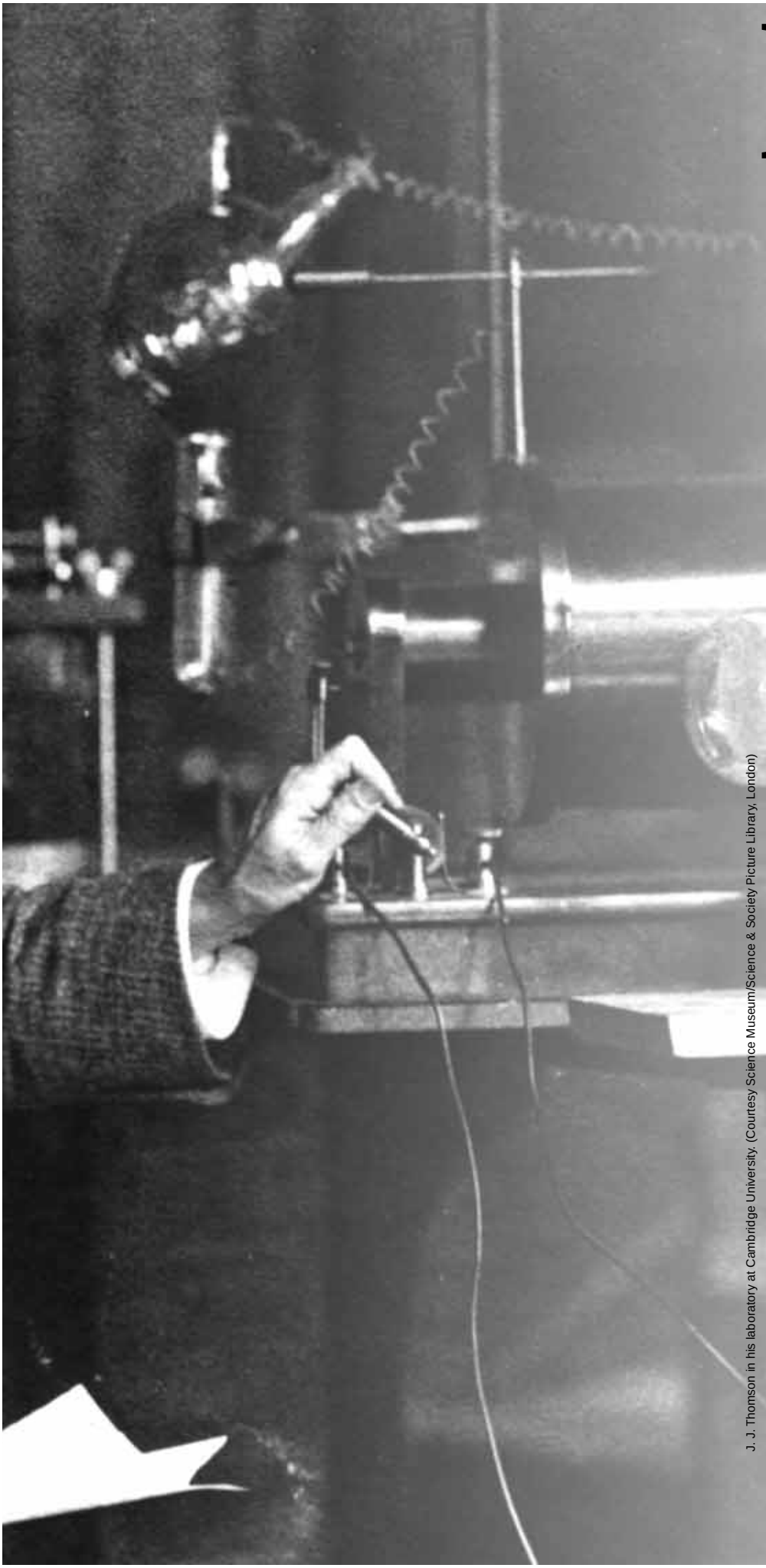

J. J. Thomson in his laboratory at Cambridge University. (Courtesy Science Museum/Science & Society Picture Library, London)

IN THE EARLY YEARS following the first observation of the electron, a toast used to be offered at the Cavendish Laboratory annual dinner: "The electron: may it never be of use to anybody."[1] That wish has not been fulfilled. The discovery of the electron, the first particle in the modern sense of the word, has brought about profound changes in the world at large. This essay is devoted to the more provincial but not less interesting question of how this discovery came about.

That event, occurring toward the end of the nineteenth century, marks the end of 2500 years of speculation about the structure of matter and the beginning of its current understanding. In order to lend perspective to this momentous advance, it will help to begin with a look back to earlier days—first, briefly to the times of pure speculation, then, in more detail, to earlier nineteenth-century developments, and finally to the decade of transition, the years from 1895 to 1905.