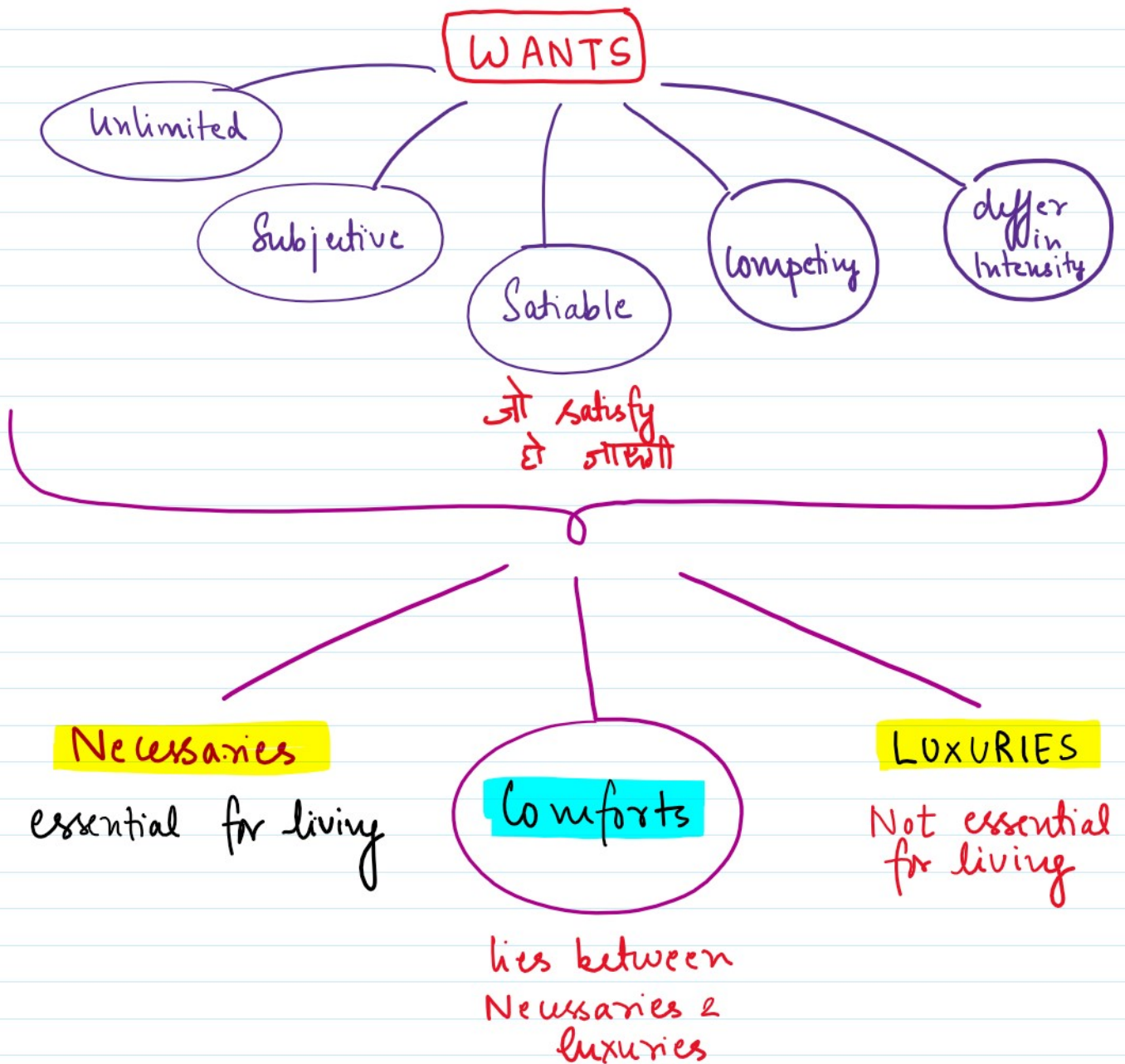


CH2 : Consumer Behavior



②

UTILITY

→ Satisfaction (i.e Satiety)

→ Utility is **not usefulness**

Utility is not happiness

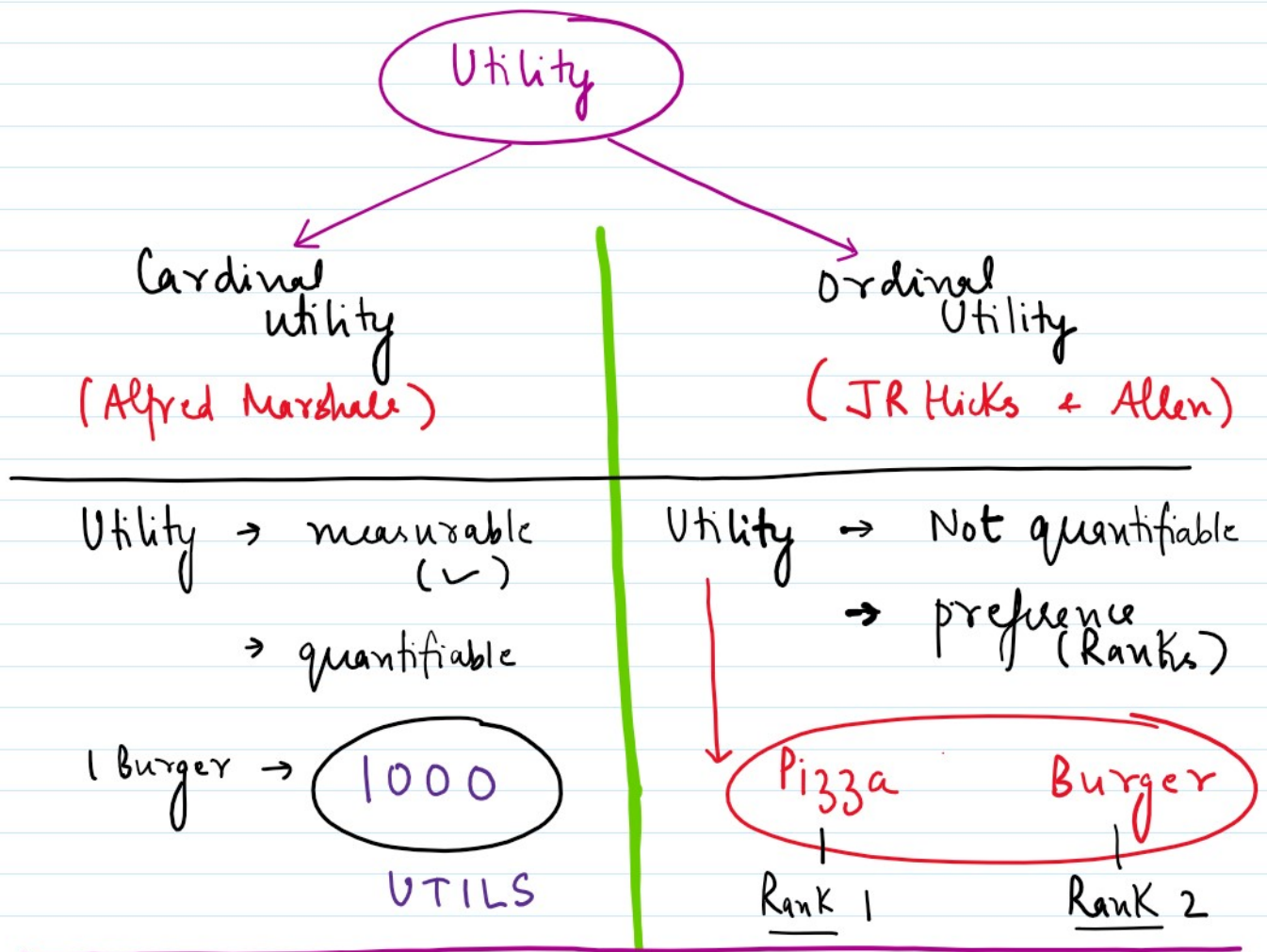
utility (Satisfaction) 😊 ← "Alcohol" → useful (X)

→ Utility is **Ethically neutral**
(judge नहीं करता)

Person → Milk → 😊

Person → Alcohol → 😊

utility

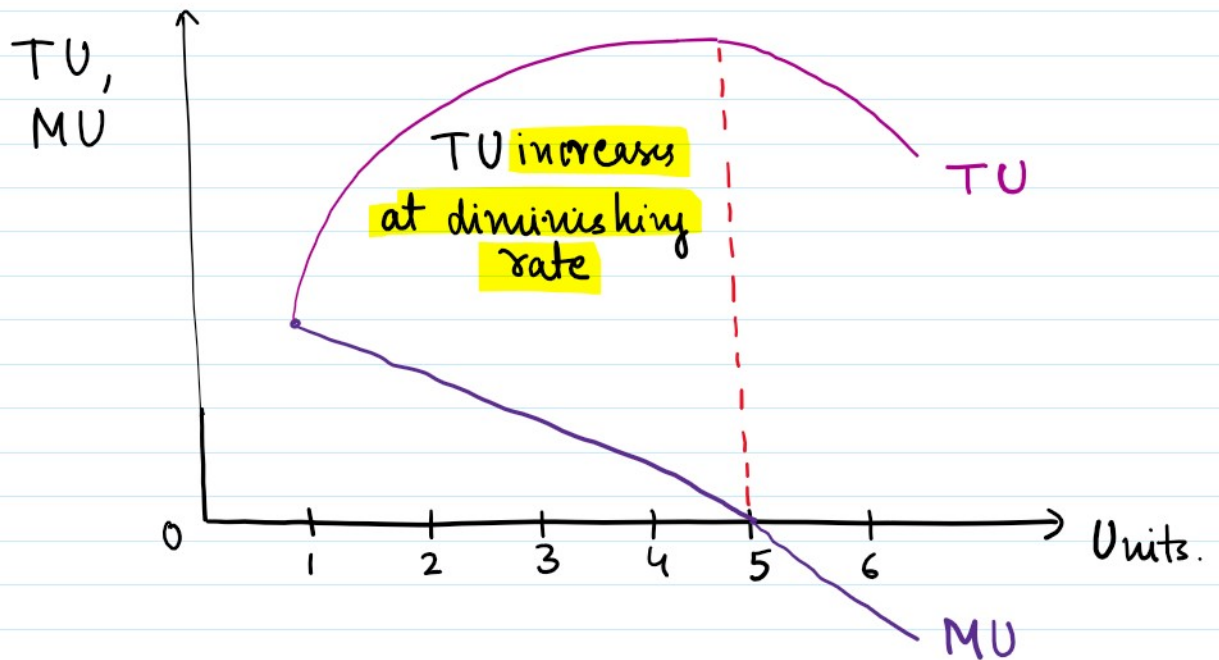


* Alfred Marshall
(MU analysis)

Unit (Burger) Marginal Total

Unit (Burger)	Marginal utility (MU)	Total utility (TU)
1	10 utils	10 utils
2	8 utils	18 utils
3	5 utils	23 utils
4	3 utils	26 utils
5	0 utils	26 utils
6	(-) 2 utils	24 utils.

Law of DMU



- 1) $MU > 0$; $TU \uparrow$ @ diminishing rate
- 2) $MU = 0$; TU is Maximum
- 3) $MU < 0$; TU is falling

$$\begin{aligned}
 * \quad TU &= MU_1 + MU_2 + MU_3 + \dots + MU_N \\
 &= \sum MU
 \end{aligned}$$

$$= \underline{(2 \text{ MU})}$$

$$* \text{ MU} = \frac{\Delta \text{ TU}}{\Delta \text{ units}}$$

MU is SLOPE of TU

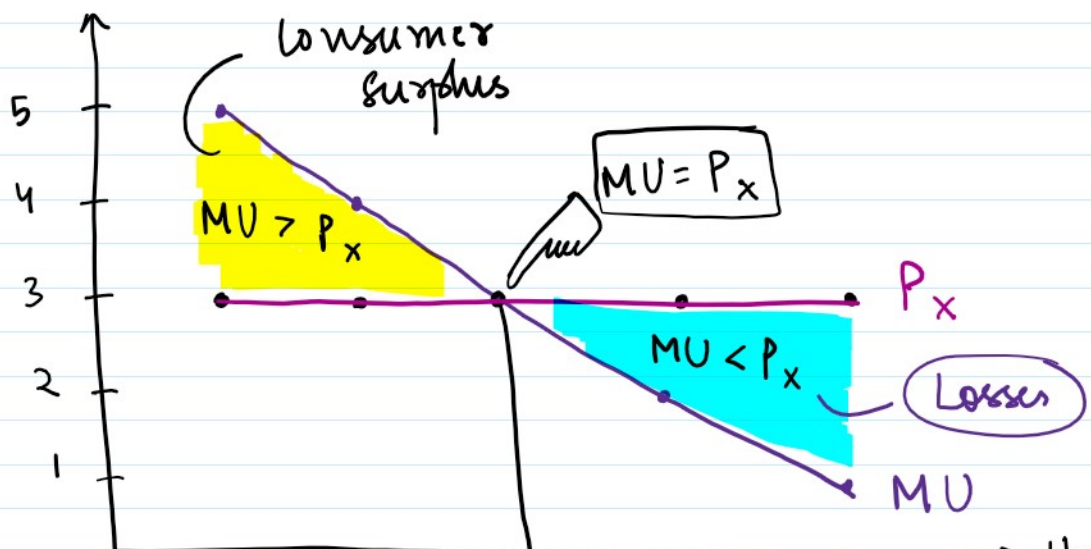
* Consumer's Equilibrium

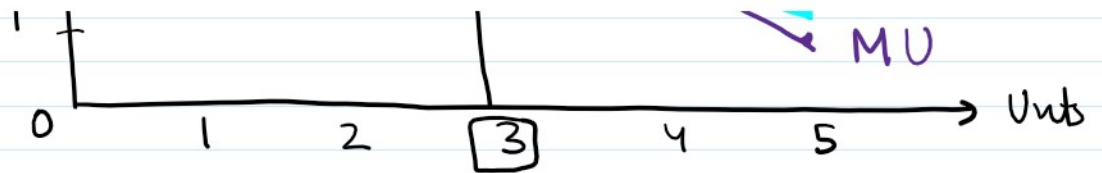
Person $\rightarrow$ Good consumer $\rightarrow$ Maximum Satisfaction

eg:- 1 Burger = ₹ 3 (Price)

Units (Burger)	Willing to Pay MU	Actual Price P_x	
1	5	3	(2)
2	4	3	(1)
3	3	3	0
4	2	3	(-1)
5	1	3	(-2)

C.E →





∴ Consumer's equilibrium $MU = P_x$

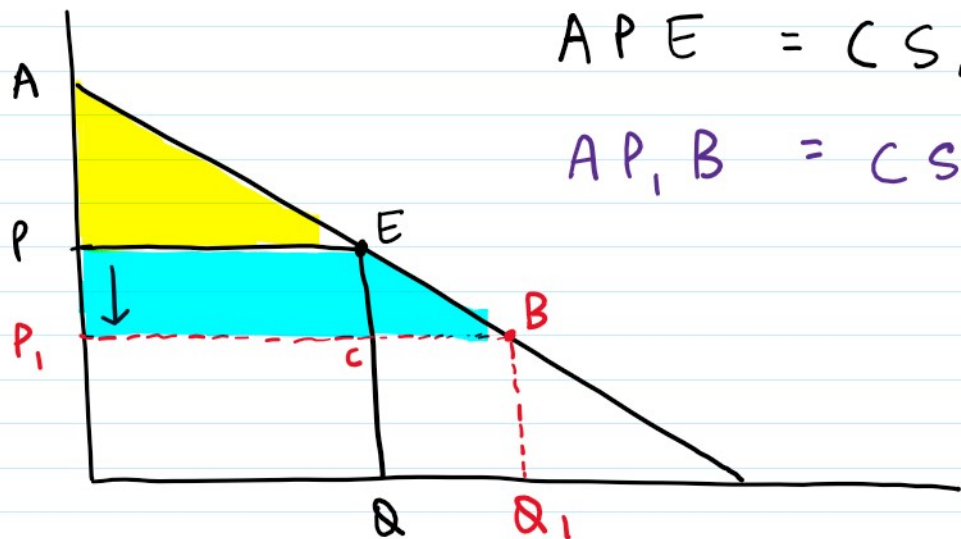
∴ Consumer Surplus $MU - P_x$

Application → Business 😊
→ Government 😊

Limitations

- unrealistic assumption
- Necessaries (exception)

*



$$APE = CS.$$

$$AP_1B = CS_1$$

Increase in CS
(PP_1BE)

=

PP_1CE

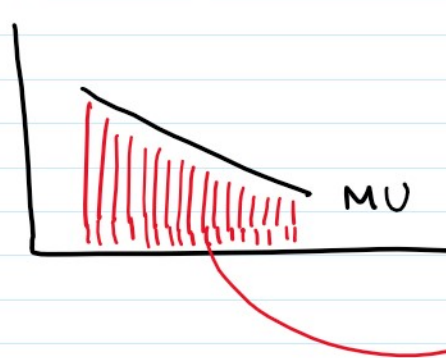
+

ΔECB

existing buyers
ज्यादा खरीद रहे हैं

New
Buyers
नया आगम

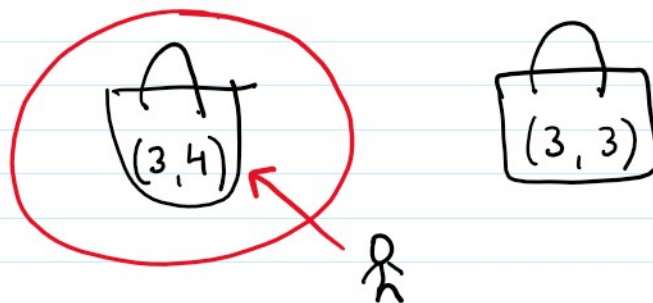
* Area under MU curve is **TU**



* Ordinal Analysis - J.R. Hicks & Allen

1) consumer **rational** ✓

2) consumer has **monotonic preference**



3) Choices are **transitive**

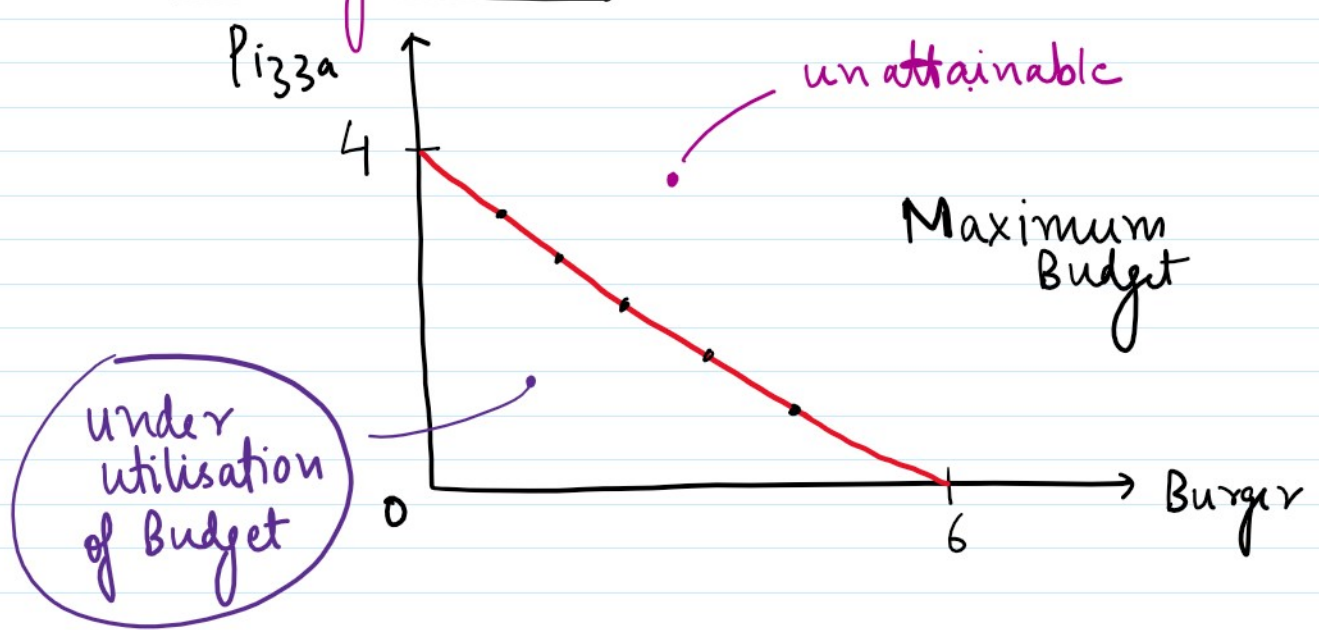
Burger (1) > Pizza (2)

Pizza (2) > Momos (3)



Burger (1) > Momos (3)

* Budget line



$$\text{Slope of B. line} = \frac{P_x}{P_y} \quad [\text{or MRE}]$$

P_x = Price of Good X (£4)

P_y = " " " Y (£2)

$$\therefore \text{slope} = \frac{£4}{£2} = 2$$

* MRE $\rightarrow$ Market Rate of exchange

Budget line equation

$$P_x \cdot Q_x (+) P_y \cdot Q_y = M$$

eg:-

$$P_x = £2$$

$$Q_x = 3 \text{ units.}$$

7

$P_x = ₹ 2$

$Q_x = 3 \text{ units.}$

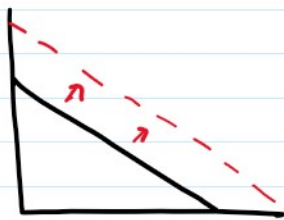
$P_y = ₹ 4$

$Q_y = 6 \text{ units.}$

$M = ₹ 30$

Sol:- $\underbrace{(2 \times 3) + (4 \times 6)}_{\text{Total expenditure}} = \underbrace{₹ 30}_{\text{Money Income}}$

* Shift in Budget line



$P_x (\downarrow) P_y (\downarrow)$

or $M (\uparrow)$



$P_x (\uparrow) P_y (\uparrow)$

or $M (\downarrow)$



$P_x (\downarrow)$

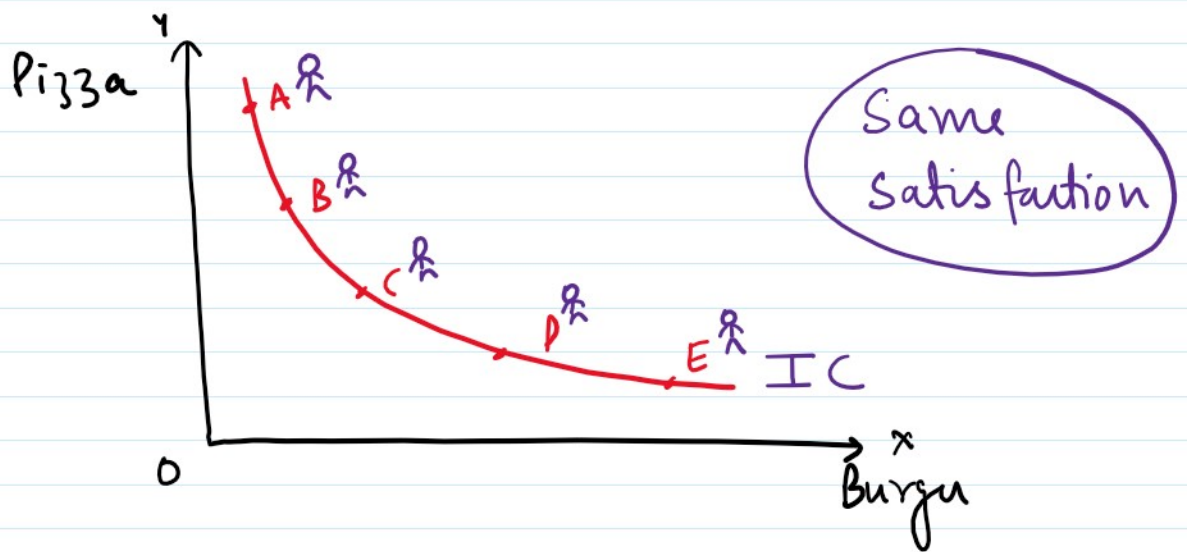
& many more

* Indifference Curve (Iso Utility Curve)

	<u>Burger</u>	<u>Pizza</u>	<u>MRS</u> (दर)
A	1	15	-
B	2	11	4
C	3	8	3
D	4	6	2
E	5	5	1

Same
Satisfaction

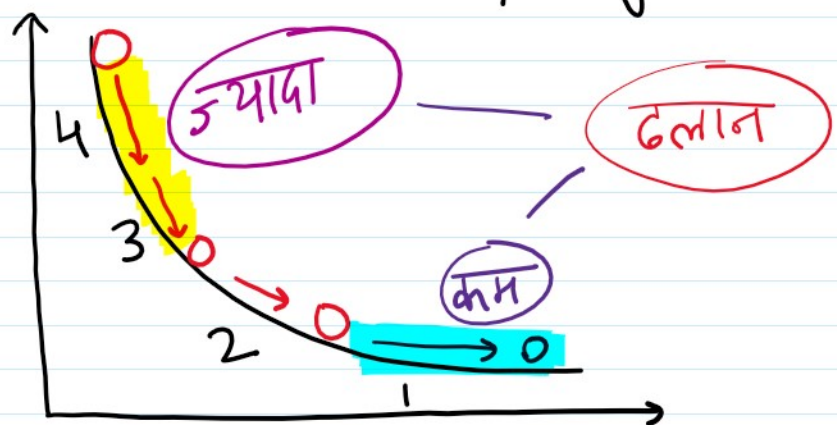
$\begin{matrix} \sqrt{E} & 1 & 0 & 1 \\ E & 5 & 5 & 1 \end{matrix}$



$$\text{Slope of IC} = \text{MRS} = \frac{\Delta \text{Goods Sacrificed}}{\Delta \text{Goods gained}}$$

{ * Marginal Rate of Substitution }

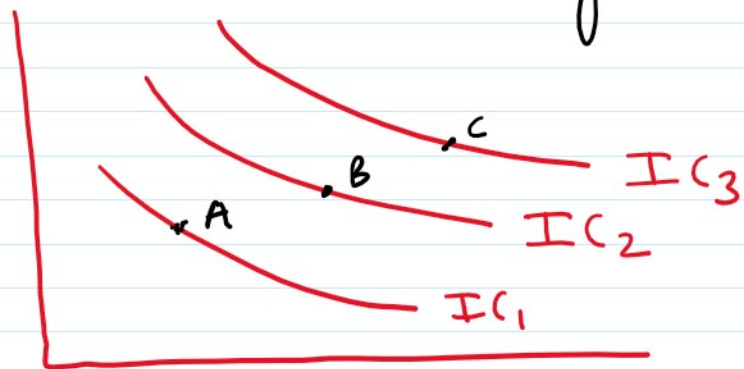
Diminishing MRS is the reason behind convex shape of IC



- * IC is downward sloping
- * " " convex
- * IC never intersect each other

* IC never intersect each other

* Higher IC shows **higher satisfaction**

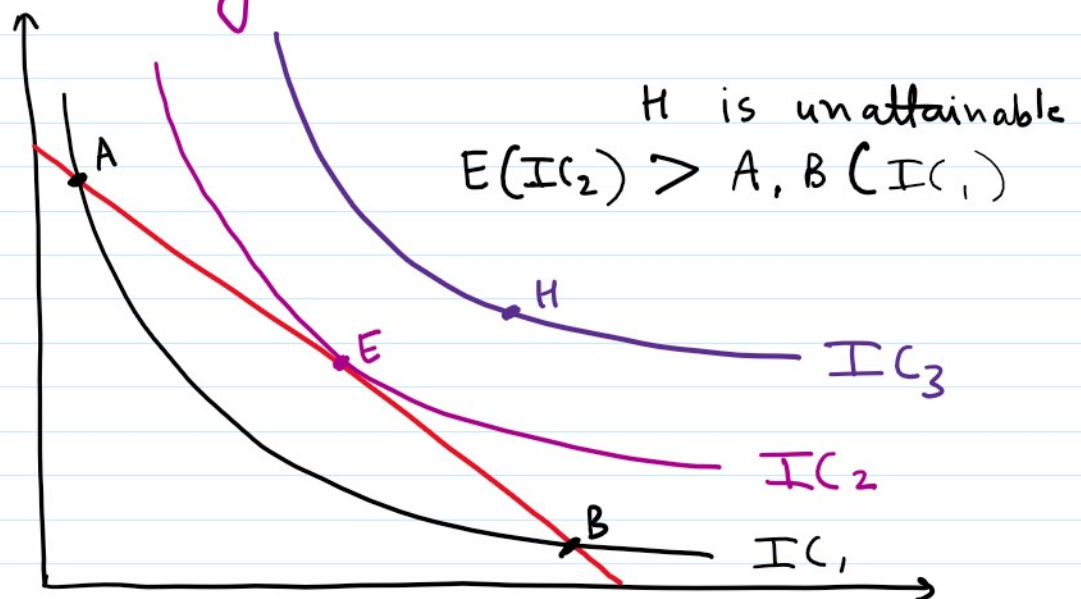


$C > B > A$

Consumer's Equilibrium

Slope of B.line = slope of IC

$$\frac{P_x}{P_y} = MRS$$



E is consumer's equilibrium

E is consumer's equilibrium

$\left(\frac{P_x}{P_y} = MRS \right)$

B. line is Tangent to IC

A $\rightarrow$ $MRS > \frac{P_x}{P_y}$

B $\rightarrow$ $MRS < \frac{P_x}{P_y}$

* Perfect Substitutes $\rightarrow$ IC $\rightarrow$ Straight line

* Perfect complementary goods $\rightarrow$ IC
 $\downarrow$
L-shaped

x ————— x ————— x ————— x