Chapter 15: The NeoClassical School – Alfred Marshall
(pg 275 - 300)

Historic Background
>   1842 – 1924, English
>   Father, rather tyrannical, "Mans rights and Woman's Duties"
>> Against, Math, Chess, and Marshall to be a Minister
>   Marshall refused to go to Oxford and study "dead languages",
>> Instead went to Cambridge, studied math, physics – and economics
>   A hypochondriac, a perfectionist, slow to publish, cautious….
>> 1890 "Principles of Economics" – defined modern economics
>> 1919 "Industry and Trade" – in printed proofs for 15 years

>   Marshal popularized diagrammatic Economics
>> Kept his math in the footnotes

His principles (rewritten a bit to make it more understandable)
>   1) Use math as a shorthand language, not as means of enquiry
>   2) Keep to it until you are done
>   3) Translate your math into English
>   4) Illustrate your results with real world applications
>   5) Burn the mathematics
>   6) If you can't illustrate with real examples, burn it all and go study something else.

Economic laws are "social tendencies", and economics is not a body of concrete truth, but is rather an engine for the discovery of concrete truth. The laws of economics may govern how we act and interact, but they are neither good nor bad in and of themselves. Society can, and may indeed wish to, influence them for its own purposes.

Utility and Demand
>   Demand based on the law of diminishing marginal utility
>> Two caveats
>   Assumes a "moment" in time (Short Run)
>> Over time, tastes can change
>>> Examples: classical music, beer
>   Indivisible goods: utility can increase,
>> if a good can't be consumed in small quantities
>> Examples, Wallpaper, Tires

>   Utility dealt with Pleasure/Pain, ala Bentham
>> How can we measure this? For Marshal, this was easy
>>> Use money.
>   *Early Marginalists: I like it, therefore I will spend more money on it*
>   *Marshall: I spent a lot of money on it, so I must like it.*

>> *Inside the system or outside the system: Physics vs. Economics*

Money measures Utility at the Margin
> We can't compare utilities between individuals
> But if we take a whole cross section of society,
> > Differing tastes average out, money does measure utility

This made economics a quantifiable science
> *FAR MORE so than any of the other social sciences*
> > *It also made it predictive….*

Rational Consumer Choice
Like Jevons, Menger, Gossen, etc.; he described ration choice as
> Adherence to the equimarginal principle

But unlike them, he tied it to the law of demand

Law of Demand
A function of Diminishing Marginal Utility and rational consumer choice

$MUx/Px = MUy/Py$, for all goods.
> If Px falls, Marshal reasoned that rational consumers would buy more
> Until MUx/Px again is equal to MUy/Py

"the amount demanded increase with a fall in price, and diminishes with a rise
in price."
> Illustrated with both graphs and tables, "ceteris Paribus"

Tastes, wealth, substitutes, all held constant
> These became the "determinates of demand"
> A change in the "quantity demanded", vs. a change in "the demand curve"

He was also aware of (but didn't fully explore) substitution and income effects

Consumer Surplus
Superior understanding to Dupuit, and Menger….
> Only two real problems remained….

Marshal used tea as his example, because there is no income effect

Marshal asserted that we could measure if for markets, which is problematic

Elasticity of Demand
He handled it far better than predecessors

Illustrated it Mathematically, verbally, and diagrammatically
> Determinates of elasticity included Income, percent of income,
substitutes, etc.

Supply
Supply depends on the cost of production, but it is a curve, not a point

Depends on time: the immediate present, short run, and long run

The Immediate Present
The time when the quantity supplied can't be increased/decreased
> For a perishable good, this means inelastic supply curve
> For other goods, a reservation price for most suppliers

But not all, the supply curve rises, then becomes vertical

Short Run

      Supplementary costs and Prime costs

           Now called fixed costs and variable costs

      The short run is the period where supplementary costs are fixed

      Variable costs include labor, raw materials, etc.

           Variable costs must be covered in the short run, but not all costs

      To supply more of the good, hire more labor/longer hours

           Declining utility of income to workers, so you must pay them more

      This causes our supply curve to slope upwards

           This part of Marshal needed improvement

Long Run

      Now all costs are variable, and must be covered

      Changes in the long run are shifts to the supply curve, shifting it in/out

Equilibrium Price and Quantity

      What determines market price?

           Classical Economics – Supply

           Marginalists – demand

      Marshall – Both

           The blades of scissor….

      Numerical Illustration (see book)

      Graphical Illustration

           Marshal thought quantity the independent variable, put on horiz. Axis

              We now think of it as the dependent variable – no matter…

           Now he added consumer surplus, and producer surplus

      His graphical analysis also now allowed for real consideration of time….

           Demand more important in determining price in the short run

               But over time, supply can respond

      (looking for point data, vs. looking for functions)

           But demand curves can shift in the long run as well, for various

reasons

Distribution of Income

      Income is distributed by the pricing of factors of production in the economy

      At the margin, the marginal value to price ration must be equal across factors

Wages

      Wages are not just determined by the marginal productivity of labor

           The marginal productivity of labor determines the demand for labor

      The demand curve for labor a derived demand

           The demand is for the goods the labor can/is producing

      Note that the wage rate is determined by the above, AND ALSO supply

      Marshall's four laws of derived demand

1) Other things equal, the greater the substitutability of other factors for labor, the greater will be the elasticity of demand for labor.
        (if robots can easily substitute, elastic demand for labor)
2) Other things equal, the greater the price elasticity of product demand, the greater will be the elasticity of labor demand.

(When restaurant meals go up in price, many waiters lose jobs)

3) Other things being equal, the larger the proportion of total production cost accounted for by labor, the greater will be the elasticity of labor demand.

(that one key guy has a pretty safe job)

4) Other things being equal, the greater the elasticity of the supply of other inputs, the greater the elasticity of demand for labor.

(the easier it is to buy other inputs, the easier to fire labor)

Interest….