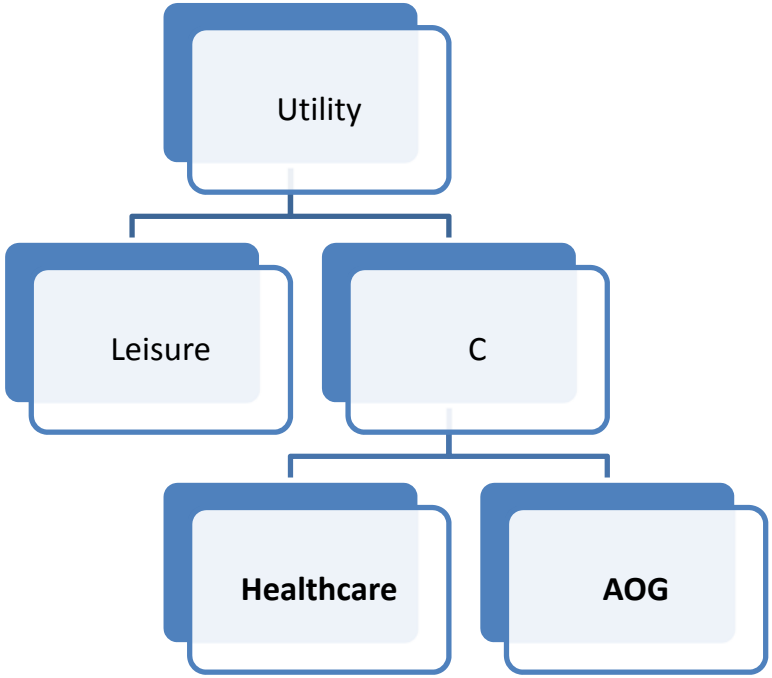
Discussion Material presented by David Montgomery for Economy-Wide Modeling Panel meeting of October 22-23, 2015



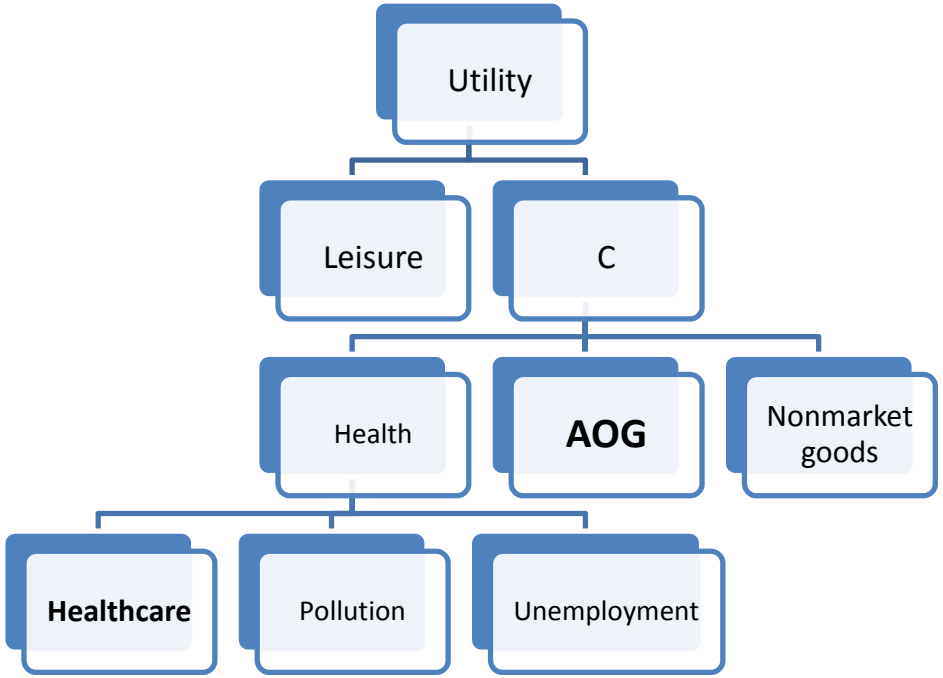
Time Constraint: Labor + Leisure = time endowment – sick days – early mortality

Pollution effects: G (sick days, mortality, pollution) = 0

Production: F(AOG, Healthcare; Labor, Capital; Pollution) = 0

Income = Wage * Labor + Rate of Return * Capital

Budget Constraint: Income – P_h*Healthcare – P_a*AOG = 0



Labor + Leisure = time endowment – sick days – early mortality

Health = H (sick days, mortality)

Pollution effects: G (sick days, mortality, pollution) = 0

Production: F(AOG, Healthcare; Labor, Capital; Pollution; Nonmarket goods) = 0

Income = Wage * Labor + Rate of Return * Capital

Budget Constraint: Income – P_a*AOG – P_h*Healthcare = 0

Implications:

Total WTP must be increasing in the supply of non-use or non-market goods

Marginal WTP is probably decreasing (quasi-concavity)

Total WTP must be bounded by income

Decreasing pollution will decrease healthcare expenditures and produce lower "health" than standalone health effects models predict – a very general economic principle

95% of WTP studies violate one or more of the conditions for getting accurate revelation of preferences

Public health and epidemiological studies all have to solve immense statistical problems in teasing out relationships (Anne Smith)