

## **The Value of Science: Changing Conceptions of Scientific Productivity, 1869-circa 1970**

Paper presented at the International Conference on Science, Technology and Innovation Indicators. History and New Perspectives, Lugano 15-17 November 2006.

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### **2 Abstract**

Productivity has become a kind of buzzword in science studies. Whether you look at the literature on research management, the economic literature on technology and innovation, the literature on bibliometrics or the official literature on science policy, what you find is analyses on productivity, often accompanied by a plea and recipes for increased productivity. This paper documents how the concept of productivity got into the analysis of science, through the statistics on which the concept rested, and its transformation over one hundred years. It argues that, through history, the concept as applied to science carried four meanings: productivity as reproduction, productivity as output, productivity as efficiency, and productivity as outcome. The paper shows that the concept of productivity in science studies and policies came from scientists themselves and their efforts at measuring the size of the scientific community and its activities, and its contributions to the advancement of science.