Erwin Neher's speech at the Nobel Banquet, December 10, 1991

Your Majesties, Your Royal Highnesses, Ladies and Gentlemen,

This is a day of honour and distinction for Bert Sakmann and myself. We consider ourselves privileged, fortunate and endowed with luck. We had the privilege of good teachers. We were fortunate to concentrate our efforts on the right problem at the right time, and we were just lucky in many cases, when, what we tried in terms of new techniques, worked. We were fortunate above all, that these new techniques were adopted by so many of our colleagues, who used them to do the most brilliant experiments. I received a multitude of messages over the last six weeks, saying that the whole field of membrane physiology is honoured by this year's decision of the Nobel Assembly. This is true in a special sense: In the sense that hundreds of laboratories throughout the world contributed by studying ion channels, revealing their roles in organs and tissues, and elucidating molecular details. The Nobel Prize honours this development, and Bert Sakmann and I are really fortunate that all this happened in the last ten years.

This year, 1991, has some special meaning to electrophysiology. It is 200 years, since Luigi Galvani first published his experiments on animal electricity. It is a hundred years, that the term neuron was coined by the anatomist Wilhelm Waldeyer. Naming the neuron happened at a time when there was a fervent dispute on whether the nervous system was a continuous network or whether it was made up of separate cells in contact. Many investigators of that time found it impossible to conceive of information flow between separate cells. The main antagonists of the dispute, Camillo Golgi and Ramon y Cajal jointly received the Nobel Prize in 1906 without having settled the discrepancies in their thinking. We are proud to receive the Prize in 1991 on a topic, which helps to resolve the dispute of that time - ion channels, which provide signal transfer between individual cells.

To come to an end let me concentrate on channels: I would like to compare channels and quarks. Last year, on this occasion, Dr. Taylor stated that quarks don't talk to each other - they are not funny. Dr. Taylor regretted that he would not be able to derive a joke from their properties. This is different with channels. They do talk. In fact, communication is the real essence of their existence. Thus, I am left without an excuse. However, let me assure you, both of us, Bert Sakmann and myself, have listened to channels over almost twenty years. We have heard them open and close, we perceived their melody, we watched their voices become clearer and clearer, but we never heard them tell something witty. Thus, I am sorry to conclude, that I have to leave it like that.

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