

## Problems – Chapter 4: Maximizing Satisfaction

Read” Ch 4: Sections 4.3.4, 4.5.3 and 4.5.4 are optional.

William Stanley Jevons, *The Theory of Political Economy*, 1871, preface 1<sup>st</sup> ed.

In this work I have attempted to treat Economy as a Calculus of Pleasure and Pain, and have sketched out, almost irrespective of previous opinions, the form which the science, as it seems to me, must ultimately take. I have long thought that as it deals throughout with quantities, it must be a mathematical science in matter if not in language. I have endeavoured to arrive at accurate quantitative notions concerning Utility, Value, Labour, Capital, etc., and I have often been surprised to find how clearly some of the most difficult notions, especially that most puzzling of notions *Value*, admit of mathematical analysis and expression. The Theory of Economy thus treated presents a close analogy to the science of Statical Mechanics, and the Laws of Exchange are found to resemble the Laws of Equilibrium of a lever as determined by the principle of virtual velocities. The nature of Wealth and Value is explained by the consideration of indefinitely small amounts of pleasure and pain, just as the Theory of Statics is made to rest upon the equality of indefinitely small amounts of energy.

Macmillan and Co. 1888. Library of Economics and Liberty. 19 September 2006.  
<http://www.econlib.org/LIBRARY/YPDBooks/Jevons/jvnPE1.html>

Notes: This is a short problem set because I can't wait to get to Chapter 5.

Please be neat – graph paper might help

- #1. Question 5a, page 179
- #2. Question 11, page 180
- #3. Question 12, page 180

Honors Option: 5b and 5c page 179, question 9 page 179, and question 13, page 181  
[No partial credit; no help from the TA or the instructor]

For Class Discussion:

Consider the following policy issue:

Suppose that the government wants to undertake a Reform to improve the productivity of the economy. As a result, everyone will be better off, but the improvement in life will not affect people equally. A million people (people who respond energetically to the incentives in the plan and people with certain skills) will see their incomes triple while everyone else will see only a tiny income increase, about 1%.

Suppose that the only option is either the status quo or the Reform. Would you support the change? Why?