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Sommario/riassunto

Recent developments have extended our knowledge of the basic functions of nerves: notably, the demonstration of the mechanism within nerve fibers which transports a wide range of essential materials. In order to understand how this discovery occurred, it is necessary to examine its history. The story begins in ancient Greece when nerves were conceived of as channels through which animal spirits carried sensory impressions to the brain. As science developed, the discoveries of various physical and chemical agents supplanted the agency of animal spirits until the molecular machinery of transport was recognized. In this fascinating and complete history, Sidney Ochs begins with a chronological look at this path of discovery, followed in the second half by a thematic approach wherein the author describes the electrical nature of the nerve impulse, fiber form and its changes in degeneration and regeneration, reflexes, learning, memory and other higher functions in which transport participates.