

First adventure of a neuron**

A tiny slit of light through the darkness is one of my earliest memories. As I tried to move my head to look around--my only thoughts: *Where am I?* I tried to move my appendage, but with little success. Just then, a hushed voice whispered: *Hold still, little one, else you will drown in the vast ocean below.*

I do not remember what I noticed first: the wise-looking gentle being cradling me, or the never-ending stream running below. I do remember being awed by my reflection, though. A star-shaped head with a long leg reaching for the zenith--I looked different from the weary-looking lady next to me--and I was glad. However, I turned to look for my other appendage, like the lady had, the one that had her stuck to the ocean. *Oh! Why do I not have that?* I looked at the lady for answers, but she had already dozed off!

Just then came a stern voice and what I heard baffled me: *Welcome to the brain, new neurons! You will be assigned to your respective layers shortly. You will also be given a number, which you will report to your fellow layer-mates who have already reached their destination and are eagerly waiting for you. Now pay attention!* and so began the ceremony. I was anxious I saw my neighbors disappear towards the zenith.

L4-S1-305! Hey you with the sleeping mother! P7889-5N! Wake up! Suddenly, the lady (my mother?) stirred and blinked a few times. She apologized to the voice and looked at me. *Mother? Are you my mother?* I asked trying to keep my voice steady. She wrapped her appendage tighter around me and said: *I did not realize I had fallen asleep. Five rounds of division had exhausted me. I am so sorry. I would have explained more to you, but there is no time. Do not worry! One of your siblings is in L4--that is where you are going, yes? Your sibling will assist you, and everyone in L4 is very welcoming.* She then loosened her grip and pushed me up.

There were many similar-looking neurons cheering me on as I climbed past them. I remember seeing some of my fellow traveling neurons be received by their layer-mates. I was still thinking about my mother when, I saw a bunch of neurons rush towards me and disentangle me from the only belonging of my mother. Some time passed before I found my sibling--L4-S1-203. She was indeed kind and told me stories, about our mother. We often laid waiting to wave to our siblings as they passed by.

One day, we discovered our mother's limb was gone, but that is a story for another time. Till then, hold on to your parents as long as you can, and do not forget to visit them from time to time.

****Background:** My entry revolves around the life of a neuron L4-S1-305, from its birth till the time it reaches layer IV of the neocortex. L4 stands for the destination layer, S1 signifies the region of the brain that this neuron occupies, which is, primary somatosensory area(S1).

Since it is a later-born layer 4 neuron, the first wave of layer IV neurons have already reached their destination, a group that also includes the sibling neuron referred to in the story. The mother cell here is an old progenitor. As we know from literature, each progenitor can give rise to approximately 8-9 neurons that integrate into various layers in the cortex. The newborn neurons wriggle outward/upward using the projection from its progenitor cell as a scaffold. L4 neurons form connections with projections from the thalamus neurons and form the foundation of the somatosensory processing unit of the mammals, which helps us feel touch and pain.