

Tues Sept 5: List of points on slides

Cortical surface map

Cross section

Midbrain

Layers

Afferent fibers – outside in, term. In layer 4

Efferent fibers – inside to out

Neuron pic – axon (out) , soma, dendrite (in)

Columnar org. of neocortex

Fine structure of neuropil

Pathways between cortical regions

Van Essen 1990 visual pathway

EEG waveform Gibbs & Gibbs, reprinted in Rhythmicity and Synch. In neocortical networks

Synchronization

Diagram of incoming transmitters modulating flux in ion channel resulting in

Axon all or nothing, ion potentials,

Soma, all or nothing

Dendrite – local potential, excitatory and inhibitory

Microelectrodes – extracellular, intracellular

Time constant of amplifier determines whether you see slow wave (100 ms) or spike (20 ms)

Synapses & neurotransmitter

Neuromodulators – change level of excitability

Code types 15 candidates

Freq code

Temporal coincidence

Delay coding

Spatio-temporal coding

Markovian process of freq. Modulation

Coding and Representation

Self-Organization of closed idea with perturbation from outside – constructive fashion

Cartesian vs. Constructivism

Roots of the Digital Brain Slide

What got lost by Macy Foundation: analog