WELFARE ECONOMICS: THE BRANCH OF ECONOMIC THEORY CONCERNED WITH THE SOCIAL DESIRABILITY OF ECONOMIC STATES.

LET'S BEGIN W/ "PURE ECONOMIC EXCHANGE".

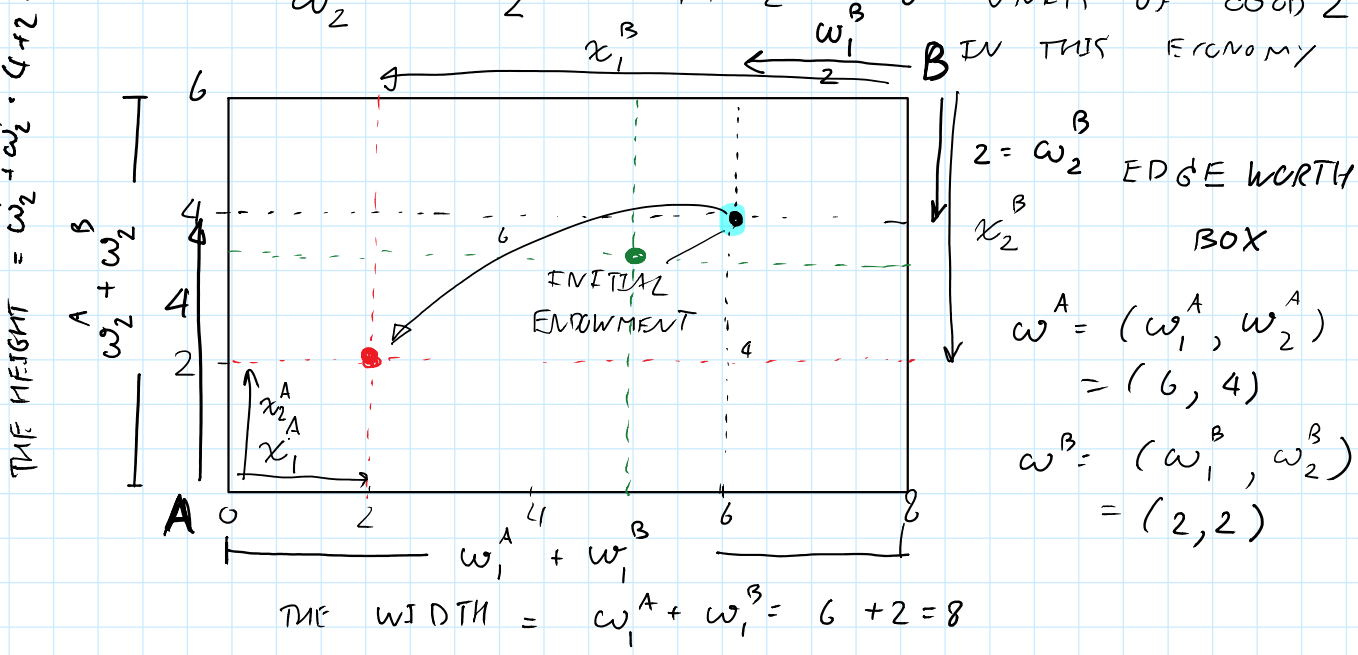
- TWO CONSUMERS, ANNA (A) AND BOB (B)
- THEIR ENDOWMENTS: GOOD 1 AND GOOD 2

$$\omega^A = (\omega_1^A, \omega_2^A) \quad \text{AND} \quad \omega^B = (\omega_1^B, \omega_2^B)$$

EX: $\omega^A = (6, 4)$ $\omega^B = (2, 2)$

$$\omega_1^A + \omega_1^B = 6 + 2 = 8 \text{ UNITS OF GOOD 1 IN THIS ECONOMY}$$

$$\omega_2^A + \omega_2^B = 4 + 2 = 6 \text{ UNITS OF GOOD 2 IN THIS ECONOMY}$$



$$\omega^A = (\omega_1^A, \omega_2^A) = (6, 4)$$

$$\omega^B = (\omega_1^B, \omega_2^B) = (2, 2)$$

- ALL POINTS IN THE BOX ARE FEASIBLE ALLOCATIONS
- (x_1^A, x_2^A) DENOTES AN ALLOCATION TO A
- (x_1^B, x_2^B) " " " B
- AN ALLOCATION IS FEASIBLE IF

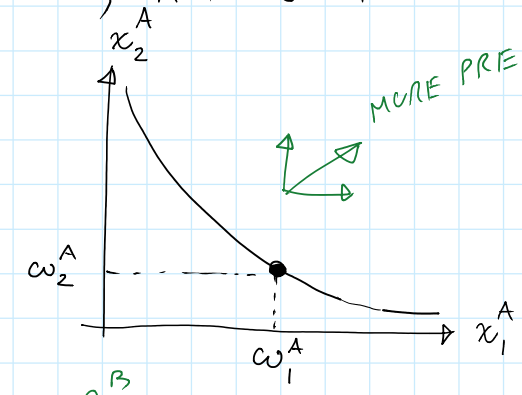
$$x_1^A + x_1^B \leq \omega_1^A + \omega_1^B$$

$$x_2^A + x_2^B \leq \omega_2^A + \omega_2^B$$

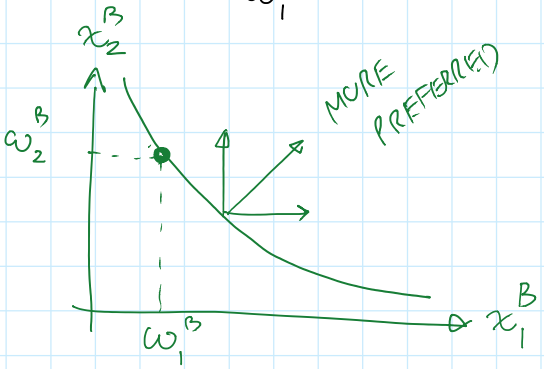
$(6, 4)$ → FOR ANNA (A)

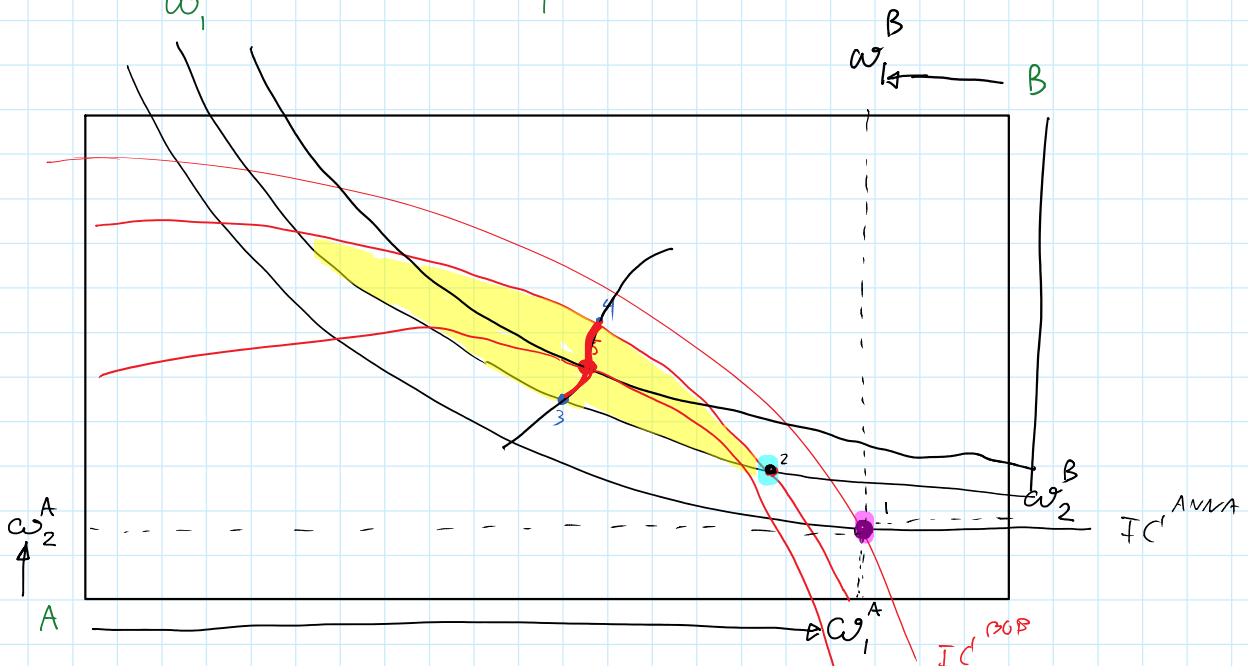
$(2, 2)$ → FOR BOB (B)

NOW, ADDING PREFERENCES INTO THIS STORY...



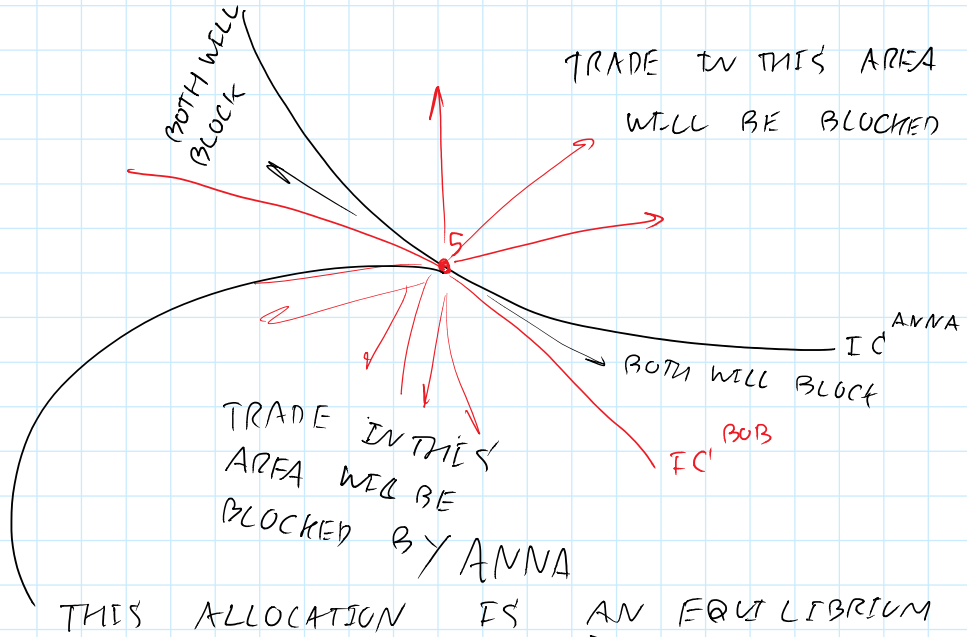
CONSUMER A (ANNA)





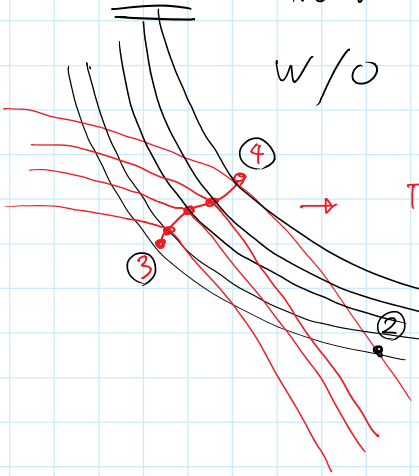
9 START FROM 2, ALL ALLOCATIONS IN THE YELLOW LEN ARE FEASIBLE. (WHY?)

- TRADE BETWEEN A AND B WILL FINISH AT POINT 5 WHERE THE TWO IC's ARE JUST "BACK TO BACK". FURTHER TRADE WILL NOT BE POSSIBLE. (WHY?)



THIS ALLOCATION IS AN EQUILIBRIUM

WE CALL THIS ALLOCATION "PARETO OPTIMAL ALLOCATION" SINCE NOW WE CANNOT IMPROVE WELFARE OF ONE PERSON W/O MAKING THE OTHER PERSON WORSE OFF.



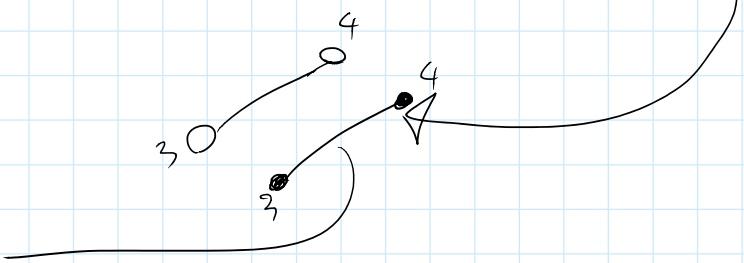
→ THE CHORD FROM (3) TO (4) IS CALLED "THE CORE"

CONTAINS ALL FEASIBLE ALLOCATIONS THAT WILL NOT BE "BLOCKED" BY A OR B! (WHEN WE START FROM (2)

THE CORE "CONTAINS"

ALL POSSIBLE PARATO OPTIMAL ALLOCATIONS THAT ARE WELFARE IMPROVING FOR AT LEAST A CONSUMER OR FOR BOTH CONSUMERS' RELATIVE TO THEIR OWN ENDOWMENTS.

CONSUMER S'



WHERE THE TRADE WILL END UP W/
DEPENDS ON HOW TRADE IS CONDUCTED.