The biological membrane potential arises from an imbalance in ionic charge, which is generated by the sodium-potassium ATPase pump and maintained by the lipid bilayer, which acts as an electrical insulator. Within a single neuron, spatial variability in membrane potential can arise, for example, between areas separated by thin axonal projections, which generate relatively large longitudinal intracellular resistance. However, single-compartment neuronal models assume electrotonic compactness, subsequently modelling the entire membrane potential with a single variable. This simplification is just one example of reductionism in neuronal modelling.