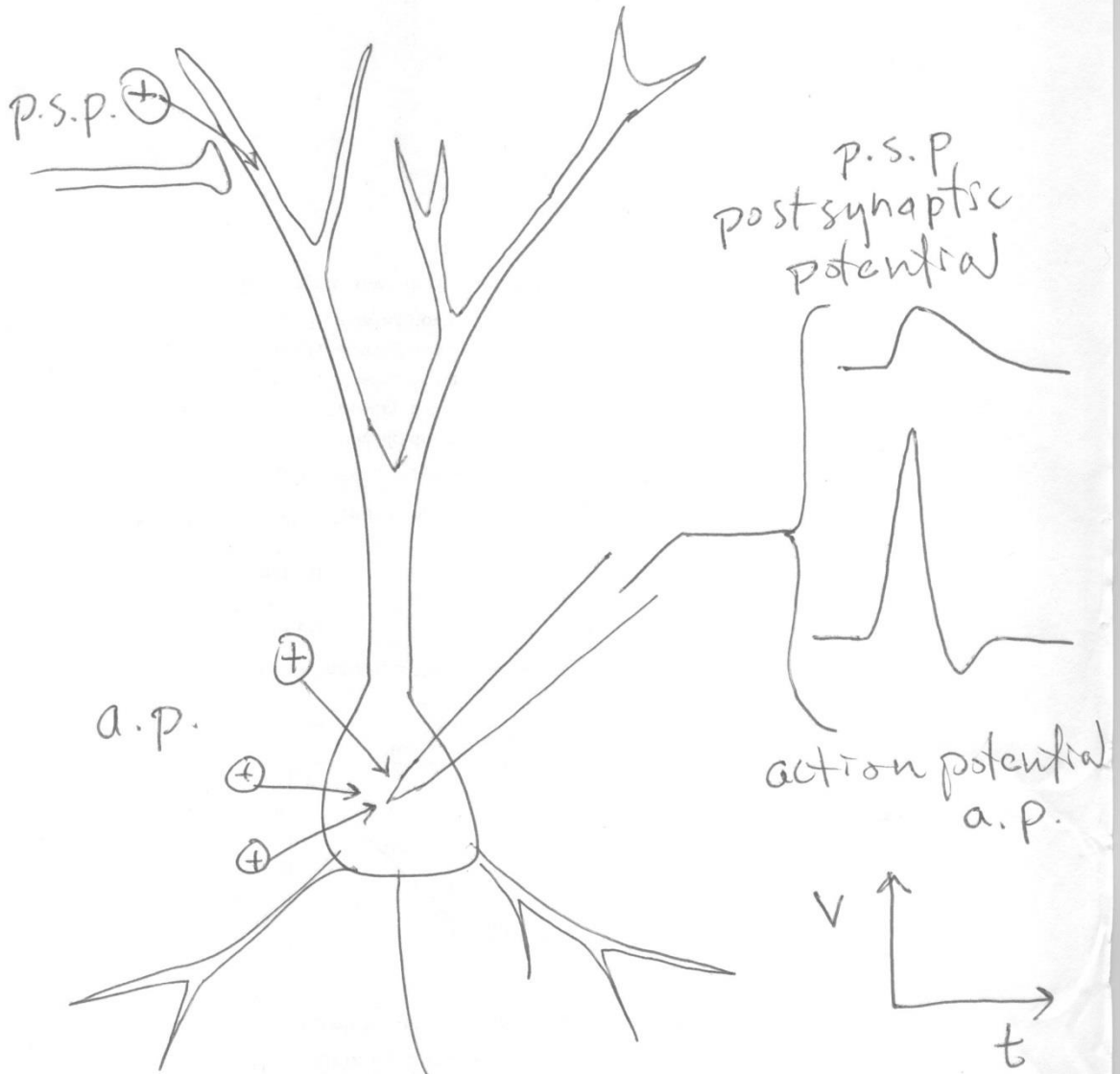
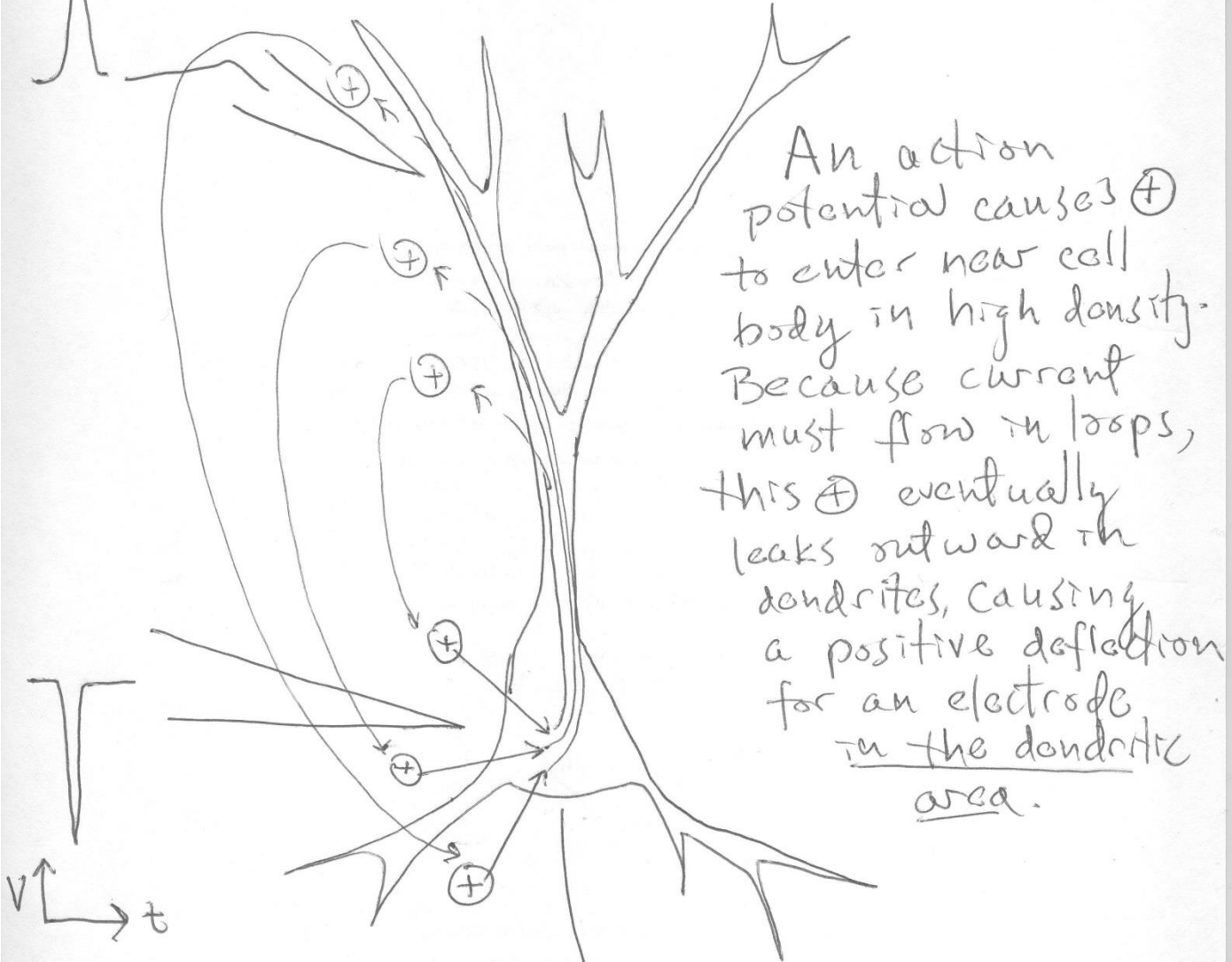


Intracellular recordings



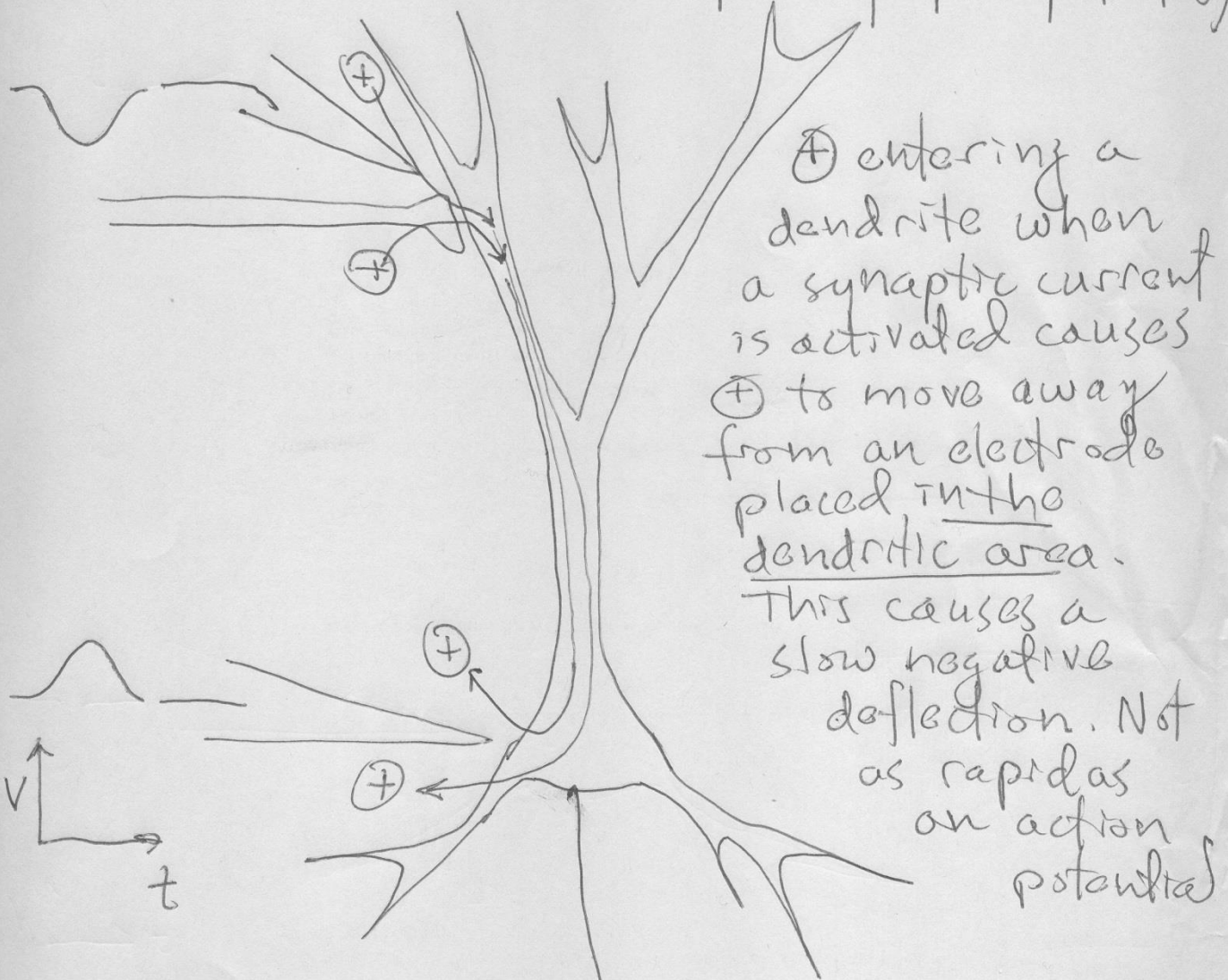
Extracellular recordings (action potential)



An action potential causes \oplus to enter near cell body in high density. Because current must flow in loops, this \oplus eventually leaks outward in dendrites, causing a positive deflection for an electrode in the dendritic area.

\oplus entering cell moves past extracellular electrode near cell body causing a loss of positive charge. This is seen as a negative deflection.

Extra cellular recordings (post synaptic potential)



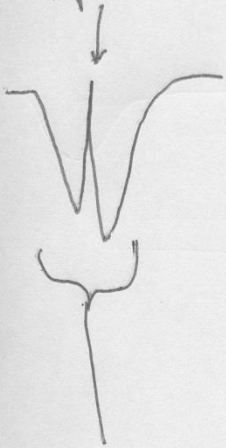
\oplus entering a dendrite when a synaptic current is activated causes \oplus to move away from an electrode placed in the dendritic area.

This causes a slow negative deflection. Not as rapid as an action potential

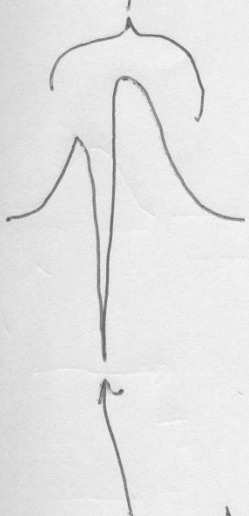
Because current flows in loops, the \oplus that entered during synaptic stimulation eventually comes out near the cell body, causing an electrode near the soma to have a positive deflection.

Putting it together:

population spike



field e.p.s.p.



population spike

