Personal Copy

Geography

By : Neetu Singh

Class Notes
(Part - 3)

Neetu Singh Geography Hand Written Notes

2023 - 24

DIRECTION INSTITITE FOR IAS EXAM

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Geography

Neetu Singh
Handwritten
Notes
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What is Geography

Spatio (chorology) → Location – Temporal Discipline (chronology) → Time

Deals with →

5 Themes of Geo.

1. Location
2. Place
3. Region
4. Movement
5. Human-Environment relation

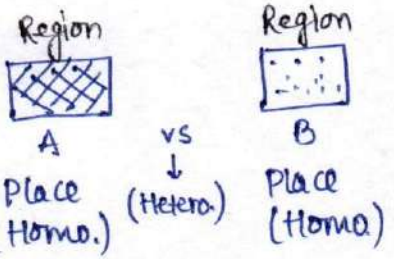
(1) Location – Where it is

- Absolute
- Relative

(2) Place – What it is → Characteristics of location

(3) Region – Homogeneous (within) / Heterogenity (Between)

Areal Differentiation



(4) Movement (b/w regions or places)

- → People – Migration – Relocation
- → Goods + services – Trade
- → Ideas – Expansion ★ ← Diffusion ★

- The term/theme 'Movement' relates to diffusion

  Two major types of diffusion are distinguished

  → Relocation Diffusion (with movm^{n}t of people)

  → Expansion Diffusion (diffusion of ideas or perspectives only)

(5) Human - Environment Relation — adapt (Determinism)

                                  — change (Possibilism)

Cultural Regions of World

The term 'Culture' is the comprehensive term that includes all the constituent that regulates way of living. It identifies the lifestyle of people, their prevailing value and belief.

It involves 3 inter-related terms

a) Cultural Trait

it represents single attribute of any culture

b) Cultural Complex (Regulator of Cultural traits)

it incorporates causes & consequences of interactions that developes and sustains cultural trait. It is discrete combination of traits.

c) Cultural System

from complex - few are dominating traits based on which Cultural Regions of the World are demarcated.

Cultural Regions of World

- Boak & Webb classification (Historians)

System involved
- Religion
- Eco'ic Activity
- Race

Major Regions → (Higher levels of Homogenity)

i) Christianity (Religion)

ii) Islamic (Religion)

iii) Indic (Eco'ic Activity)

iv) East Asian (Race)
↳ China, Japan

Minor Regions → (Lower/weak levels of Homogenity)

v) S.E. Asian

vi) Meso African

* vii) Minor Oceania

Booklist and Reading for UPSC - CSE Geography Optional

https://youtu.be/tKF1CugfF4c

USA, Mexico, Canada

N. America – 3rd largest conti. ≠ Cultural Demarcation

(Central America)

Mainland — Islands (Caribbean)

Guatemala — Cuba

Panama

River Rio Grande

① Anglo America (Canada + USA)

Vs

② Latin America

Mexico + Central America + South America

↳ Brazil, Argentina

③ Africa (2nd largest)

Cultural exception

N^n Africa – Morocco, Algeria, Tunisia, Libya, Egypt ≠ rest of Africa

+

South Africa

④ Asia

1. N^n Asia — Russia
2. E^n Asia — China (Mainland), Japan (Island)
   Mongolia
3. Central Asia — Kazakhstan
4. S.E^n Asia
5. South Asia — India (M.L.), Sri Lanka (Is.)
6. SW Asia — Afghanistan, Turkey, Saudi Arabia

NOTE

S. Asia = ISC + 3s. Countries (SL, Maldives)

Indian subcontinent (M.L.) ⇒ Pak, Ind, Nepal, Bhutan, BAN

SAARC = S. Asia + Afghanistan (member in 2005)
(S.W Asia)

4. S.E. Asia

↳ Mainland – Myanmar, Indo-China (Peninsula), Malay (Peninsula)
Vietnam Singapore

↳ Islands (East Indies)

↳ Indonesia, Philippines

Complete Notes Explanation

https://youtu.be/WDEd7Fcvo38

Christianity Culture – Dominant Most (Major part of Habitat World)

Caucasoid (white people) ⟷ Religion / Race — as Homogenous traits

(2) (Sects)

Cosmopolitan (Dev'ed World)
(Protestant Christianity)

- **Hearth** → Source: Wⁿ Europe (UK.)
  - Intensive land use Culture
  - Exhausted Natural Resource base
  - Depleting Human pop'n (Max. pop'n in old age cohort)
- **Destination**: (USA) Anglo America + Aus & NZ
  - Extensive land use Culture
  - ever multiplying Natural Res. base
  - growing human pop'n (max. pop'n in mid-age cohort)

Fundamentalist (Developing World)
(2) Sects

- **Roman Catholic Christianity**
  - Hearth (Colonial settlers): Sⁿ Europe +SW, Vatican
  - Destination (Colonies): Latin America
    - * Sizeable Negroid Race also
- **Eastern Orthodox Christianity**
  - Eⁿ Europe +SE

Anglo America + Aus & NZ
↳ New World settled by European settlers

Cosmopolitan
- follow scientific temper/rationality
  ↳ don't blindly belief anything
- Dev'ed World
- higher eco'ic affluence.
- least impact of religion in dictacting day to day life, complete absence of role of pope

Fundamentalist
- Dictacting role of religious ideology in day-to-day living.
- Restricted scientific rationality
- Eco'ically dev'ing status or Status of Economies in Transition.
- Strongest role of pope in society & culture.

Europe

1) S-W Iberian Countries — Spain, Portugal

2) S Appennies Countries — Italy, Vatican

Follow Romance Chathotic Christianity

3) S-E Balkan — Romania, Bulgaria, Greece etc

↓

Follow E^n orthodox Christianity

Danube river
- Demarcate border b/w Romania & Bulgaria
- Lengthiest river of Europe
- mouth opens in Black Sea

Europe (contd.)

4) W British Isles = Ireland + Grt. Britain

Ireland → Irish Republic & N^n Ireland
(exception * follow orthodox christianity)

Grt. Britain → G.B + N^n Ireland = UK
G.B → Scotland, England, Wales
(Part of Ireland Island)

follow Protestant Christianity

5) Low Countries – Netherlands (Holand), Belgium, Luxembourg
- elevation near sea levels
- low lying countries

6) N Nordic States – Iceland, Norway, Sweden, Finland, Denmark
classification on ethnicity, race
Protestant Christianity

7) E Baltic States – Estonia, Latvia, Lithuania (3 of 15 breakaway countries from USSR)
~~from~~ Share shoreline with Baltic Sea
follow E^n Orthodox Christianity

E Russia, Belarus, Ukraine, Moldova (other breakaway countries from USSR)

Former USSR - 1991

15

Commonwealth of Independent States → CIS (12)

Baltic States (3) → Eⁿ Orthodox Christianity

Islamic Culture ← (5) Central Asia

Eⁿ Orthodox Christianity ← (4) other Breakaway countries (Russia, Belarus, Ukraine, Maldova)

Islamic Culture ← (3) Caucasus States (Armenia, Georgia, Azerbiajan)

8) Alpine States - Switzerland, Hungary, Austria, Czech Republic, Slovakia

↑ Protestant Christianity ↓

France, Germany, Poland

Islamic Culture

- Religion - ideology
- Race - Caucasoid
- Fundamentalism (extreme)
- "Isolated" (Desert) culture
- ** Geo Political Vulnerabilites

Cultural Regions (acc. to Boak & Webb classification)

N" Africa → S.W. Asia → Central Asia

Israel
Lebanon
DO NOT BELONG TO ISLAMIC CULTURE

* including Caucasus States
Armenia
Georgia
Azerbiajan
largely belongs to Islamic Culture

* Boundary

Europe | Ural Mts. + Ural River + Caspian Sea | Asia

NOTE: Geo Political Vulnerabilities

Baku, Azerbiajan → Petrochemical dominant location

Suez Canal → 2nd dominant trade route

Persian Gulf → Crude oil prominence

↓

Gulf Countries – Iran, Saudi Arabia, Iraq, Kuwait, Qatar, UAE, Oman, Bahrain

Geo. Political Vulnerabilities
- Locational favourable
- Resources richment
- Fundamentalism (retaliation)

* Geopolitical Vulnerabilities

a) Locational benefit
- Trade Routes
- Trans continental Road (Rail) network Development

b) Hydrocarbon reserves

SHIAS — Dominance of shia in Iran + Azerbiajan

SUNNIS → this sect has ^ major part of Islamic culture

Religious sect :-

is (not) valid base to study Islamic Culture as Major part of this culture → (Sunni)

* Iran → Shia

N° Africa → S.W. Asia → Central Asia

→ Caucasus States

Based on
Eco'ic Devpt

a) Affluent countries (Rich) – Gulf countries – near absolute dependency on crude oil & (Saudi Arabia & UAE)

b) Dev'ed Region – Turkey (Secular State) – higher diversity of self sustaining agricultural & industrial development along with high levels of cultural coherence & cultural parity

c) Dev'ing Region (most) – Agrarian + mining + extractive industries – Eg. Egypt, Kazakhastan, Jordan

d) Destructed (in impact of GeoPolitical Vul.)** → Nat. resource + Loc'n centric
Afghanistan, Syria, Yemen

Other than Boak & webb approach, Islamic culture is also followed in Pak, BAN & Maldives
(Don't mention when ques is specifying Boak & Webb)

(When it is asking abt Islamic culture without mention of Boak&.. You can mention it)

Major Culture

Indic Culture (S. Asian) — otherwise multi-racial multi-religious culture

Eco'ic Activity is Homogenous (Rural agrarian)

***East Asian Culture** → Religions ~~conversity~~

- Confusian – China
- Shintoism – Japan
- Animism → Primitive Religion
  - Naturalist (Bhutan) → Natural forces worship
  - Shamism – Guru/Spiritual leaders
- Buddhism (Bhutan, Mongolia) → N. Korea, S. Korea, → Taiwan (sizeable orthodox christianity)

✓ Race – (Mongoloid)

✓ Rice-Fish Culture (Dietary Culture)

Oriental Cultural zones with Evolving (Indic) (Evolved) (E. Asian) Occidental Culture

Oriental Cultural zones — largely Dev'ing eco'ic states → **Eastern Culture**

Occidental Culture — largely dev'ed eco'ic states → **Western Culture**

Eastern Culture

- Strong family & societal bondage
- Joint family norms.
- Use of Social capital (Grping of people)
- Dev'ing rural agrarian set up/economy
- Higher prevalence of sectarian, ethnic or religious divide.

Japan, Singapore – melting pt. of oriental & occidental culture

Western Culture

- Weak family & Societal bonds
- Nuclear family norms.
- Lack of use of societal capital
- Urban industrial set up/economy.
- ~~Near complete absence of se~~ Moderate to Low levels of prevalence of sectarian or ethnic divide.

Minor Cultural Region

S.E. Asian Culture

Weak homogenity ↑ Why minor cultural ?

(1) Oriental Culture zone with evolving Occidental Culture

× singapore → occidental totally

(barring the exception of)

(2) Religion — Buddhism → Mainland (↳ dominant in) × Malaysia (exception) → Islamic

(3) Islamic → Islands (↳ dominant in) × Phillipines → Orthodox christianity

× Bali → Hindu

(4) Race — Malaya = Race, Mongoloid × Negoroid race in Eⁿ Indonesia, Timor

(5) Eco'ic Deypt — Dev'ing Eco. (commonly) − × singapore (Dev'ed)

× Laos (Eco'ically most backward)

Limitations of Boak & Webb Classification

- No mention of Language, not used in classification (ignored)
- included South Africa in Meso-African Culture, which is wrong bcz Protestant Christianity Dev'ing Colonial Destination)

(Rainbow country)

↳ extreme mossac of ethnic identity

So, not recognizing cultural characteristics of South Africa.

Indic Cultural Regions

- This cultural region also represents physiographic unity demarcated by Himalayas & marginal water (with higher specifications in Indian Subcontinent)
- Religiously & Racially, the region projects diversity with Pak, BAN & Maldives - Islamic states, SL - Buddhism & Shamism, Nepal - Hinduism, Bhutan - Naturalist & Shamism India - Secular State

Meso African Culture

- 4th World Community (Primitive tribal pop'n)
- Dominating presence in Major part of Africa

Why Minor? ↓ absence of interactive links thus less Coherent (Minor) Culture

i) Bedowins – Camel herders – (Sahara Desert) – Chad, Mal, Niger

ii) Masais – Cattle herders – (Savanna) – Kenya, Tanzania (E" Africa)

iii) Hauzas – Cultivators – (Upper Guinea) – Nigeria (W" Africa)

iv) Pygmies – Hunting / Gathering (Congo Basin) – Dem. Rep. of Congo, DRC (central Africa)

v) San Bushmen / Hottentots – Hunting / Gathering – (Kalahari Desert) – Botswana (S" Africa)

(None of these interact with each other)

- Masais people depend on drinking blood of their animals
- congo river – only river to cross equator twice (central Africa)

South Africa → Protestant Christianity (colonial) ^ Dev'ing Destination

Geography of Language

Linguistic families based - Isoglosses (a boundary line b/w 2 distinct L.R.) - Linguistic Regions (L.R.) (12)

1. Indo European L.R (covers Anglo Am., Latin Am., Europe cultural regions (define them))
   English, German, French, Spanish, Portugese, Slavic
   Russian, Indo Iranian (Hindi, Pakhtu (Afg.), Persian (Iran))
2. Ural - Altaic
2. Ural - Altaic L.R
   Finnic, Kazak (C. Asia), Uzbek
3. Japenese - Korean L.R (E. Asia)
4. Sino - Tibetan L.R.
   Mandarin (E. Asia), Thai (S.E. Asia)
5. Austro - Asiatic L.R
   Burmese (Myanmar) - S.E Asia -, Laotian, Khmer (Cambodia (present) S.E. Asia)
6. Malaya - Polynesian L.R
   Phillipino, Bilbao (Spain, France), Dayak (Indonesia)
7. Afro - Asiatic L.R (N^n. Africa)
   Arabic (SW Asia)
8. Dravidian L.R
   Tamil, Telugu, Malyalam
9. Saharan L.R (Chad)
10. Sudanic L.R (Kenya)
11. Niger - Congo L.R (Nigeria ↑ W to C Africa ↓ DRC)
12. Khoisan L.R. - S^n Africa (include S.A.)

Population Geography

1. Population theories (Demographic theories) – Malthusian, Marxian, Demo. Transition Model.
2. Pop'n Variables (Demo. attributes)
3. Growth & Distribution of Global Pop'n
   - Trend (Time) [Chronology]
   - Pattern (Space) [chorology]
4. Pop'n Composition (Age-sex)
5. Pop'n Problems
   - Over Pop'n (Antinatalism) ← controlling the pop'n. Eg. India, China
   - Under Pop'n (Pronatalism) ↓ encouraging the pop'n.
   - ↓ Policies
6. Migration
7. Optimum Pop'n Concept
   - ↓ Concept of well being
   - \+
   - Quality of life] PQLI (Phy. Quality of Life Index) living — +ve, -ve
   - HDI — +ve, -ve

Growth ≠ Devpt
↓
not synonymous

8. Pop'n as Social Capital

Demographic Theories

Malthusian Concept (1798) (Doomsters')

- Robert Thomas Malthus – Theory on Pop'n

based on - human animal instinct

2 Universal laws

(1) Passion b/w sexes → Early marriages → larger no. of births

(2) Food required for survival

can be controlled by

★ Preventive Checks in human control
- delaying marriages
- moral restraint
- abortions

in abs. of its application

Uncontrolled Pop'n will grow @ Geometric Rate (×2, 4, 8, 16...), however,

means of subsistence grows @ arithmetic rate (×1, 2, 3, 4...)

in due course of time, gap b/w Pop'n & means will (↑)

↓

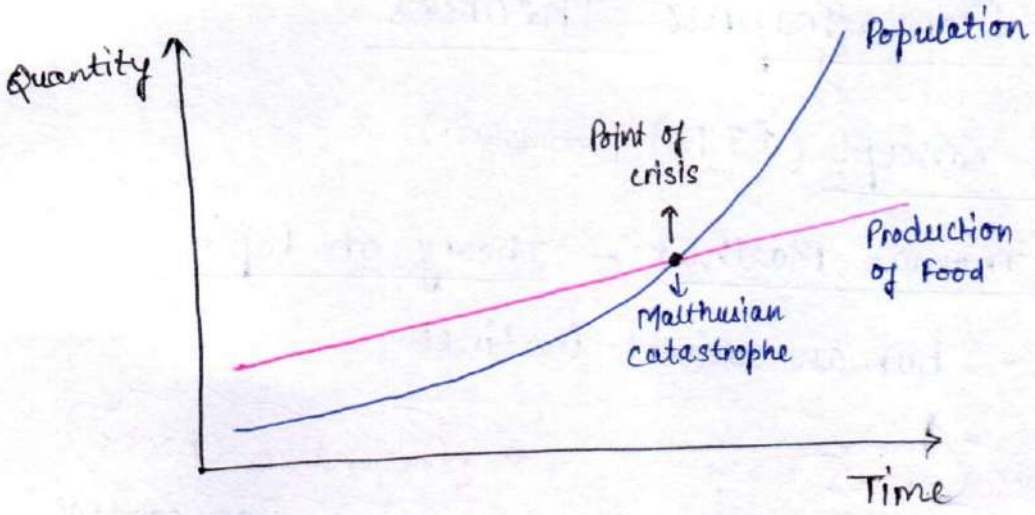
divide of society into HAVES / HAVE NOTS

↓

scarcity thus Positive Checks nature induced
- epidemic
- starvation
- violent Conflicts
- Vulnerabilities to Natural Calamity

⇓

Pop'n (↓)



Evaluation / Appraisal / Analysis / Validity of Malthusian Concept

+ve arguments in favour

a) 1st attempt of theory building in demography.

b) 1st attempt to note urgent need of controlling pop'n (based on pop'n projections)

Validity of malthusian viewpoint in

*c) delaying marriage is most common measure in Antinatalist pop'n policies

d) Correct with geometric rate of growth in pop'n

[Exponential growth of pop'n since 1950s justifies Geometric rate. However, in the sustained growth of pop'n with recognisable (↑) in quality of life, arithmetic rate of growth of means of ~~substi~~ subsistence proves to be incorrect.

This approach is referred as Neo Malthusian Approach

-ve arguments against

a) Over generalisations

- ignoring biological limit of fertility
- (desire to have sex) ↖ biological ₹ sociological needs ↳ (decision to give birth to a child)
- * Mixing

b) Arthmetic rate is impractical (Neo Malthusian)

c) Growth of Pop'n do not divide society (Karl Marx)

↓

divided society leads to growth of pop'n

Capitalist setup

b) Taking pessimistic look to the technological innovations & growth of resources.

not a demographer

Marxian Concept

- critic to Malthusian Concept
- Presented Demographic idea based on assessment of (Capitalism) - the evil/injust Politico-economic setup divide society

(Rich) Vs (Poor)

- Minor share of pop'n
- Owners of means of prod"
- Owners of profit
- Saving on labour wages

Multiplying wealth

- Major share of pop'n
- Major contribution to Eco'ic function
- lacks in entitlements in profit
- deprived of legitimate wages

Multiplying Pop'n (only asset they possess)

based on assumption that it will (↑) work force thus income of family ↓ leading to pop'n growth

reality it (↑)es deprivation

∴ Politico-Eco'ic setup when ~~bec~~ becomes just → PARITY

Pop'n will get controlled

Eg. Dev'ed World

Kar Marx emphasized that in order to contain growth of pop'n there is req$^{m't}$ of changing politico-economic setup from exploitative & divisive capitalist type to inclusive & just socialist type (more parity and & equitable)

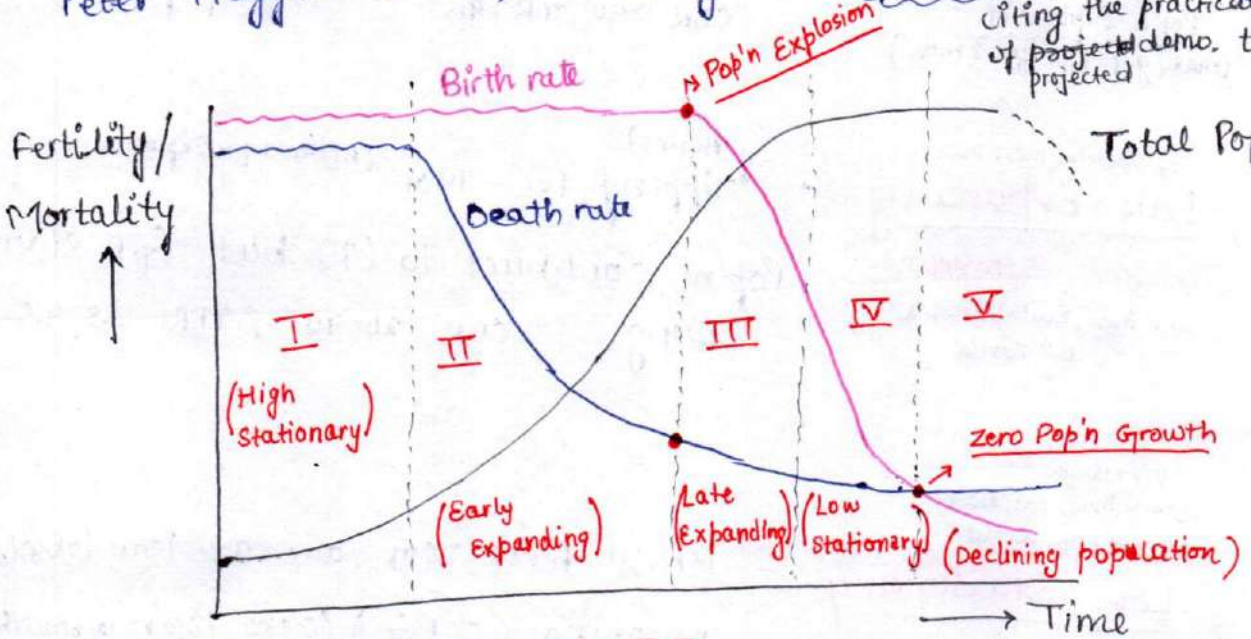
Demographic Transition Model (Vital Revolution / Demo. Cycle)

- **Original Propounders** - based on European Demo. experience
  - Thompson (1927)
  - Notestien (1945)

3 Parts of Model → Stages, Prediction, Causes

- **Modification**

Peter Haggett (1971) → integrated Prediction into Stages citing the practicality of projected demo. trends.



Peter Haggett

Assumptions of Demo. Transition Model

1. Both fertility and mortality registers transition from high levels to low levels in due course of time.
2. Dip in mortality is always experienced first. (as to regulate fertility, there is requirement of perception modification)
3. The transition of fertility & mortality is simultaneous

to cultural, economic and technological transition.
(from primitive to modern)

Stages

I) **High Stationary** (Traditional European)
Eg. 4th world (5% pop'n)
– High Fer. & Mor. with Stable Total Pop'n
↳ lesser e° and higher infant mor. rate

II) **Early Expanding** (Industrial European)
Eg. Afg. & Yemen (Asia), most Africa
– High Fer. + Dipping Mor. – (↑) in total pop'n with (↑) in Growth rate of pop'n
due to (↑)ed availability of medical & health services
CBR >40, TFR >4.5
tends to conclude at Pop'n Explosion (max. gap b/w fer. & mor.)

III) **Late Expanding** (Modern European)
Eg. India, most Asia
Latin Am., South Africa & N^th Africa
– (Begins) Dipping Fer + Mor. (After Pop'n Explosion)
Pop'n continues to (↑) but G.R starts (↓)ing
CBR 20-40, TFR 2.5-4.5

IV) **Low Stationary** (Predictive)
USA + Canada (Anglo Am., Aus, NZ)
↳ Dev'ed new World
successful antinatalist (China, Turkey, Kazakhastan,) Uruguay
– Both fer & Mor. are at low levels reaching (ZPG) (zero Pop'n Growth)
represents dev'ed phase of politico-cultural & societal setup & low levels of pop'n growth
CBR <20, TFR near replacement level

V) **Declining Pop'n** (Predictive)
Eg. European countries
– Fer. have dipped below Mortality
Begining of decline of pop'n with variable magnitudes.
CBR <20, TFR <2.1

Causes that make diff. countries of world experiencing diff. stages of demographic transition in a given point of time.

1) The causative component of demographic transition deals with dual characteristics of humans - Biological and Cultural characteristics.

2) Biologically human pop'n projects similarity in having capacity to reproduce their own kind.

3) It is cultural difference with specification of economic levels of development that makes different countries experiencing different stages of demographic cycle in a given point of time.

Crude Birth Rate

CBR (Fertility) – No. of live births per 1000 persons per year

Used for global studies/comparison

CDR (Mortality) – No. of deaths / 1000 persons / year

Crude Death Rate

As it measures deaths in reference to total pop'n, it don't provide distinction b/w the causes of mortality & ∴ it has restricted utility in global comparison/studies

CDR: Only used to compare Pop'n zones with identical pop'n composition

Global CBR (21)

- High CBR – >40 – I, II
- Mod. CBR – 20-40 – III
- Low CBR – <20 – IV, V

Global CDR (9)

Austria, Sweden ↑ have high CDR → High proportion of pop'n in older age

Vs

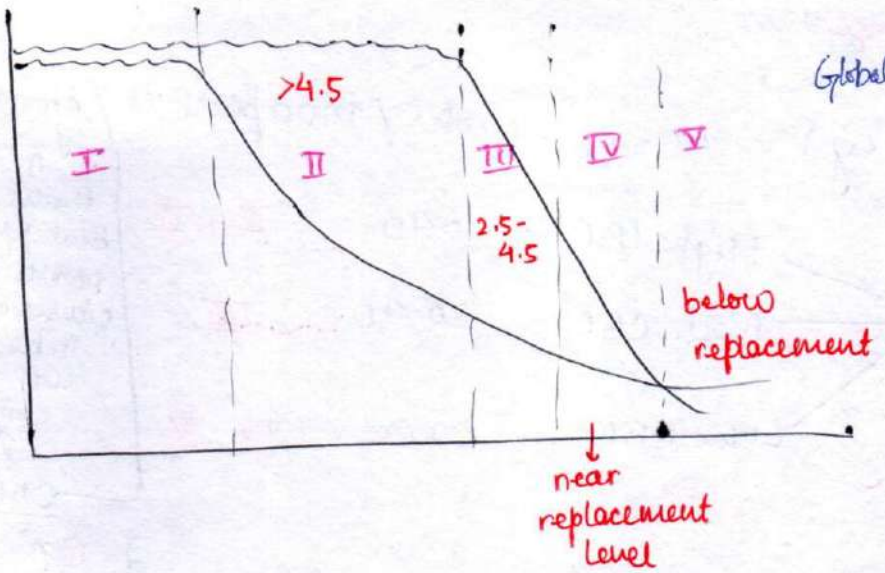
Afg., Somalia ↑ have high CDR → Low life expectancy & high infant & child mortality rate

Total Fertility Rate (TFR): Practical substitute of CDR for global pop'n studies.

i) Simply fertility rate that denotes avg. no. of children that would be born to a female through her lifetime, if

a) the woman were to experience exact ~~current~~ current age specific fertility throughout her lifetime (Age specific fertility Rate tends to measure annual no. of births to a female of specific age or age group per thousand women in that age group)

b) the woman would survive from birth ~~throug~~ to the end of her reproductive life.



Global TFR
3.3

Replacement level
2.1 - 2.5

Stage I — 4th World communities (primitive tribal pop'n) (less than 5% of world pop'n)

Stage II — Most of Africa + Afg. & Yemen

CBR → >40 , TFR → >4.5

Stage III — Asia , Latin America , N^n African, South Africa

CBR → 20-40 , TFR → 2.5-4.5

Stage IV — Dev'ed New World (Anglo America, Aus, NZ..) (as they started Demo. cycle after Europe)

+

Successful Antinatalist (which skipped one stage of Demo. Transition)

→ China, Turkey, Kazakhastan, Uruguay

CBR → <20 , TFR - @/near replacement level

Stage V — most European countries

CBR → <20 , TFR is below replacement level.

Demographic Variables / attributes

UN fund for Pop'n Activities (UNFPA)

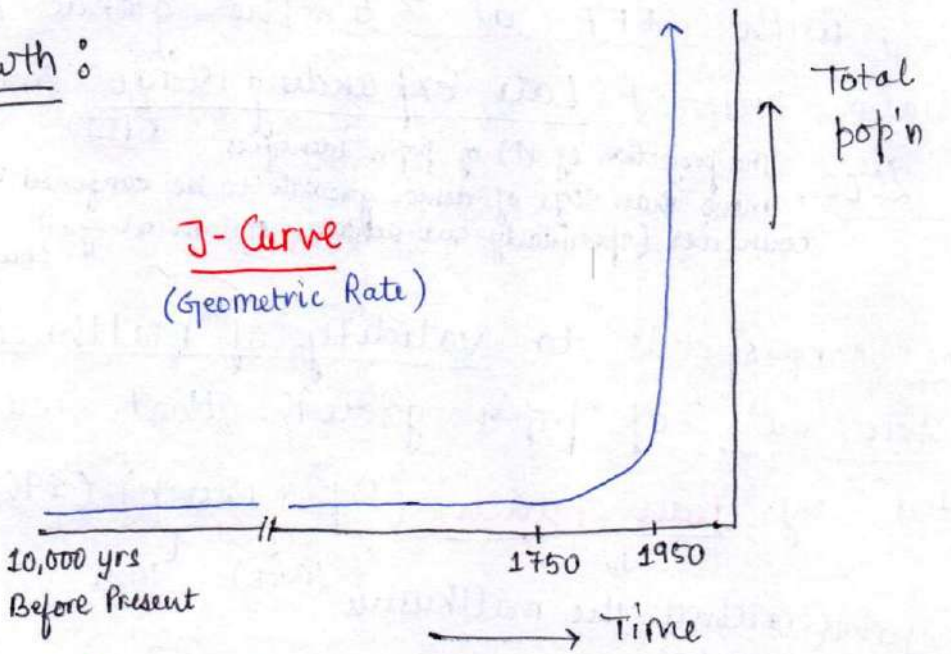
- **Functional Variables** (directly influence demo. cycle)
  - Fertility
  - Mortality
  - Migration
- **Structural Variables** (results of direct influence of fn variables)
  - Pop'n size
  - Pop'n Distribution
  - Pop'n composition
    - Age
      - Young
      - Mature
      - Old
    - Sex
      - Male
      - Female

Inter-related terms

★ Growth and Distribution of Global Pop'n

(Trend) (Pattern)

Growth :



J-Curve validates / represents these concepts ⇐

- Malthusian — Geometric Rate
- Ehlrich — Pop'n Bom

→ The trends of Global pop'n growth is traced from the begining of cultural history, i.e., 10,000 yrs before present (B.P) - Paleolithic culture

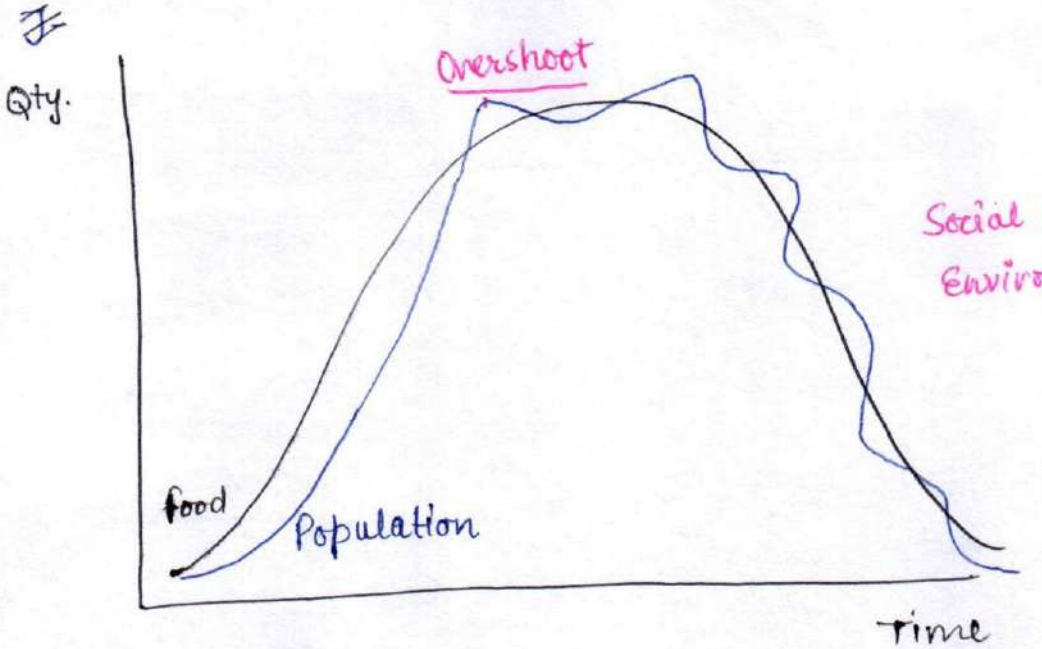
→ In the lengthiest time frame, i.e., b/w 10,000 yrs B.P. to 1750 Global Demographic cycle remained in high Stationary Stage (I).

→ With industrial revolution (till WWII) (↑) in function capacity (& affordable availability of health & medical services) started inducing (↓) in Mortality making global demo. cycle enter Early Expanding Stage (II). ((↑) in pop'n)

→ Since 1950s, global pop'n have been exponentially growing developing "J-Curve" of demographic growth (denoting Population Explosion)

→ UNFPA (2010-11 tables) projecting stability of global pop'n by 2150 A.D. at near 11 Billion mark, justifies that global pop'n will continue to grow, however, with TFR at 3.3 the global demo. cycle have entered Late Expanding Stage (III) since year 2000. The projection of (↑) of pop'n identifies more than 90% of demo. growth to be confined in African countries (specifically sub-saharan African along with South Asian countries)

★ J-Curve corresponds to validity of Malthusian geometric rate of pop'n growth that was supported by Paul Ehlirch (Pop'n Bomb) (1968)
(Book) (Term)
⇓
supported/enriched the malthusian concept.



Paul Ehlirch

Pop'n Bomb (1968) = Geometric Rate

Overshoot = Malthusian Catastrophe (Pt. of crisis)

↓

a), b), c)

+

** Envrtal / Societal Callapse

↓

a) Starvation
b) Misery
c) Lack of new cultivable land

** I = PAT equation

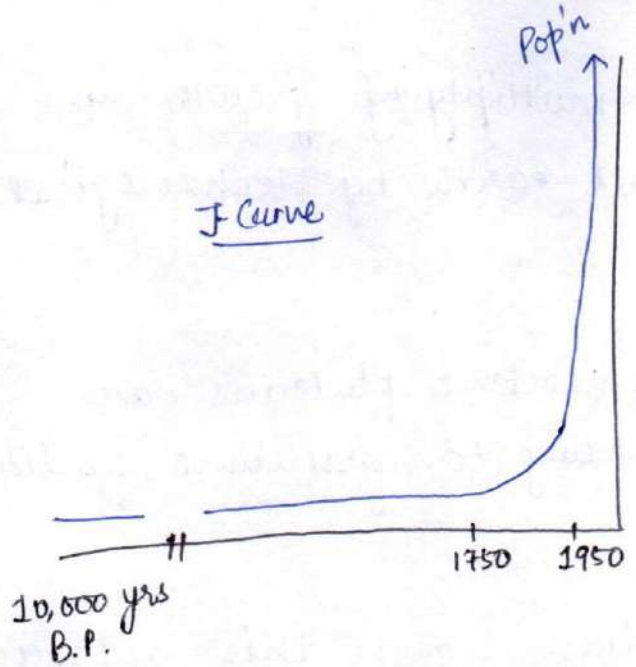
(I) function of (P) (A) (T)

(human) Impact — Pop'n — Affluence — Technology

↓ — ↓ — ↓

Malthusian concept covered only this — rich/higher level of living → detrimental effect — can have both +ve & -ve effect

inducing influence of availability & affordability of resources.



Pessimistic viewpoint ↑

J-Curve validates these
- Malthusian Geometric Rate – Arthmetic Rate X
- Ehlrich Pop'n Bomb – decline of Pop'n after overshoot X

Not valid as Growth of pop'n is projected till 2150 A.D (UNFI

taking Pessimistic approach to tech. innovations ← Malthusian approach

("Doomsters") ← Pessimistic viewpoint

Growth Projected till 2150 A.D

CIT Rev'n (Communication, Info., Tech.) → facilitates Expansion Diffusion

Medical Rev'n

Agri'al Rev'n

1950

- Not cornucopian
- Supporter of Neo-Malthusian

Julian Simon in his :
- Economies of Pop'n Growth (1971)
- The Ultimate Resource (1981)

credited to

corresponds to

'S' Curve (Homeostatic Plateau) ← talks about carrying capacity enhancements

Neo-Malthusian approach (More balanced approach) ← involves higher emphasis on frontier ethics

Cornucopian approach ("Boomsters") (extreme approach) ("Horn of Plenty")

- → irresponsible course of deviant
- → don't believe in scarcity of resources
- → not need to regulate pop'n Eg. Brazil, South Africa, Russia

believes in infinity resource base, OR, approach of plentiful resources

→ The S-curve depicts ever-multiplying growth in carrying capacity of planet earth by technological innovations

→ Since 1950s, (3) defined Homeostatic plateaus are thus recognized (corresponding to agriculture, medical and CIT revolutions)

→ Credited to scholar Julian Simon, this approache is called Neo-Malthusian Approach

→ It is these homeostatic plateaus that terminates validity of arithmetic rates (of Malthus) & scarcity approach (of Ehrich)

Growth:
J-Curve
S-Curve

Distribution of Pop'n

Unequal

Prove

- In total pop'n, only 10 countries accounts for approx. 60% of global pop'n.

[* China, India, USA (<5%), Indonesia, Brazil, Pakistan, BAN, Russia, Nigeria and Japan]

⇒ * from among these 10 countries, it is only China (19%) and India (17.5%) accounts for major share of global pop'n

- In Density Distribution,

↳ unequal pattern is comprehended at continent level

↳ Global pop'n density is at 40 persons/km² → per sq. km

↳ The Dense clustered continents includes Asia (108 persons/km²) and Europe (101 persons/km²)

↳ The sparse clustered continents includes Africa (21 persons/km²)
Latin America (20 persons/km²)
Anglo America (14 persons/km²)
Oceania (3 persons/km²)

Why unequal distribution

* Natural Conditions (climate, topography, soil etc.) → Favourable or not
* diff. Levels of Cultural Eco'ic development (human factor)
  ↳ diff. demo. transition stages of dev'ed & dev'ing
  ↳ (more prominent)

Distribution of Pop'n

as Pop'n Realms (Regions) – (Habited World)

Ecumene (dense clustered realms) (>100 persons/km²)

- → E^n Asia
- → S^n Asia

Extensive (Rural) × exception Japan (Intensive) ← Dev'ed Urban industrial

- → East Central Anglo America
- → Western Europe (UK, Ger, France, Netherland, Belgium, Denmark ...

Intensive (Urban)

East Central Anglo America – in/around Great Lakes

Non-Ecumene (sparse clustered realms) (<10 persons/km²)

Includes:

- → Equatorial Rain forest
- → Tropical Deserts
- → Polar icecaps
- → Tall mountains – unfavourable relief

→ bcoz of unfavourable climate

Moderate Ecumene (10–100 persons/km²)

↳ Most of habitable World

★ Sporadic Ecumene

- Intensive Ecumene – Urban industrial
- Extensive Ecumene – Rural agrarian

Ecumene (represents diff levels of Cultural Eco'c dev.) (reflects higher carrying capacity with favourable physiography, climate & heavy geo-demo load)

Geodemographic – demo. characteristics of pop'n living in a region.

Non-Ecumene (represents unfavourable natural conditions with lesser geodemographic load.)

★ **Sporadic Ecumene** → 'Random'

(naturally unfavourable conditions, but due to certain modifications made by humans, they have been made favourable)

(Dense clustered regions in non-Ecumene realms)

eg. Indonesia (Sporadic Extensive Ecumene)
© Java Island - Black soil region

Singapore, Kuala Lumpur (Sporadic Intensive Ecumene)
Mekong river delta (Vietnam)

@Equatorial Rainforest → unfav. conditions (warm & wet) (infertile soil) (vector borne diseases)

Maritime navigable routes

(b) Tropical Deserts (consistent perennial [illegible])

Saharan desert region + Arabian desert ⇒ Non-Ecumene

But, in these non-ecumene loc'n, widespread sporadic Ecumene is identified:

in Suez Canal (Egypt) & Persian Gulf (extractive industries) regions due to tech. advancement

Navigable trade routes

Sporadic Intensive Ecumene

B/w Port Said & Sinai

Ras Tanurah (one of major crude oil prod^{n} region of Saudi Arabia)

Nile Valley (Egypt), Pak. (Indus Valley), Mesopotamian plain ← Fertile alluvial lowland

↓

Sporadic Extensive Ecumene

(c) Polar ice-caps (Non-Ecumene) → beyond 60° latitudes (Extreme cold conditions temp. below freezing pt.; absence of fertile soil & climate to cultivate; climate induced hazards) But, Sporadic Ecumene is identified

Siberian Russians

Magadan (coal)

Sakhalin (Crude oil + Nat. Gas)

→ Sporadic Intensive Ecumene

(only Intensive Ecumene is possible in Polar caps bcoz cultivation is not possible/favourable)

Gallivare, Kiruna (Sweden) – Iron ore mining centre (extractive industry)

→ Sporadic Intensive Ecumene

(merchant trade route) Murmansk (Russia) – All weather port (for merchant vessels) (in influence of Norwegian current (warm oceanic current))

(d) Tall Mountains (Non-Ecumene) (lack of avlbility of flat land & fav. climate, range of geomorphic hazard, presence of skeletal soil)

South America →

Lake Titicaca → highest navigable lake in the world (B/w Peru & Bolivia in South America)

La Paz → Admin. capital of Bolivia, natural gas extraction centre

& Sporadic Intensive Ecumene (South American)

Bolivia & Paraguay ⇒ Only Land-Locked countries in South America

Africa — capitals — Country

Addis Ababa (Ethiopia)

Kampala (Uganda) — Low Lying countries

Nairobi (Kenya)

Tall height cities

Sana, Yemen (Asia)

bcoz of favourable climatic conditions, Sporadic Intensive Ecumene

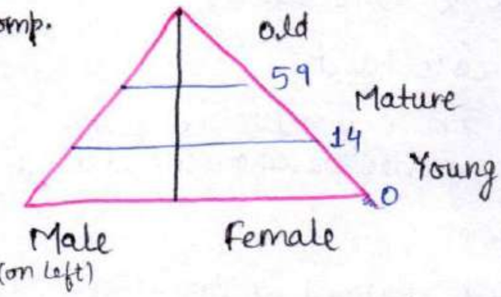
Population Composition

Assessment favours the understanding of demographic prospects, demo. demand & demo. challenges providing the foundation of demographic planning

Structural demo. Variable — Age / Gender

→ Graphical device – age-sex pyramid (impractical/outdated in current time as it is not same for the world)

Dept of (1800 AD) Begining of study of pop'n comp.



Change in demographic composition due to different (Stages) of demo. cycle

↓

the term pyramid ⟷ replaced by (COHORT) (Practical Substitute to age-sex pyramid)

↓

That perspective in demographic studies which considers (Grouping) – Age-Sex Cohort

↓

in present perspective is :-

2 Types

Developing World cohort

- Broader (larger share of pop'n)
- Shorter (life expectancy) in height ↳ e° @ birth is less/low
- [Females are less in no. than Male in old age cohort] — bcoz max. females fail to reach old age cohort. bcoz..

Developed World cohort

- Narrower (lesser share)
- Taller (e° @ birth is more/high)
- females > Male in old age

why → females are medically less prone to old age disease ← do

- females are less in no. than male in old age cohort

'do'

but

bcoz max females fail to reach old age cohort

largely due to successive births & resultant mortality in reproductive age and range of gender-based discriminations

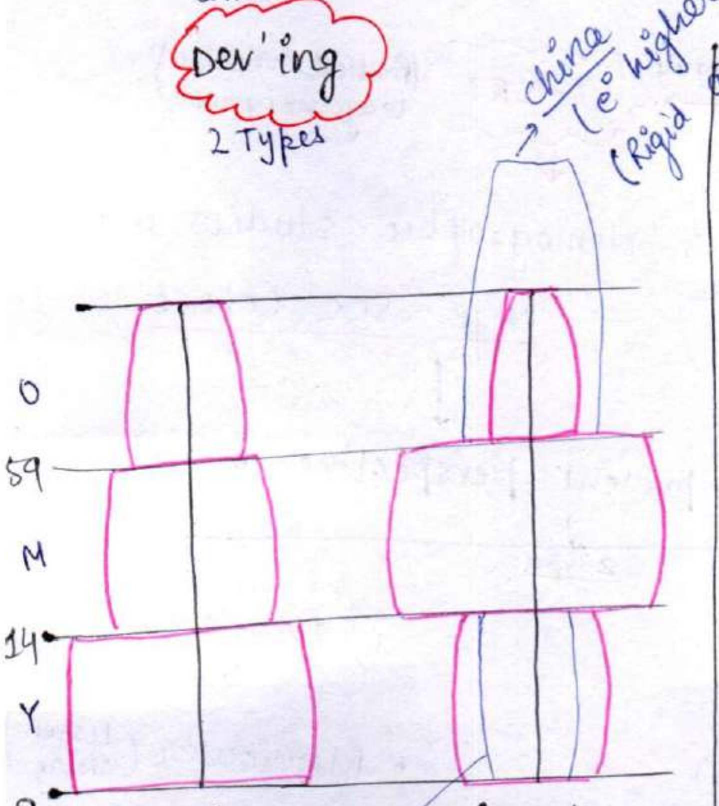
- Early marriages
- Lack of Health & Infrastructure facilities
- gender disparity

- Females > Males in old age cohort in dev'ed world

Reason: females are medically less prone to old age disease

Age-Sex Cohort

within **Dev'ing** — 2 Types



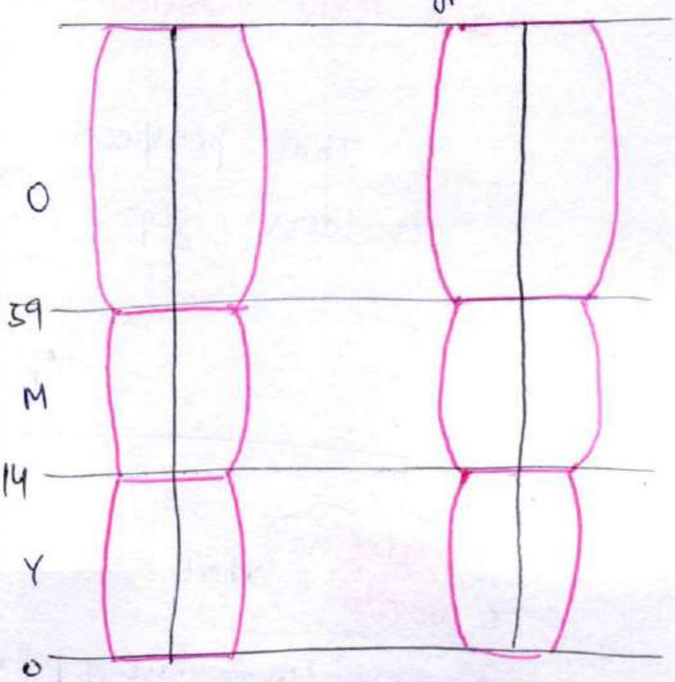
(i) Explosive Growth — Dev'ing Age-sex cohort

(ii) Growth with Stability (max. concentrat of pop'n in mid age cohort) — China

Kenya (Pop'n Explosion) (broadest base & narrow apex)

India (containment of fer. rate & growth rate of pop'n)

within **Dev'ed** (Taller, narrower) — 2 Types



(i) Stable — Dev'ed Age-sex cohort

(ii) Declining (Inverted pyramid)

Sweden (near balancing share in every age grp)

Austria (exponentially low TFR & max. share of pop'n in old age cohort) Challenge of depopulation threat)

Demographic age sex cohort (Why important)

- explains demographic **status** of a pop'n zone & provides **projection** ← based on
- develops foundation for economic & social planning
- it facilitates sustainable inclusive development

For development to be sustainable it must contain these:
- diversify
- decentralise
- inclusive

eg. Kenya –
Present status – Young age pop'n more
projection – would become like India of current period in coming decades
eco. & social planning – child care
child health facilities & education
Better delivery infra
pregnant women care

India
Status – Mature age max. shar
Planning – Job opportunity creation,
– skill dev'mnt etc.
leads to ↙ sustainable incl. de

Geriatics – study of old age cohort

Geriatrics → Study of old age cohort

→ e° have registered global improvement

→ 2019 UNFPA tables - over last 200 yrs all countries have registered impressive progress.

i) Pre-modern times, global e° was around 30 yrs.

ii) Largely due to: infectious diseases, high infant mortality, general food insufficiencies.

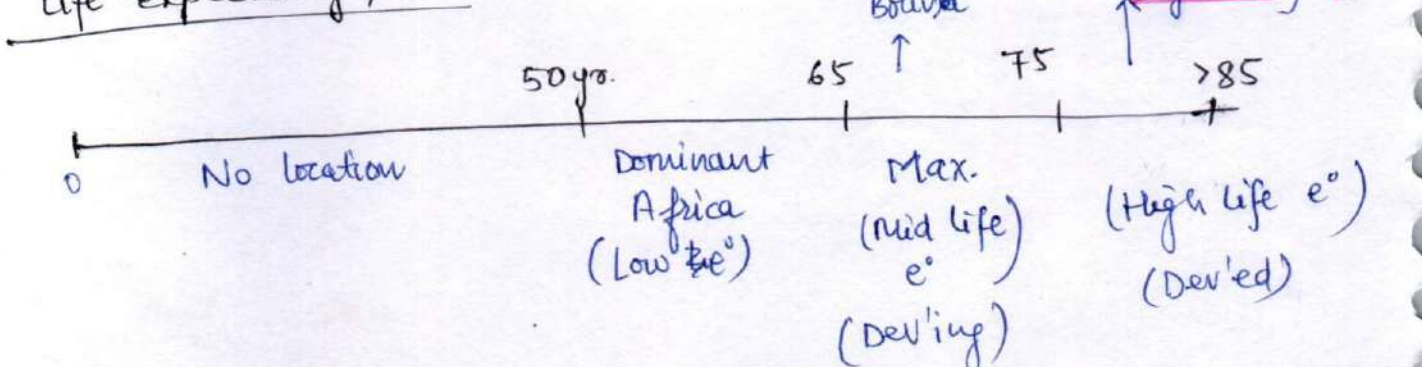
Epidemiologiste ⇓ Demographers who focuses study on mortality identifies present times as "Health Transition" times

Examples (of i) - Global e° (↑)ed from 29 yrs - 73 yrs (2019)

- Oceania ⇒ 35 yrs - 79 yrs (2019)
- Americas (N + S America) ⇒ 35 yrs - 77 yrs
- Europe ⇒ 34 yrs - 79 yrs.
- Asia ⇒ 27 yrs - 74 yrs.
- Africa ⇒ 26 yrs. - 63 yrs.

High e° → most exception
- Europe
- Major Oceania
- N. America
- S. America ★
- China
- S. Arabia
- Algeria ★

Life Expectancy, 2019



Old age cohort (pop'n) is dependent on mid age cohort economica

Dev'ed → concerned as to who will sustain the economy if larger share is in old age cohort

Dev'ing
Eco., socially, mentally not prepared for this (↑)ing old age

global e° (↑) — is resulting into new demo. challenges

Developed
↳ a) health security
↳ b) Eco. security
↳ c) Emotional / societal well being of old age pop'n

Dev'ing (a), b), c)) +
↳ d) • higher eco'ic vulnerability
↳ e) • poor societal acceptance
↳ f) • dominance of rural aged pop'n are added challenges

d) [old age pop'n more dependent economic in dev'ing world
major old age age has retired from informal sectors, thus not entitled to any pension

e) Dev'ing cntries with Oriental Culture
← It is set norm that old age parents has to be with children
↳ multiplies the emotional & economical vulnerabilities of old age people

No Acceptance of individual choices of to be living with parents/children or not

f) ~~high~~ health infrastructure much sparse or less advanced than the urban pop'n area. poor

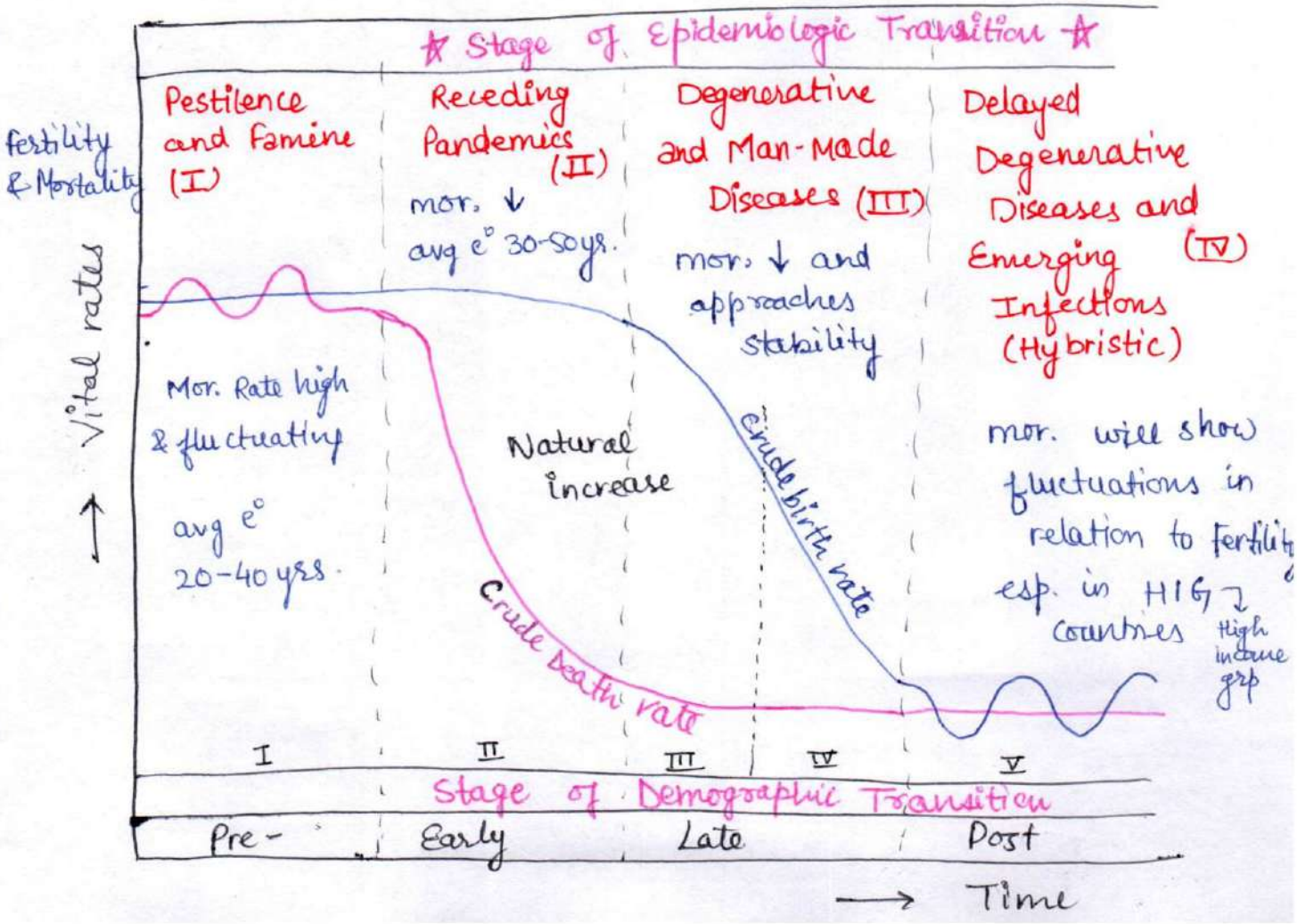
Social & Economic theories of pop'n growth

- Malthusian (+ ~~Ethrlich~~ Ehlirch)
- Neo-Malthusian
- Marxian
- Demo. transition Model

Mortality Theory

Epidemiologic Transition – Abdel Omran (1971)

- this theory recognizes limitation of Demo. transition model (DTM) as it advocates more comprehensive approach to pop'n dynamics.
- focuses on complex change in patterns of health and diseases
- also on interaction b/w these patterns and their demographic, economic, sociologic determiners and consequences.
- the theory begins with major premise that – mortality is fundamental factor in pop'n dynamic



Population Problems → ≠ Gender (inequality/disparity)

- Over pop'n → Global dimension
- Geriatrics ★
- Under pop'n

- Demand > Supply mismatch
- * deprivation in → means of subsistence (Have & Have not disparity)
  - in (lack of) opportunities
- Socio-Eco'ic unrest → lead to agitation (Farmers, Education) - anti-system approach
- develops Geo political Vulnerability
- Unstable Envs.

↓

ANTINATALISM — Pop'n Policy

Pop'n policy that aims at controlling births to control growth of pop'n

→ is older (in official terms) pop'n policy than pronatalism, marking its beginning 1948-1949 (after WW III)

involves:
i) KAP Program
ii) Voluntary Antinatalism
iii) Mandatory Antinatalism

(i) ★ KAP Program (Beginning of antinatalism)

Knowledge of family Planning in W" world → to LDC

Application applied in NIC → New Independent countries → colonies. Latin Am., ~~Aus~~ Africa, Asia

Practice compelling/persuing NIC to apply or practice in adm./ people use where pop'n explosion was projected

KAP Program:

Completely failed

i) academic nature of prgm, which was impractical (not having ground truthing or realities)

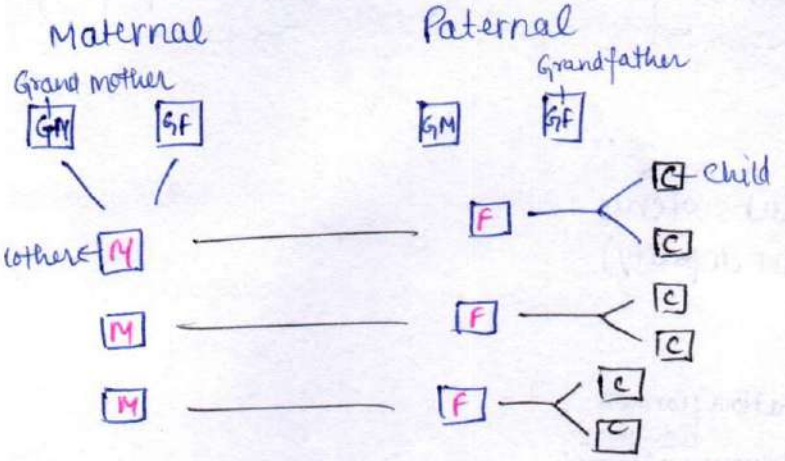
ii) Unclear objectives — aim? (what was wanted to be achieved)

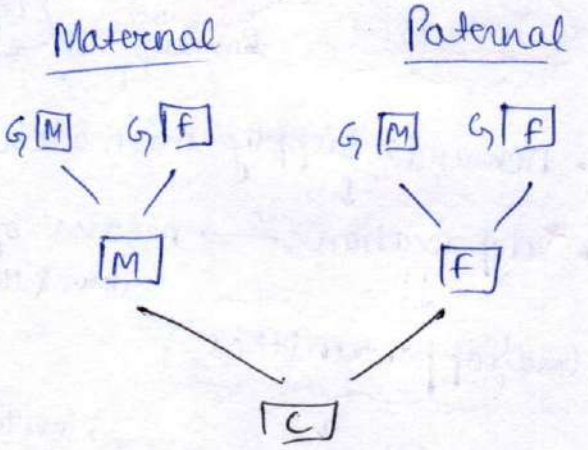
iii) Lack of trust — "end of colonial regime"

Family Welfare
Gender empowerement
social welfare)

(ii) Voluntary

(iii) Mandatory





Indian - 3 generation

(i) Informative (creating awareness)

(ii) Family welfare (Planning)

(iii) Gender empowerment / parity
Social welfare, ~~anti~~ development & parity

Successful example
(Slow & steady)

Indian antinatalism (1951-52)

1st dev'ing country to accept antinatalist approach

Genesis & Growth of Indian anti-natalism in (3) phases:

(i) Preliminary Phase (1951-75)
- Voluntary & Informative (creating awareness)
- genesis of health, communicat° & transport infra
- Failed (pop'n explosion in 1970s)

(ii) Developmental Phase (1975-2000)
- sustained informative & voluntary char.
- Integrated "family planning to be family welfare".
- orientation towards health & medical services
- pre natal & post natal immunisation & vaccin" progmm.
- Statistical success (India entered 3rd stage)
- Regional disparity in success (No hindi state responding to antinatalism) — Reasons
  - → vast prevalence of misconception
  - → poor societal status of females
  - → Strong desire of male child

Chinese - 3 gen

anti-natal. policy (1981)
↳ one child norm
abrupt result
ZPG in 20 years of antinatalist
criticism by ethnic minorities
depleting - working force
- sex ratio / gender inequality
(A)ing social vulnerabilities
penal clauses
successful
(Sudden)

2000 eased rigid anti-natal. by permitting (2) children per family for selective ethnic minorities
China now ceased its
↳ antinatalism recently (2019)
to 2-child for everyone.

(iii) Contemporary Phase (2000-)
- continued earlier approaches
- integrated social well being, Gender parity as new defined components, with the demo. planning
- marked involvemnt of EAG states (since 2001)
  (8) → Empowered Action grp (socio-eco'ically backward)
  ↳ BR, JH, OR, CR, MP, UP, RJ, UK

Under pop'n — supplies > Demand

Lack of human res. base to sustain the attained levels of Eco'ic growth

Europe (largely in last stage of DT)

↓

PRONATALISM

i) 1960s - Classical phase of pronatalism
Mandatory

ii) 1970s - Modern
Voluntary

iii) Post 1980s - Contemporary
- appeasements
- urban planning

↓

facilitates compatibility b/w family & Professional responsibilities

Lack of H.R. base to mobilise the nat. resource base

4th world communities (1st stage DT)

↓

SOCIETAL / ECO'IC MAIN STREAMING
(Medical care, Education, Eco'ic streaming)

FAILURE

that is why "Europe is Vanishing"

(depop'n threat)

only successful example of Pronatalism

↳ Maoist ~~Maoist~~ pop'n Policy in China

((1)ed their pop'n (After independce) till 1981

Concept of Optimum Pop'n – Economists

level of pop'n at which:

i) Carr Saunders - "Max welfare" = optimum

ii) Edwin Cannan - "Max return (output/income) to labour" if knowledge & circumstances are same = optimum

iii) Bounding - "Max living standard" = optimum

Theory based on 2 assumptions

a) The proportion of working pop'n to total pop'n remains constant as pop'n (↑)es

b) as pop'n (↑)es Nat. Res. base, assets & Capital and tech. levels remain same.

Optimum pop'n

The pop'n level at which the highest economic standard of living is achieved. The available resources are exploited effectively.

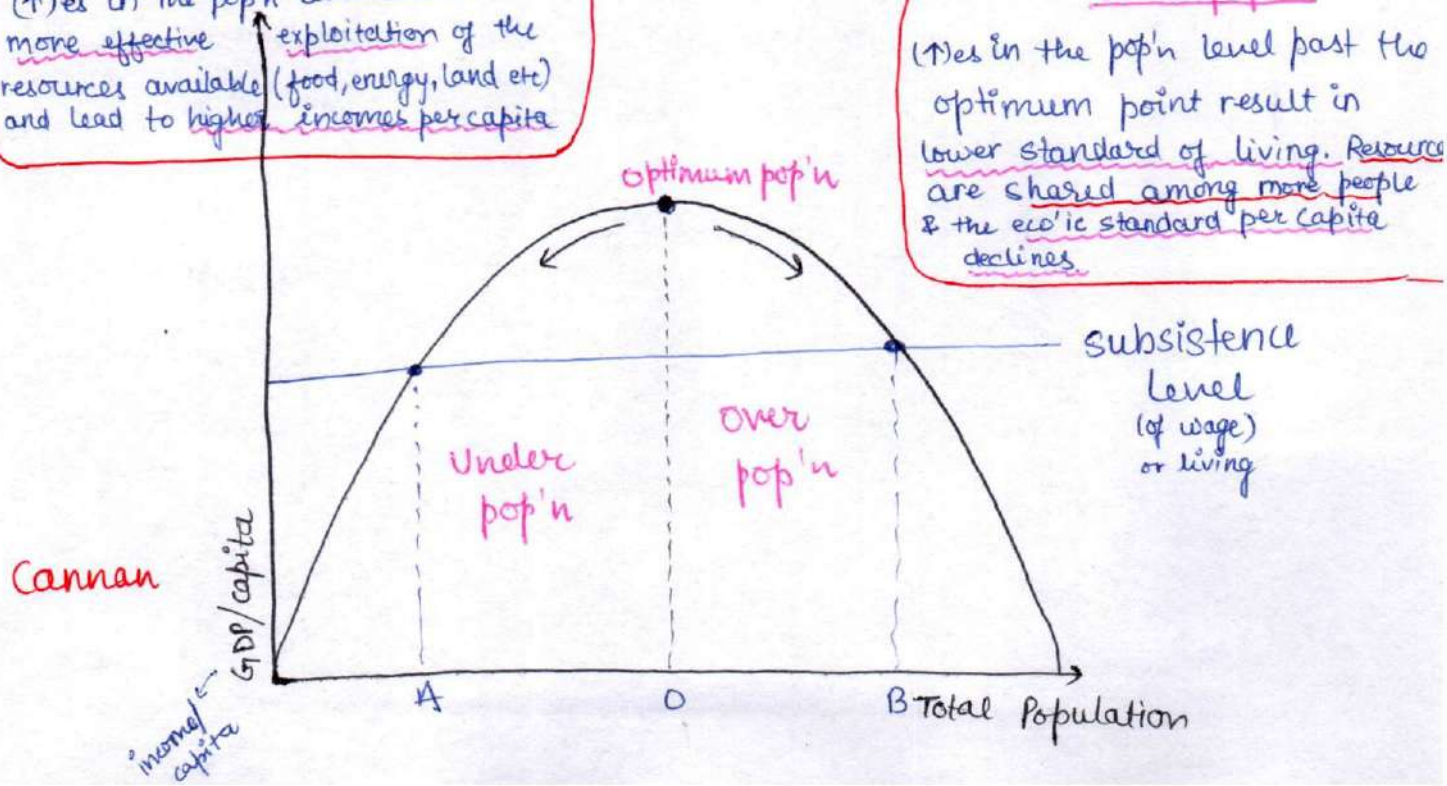
Bounding

Under pop'n

(↑)es in the pop'n level allow more effective exploitation of the resources available (food, energy, land etc) and lead to higher incomes per capita

Over pop'n

(↑)es in the pop'n level past the optimum point result in lower standard of living. Resources are shared among more people & the eco'ic standard per capita declines



Cannan

Arguments against concept
(-ve aspects, limitation)

i) Impossible to measure optimum levels (theoritical)

ii) Vague approach with no practical evidence.

iii) distribution aspects are completely ignored

iv) all the indicators are practically not static but oscillating
(changing/fluctuation with time)
Δ in pop'n, tech

Above Adj:
Optimum pop'n
- significant measure of dev'mpt
  - ↳ well being
  - ↳ quality of life
  - ↳ HD & SDGs

Arguments in favour of optimum pop'n concept
(+ve aspects, validity)

is that it provides theoritical scope to analysis of Eco. Devpt *

i) Relates to well being / Quality of life of pop'n

ii) Identifies human devpt approach with health & longevity

iii) can be applied to analyse sustainable approach of devpmnt.
- ↳ inclusive, diversified, decentralised

False: Growth is subset of Dev'mnt
All aspects of growth relates to dev'mnt but all dev'mnt doesn't not relate to growth

True: Eco'ic devpt is synonomous to optimum pop'n not the Eco'ic growth

Measures of Progress

Growth

- (↑) in real output of a country over a particular timespan
- do not consider income from informal sources
- do not consider depletion of natural res. base
- is automated sequential process

Development

- (↑) in level of prduction to enrich living std.
- it includes all activities (recognition to informal sector)
- it is concerned with parity thus sustainability
- Planned (induced) result oriented.

- as concept: narrower/limiting ← → More comprehensive
- as scope: single dimensional ← → Multi dimensional
- as term: short term ← → long term (continuous)
- as measurement: Quantitative ← → Both Qualitative (living std.) + Quantitative (level of prdtn)
- as location: Dev'ed countries ← → dev'ing countries

★★★

Eco. growth is a subset of **Eco. devpt** → is measured as

True
Every eco growth don't related to eco. devmnt
but every eco. devpt related to eco. growth

→ is measured as output (GDP levels) of a country / region @ a given pt. in time.

I. Well being / Quality of life
- a) WHO → Phy. Quality of Life Index
- b) + Concept of QOL & WB

II. Human Devpt Approach
- a) UNDP → Hum. Devpt. Index
- b) + Sustainable Devpt. Goals

Eco'ic Development

I. WB & QoL

a) PQLI (WHO) – Morris David (1979) ≠ b) Concept of Well being & Quality of life

incorporates (3) indicators/measures

- Life Expectancy Rate
- Infant Mor. Rate
- Basic literacy Rate

  Any person above age of 7yr. who can read, write and understand

Advantages (Pros)

i) Aspect of welfare has been considered
   ↳ all the (3) indicators represents welfare

ii) Helps in analysis of prevailing pattern thus (planning) of welfare policies

iii) Easy measure to compare (one loc'n to another)
   ↳ Areal Differentiation

iv) Considers distributional aspect*

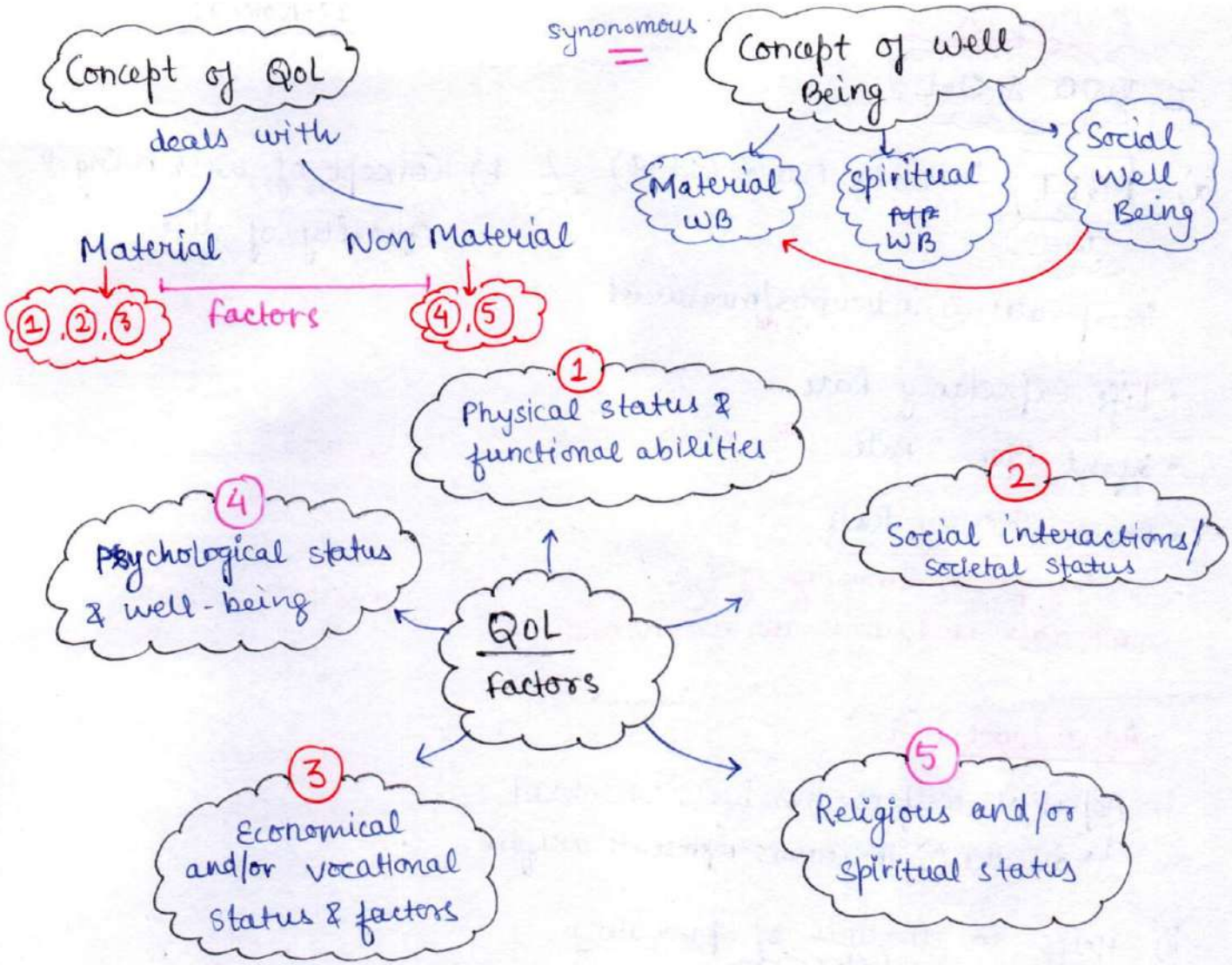
v) Required data of (3) indicators is easily available.

-ve (Cons)

i) Many imp. factors are ignored
   housing, employment, social security

ii) Not considered to be proper (complete) measure of eco'ic devpt - as do not consider economic / monetary aspects

   don't consider non-material components



QoL/WB - is the thought (state of mind/mindset/perception) that gives people a sense of how their lives are going on.

it involves/determined through interactions b/w (determiner of thought)

a) their circumstances
b) " activities
c) " psychological/mental capital (how you perceive)

⇓

higher levels of WB/QoL reflects higher resilience, i.e., capacity to respond/revert any -ve incidence

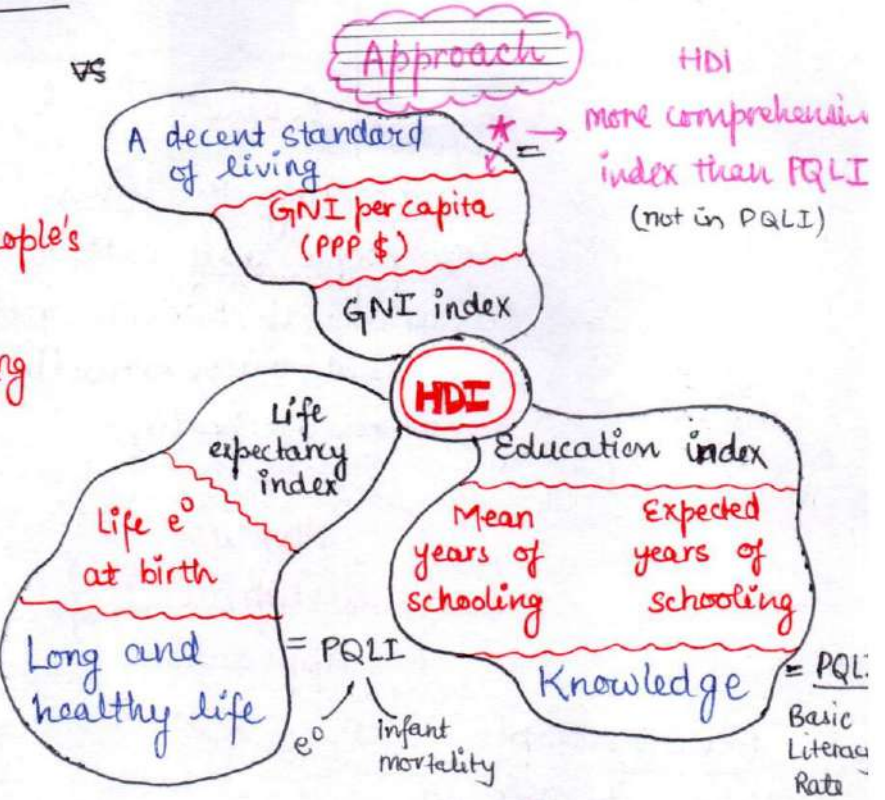
II. Human development

Index vs Approach

- UNDP - defines HDI as a process of enlarging people's choices
→ and their levels of well being

3 indicators → Knowledge, Life e°, Std of living

★ (more comprehensive index than PQLI)



HDI
★ → More comprehensive index than PQLI (not in PQLI)

+ve (Pros)

i) it helps in judging levels of achieved devpt.

ii) helps in inducing demographic planning as provision of better education creates informed pop'n

iii) It indicates improvement in health, nutrition, education

iv) It helps in appropriate planning

v) It provides comparison (Areal Differentiation)

[HDI 2020 included envr'al/ planetary impact (how humans are impacting envr.)]

-ve (Cons)

i) Many factors ignored

Needs
- Physical (Housing, food, clothing)
- cultural (Education, Health, Security, Leisure) → - Completely ignored
- Higher (open ended) ↑ as your income (↑)e

ii) ★ Problems of inequality is ignored.

Prof. Amartya Sen refers HDI as imperfect index (one of the developers/ creator of HDI)

Unlike Index (HDI) (vs) Human Devpt. Approach includes

① People

Improving the lives the people lead rather than assuming that eco'ic growth will lead, automatically, to greater wellbeing

Human Development Approach

Providing people with opportunities, not insisting that they make use of them

② Choices

Giving people more freedom to live lives they value.

③ Opportunities

HD Approach more comprehensive than HDI

SDGs - Global Goals

- adopted by UN - 2015

aims at
- Ending poverty
- Protect Planet
- ensuring peace & prosperity

⇒ is the most comprehensive approach to Development

- Benchmarking (Target) - 2030
- (17) goals are thus integrated with individual specific planning & comprehension of each other

(Eco, social, gender etc)
Parity (Dimension of SDGs) - 1, 2, 3, 4, 5, (6), (7), 8, 9, (10)
(overlapping)

Ecological (Dimension) - (6), (7), (10), 11, 12, 13, 14, 15

Partnership (of Global community) cooperation - 16, 17

17 SDGs (to transform our world)

1. No Poverty
2. Zero Hunger
3. Good Health & Well Being
4. Quality Education
5. Gender Equality
6. Clean water & sanitation
7. Affordable & Clean Energy
8. Decent work and Eco'ic Growth
9. Industry, Innovation & Infrastructure
10. Reduced inequalities
11. Sustainable cities & communities
12. Responsible consumption and production
13. Climate Action
14. Life Below water
15. Life on Land
16. Peace, Justice and Strong institutions
17. Partnerships For the Goals

Measures of Progress

- Growth
- Devpt (more comprehensive)

QoL

PQLI ≠ Concept (QoL & WB)

more comprehensive

- Material factors
- Non-Material

Human Devpt

HDI (3 indicators) ≠ HD Approach

People
Choice
Opportunities

more comprehensive

SDGs are most comprehensive

Parity / Environmental or Ecological / Partnership Goals

with set target 2030

Grping of people towards attaining common objective

Population as Social Capital → sociological concept

- defined as tve product of human interaction, which involves grping of people with common compatibility ideology/perception
  Eco'ic, Cultural, Pol'cal
- Set of shared values that allows individuals ~~to~~ in a group to work together to achieve COMMON GOALS more effectively
  Eg. MGNREGA working
- As sociological concept, social capital → involves 3 types
  Geographers added (1) additional type } (4) Types
  ↓
  Identify
  Bond
  Bridge
  Linkages

(1) Bond (interaction with family)
represents links based on sense of common identity.
Eg. family - blood relations

(2) Bridge (interaction with friends..)
represents links that stretch beyond shared sense of identity.
Friends / Associates / Collegues.

(3) Link (interaction with society)
connect b/w people further up/down the social ladder.
More societal capital

(4)* Identify
nature of connect people perceive at any 3 types/levels.

- provides more practicality to the social capital concept.
- it reflects "real nature" of existing connect.

OECD (Org'n for Eco'ic, co-op^{n}, and Dvpt)

↓

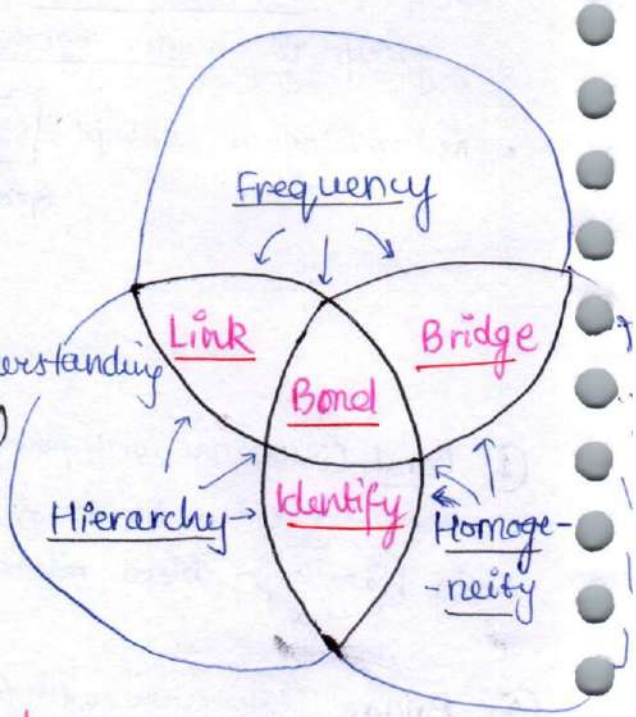
recognises social capital in dvpt of network to facilitate coop^{n} in exchange / innovations / Growth.

★ It added

Frequency - of interactive encounters b/w (link (society), Bond (family), Bridge (friends))

Homogenity - of ideas / perceptions / understanding similarity in → (Bridge (friends), Bond (family), ~~Bo~~ Identify (Perception/ nature))

Hierarchy - social ladder in (Link, Bond (family) by age, Identify)



as the determiners of S.C. efficiencies

Social Capital concept is criticised

a) as vague concept
difficult to measure & poorly defined

b) Mobilisation of SC can have Eroding effect on society.
as it (↑)es the existing gaps b/w people of different categories.

Eg. wage payment on reservation basis in MGNREGA (SC/ST given wages first, making ~~dalit~~ other people angry over delayed payments)

Migration → excellent example of Relocation Diffusion

Movt.

- Functional demo. variable
- change of residence for more than a week's time
- reshuffling/relocation of global popⁿ, not addition/subtraction to global popⁿ — Permanent / Temporary
- Geog'ally more prominant variable - as influence 2 Loc'n together

Source — Destination

From Where (Begins) → → To where (headed)

at source PUSH FACTOR applicable

at destination PULL FACTOR applicable

Causes (oper. at destination)

★ Push and Pull factors, which further, can be Real & Perceptional

(operational at source)

Both push/pull can be

Real

Real Push ⇒ Food shortage, Natural Calamity

Real Pull ⇒ Better salary

Perceptional

Perceptional Push ⇒ Perceptional social threat (mob lynching), eco'ic insecurity

Pull ⇒ Perception of better living std.

Geo'ic study of Migration is based on

(i) Laws of Migration - EG Ravestein

1880's Ravestein observation of Internation migration - b/w Europe & Anglo America (1885-1889) - Listed some laws of Migration →

a) Majority of Migrants travel short distance

b) ~~Main~~ (Distance decay effect)

(ii) Inverse distance law - G.K. Zipf

f) Every Major Migratory ~~flow~~ movt. develops weak & opposite counter migration

g) Mig'n Proceeds step by step (Not valid/practical) → Megacity, City, Town, Village, Hamlet

b) Main cause of Mig'n is economic (Push or Pull)

c) Big towns grows on immigration (Gravitational law) → Bcoz of better perceptional compatabile

d) Adults migrate more than family (Job seekers, mature age)

e) Females migrate short dist. whereas Males (for social measures (at that time 1880s)) — improved ← for eco'ic measures

(Gravitational Law) ← improved/enriched

(iii) Theory of Intervening Opportunities - Stouffer

States that the no. of persons migrating to a {given dist} is directly proportional to no. of opportunities at that distance & inversely proportional to no. of opportunities as intervening opportunities

(Eg. Vacant house, Emplyt opp.)

Eg. (you are migr^n from Delhi to Mumbai for better eco'ic opport., but in b/w Bhopal (M.P) you see better prospect of everything, in housing, traffic, affordability, Empyt etc. So You decide to go to Bhopal)

(iv) Model of Mig'n - E. Lee

(v) {Mobility} Transition Model - Zelensky

(ii) Inverse distance Law - G.K Zipf.

the volume of mig'n is inversely proportional to distance travelled by migrants.

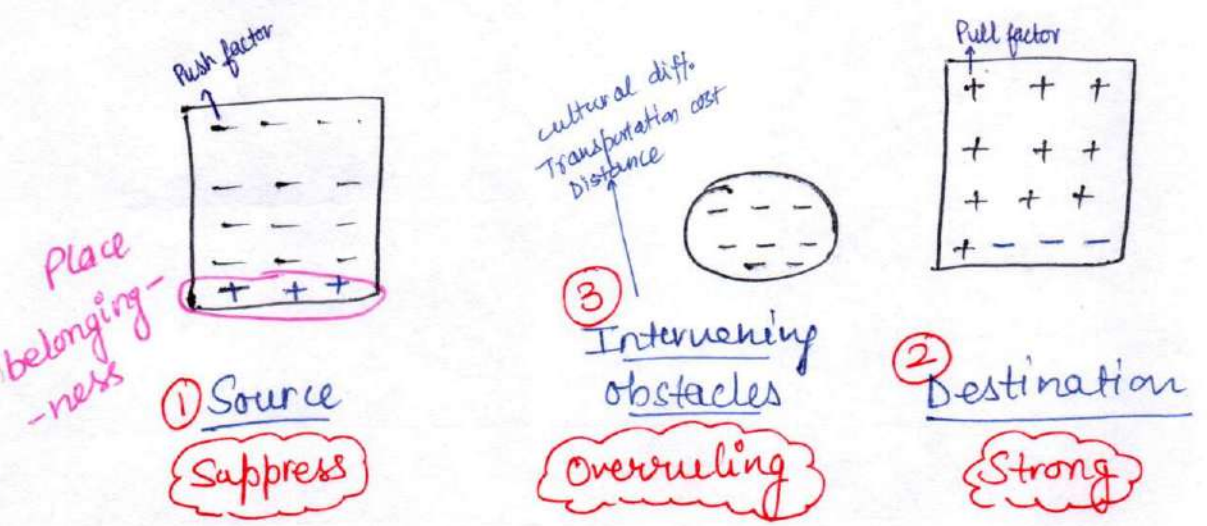
⟷ (Distance decay effect)

iv) Model of Migration - Everett Lee

a) proposed mig°. & model based on four factors

I. factors operational at source
II. factors operational at destination
III. factors operating as intervening obstacles
IV. factors that are individual specific.

b) The model states that for the migratory decisions to be taken and implemented, factors operational at destination should be strong enough to suppress factors at source, overrule factors as intervening obstacles and satisfy factors that are individual specific.



④ factors that are Individual Specific

Satisfy

+ve
- ✓ Consolidating
- ✓ Diversity of causes that influences mig. decisions

c) This model is credited of attempting consolidation to the fragmented list of laws of migration proposed by Ravestein.

It is also significantly open-ended to facilitate incorporation of diverse migratory decisions or regulators.

d) The model is however ~~critis~~ criticised of completely ignoring Real Push induced migratory decisions.

↓
Natural Calamity
Pol./Eco'ic vulnerability

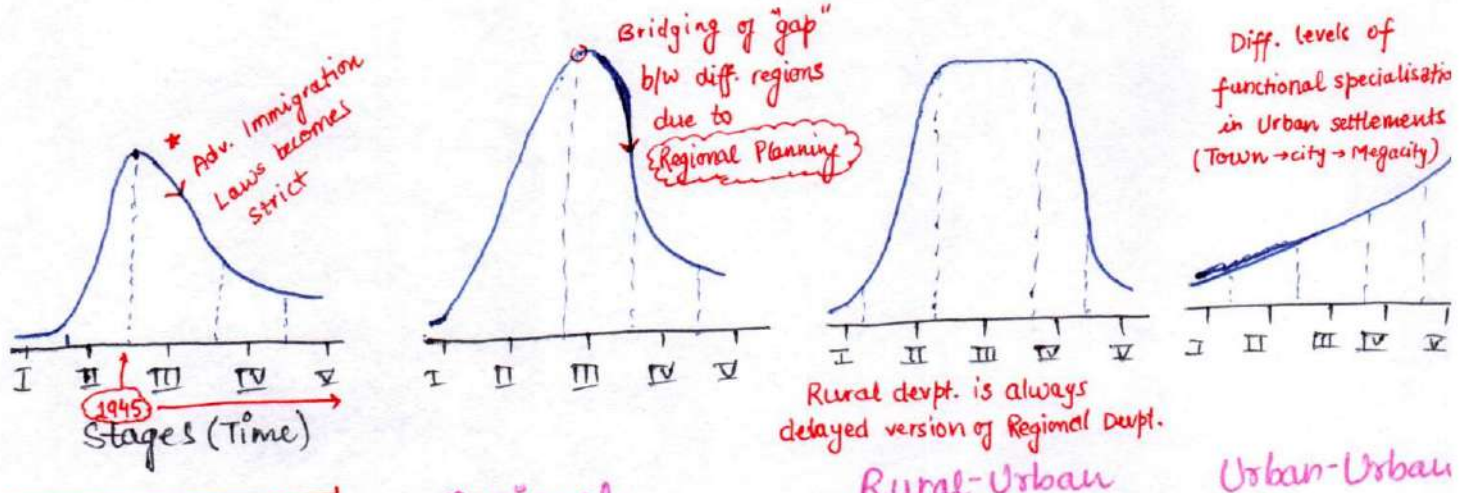
Mobility :
- Temporal dimension of mig^{r}.
(Time)
- changing trend ~~pattern~~ of mig^{r} over course of time.

Mig^{n} more comprehensive than Mobility
↓ considers both space & time
↓ considers only time dimension

(↑) in Mig^{r} bcoz of Growth in
- Pop'n
- Connectivity
- Awareness

v) Mobility Transition Model - Zelinsky

Migratory trends :



International

Regional

Rural-Urban

Urban-Urban

Intranational

International
- Cultural & Pol. boundary advancements
↓
- Mig. mvmnt (↓)
(Adv. immigration laws becomes Strict
- Lower Volume
cultural diff.
transportation cost
larger distance

Regional
- Higher Volume (than Intl.)
bcoz Majority mig. travel short dist.
- (↓) in migration bcoz of bridging of "gap" b/w diff. regions due to Regional Planning (Regional Dept.)

Rural-Urban
Rural Dept. is always delayed version of Regional Dept.
Regional Planning (1950)
Rural Dept (IRDP) 1974-75
Thats why rural-urban mig^{n} at high level for long period.

Urban-Urban
With similar functions, Urban settlements (Town < City < Megacity) differs in levels of functional specialisation
Thats why Mig^{n} continuously growing in Urban-2

Trends of Global Migration

- Historical (Pre 1945) — 10,000 B.P.
  - Major part of cultural history
  - time of mass mig^{r}
  - involving larger vol. & longer time → have MAJOR CONSEQUENCES
- Modern
  - Transitional (1945 - 1965)
  - Contemporary (Post 1965)

Causes:

a. Voluntary → derived → (consequence)
   - i) Racial Diversity
   - ii) European settlers (New World)

   Mig^{r} of Homo sapiens

- Race is principle divide of Mankind based on Phy. Appearance
  - Caucasoid (White)
  - Mongoloid (Yellow)
  - Negroid (Black)

- Voluntary mig^{r} of European settlers
  ↳ Great age of exploration and Settlement.
  Consequences →
  New World settled down
  Caucasoid race
  Christianity culture
  Indo-European L.F.

b. Forced → Slave Trade → (led to) Racial discrimination

c. Economic → Colonial Regime → Plantation Agriculture

b. Forced (incorporated) → Slave Trade (led to) → Racial Discrimination

Source Area of (Slaves Mig^{r}) — Upper Guinea

Dest'n — New World (U.S., canada, Aus, NZ)

i) Racial Diversity — (Homosapiens Mig^{r}) Source Area: Central Asia or Africa; Dest'n: Entire Habited World

ii) Settlement of New World — W. Europe → U.S., Canada, Aus, N.Z. (New World)

c. Economic →

→ Colonial Regime ↑
- Industrial Rev^{n} (1700s) - W. Europe
- colonial settlers settling the economies, sizeable share of people from the colonial power coming to respective colonies & settling down there, for economic reasons

→ Plantation Agriculture (Tea, Coffee, Cocoa, Spices) (consequence)
- Cocoa → Ghana
- Spices → Tanzania Islands

Traditional ← same crop giving yield for 25-30 years
- Coffee, Cocoa (Tanzania)
- Spices, Rubbber, Tea (Malaysia)

Non-Traditional → giving yield for 2 to 3 cropping seasons (1-2 years)
- Cane, Cotton (Cuba)

Fiji Island → Mahogany (Hard wood Yielding tree) Plantation (Traditional)

Colonial Regime: Western Europe (Source) → Latin Am., Afrika, Asia (Dest'n)

Plantation Agriculture:
- Mainland colonial (Source)
- Cuba, (Pemba, Zanzibar, Mafia) (Dest'n), Ghana
- (Pemba, Zanzibar, Mafia) — Tanzania

Modern

Transitional
(1945-1965)

Mass Mig'n

Causes:

(1) Retreat of Colonial settlers (end of colonial Regime)
↓
Pol. Independence

(2) Territorial allocations of New Independent States → Geopolitical Vulnerabilities
(Israel-Palestine ; Tibet ; PoK)

East China Sea & Pacific Ocean ← Ryuku Is. (Armed annexed by Japan in this period)
∴ Japanese people mass mig' to it

+ hydrocarbons ← Paracel Is. / Spratly Is. → (Armed annexation) by China in transitional period (1945-65)
↳ claimed by Vietnam, Philippines, Indonesia

(Armed annexation) → by Pak.

Contemporary
(Post 1965)

- individualistic Mig'
- Global dimension
- Strict - Immig'n Laws

Causes:

(1) Eco'ic Cause — @ from Dev'ing → Dev'ed

Quebec - french capital of Canada
Toronto - English " "
vancouver - Punjabi " "

(1) Eco'ic Cause

(b) During 1980s only, W. Asia in general, Gulf countries (in specific) → become Dest'n

(c) Globalisation thus Retreat Migrn

(shifting to S-E Asian Vietnam, Indonesia et.)

* (2) Mass Migr'n (Real Push factors)

Refugees + Illegal Immigrants (Due to Natural Calamity, Epidemic, Acute food shortage Problem, Pol. vulnerability)

Eg. Syrian Refugee crisis

Add pressure on (Economy, Geo. Pol Vulnerability, Threat to security, Threat of insurgency)

Source 2010 Acute shortage of food in Sub-Saharan Region

Dest'n Nigeria (Upper Guinea) (Only food sufficient country in upper Guinea

East Africa

Source Uganda, Rwanda, Burundi Acute Ethnic Conflicts

Dest'n Kenya, Tanzania

Economic Geography

① World Eco'ic devpt: measurement & problems (done ✓)

② World Agriculture — Typology . Regions

* Whittelsey, Anderson

Types — Intensive Vs. Extensive

Intensive	Extensive
Manual Labour	Mechanised
Man-Land ratio low	Man-Land ratio high
(India)	(USA)

★ ③ Agri inputs & productivity

Classical: HYV seeds, Irrigation, Mechanisation, Chemical Fertilizers

Modern: Climate Smart Agri (Drones

★ ④ Food - security and Insecurity
(Nutrition included)

⑥ Industrial Regions of World - Pattern & Problems

⑤ Von Thunen's Agri'al Loc'n Model
Alfred Weber's Industrial Loc'n Model
] Model on Loc'n

⑦ World Trade Pattern

⑧ Limit to Growth Concept

⑨ Energy Crisis

Agriculture - (Reproductive Industry)

highly Diversified industry/ eco'ic activity
+ complicated (many influencing factors & constituents)
+ Dynamic (not static, everchanging)

Comprised of
- Crop Cultivation
  - Food Crop
  - Cash Crop
- Animal Rearing
  - includes Herding
- Aqua-culture
  - Fresh
  - Marine
- Silvi-Pasture
  - Tree based Farming

Influenced by
- Natural Factors
  - Relief
  - climate
  - soil
- Anthropogenic factors (Human induce
  - Infrastructural inputs
    - Chemicals
    - HYV seeds
    - Irrig'

★ Enhance +ve Natural Cond'n
OR
★ Overrule -ve Natural Cond'n

Food Crop

↳ Principle grain
- Rice
- wheat

↳ NutriCereal
Maize, Barley, Oat
Jowar, Bajra

Cash Crop

↳ Traditional Plantation
(Rubber, Coffee, Tea)

↳ Non-Traditional Plantation
(Cane, Cotton)

↳ Horticulture
- Tropical (Guava, brinjal, Mango, cabbage, Oranges)
- Temperature (Apple, potato)
- Arid (Amla)

Anderson

1970s

Sustainability (based on)

- Ecological
- Near Ecological
- Non-Ecological

Types of Agri.

Whittelsey

(13) Types of Agri.

1936 (Levels of Eco'ic devpt) (based on)

unfav. (Land-man ratio)

I. (Tropical) Developing → Intensive + Subsistence + Labour Intensive

Near Ecological

→ In tropical latitude dominantly, agri. continues to be essentially livestock only or only crops culture

(1) Nomadic herding
(2) Livestock ranching
(3) Sedentary Agri.
(4) Shifting Agri
(5) Intensive subsistence with Paddy
(6) Intensive susistence without Paddy
(7) Mixed subsistence

II. ~~Developed~~ (Temperate) Developed → Extensive + Commercial + Mechanised

Non Ecological

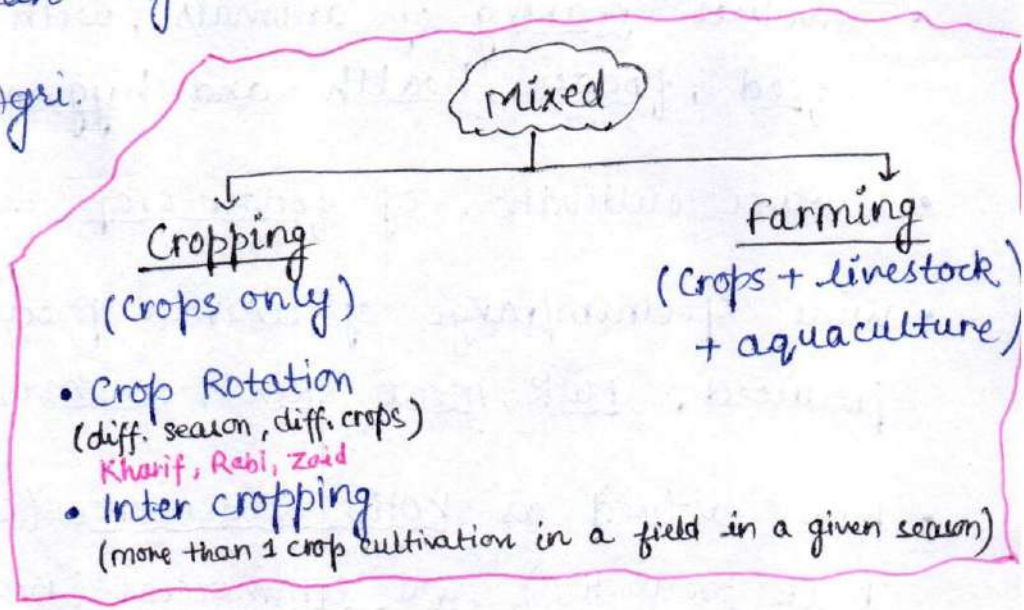
(8) Extensive Commercial Grain farming
(9) Extensive Commercial Mixed farming
(10) Comm. Diary farming

III. Specialised

(11) Horticulture (Truck farming)

(12) Mediterranean Agri

(13) Plantation Agri.



I. Developing Agriculture

(1) Nomadic Herding

- Livestock only agri.
- Primitive type of agri.
- Humans dependents on animals and animals on natural pastures.
- Ecological type with bare minimal natural resource utilisation.
- Practiced by Primitive 4th World Communities in wide range of unfavourable conditions
- Wide range of animals - Camel (Sub-Saharan), Cattle (Savannah) Maisas tribals, Horse (C. Asia) Kazaks, Mangols (horse herders), Raindeer (cold climate region) Sub-Polar/Tundra Somayeds (raindeer herders) are included. ~~Horse~~ ↓ Bedowins

② Livestock Ranching

- Livestock only agri.
- involves rearing of animals, with concerns of feed, fodder, health and hygiene of livestock.
- involves cultivation of fodder crop (for animal feed)
- wide spectrum/range of animal products are produced.- Milk, meat, skin, feather, wool etc.
- have evolved as both subsistence (central African Republic; milk production) and commercial (Brazilian beaf production and Argentina's wool prodⁿ)
- Near Ecological type

③ Shifting Agriculture

- Only crop agri
- Primitive & wasteful types of agriculture. Non-Ecological Type
- is called 'slash and burn' agri., i.e., involving termination of natural plant stand v. for crop cultivation (Threat of soil erosion)
- Rice, Maize are principally cultivated
- is practiced by primitive 4th world communities and are ~~reffered~~ referred as {Roka - Brazil} Latin/S. America, {Conuco - Venezuela} S. America, {Aeta - Philippines} S.E Asia, {Tamrai - Thailand} S.E Asian, {Jhum/Poda - India, Chena - Sri Lanka} S. Asia

(4) Sedentary Agriculture

- Primary stable agri., involving rotatation of crop. (no rotation of field)
- involves combination of crop and livestock (economically better)
- have higher presence of fallow land, low production & productivity and use of crude agricultural implements (old, out-dated)
- is Near Ecological type (Primitive agri.)
  (Biotic manure, lack of Slash & burn)

(5) Intensive Subsistence (wetter regions) with and (6) (drier regions) without Paddy

(5): (India, China, Indonesia) — (6): (Pak, Egypt, Yemen, Kazakhstan, Russia)

- The crop only agri'al types.
- have dominating presence in dev'ing world.
- prevalence of smaller landholdings (unfavourable land man ratio)
- involves favourable cultivable conditions throughout the year, thus multiple or mixed cropping.
- These involves 2 sub-types of primitive and non-primitive

→ The Primitive sub-type depicts near ecological type with small land holdings and lesser availability of agricultural infrastructural inputs (thus lower production & productivity)

→ The Non-Primitive sub-type depicts non-ecological type with small land holdings, combined with higher levels of agricultural infrastructural inputs (thus higher production & productivity) ★

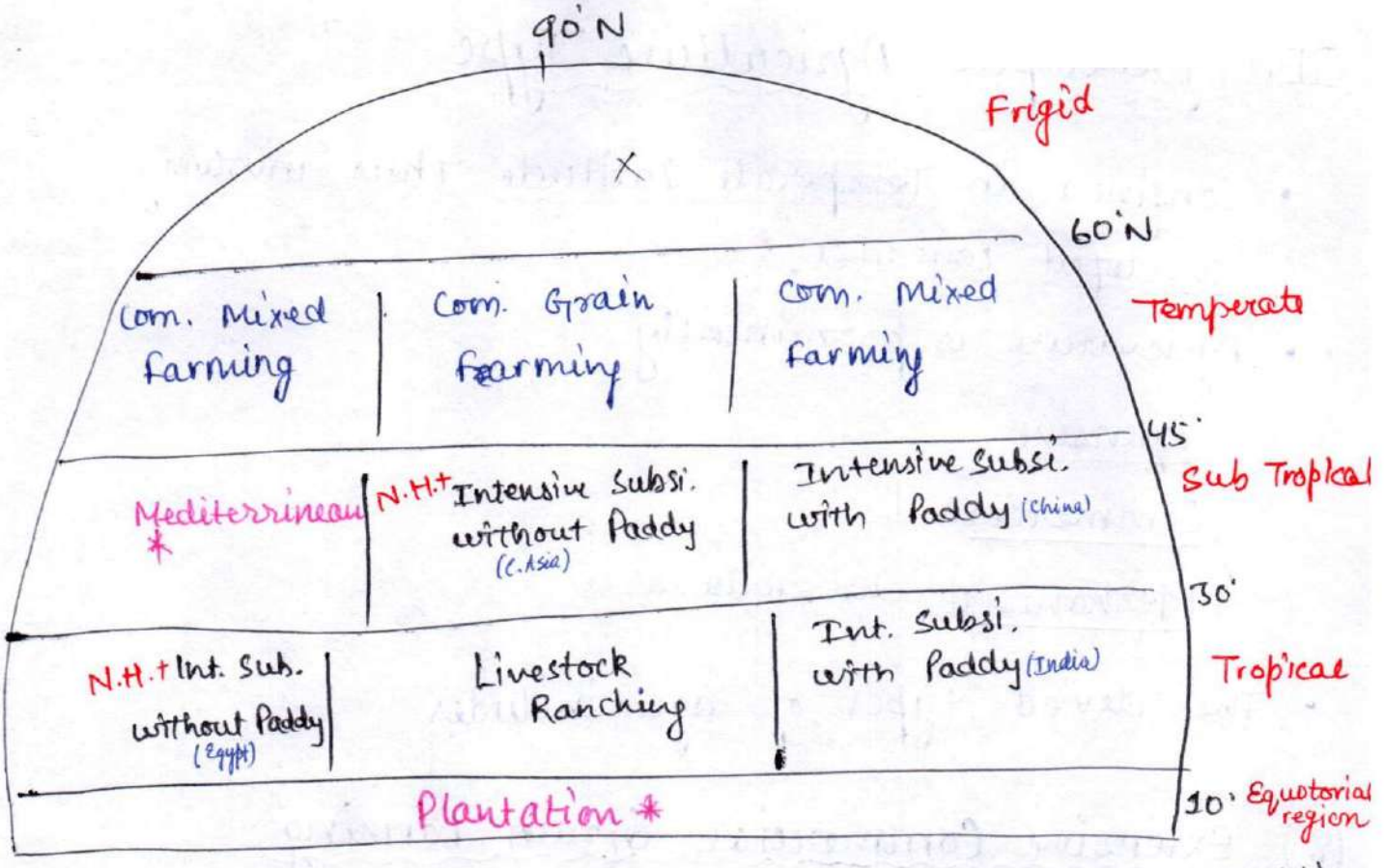
★ • The with paddy and without paddy agri'al types are distinguished on the basis of Climatic conditions

(With Paddy in wetter climate → Tropical, Subtropical monsoon region
without Paddy in drier climate)
↳ tropical Subtropical deserts

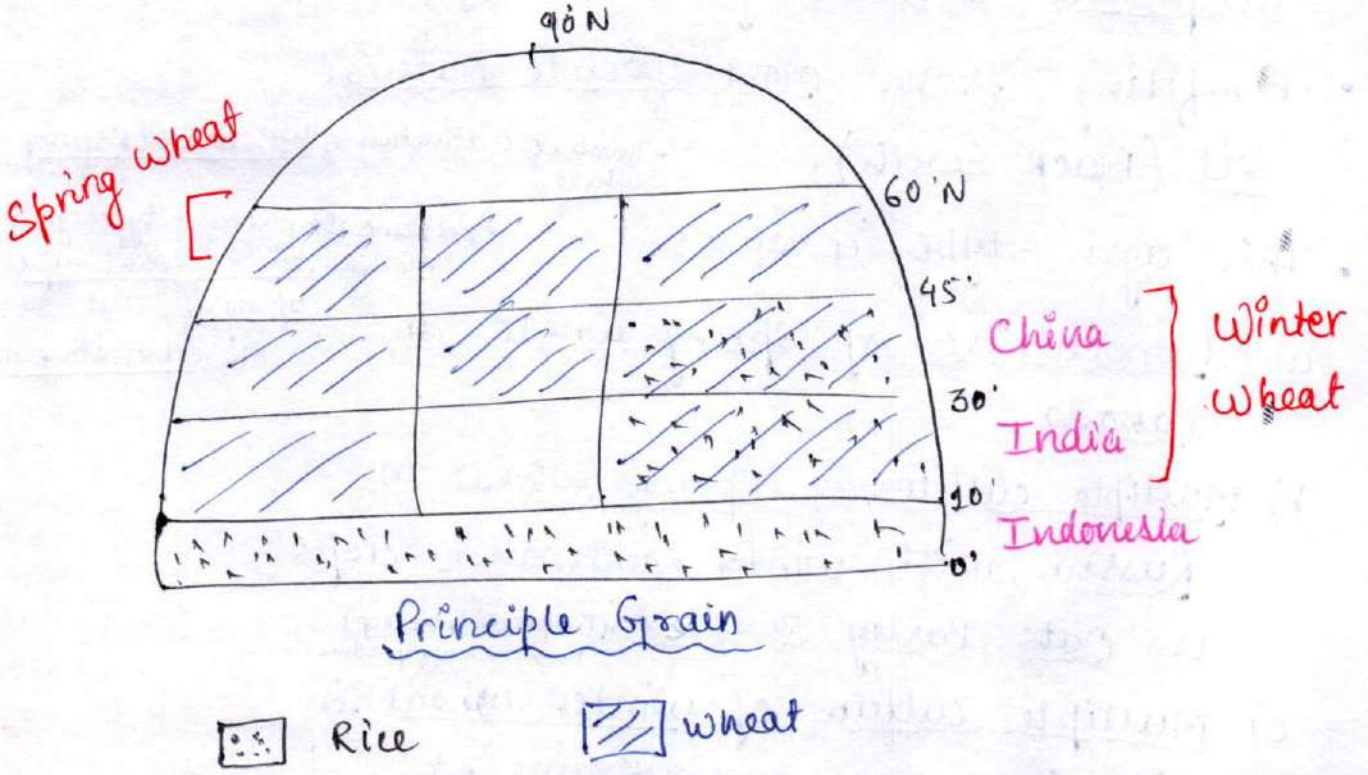
(7) Mixed Subsistence farming

- commercially balanced status of crop and livestock depicts mixed farming
- it is * evolving type of agriculture in deving world

Eg. (China, India, Nigeria)



Agricultural Regions of World (Apply on Continental parts)



Principle Grain

Rice

wheat

II. Developed Agriculture Type

- Confined in Temperate latitude thus involving developed countries. *
- Agriculture is prominently
  Extensive
  Commercial
  Mechanised characteristics.
- The dev'ed types of agri. includes

(8) Extensive Commercial Grain Farming

- confined in continental interiors of temperate latitude. (why?) (temperate grasslands)
- Benefiting from most fertile natural soil (Black Earth).
- This agri. type involves -
  a) Monoculture of spring wheat in Canada
  b) Multiple cultilre of Spring wheat in Russia, with winter combination crops as Oats, Barley & flex → (Temperate fibre crop) Russia leading producer
  c) Multiple culture of winter wheat in USA (Cotton, Maize), Germany, France, Ukraine etc.
- Commercial grain farming corresponds to Bread Basket of the World (N. America) & Wheat Triangle of the World (Eurasia)

- Involves cultivation of both winter & spring wheat.
- Economically sound typology • makes non ecological type of agri. due to its exploitative nature.

- China and India as leading producers of wheat also depicts this type, however, as intensive commercial grain farming

(while writing Types, include this, while agri'al region, leave it)

(9) Extensive Commercial Mixed farming

- is practiced in major part of temperate countries/latitudes.
- it uniquely combines devied economic & near ecological characteristics.
- It provides 3-fold benefits - (to farmers)
  - a) Spreading labour requirement throughout the year. thus (↓)ing the labour cost.
  - b) Safeguarding farmers interest against poor prices & disease.
  - c) Gainful utilisation of waste of one sector as priced asset/input for the other. (Crop residue & Animal Excreta)

- This agricultural type involves cultivation of wide range of crops as well as animals.
  - both winter & spring wheat
  - (wheat, cotton, oats, maize, flex Horticulture)
  - (milch cattle, sheep, goat)

(10) Commercial Dairy Farming

Denmark
Netherlands
NZ
Aus.
★ India

Confined in wetter margins of temperate latitude where luxurious growth of grass provides excellent habitat for milch cattle.

- Livestock only developed agricultural type.
- Is dominantly ecological type.
- It involves prominence of manual labour.
- Exclusive rearing of milch cattle, for milk production.
- Involves Denmark, Netherlands, NZ, Aus

★ • This agriculture type involves India - the leading milk producer of World (since 1997)

★ • This type is also globally evolved around the big urban centres (as Truck farming)

III. Specialised Agriculture

- dedicated to commercial ... though with distinctive types of specialisation :

(11) Mediterranean Agriculture

- Specialised type due to Unique agro-climatic condition (winter concentrated rain & long hot summer drought)
- It involves intensive commercial mixed farming with Horticulture*
  - cultivation of winter wheat, cotton, tobacco with rearing of animals (sheep, goa
- with citrus fruits, figs, olives, the agro-climatic region forms garden of the World. & viticulture zones.
  - Eg. Bulgaria - Roses world famous
- * Due to long summer drought, milch cattle is largely restricted to goat & sheep.

(Mediterranean) → Mixed farming + Gardens of World (Horticulture)

(Horticulture) = Fruits + Flower + Vegetables (commercial).

NOTE: Truck farming = Horti. + Dairy farming

(12) Horticulture (Truck farming)

- Specialised agri. involving commercial production of fruits, flowers & vegetables.
  - followed both as intensive & extensive commercial.
- involves wide spectrum of locations as Horticultural crops are Tropical (Mango, Orange, Guava), Temperate (Apple, potato) & Arid Varieties (Amla)
- In all this range, China & India forms major producers.
- Traditionally belonged to European & Mediterranean agri'al regions
  Eg. Netherlands for Tulips
  Bulgaria for Roses.

- Horticulture is crop only culture with near ecological dimension.

★ - Its world-wide development as the constituent of ₹ Market Gardening around big cities of world, however, has mixed farming characteristics (Dairy farming) called Truck Farming. (All horticulture is not Truck farming)
All Truck Farming is Horticulture

- Specialised agriculture as individual specimen of fruits, flowers & vegetables requires dedicated, unique techniques of cultivation & harvesting

(13) Plantation Agriculture

- Only crop agriculture
- Specialised type as it involves

a) Specialisation to judge stand of the crop.

b) Specialisation to control weed growth.

c) Specialisation in harvesting techniques.

- This agricultural type as Traditional ₹ plantation is man-made ecosystem, practiced in Equatorial climate involving
  Coffee in Brazil, Cocoa in Ghana, Spices in India & Tanzania
  Rubber in Malaysia. (Dev'ing countries mostly) Tea in (SL)

- As Non-Traditional Plantation (where same plant provides yield for 2 to 3 consecutive cropping seasons) Larger geographical extension is specified.

Eg. Cotton – The long staple cotton (highest commercial grade/quality) is produced in Egypt (Tropical Desert), Pak

Kazakhstan (Sub-tropical Desert) & Turkey (Mediterranean climate)
(China, India & USA are major producers of cotton in world).

26-Nov-21

Eg. Cane
↳ Brazil & India as prominent examples.

* Basis of Whittelsey's classification

* i) Crop and Livestock Combination (basic principle base of classification)
ii) Intensity of use of Land, Labour & Capital (more prominent in dev'ing world → more prominence in dev'ed)
iii) Methods of growing & stocking - Prod^{n} & storage
iv) Methods applied for dispersal - marketing & Trade
v) Ensemble of agri'al infrastructural inputs.

↓ distinguishes b/w Dev'ed & Dev'ing Agriculture

Dev'ing: less available, inequalities
Dev'ed: Uniform, higher level of availability

(i)

Crops only	Livestock only	Combination
• Shifting agri	• Nomadic Herding	• Sedentary agri.
• Int. Subsistence with Paddy	• Livestock ranching	• Mixed subsistence
• without Paddy	• Com. Dairy farming	• Comm. Mixed farming
• Comm. Grain farming		• Truck farming (Fruits, Flowers, Vegetables, Milk)
• Horticulture		• Mediterrepean
• Plantation agri.		

Agricultural Inputs

Conventional / Traditional

→ **infrastructural inputs**

- HYV seeds
- chemical inputs
- Irrigation
- Machines

Dev'ed: higher levels of these inputs thus higher prod^n

Dev'ing: lower levels of inputs thus lower prod^n

FAO - Traditional Farm Input model

Many companies provide dedicated input products

Seeds → Fertilizer → Agrochemicals →

farmer makes decisions & applies inputs

↓

Crop yield depends on grower's capabilities (Timely, affordability, availability)

Moderen

→ **Sustainable agriculture** ≠ Organic farming

(Climate Smart Agri.)

- Diversification
- Mitigation
- Adaptation

Contemporary

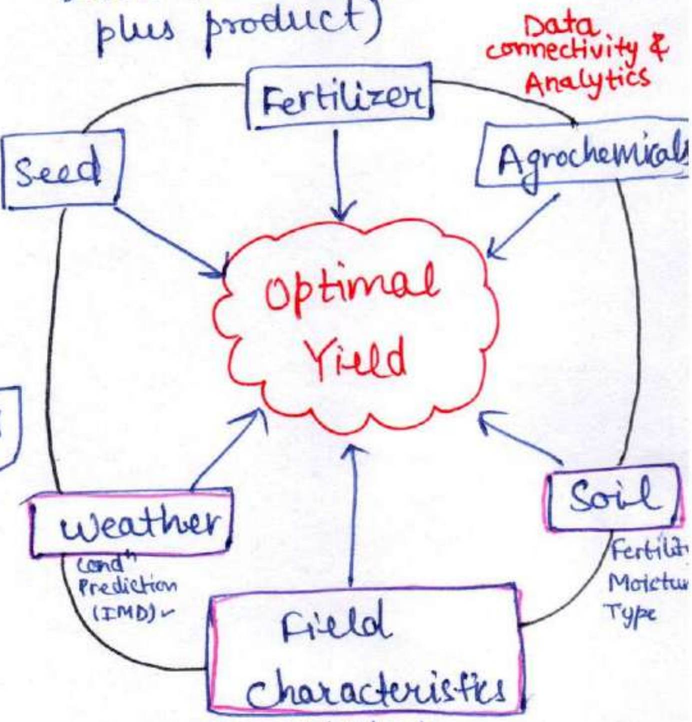
Digital / Internet of Things / Artificial Intelligence

to optimise yield (by informed farmer)

⇓

FAO - Digital Platform-based Farm Input Model

farmers get connected, benefit-based solutions (recommendation plus product)



resource based agri.

what field can cultivate today & tomorrow

[Enhanced the farmer's capability input agri. by incorporating digital inputs.]

Modern Agri. inputs

↓

Sustainable agriculture

(Climate Smart Agriculture) (IPCC)

(3 inter-related pillars)

Diversification

(Productivity Enhancement)

(sustainable intensification)

Prod^{n} of (Diversify with)

↳ Food crops, Feed (fodder) crops, Fibre crops (cotton etc) flax

Fuel (Energy),

Ecosystem Services

or, (Tree based farming)

Change Mkt based Agri. to Resource based Agri. *

Mitigation

(GHGs Emission Reduction)

Adaptation

(Resiliency)

Adapt to the irreversible changes

Hazard, * Pest + Invasive Specimen

Ecosystem services

- Provisioning services (direct Mkt. Value)
- Regulating services (e.g. Mangroves to mitigate tsunami) (hazard mitigation & passive mkt value)
- Cultural services (Tourism) (Aesthetics, Trad'nal dwellers (Depend on forest services))
- Supporting services (Growth cond'n for soil / plant)

Mitigation → steps/ways to reduce GHG emissions

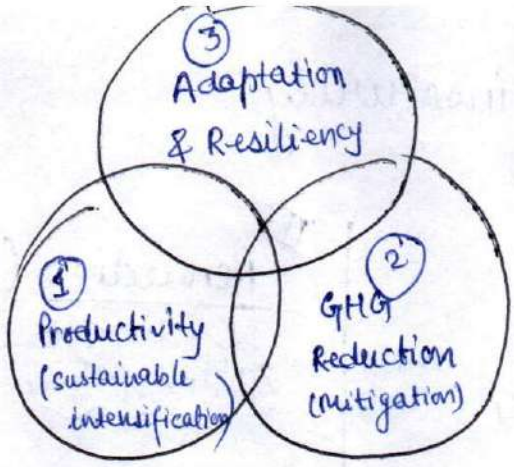
- **Carbon sequestration (C.S.)** → long-term storage of carbon in plants, soils, geological formations and the ocean
  - **Terrestrial C.S.** (through photosynthesis & stored as carbon in soil & biomass)
  - **Geologic C.S** (CO_2 can be stored, including oil reservoirs, gas reservoirs, unmineable coal seams, saline formations, shale formation)
  - **Ocean C.S.** (ocean absorb, release & store large amts of CO_2 from the atmosphere, by (2) ways)
    - enhancing productivity of ocean biological sys. through iron fertilization → iron dumping → stimulates phytoplankton prod^n → enhanced photosyn. → CO_2 absorption.
    - injecting CO_2 into deep ocean.
- **Clean Fuels** (Hydrogen, LPG; for cooking, transport etc)
- **Methane Capture** (Potent GHG)
  - Recent: Global Methan Pledge, US-UK led effort)
  - ✗ reducing Methane emissions by (1/3) by end of this decade

Mitigation efforts req. as Agri. is both (cause) of C.C. & is suffering the most due to C.C.

Adaptation

& Resiliency to

- Crop & Livestock Hardiness (cultivating drought resistant crops, Flood resistant crop)
- Erratic weather
- * Hazard Mitigation
- * (↑) Water use efficiency (~~Tubewell irrig^n~~ sprinkle irrig^n, drip irrig^n etc)
- * Pest & Invasive species Management (developing precautionary measure of controlling the pest)



Soil Health | Nutrient Use Efficiency |

Hunger = Food insecurity

I.

FAO (more comprehensive) < GHI

FAO ↓ <1800 kcal consumption per adult per day

a) Types of Food insecurity
b) Causes of food Insecurity
c) Consequences of food insecurity

* Famine

II. Remedies (Mitigation)

attempts

SDG 2

FAO
↳ condition in which consumption < 1800 kcal per adult per day

basic minimal requirement for healthy-reproductive living

→ **Hunger** is related to inadequate food consumption that reflects Food Insecurity

FAO identifies 2 types of food insecurity (Temporal classification)

Chronic food Insecurity	Transitory food Insecurity
Long term or Persistent	Short term & Temporary

* The Food insecurity experience scale (FIES) is utilised by FAO to enlarge the understanding of Levels of prevailing hunger. This scale includes:

a) Food security to Mild Food Insecurity
uncertainity regarding ability to obtain food.

b) Moderate Food Insecurity
compromising on food quality & variety
or Reducing food quantity & skipping meals

c) Severe food Insecurity
No food for a day or more

Global Hunger Index (GHI)

- International food policy research institute since 2006. have been publishing the data on hunger (food insecurity)

- It incorporate Undernourishment or Undernutrition defined as deficiencies beyond calories including protein, vitamins & minerals intake.
  It defines the causes of Undernourishment/Undernutrition to include:
  - Poor Utilisation of Intake (of food due to illness or infection)
  - Less levels of consumption (Both quality & quantity)

- It also incorporates Malnutrition that involves Undernutrition & Overnutrition (caused due to intake of unbalanced diet)

- The Hunger Index is calculated on the basis of (3) equally weighted indicators
  (1) Undernourishment (is the measure of inadequate food supplies)
  (2) Child Mortality
  (3) Child Wasting & Child Stunting (i.e., child under-nourishment)

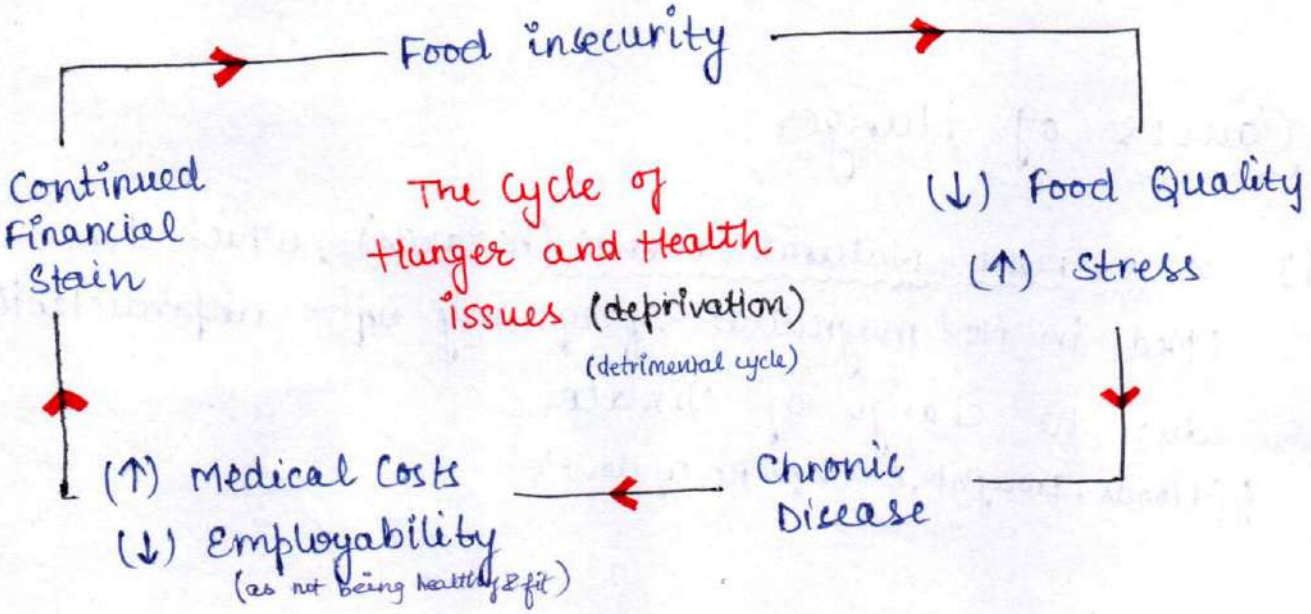
* These indexes proves GHI to be more comprehensive as specifically focuses on most vulnerable age group

* GHI tables provides substensive data that facilitates global comparison involving Low hunger, Moderate hunger serious hunger, alarming hunger & Extremely alarming hunger levels.

GHI severity scale (0-100) ≥ FIES (better measure) (more compreh.)

Low	Moderate	Serious	Alarming	Extremely Alarming
≤9.9	10 - 19.9	20-34.9 (India)	35-49.9	≥50

* Effects of Hunger



★ **Famine**

- It is defined to be extremely high levels of food Insecurity.
- UN demarcate (3) fold criteria to recognize this developed condition
  1) At least (20%) of the pop'n facing food shortage.
  2) Prevalence of acute malnutrition to upto (30%) of children pop'n (atleast 30% acute malnut.) in a child
  3) High & frequent mortality, i.e., (2) deaths per day per 10000 pop'n

★ **Causes of Hunger**

i) is extreme Natural events (hazards), which has (↑)ed in its magnitude, frequency ~~upre~~ unpredictability due to change of climate.
   Eg.(Floods, Drought, Earthquake, Cyclone)

ii) Domestic or Internal Causes
   (Culture, Societal characteristics, gender equations)
   - Culture → Fasting, Less intake
   - Societal → Rich, Poor divide
   - characteristics → Less opportunities to deprived class, Discrimination
   - gender equations → Men-women inequality (vulnerable financial stability of women; constraint on freedom, skill gap, capability & opportunities)

iii) Global or External Causes
(Pol'cal conflicts, disruptions in the movement of trade cargo (piracy / pirates)
↳ food supply chains disruptions

iv) Outbreak of pandemic or epidemic ((↑)ed vulnerability in health, economic status etc.)

v) Desertification
(outcome of unsustainable agricultural practices)

- terminal"/depletion of biotic potential

- 40% of arable land is degraded (cultivable)

Hunger ↕ Under-development

* Consequences of food Insecurity

1) weak physiological, psychological capacities and potentials directly influencing economic capacities & potentials

2) Social & Economic unrest that tends to generate Political Instability.

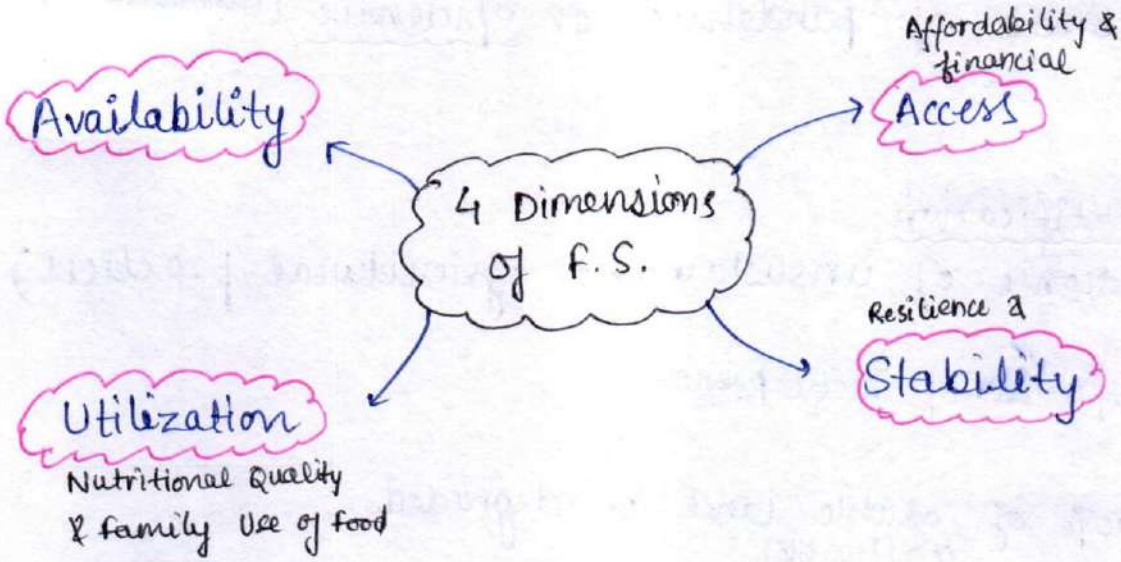
3) Lack of mobilization of growth momentums that magnifies economic inequalities in regional perspectiv

* Underfeeding
Mass diseases
Pop'n (↑)
Illiteracy
Social inequalities
dependency

Food ~~inec~~ insecurity leads to
* (↓) in resilience of pop'n or community.

Food Security Measures (Remedies)

The term food security is co-related to (4) inter-related dimensions



Availability

This dimension relates to supply of food that is determined by production levels
Buffer stock level
& Food trade

Affordability (Financial Access)

this dimension relates to efficiency of availability to the vulnerable most pop'n in the given economic setup. (favourable distribution of food)

Utilization

This dimension essentially focuses on amendments in the dietary culture ranging from nature of processing food, food diversification & specification of

food requirement.

Stability

This dimension is to maintain consistency of supplies of quality and quantity of food (by planning & mitigating erratic development of conditions that generates food insecurity).
(Epidermic, Pandemic)
Pol'al instability

Efforts

SDGs related to or impacting on malnutrition, thus food insecurity

1 → No Poverty
2 → Zero Hunger
3 → Health & Well Being
4 → Quality Education
5 → Gender Inequality
6 → Clean Water & Sanitation
17 → Partnerships for the Goals.

(Global hunger)
(Food availability & affordability
↳ Food trade)

Tackling Hunger (Measures to tackle hunger - GHI)

Affordability of Food (Access)

- New farming techniques (sustainable agri.) ★
- Animal health care
- favourable food stock ★
- Improved variety of seeds.

Improved Health

- The health support to mothers ★
- clean water & sanitation (SDG 6) ★
- Awareness about health & hygiene
- Diversified food intake ★

★ ↳ Urgent Needs

Applied only when extreme conditions are encountered challenging food security

Involves:

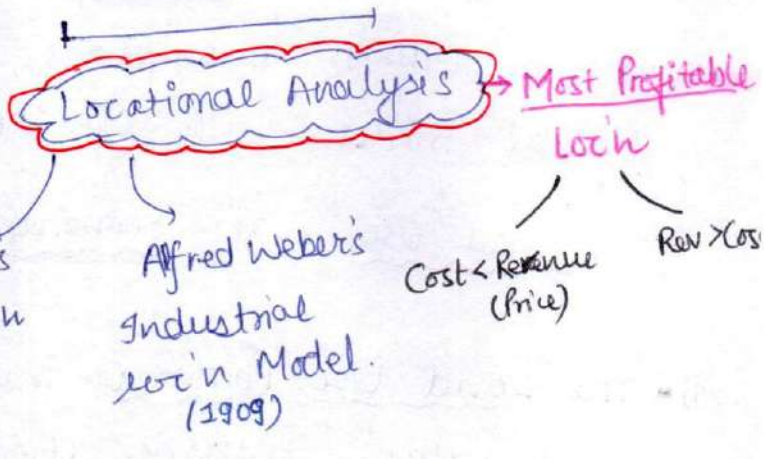
- Emergency food supplies
- Emergency medical support to treat malnutrition
- generation of temporary jobs to facilitate liquidity (Purchase power) at individuals disposal

↳ Secure future

This aspect of tackling hunger involves long term perspective thus

- Strong and consistent market
- Dependable rise in income
- Environmental sustainability
- Better connectivity using digital platforms

Empirical Inductive (Based on Real time survey) vs. Empirical deductive (Lab based Study) (deduce facts/reasoning from already available data)



★ Von Thunen's Agricultural Location Model

→ German Economist & practicing farmer, Von Thunen attempted 1st elaborated locational analysis (1826).

→ His Empirical deductive model was based on defined assumptions:

a) Existence of Isolated State, i.e., absolute economic isolation, thus required to produce everything in demand & consume everything produced.

b) Farmers, the rational economic creatures capable of taking all decisions rationally maximising their profit.

c) Prevailing of Isotropic plain, i.e., featureless lowland having homogenous prevailing conditions depicted as same soil fertility, constant market thus price of agri'al commodities.

d) Transportation Cost, as the determiner of production cost, (↑)es with (↑) in distance travelled and weight of the commodity displacement.

e) Land value in the isolated state (↓)es with (↑)ing distance from the centre (of settlements) market

→ Based on these assumptions, Von Thunen developed Loc'nal model with (2) inter-related parts:

Land Use and Economic Rent

i) • The Land Use Pattern involves the influence of land value, transportation cost & presence or absence of navigable stream.

Originally, concentric land use was proposed with inner margins projecting Intensive Land Use as well as production of wood (Bulkier commodity sensitive to displacement). (zones 1, 2, 3)

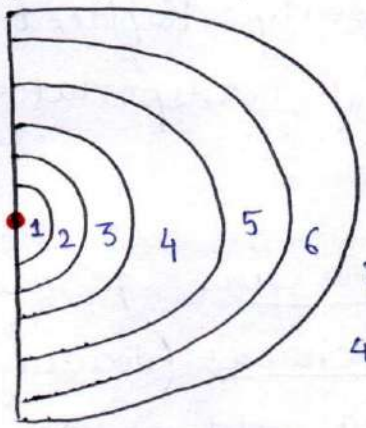
. Outer margins in comparison involving Extensive Land Use pattern. (zone 4, 5, 6)

In the modified condition involving presence of navigable stream (which provides cheaper means of transport) same (Intensive to Extensive land use) Land Use pattern will have linear shape fringing along the navigable stream.

Von Thunen Agri'al Loc'n

- Land Use
  - Original (concentric)
  - Modified (Linear wedges along navigable river)
- Economic Rent

Original (concentric)



● → Central Mkt

1 → Mkt Gardening zone & Milk prodⁿ

2 → Wood zone Prodⁿ (Firewood & Lumber)

3 → Intensive Crop (no fallow)

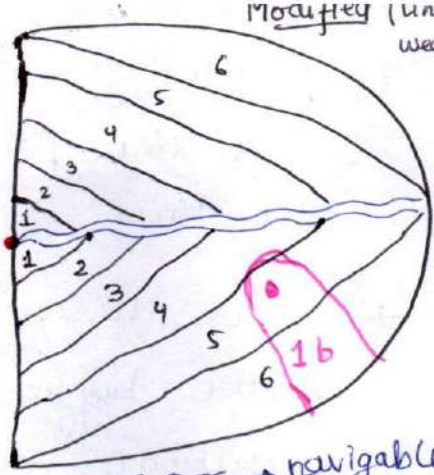
4 → Crop farming with fallow, fodder (Pasture) zone

5 → Three field system zone

6 → Extensive zone grazing (Livestock farming)

2+3+4 ⟸ wood, crop, fodder

Modified (linear wedges)



〰 → navigable stream

* 1b → smaller city with its own trade area (secondary mkt)

** In the modified Land use Von Thunen proposed development of secondary market with its own Market Gardening zone at the periphery of isolated state.
(However, never utilised it in the judgement of Economic Rent.)

• ii) Economic Rent

↳ is defined to be the profit farmers make in cultivating certain type of crop.

↳ Economic rent is defined to be the function of Value of the commodity in mrkt (V), along with the input cost that includes Transportation cost (T) and Laborer cost (E)

Input cost

$$P = V - (T + E)$$

P = Profit; V = constant presumed; T = Transp cost (dst. travelled (not in hand) + wt. displaced); E = Labour cost

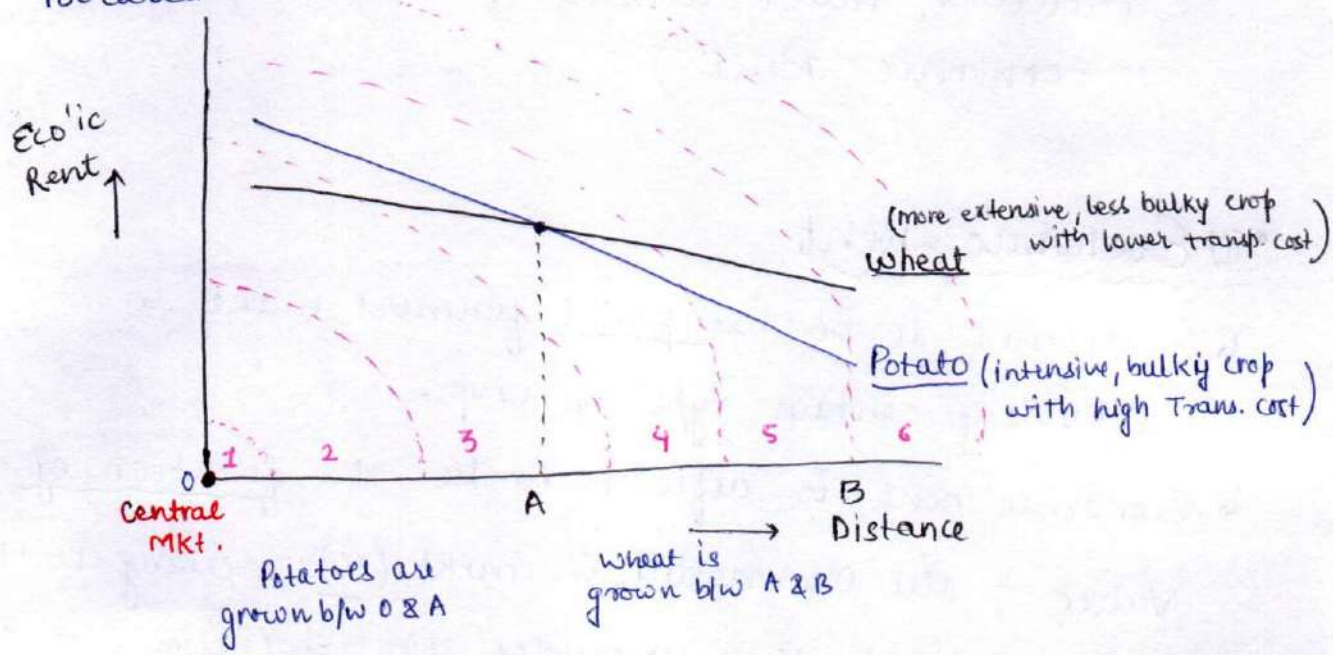
↳ By presuming that both V and E remains constant in the isolated state, Von Thunen emphasized T, the transport cost, as economic rent determiner.

↳ Specifically, weight of the commodity displaced forms the principle determiner of transportation cost thus Economic Rent.

↳ It is therefore that in inner margins, farmers involve bigger range of profitable choices (deciding to cultivate most remunerative (profit yielding) crop)

↳ In the outer margins, farmers will have compulsion to cultivate certain crop in order to make Economic Rent.

★ It is therefore that Economic Rent further enhances Land Value of inner margins of Isolated State.



* Analysis or Appraisal of the Concept

The 1st deductive model in loc'nal analysis projects its practical validity involving

1) Every market node or centre do incorporate its own specialised market gardening zone (Truck farming zone)

2) Land value do (↓)es with (↑)ing distance from the nod of the settlement both in rural & urban areas (the (↓) of land value in urban areas is however more steeper than the rural counterpart).

3) Transportation cost is dependent on distance travelled & weight displaced moreover it is the prominent determiner of loc'nal decision of economic activities.

4) Water means of transport forms cheapest means of transport justified with dominance of oceanic routes in global trade.

5) Depicted by wood production, produced at the closest proximity to the central market, validity is judged as all the ~~weight gaing~~ * weight gaining industry marks their confinment near the market.

* As the centrality (prominence) of wood as the source of heating, cooking is no longer prevalent, the forestry zones are at extreme peripheral areas.

(Selviculture + regenerating the depleted green, the regulating services)

;) (*) In the Regional Perspective, validity of agriculture model is further justified.

Applied at the country's level & assuming any defined city as the only existing market, the proposed land-use change projects validity.

For Example, with New York City as the only market the common land-use change ~~ino~~ identified reflexts market gardening in the closest proximity to the city, Extensive wheat cultivation at Intermediate distance, along with Livestock ranching (Extensive grazing) at maximum distance from the central market.

Too theoritical

Locational Analysis

- Agri'al loc'n ✓
- Industrial loc'n
  - conventional / Classical Approaches (till 1940-50)
    - i) Least Cost Approach
      - Alfred Weber (1909)
      - Hoover
      - Isard
    - ii) Profit Maximization Approach — Losch
    - iii) Spatial Margins of Profitability — Smith
  - contemporary / Modern Approaches
    - Globalisation related
    - • Scale of Prodⁿ
    - • Trade Relations
    - • Labour Unions
    - • Govt. Policies
    - • Envr'tal concerns
    - * • Commensal services (advertisements)

★ Alfred Weber's Industrial Location Model (1909)

→ German economist, Alfred Weber developed Least Cost Approach in locational analysis of manufacturing industry.

→ Presuming economic rationality of entrepreneurs with uninterrupted supplies of capital.

He developed his concept based on → raw-material,

* raw material market,
  Labour Cost,
  Transport Network (Cost).

Assumed
- Demand Constant / static
- Price of commodity constant

→ He also presumed prevalence of isotropic plains with constant demand thus price of the commodity.

→ He gave recognition to transportation cost (↑)ing with (↑) in distance travelled & weight of the commodity displaced.

→ The developed concept includes 3 inter-related parts:

Locational Triangles | Isodapanes (Labour Cost) | Agglomerations

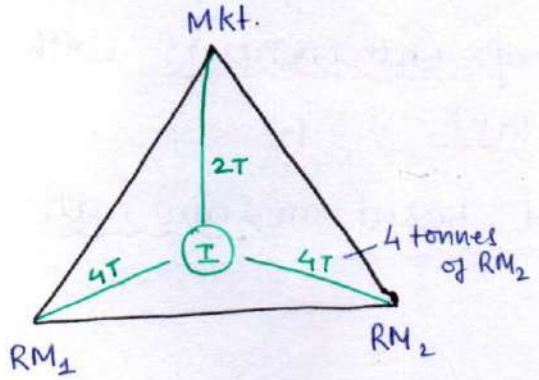
- **Locational Triangles**

↳ It involves judgement of least cost location based on Raw Material, Market & Transport Cost.

↳ 2 Types of Least cost Locations are distinguished

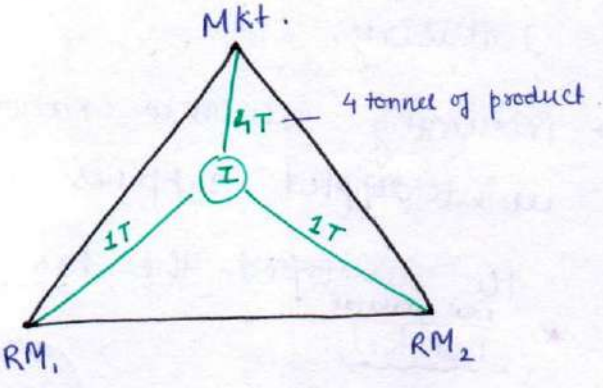
Raw Material Oriented, i.e., weight loosing industries

Market Oriented, i.e., weight gaining industries.



Raw Material Oriented
wt. loosing Industry Eg. Cement Industry

I = Industry



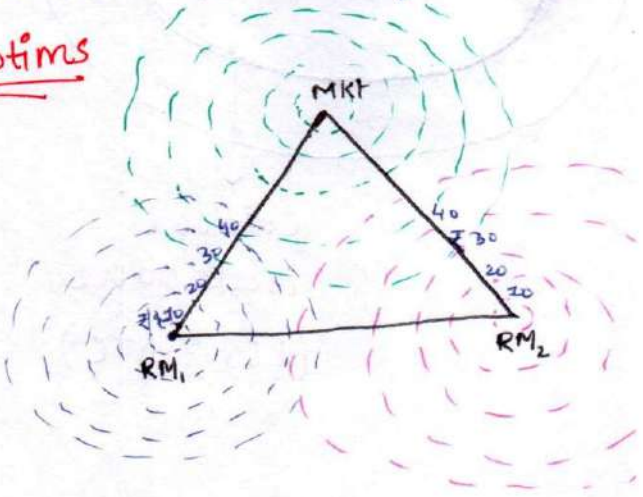
Market Oriented
wt. Gaining Eg. Automobile Industry

NOTE:
Foot Loose Industry - can be at any location, Transp. Cost of RM & product similar
(Cotton textile Industry) Both RM & Mkt Oriented.

★ In locational Triangles, Weber also advocated Isotims These are defined to be imaginary lines joining the places with same transportation cost.

The values of Isotims (↑)ing with (↑)ing distance from the centres of Raw Materials & Market is thus required to be considered to develop least cost Location.

Isotims



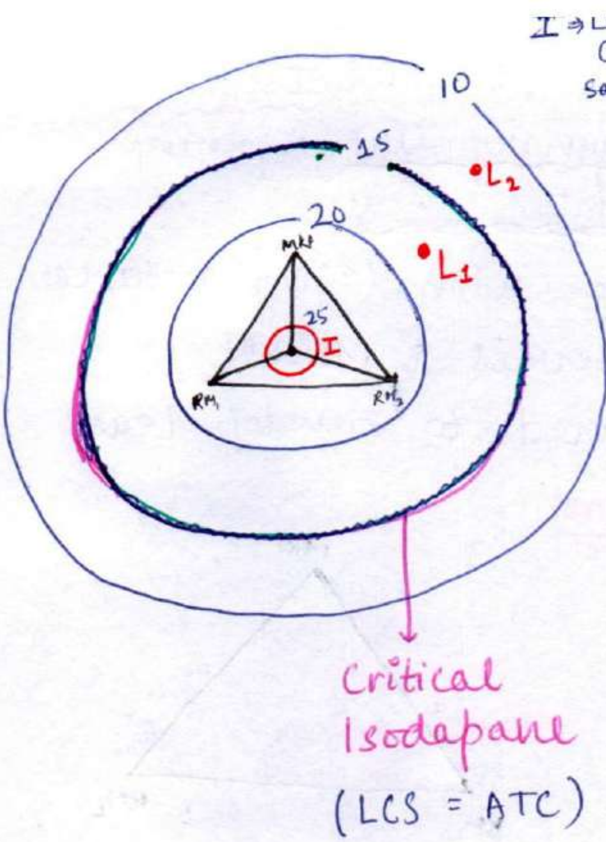
- Isodapane (same labour cost)

↳ These are defined to be Labour Cost Contours

↳ With (↑)ing distance from the Loc'nal triangle, (↓) in demand of industrial labour results in (↓) of per capita Labour Cost.

↳ It is therefore that Least Cost Location (LCL) can be specified outside Loc'nal Δ at the distance where Labour Cost Savings (LCS) is more than Additional Transportation Cost (ATC)

↳ Critical Isodapane thus represents the distance where Labour Cost Savings equals Additional Transportation Cost, i.e, maximum limits of possible profitable location. (LCS = ATC)



LCL

Labour Cost Savings (₹17 eg.)

• L_1

↳ LCS > ATC (Add. Transp. Cost)

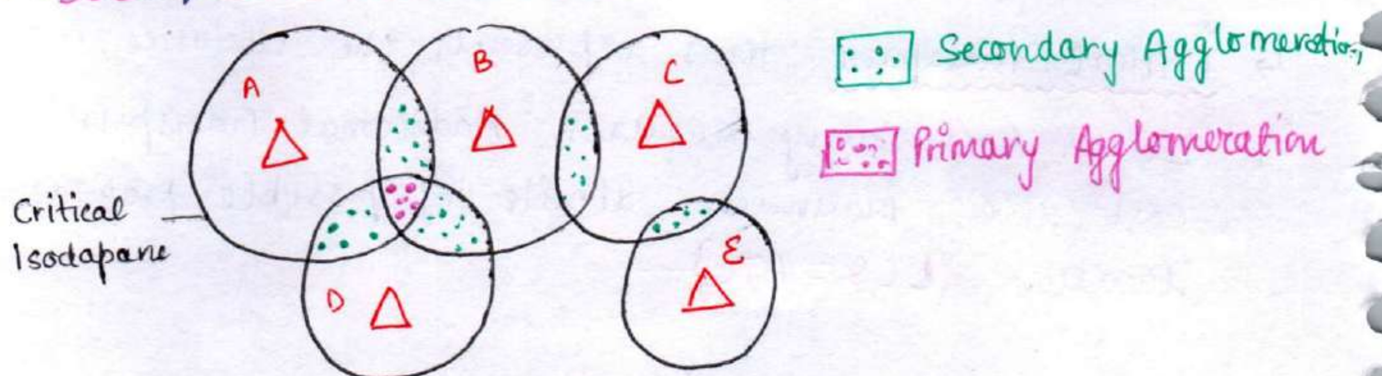
• L_2

LCS < ATC ✗

• Agglomerations

↳ At the smaller scale depicting presence of neighbouring locational Δs with their respective critical Isodapanes Weber introduced Agglomerations

This represents the benefits of clustering distinguished as Primary Agglomeration (involves overlap of ③ critical Isodapenes) with 3-fold benefits (these are rare in their occurrence) & Secondary Agglomeration (overlap of ② critical Isodapenes) with 2-fold benefits (more common in its occurrence) for subsequent industrialization. → (Capital, Labour, RM) Industrial infra benefits



Isard

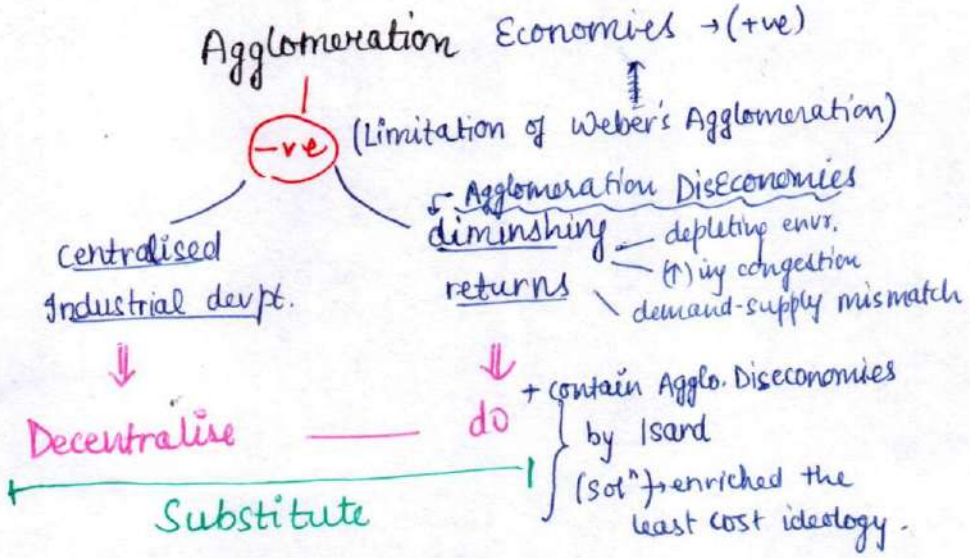
→ Propounded Concept of Substitution, i.e.

Substituting the conventional raw material base by new or non-utilized raw material.

→ This is to facilitate

Decentralization of manufacturing industries (to minimize regional disparity) and also to contain agglomeration's diseconomies, i.e., diminishing returns of industrial agglomerations in terms of depleting envr'tal conditions, (↑)ing congestion and (↑)ing demand-supply mismatch. } agglomerat Diseconon (in due course of time)

Agglomeration Economies do not possess infinite possibilities of benefit, so therefore



Hover (Least Cost Approach)

gave understanding of/classified ★ → enrichment by Hover (classification of cost)

(a) Types of Cost

- Variable Cost
  - wt. displaced
  - Dst. travelled

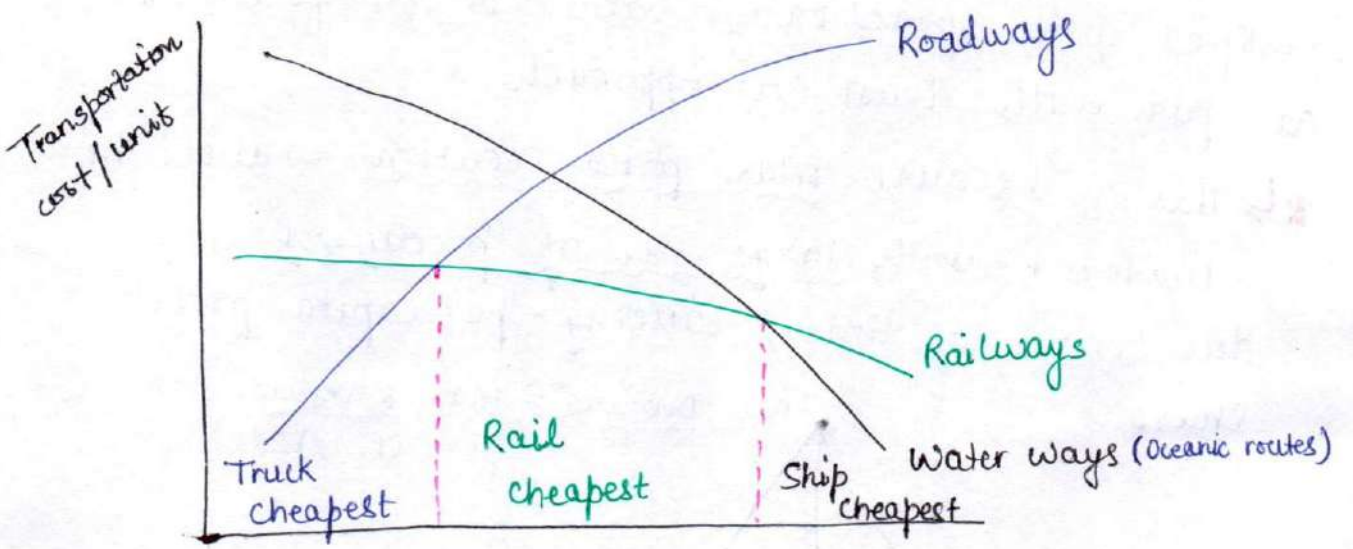
(if ↑les, Transp. cost ↑les (weber's conclusion ✓))

- Fixed Cost (recognition to)
  - ★• Terminal Cost →
    - ★★ Levels of processing experienced (weber never recognized)

(Transp. Cost of higher/processed product higher than the same qty. raw material to be displaced same distance, bcoz of additional handling or packaging cost.)

★★ Break of Bulk Centres (Loc^ where change of transport mode) in MULTIMODAL - multiple mode of transport. Transportation was recognised.

(b) ★ Mode/Means of transport to be involved in Production Process



Water ways expensive for short dist.
bcoz ↳ High fixed Cost in short distance

Economic Landscape

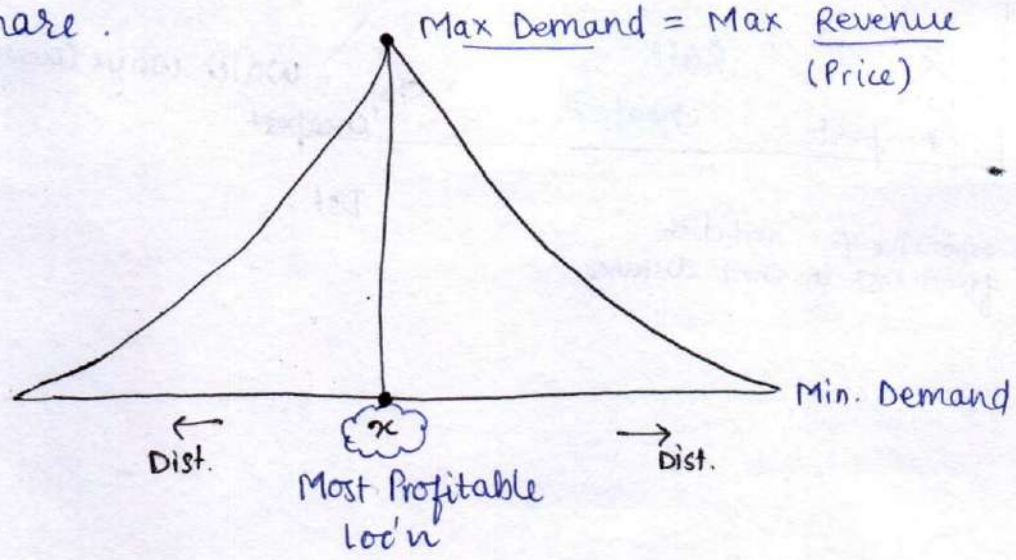
(Profit Maximisation) August Losch (assumed supply constant, cost of prod^n constant)

→ In an attempt to provide due recognition to fluctuating demand thus revenue, August Losch proposed Profit Maximisation as an alternative locational analysis.

→ This ~~pro~~ approach identifies presence of Demand Cone wherein the maximum demand loc^n/ spot relating to max. price of the commodity was defined to be max. profit yielding location.

→ This approach of locational analysis though is justified to be practically valid is not followed at par with Least Cost Approach

*↳ This is because max. price location ~~is~~ will be clustered with large no. of producers in due course of time, reducing per capita profit share.



Spatial Margins of Profitability

David Smith – (Classical Approach)

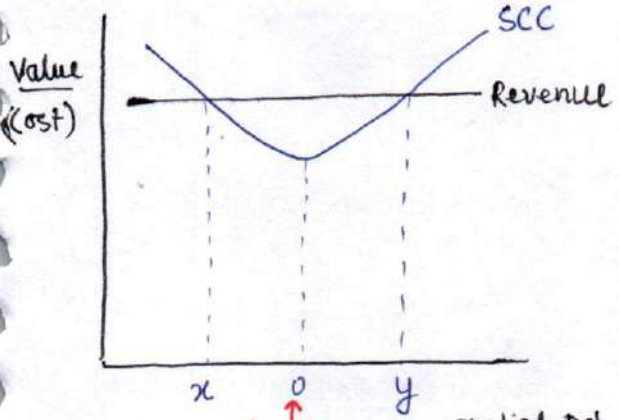
Gave recognition to both

Fluctuating Supplies (Prodⁿ)

SPACE COST CURVE (SCC)

Fluctuating Demand (Market)

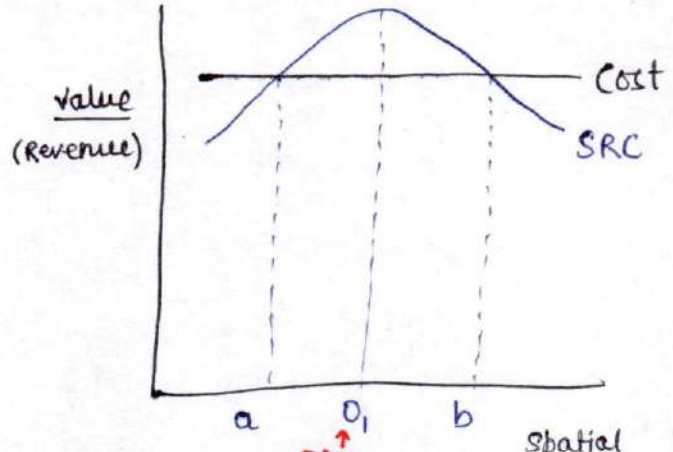
SPACE REVENUE CURVE (SRC)



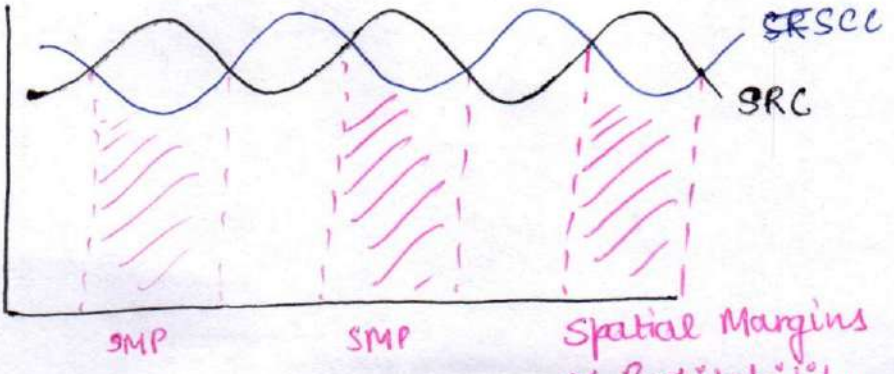
Spatial Margins of Profitability

(weber's criticism/limitation)

by only Least Cost Loc'n mentioned



Spatial Margins of Profitability



— SCC

— SRC

Revenue > Cost (SRC)

Cost < Revenue (SCC)

↳ (Not real world independent of human mind)

- The Metaphysical Argument or Position identifies that mental activity (world) has life of its own which is not controlled by material or physical things.

↳ (mental world) (human mind/experience is influenced by Real world, thus not aloof of Real world) (related to Geog.) → Real world

- The Epistemiological Argument in comparison refers the position that the world can be known only indirectly through human ideas & perception.

However, as all knowledge is ultimately based on individual's subjective experience of world it cannot be aloof of that real world.

(Additional info.)

Realism

- is approach of geogsaphy credited to Gibson that emphasizes that reality is absolutely independent of human mind.
- is involves 2 sub-divides called

Director Naive Realism

Critical or New Realism

The Direct Realism also called Extreme Realism is credited to Cook Wilson emphasizes on nothing exist that is not observable. (synonymous to metaphysical argument of idealism)

The Critical Realism, credited to T.P. Nunn that argues nothing exist except what is experienced (synonymous to epistemiological arg. of idealism)