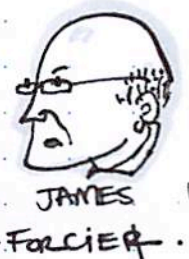


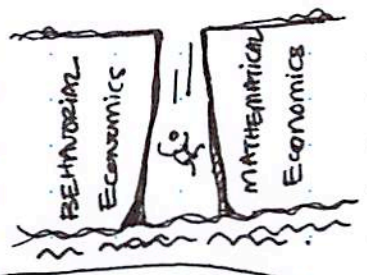
forcier@ca.edu  
415.390.1840

# MANAGERIAL ECONOMICS.

AUG. 29.09



INTEREST IN NON PROFITS.  
↓  
HAVE TO LIVE IN A FOR PROFIT WORLD.



marketplace on NPR...  
make real or tangible.  
economics as storytelling

we emphasize micro economics. as people involved in decisions in corporations.

CLASS EXPLORATION

□ UNDERSTANDING TERMS ARE IMPORTANT.

UNDERSTAND LANGUAGE AND HAVE MEANINGFUL CONVERSATIONS.

took a large emphasis to mathematics in past.  
behavioral science.  
behavioral economics.

economics as political not mathematical.  
CONSULTANTS HAVE AN APPROACH THEY ARE TRYING TO SELL.

unified language between design research & behavioral economics

AT SOME POINT HOW DO MEASURE EXCEPT FOR NUMBERS

SOPHISTICATED ANALYTICS - BALANCED WITH CONTEXT  
understand who is trying to sell what.

WHAT I WANT TO GET OUT OF CLASS

- CONVERT IN ECONOMICS
- BALANCE BEHAVIOR & BEHAVIORAL ECONOMICS

ABOUT ME

STARTED WORK ON ENERGY & ENVIRONMENT ISSUES IN DC.

STARTED TEACHING CORPORATE STRATEGY

CONSULTING WILD WEST.

WORKED IN ALL DIFFERENT AREAS.

POLICY WORLD.

CALIFORNIA & ENERGY COMMISSIONS.

PG & E - CORPORATE WORLD.

'NOBODY HAS ANSWER BUT EVERYONE HAS A BIAS'

very important to...  
LOCAL AT CONTINUUM  
macro vs micro  
behavior vs behavior science design.

THE SPENCE OF SCARCITY

YOU CAN TEACH ECONOMICS FROM A THEORY OR TOOLS PERSPECTIVES.

riaz □ FREAK ECONOMICS.

oeconomics - sneek for managing your household.

ITS COMPETITION THAT FORCES COMPANIES TO BE YOUR BEST.

external competition  
internal competitions

HAVE A GREAT INTERNAL MECHANISMS TO NOT SETTLE FOR LAST GREAT PRODUCT.

SCARCITY & HUMAN GOALS.

WORLD OF INTERCONNECTIVITY  
BETTER WAYS OF ADDRESSING SCARCITY.  
GLOBAL INTERCONNECTIVITY

CULTURAL DIFFERENCES IN MARKET ECONOMY.

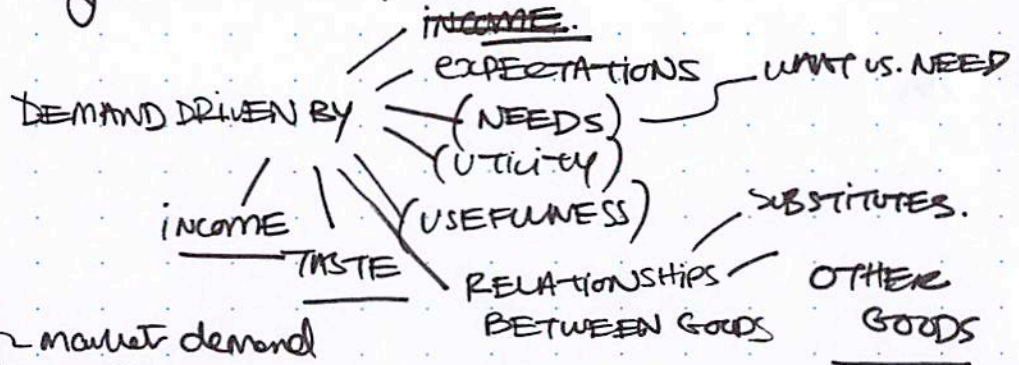
JAPANESE CONSUMER CULTURE DEMANDS HIGH QUALITY.  
VS  
AMERICAN MARKET IS MORE LAID BACK.

DEMAND curve: a curve describing the quantities of a good a consumer is willing to buy at alternative prices.

WILLINGNESS TO BUY AT ~~THE~~ DIFFERING PRICES.

PRICE POINTS.

when you miscalculate prices you misposition your product



Demand: a willingness & ability to buy a specific quantity of a good at a specific price in a given time period

market demand is simply sum of individual demand



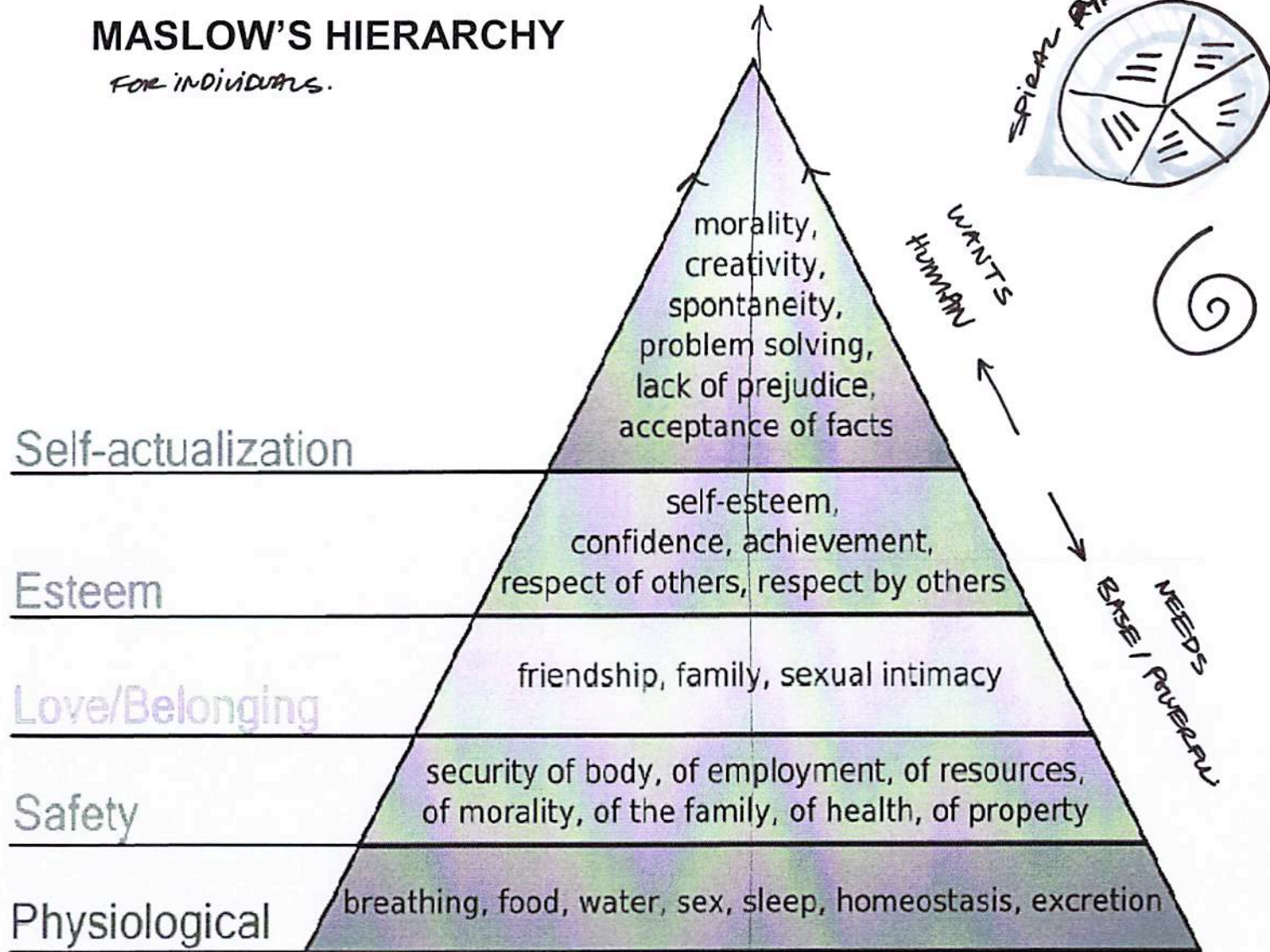
Maslows circle cycle.



Maslows pyramid

# MASLOW'S HIERARCHY

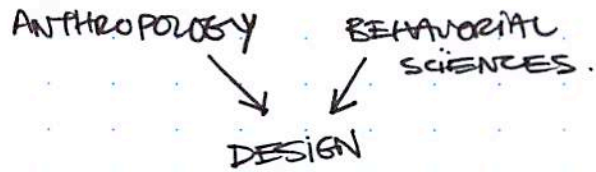
FOR INDIVIDUALS.





1930s to 60s.

From A.H. Maslow, *A Theory of Human Motivation*,  
 Psychological Review 50 (1943):370-96, as cited in Wikipedia  
[http://en.wikipedia.org/wiki/Maslow%27s\\_hierarchy\\_of\\_needs#\\_note-multiple](http://en.wikipedia.org/wiki/Maslow%27s_hierarchy_of_needs#_note-multiple)

DSMBA Managerial Economics  
 Professor James Forcier



Monetary measures.  vs. non monetary measures. 

as we move into an experience economy we need to get comfortable with new measures of experience.

~~THERE SYSTEMS WHERE THE~~ TRADEOFFS. ARE EVITBLE.

~~WAYS FOR DEMAND TO BE FURFIED.~~

HUMAN CAPITAL vs. MONETARY CAPITAL.

CHEAP/COST EFFECTIVE SUSTAINABILITY.

~~BARTER~~  
~~RESPECT~~  
~~TRIBES~~  
RESPECT.

Consumption

DEMAND  
DEMAND CURVE  
SHIFT  
Δ in Q DEMANDED

UTILITY MARGINAL (MU =  $\frac{\Delta \text{TOTAL UTILITY}}{\Delta \text{QUANTITY}}$ )  
TOTAL  
DIMINISHING

MARGINALITY  
LAW OF DEMAND  
PRICE ELASTICITY OF DEMAND.

PRODUCTION

TOTAL REVENUE = PRICE x QTY.  
OPPORTUNITY COST  
OPTIMALITY  
PRODUCTION FUNCTION  
FACTOR / MULTI FACTOR PRODUCTIVITY.  
MPP =  $\frac{\Delta \text{ in total output}}{\Delta \text{ in input quality}}$

COSTS  
riaz MARGINAL COSTS  $\frac{\Delta \text{ in TOTAL COSTS}}{\Delta \text{ in OUTPUT COSTS}}$

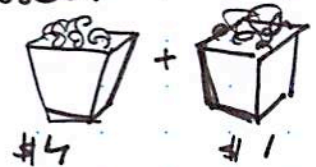
MANAGERIALS ECONOMICS.

UTILITY = value in market economy determined by the consumer  
 measurement of whatever people get from consumption.

TOTAL UTILITY: ENTIRE UTILITY IN CONSUMING ENTIRE PRODUCT

holding other things equal  
 eg. satiated from food appetite.

MARGINAL UTILITY: MARGINAL SATISFACTION ONE GETS FROM CONSUMING AN ADDITIONAL UNITS OF GOODS.



MARGINAL ANALYSIS:

marginal utility =  $\frac{\text{change in total utility}}{\text{change in qty}} = MU = \frac{\Delta \text{total utility}}{\Delta \text{Quantity}}$

if utility is the value

YOUR TOTAL UTILITY WILL INCREASE WITH DIMINISHING VALUE: Law of Marginal Utility.

LAW OF DEMAND = CONSUMPTION & PRICE ARE INVERSELY RELATED.   
 we don't know how they are related.

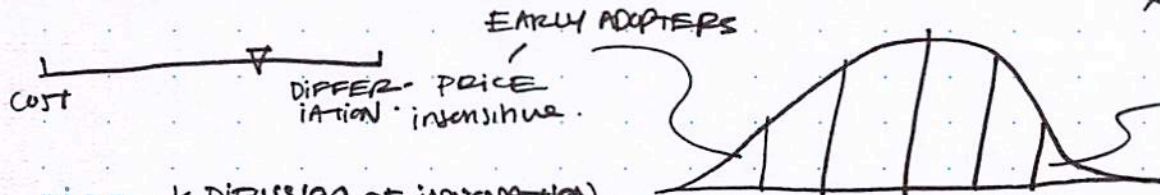
PRICE ELASTICITY: MEASURE UNDERSTAND WHAT

CONSUMPTION WILL BE IF WE CHANGE PRICE — DESIGN RESEARCH.



STRATEGY POSITION COMPANY CONTINUOUS.

\* PAYMENT IN INTENTION & INTEREST.



LAGGARDS: don't care for product.

riaz \* DIFFUSION OF INNOVATION.

Price Elasticity of Demand Calculation  
Using Arc Elasticity\*

$$\text{Price Elasticity (E)} = \frac{\% \Delta \text{ quantity demanded}}{\% \Delta \text{ in price}}$$

1. Determine %  $\Delta$  quantity demanded (Q)
2. Determine %  $\Delta$  in price (P)
3. Divide Q by P

1. *Percent Change in Quantity Demanded:*

$$\text{Ave. quantity} = \frac{\text{Q before (Q}_1\text{) + after (Q}_2\text{) price change}}{2}$$

$$\% \Delta \text{ Q D} = \frac{\text{Change in quantity}}{\text{Average quantity}}$$

$$= \frac{Q_2 - Q_1}{\frac{Q_1 + Q_2}{2}}$$

2. *Percent Change in Price:*

$$\text{Ave. price} = \frac{\text{Initial price (P}_1\text{) + (P}_2\text{) new price}}{2}$$

$$\% \Delta \text{ P} = \frac{\text{Change in price}}{\text{Average price}}$$

$$= \frac{P_2 - P_1}{\frac{P_1 + P_2}{2}}$$

3. *Price elasticity of demand:*

$$\text{Price Elasticity (E)} = \frac{\% \Delta \text{ QD}}{\% \Delta \text{ P}}$$

---

\* By using average values, arc elasticity simplifies the determination of whether to use the *initial quantity and price*, or *end quantity and price*, as the denominator in calculating the percentage change.



→

PRICE ELASTICITY OF DEMAND

unit = pricing unit  $\left\{ \begin{array}{l} \text{product e.g. container} \\ \text{services e.g. hours or value.} \end{array} \right.$  non linear change in demand based on price

PRODUCTION

TOTAL REVENUE = PRICE  $\times$  QTY.

DIFFERENT KINDS OF GOODS

- NORMAL - people will buy more of if your income goes up
- INFERIOR GOODS - people will buy less as your income goes up.
- ~~BARBARA~~ SUBSTITUTE GOODS - competitor in the mind competitor can buy instead of your good.
- COMPLIMENTARY GOOD. goods that go in conjunction

$$\frac{\% \Delta \text{ price change Qty demanded}}{\text{good x}}$$

$$\frac{\% \Delta \text{ price of Qty demanded}}{\text{good y}}$$

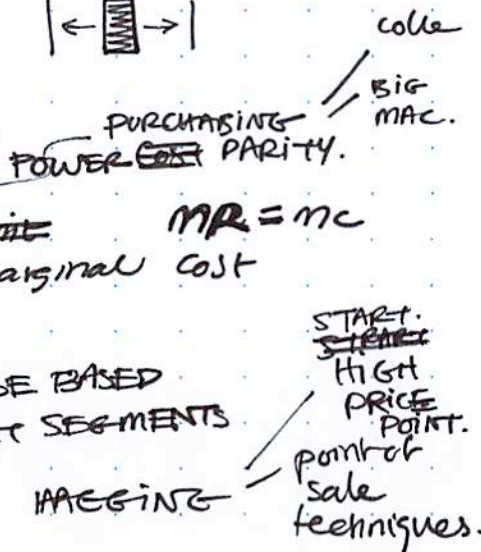
careful thought going into pricing.

margin = profit  $\left| \leftarrow \text{||||} \rightarrow \right|$

have enough revenue to cover cost

have marginal ~~cost~~ revenue = marginal cost per unit  $MR = MC$

PRICING CAN BE BASED ON MARKET SEGMENTS



price of good changes the demand for another good in opposite direction

price of one good & demand of good moves in same direction

You can figure out using substitute cross price elasticity

(pt 102)

Because demand change is not constant you can't change

CHANGE IN QTY DEMANDED.  
is influenced by price.

Shift in price



moves along curve

CHANGE IN DEMAND

change in demand.  
moves entire curve



moves curve.

dependants on industry, competitors. can effect how you will change/reevaluate these curves.

"we are now really a service economy"

PRODUCTION FACTORS: Things (ingredients) that go into making a product or service.

- CAPITAL (my monies)
  - HUMAN CAPITAL (LABOR) (gotten bigger)
  - LAND (smaller competitor now)
  - MANAGEMENT/ENTREPRENEURSHIP
- supplies.
- she makes it work.

FACTOR PRODUCTIVITY

whatever production factors you are getting as much output as you can.

MARGINAL PRODUCTIVITY

how much additional productivity you get from adding a factor.

MPP: marginal physical product =  $\frac{\Delta \text{ in total output of your good or service}}{\Delta \text{ in total input qty for good or service}}$

□ COSTS

- definition
- formula
- key point / consideration.

125, 150

fixed cost  
average fixed cost

FIXED COST

Cost of production that don't change when rate of output is altered.  
eg. plant & equipment.

Average Fixed Cost

Total fixed cost divided by quantity produced in given period.

$$AFC = \frac{TFC}{\text{Total Output}}$$

# Managerial Economics.

7.

Total cost: market value of all resources used to produce cost or service.

$$\text{avg TC} : \frac{TC}{\Delta t} = \frac{\text{total cost}}{\text{change in time.}}$$

$$ATC = AFC + AVC$$

average total cost = average fixed cost + average variable cost.

EXPLICIT + IMPLICIT cost. = Total cost

variable + fixed = Total cost.

—  
SHORT TERM : at least one cost is fixed  
& LONG TERM. : everything is variable

—  
variable cost: cost of production that vary when output is altered

$$VC = TC - FC$$

average variable cost: total variable costs divided by quantity produced in a given period.

$$AVC = ATC - AFC$$

$$AVC = \frac{VC}{\text{total output}}$$

# MANAGERIAL ECONOMICS

MARGINAL COST: an increase in total cost associated with one unit increase in production.

$$MC = \frac{\Delta TC}{\Delta OUTPUT}$$

ej. wage, rent, materials.

ej. costs when one forgoes an alternative action.

ECONOMIC COST: explicit cost + implicit cost.

EXPLICIT COST: an tangible cost that can be quantified and classified.

IMPLICIT COST: value of ~~cost~~ resources used even when no direct payment is made.

$$\text{implicit cost} = \text{economic cost} - \text{explicit cost}$$

OPPORTUNITY COST: THE PRICE YOU ARE PAYING FOR MISSING OPPORTUNITY.  $\rightarrow$  measure cost of quality.

DOLLAR COSTS: THE DOLLAR AMOUNT FOR MAINTAINING THE PRODUCTION OF A SPECIFIC NUMBER OF GOODS.

RESOURCE COST: COST OF component of labor or capital necessary for production at a given period in time.

LONG RUN COST: ~~\*\*\*~~ SET OF FIXED COSTS TO BUILD an infrastructure for a desired output.

1 package service!  
\* services package prices for service rendered.

\* economists try to deal a lot with dealing with value.

\* watch accountants.

- Accounting Costs.  
= explicit + implicit costs.

- implicit costs: value of resources used even when no direct payments made

$$\text{implicit cost} = \text{economic cost} - \text{explicit cost}$$

cost of production  
total desired output.

\* < cost of infrastructure

experience economy

riaz measuring quality: - get from customers how important is question  
TRANSLATE APPROACH. ask them if you like it.  
DAN MCFARREN? PROBEIT MODEL