

1835

ANDREW URE  
(1778 - 1851)

A Scottish chemist and professor at Anderson College  
in Glasgow, Scotland  
Introduced classes for working men  
First director of Glasgow observatory

Publication:

1821      Dictionary of Chemistry

1835      The Philosophy of Manufactures

1837      Dictionary of Arts, Manufacturers, and Mines

Applied science to study of British textile manufacturing.  
Very Nationalistic

Manufacture:

Has come to signify the reverse of its intrinsic meaning,  
for it now denotes every extensive product of art, which is made  
by machinery with little or no aid of the human hand; so that  
the most perfect manufacture is that which dispenses entirely  
with manual labor

I. General Principles

A. Manufacture

1. Mechanical versus chemical
2. Operatives
  - a. Under 21 yrs. - cheaper, quick learners, obedient  
(50% of British labor force)
  - b. Over 21 yrs. - not easy to teach
3. Science - applied to factory operation

B. Economy of power

II. Scientific Economy of Factory System

A. 3 organic systems -mechanical, moral and commercial

B. Topography and statistics of factory - power source, mkts,  
labor

C. Regulatory laws

III. Moral Economy

A. Personal comforts of operatives

B. Quantity and quality of work versus job satisfaction

IV. Commercial Economy

A. Local, national, international

B. Knowledge and wisdom → to success not capital