the sequence is top-left-right or top-right-bottom. When the motor sequence is randomized and guided by visual cues, the cell is inactive irrespective of the sequence. On the second and ninth of the visually-informed trials displayed at the bottom, the sequence is top-bottom-right, but the cell remains inactive

Recording in MI showed cells active & movements, no matter what the origin or guidance  
 Premotor cortex also tended to be more active for visually guided movements