theories:
Primate city by Mark Jefferson, CPT by Christaller (modified by Losch), RSR by zipf.

Primate city : Mark Jefferson
46 out of 51 cities had 1 very large city. Applicable to Indian state capitals.
This is phenomenon of urban settlement complex. The primate city has status of being nations representative.
ex In 28 cases primate city was 2 times next city
" 18 " " " 3 " " "
London > 4 birmingham
asunchun > 9
montiviedo > 17 (Paraguay) (Uruguay)
Mexico > 5 guadalajara

→ here 1 city is very large.

Jefferson didnt explain reasons in dev of primate city. Reasons given by ullmas, Myrdal's cumulative causation theory. Wrote book drama to study poverty & said sm reasons are historically rich & attract popn. ex: Delhi
backwash effect: the sm areas attract all dev, initiative, investment & act as such pump n grow at expense of other reg. (-ve) Spread effect → +ve

circular cycle of ind 1 → ind 2 → cc...
↓
↑↑spread effect
↓
Poverty
affluence

Jefferson didnt give reasons.
Myrdal explained them to be linked with backwash effect.

analysis
Linsky: 1) 5 features found 2) analysis of features in countries having primate cities 3) ex showing features are not always true.
UK, delhi, china, India etc.

applicability
not universal
India → diverse → not psbl 1 city to represent nation. → 4 cities at diff corners wid comparable popn.
applicable at regional levels (state capital is primate city in most cases)

applicable at regional levels but not national.

(5 features found by Linsky in countries having primate cities)
1. small territorial extent
2. ↑ density
3. ↓ / capita income
4. ↑ agri dependence
5. ↑ rate of pop growth.

means contry shud dev by LDC. but it is not so always. ex china India have atleast 4 cities each of comparable popn number.

so most imp factor is ↓ territory extent whether dev or non-dev.

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desireability of primacy cant be generalized. It depends on:
territorial extent, dev, resources, finance.

desirable if:
1) extent is ↓, 2) dev is ↓ [to avoid unnecessary resource & benefit dispersal]

undesirable if
1) territory is large 2) if focus is to reduce inter reg disparities.

desireability of primacy

desirable if extent n dev are low.

but if aim is to have balanced regional dev then it is not required.

Rank size rule ZIPf (RSR) / Yulels rule.

1) studies relationship of all settlements in complex on basis of popⁿ size. (n not just primate city).

2) emperical expr for identifying relaⁿ:

$P_x = \frac{P_1}{X}$ = Popⁿ of largest city / X city ranked.

$P_x = \frac{P_1}{x}$

x is rank
P_1 is primate's Popⁿ

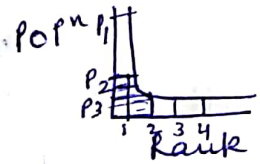
X is rank.

$P_4 = \frac{P_1}{4}$. ($Pop_x = \frac{1}{x}$ times P_1)

3) OR $P_x = \frac{A}{X^b}$ (const) / (any exponent)

$\frac{a}{x^b}$

4)



Asymptote curve

small cities r many & have ≈ Popⁿ.

Outcomes of theory
∴ ① large cities are only few
② smaller are many
③ There is 1 or 2 very large cities.
④ smaller cities have proportionate size.

5) log(Popⁿ)

log (rank)

linear relaⁿ. disparities are waived off only in graph.

6) Reason not explained by him.

imp

Some explaⁿ may b

(a) Urban centres are not self contained n depend on adjoining area. ∴ large urban area wl have large adjoining areas. So large city shd be few.

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opp for small towns. This is princi of agglomera" n disper" in explaining RSR.

(b) Gibrat's law of unequal growth rate explains RSR. GR independnt of city size.

areas Popn ∝ 1/GR.

but acc to gibrat GR is independnt of city size, large cities on avg grow faster.

1) agglomera" n disper"
2) Gibrat's law
3) natural process.

(c) Natural processes have pattern in trends how they grow. eg: Lucas sequence / special case of fibonacci series

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CPT (1933) Christaller (locational theory)
Studied S. Germany

1) use of mathematical theory building. (given in 1950) model making and making used a trend when CPT was given. model (1960) (1933)

2) normative theory, idealistic theory, based on simplifying assumpn, not appt for real life situations. these serve purpose more as std against which realities are measured. act as plan tool.

3) normatives are not meant to b applicable to real life. ∴ not criticized. these feel what shud exist. Not wat exists.

4) Primate city, RSR or emperical. discuss size of settlement in terms of popn. where as CPT is locational and explains:
locn of settlement, spacing b/w, shape.
CPT is quantitican in human geog and used as tool for urban planning.
locn
spacing
shape

5) CPT is least cost theory.
CPT is a settlement theory in urban hierarchy whr settlements are arranged wrt imp/no/typ of serv they offer.

Hierarchy of human settlement can be grouped acc to size or function. Fn al hierarchy is based on economic impact on surrounding areas. Lopch & christaller are fn al

hierarchy functional hierarchy is site and based on economic impact L al are functional.

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CPT assumes perfect market competetion. Here price of product want to manipulated. buyers = sellers. demand = supply. If demand ↑ then price ↓.

seller & buyer both minimize cost.

Seller minimizes input cost to get profit by using resources efficiently. Buyer does so. by ↓ travel Time and dist.

non-humanistic

Q) CPT is pre-behavioral model. C dsnt a/c for individual preferences in DMas these r non-science and not quantifiable.

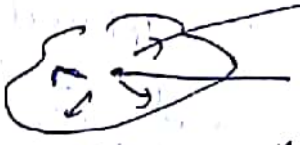
7) assumes ia linear process of DM where indi are rational, economic man (profit motives).
↳ access to all info. & ability to process info.

8) CPT : a study in urban hierarchy whr settlements are arranged on basis of type, imp & no of services offered by them.

9) settlement order is decided by no, nature, hierarchy of services offered. It is not abt geometric centres.

In CPT settlement are arranged on basis of type, importance & no of

there is called central place whose



CP C reduced to a pt)

complementary area dependant on CP.

10) threshold popn : min pop req. to sustain CP & service

11) Range : Max dist I willing to travel to reach CP.

assumpn

1) rational economic man
2) CP as a pt.
3) explicit Isotropic surface. Flat, monotonous, even wid all round level playing field. No phy barier.

isotropic popn & surface that only distance varies.

Only dist, varies.

Popn is also uniform.

explicit

4) perfect market.

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CPT is least cost theory, Idealistic (not appl. everywhere.

Obj

1) best psbl orgn of settlement
2) max profit for seller n buyer both.
3) efficient utilisan of place.

S > orgn
B > profit
utilisan

seller's pt of view — Buyer's

(least no of CPs, ↓ hierarchy)

↑↑ CPs. (↓ Tym).

S B wants ↓ hierarchy, ↑ CPs.

4) solving adv conflict.

Method

1) CPs shud offer all services offered by lower order places.
2) christaller gave 7 levels hierarchy.
3) complementary area shd hav exact threshhold popn.
4) radius of " " shd b " = range.
if buyer is within range thn he is at adv.
... similarly other scenarios.
5) (complementary areas) CA of 2 CPs shdnt overlap.

adv to buyer here.

disadv to buyer here.

6) isotrophic condin: rate at which cost of travel varies is same in all dir. ∴ CA is 0.
7) To cover missed out popn overlaping is req.
hence he suggested a hexagon shape, wid
settlement forming a lattice.

Nesting Pattern of diff hierarchies

- no of levels
- no of centres at each level
- Spacing b/w centres.

Nesting
- levels
- centres
- spacing.

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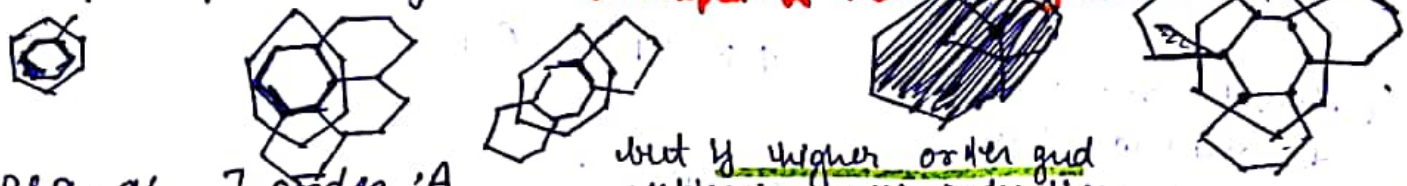
Pattern in which centres of diff hierarchy level organize themselves is called nesting.

Marketing, Transport, Administrative

limitation. dsnt consider manufacturing as urban fn.

Marketing fn: lower order cp at vertices of higher order's complementary area.

In this hierarchy, society is largely agrarian, transport is less developed & marketing is main.



area of 7 order: A

" " 6 " : a

then $3a = A$.

but if higher order god replaces lower order then...

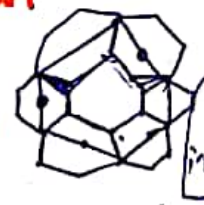
③ transport ~~cost~~ increases range.

④ people prefer to go to higher order cp.



K value = 3. (1 high order supports 3 lower order)

Transport fn: In this case lower order midpoint is at midpoint of higher order.



K = 4.

Proportional to threshold of lower order immediately higher order cp's

there transport cost are p/r imp. ∴ dist shd b least

spatial distribution & market areas of a higher order cp is linked to that of lower order in hierarchy of lowest K.

Adm: No sharing of boundaries | complementary area.

CA of lower order is within that of higher order.

K = 7. Indian 6.





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Criticism

Even spading of settlements, hexagonal spheres of influence is theoritical, no clear or definite ranking of centres within each other. equal sized sphere of influence is not reality. often lower order CPs have activities which higher CP have. rational economic nature of man secondary n primary eco-activities are excluded. fixed K factor shows poor approax to reality.

Present day applicability

1. not universal
2. dont explain complete settlement pattern of a region.
3. efficient division of space n functions.
4. focusses on inter dependence b/w settlements.
5. helps in analyzing fn n hierarchy.
6. used as guide for reloca^n policy: hexmeng.
7. used in planning new towns n cities.

In India

Indian settlements are approximate to ideal central place system.

India has 6 levels of hierarchy of settlements from point of view of administration.

National capital, state capital, district HQ, tehsil town, block dev centres, gram. hierarchy has practical relevance in everyday life of people of India.

adm hierarchy in Ind differs frm expected ratio 1:7 to 1:9 (state capital to districts)

Ist spacing b/w tehsil and district levels confirms to theory. No. n spacing of diff hierarchical levels of places is far from ideal.

hierarchy of 10 levels is recog by scholars of Ind

settlements in India are similar to theoritical central place based on marketing principle.

theory spacing ratio : 1:1.72. reality: 1.4 - 1.8

bearing million cities n small towns / villages.

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LOSCH modified christaller.

1) ino manufacturing
2) also normative, but less ∴ ↑ applicable.
3) Christaller had only 3 discrete values for K. Losch inc continuous values and more than just 3.
4) Cs was top down.
5) he allowed various hexagonal systems with diff K values to co-exist & hence produces continuum of settlement size more closely in line with RSR.

Losch — Christaller

1) ↓ normative then ↗. incorps realistic patterns
2) incorps manufacturing fn (150)
3) considers > values of K. inc continuous decimal values too apart em discrete.
4) Losch nesting patterns are bottom-up approach. begins wid ↓ order hierarchy & n then locates high order wch are christallers was top-down.
5) Pts lower level central places for diff fns on transparent sheet & then superimpose ~~target~~ n rotates to ensure max no of central places of diff fn overlap. (hit n trial)

pattern: 12 sectors. 6 ↑ cone & 6 ↓ cone. Sectors alternate. recalled as ~~sectors~~ of central places.

(1) ↓ isotropic.

(2) unequal distribn b/w city rich/poor regions
2) pattern explained by agglomern & dispn.
→ more realistic.

(3)
3) uneven distribn suggest uneven distribn of consumers. ↓ normativism; ↓ isotropic surface.

(4)
4) ↑ order places dont offer fn of lwr order places → specialisn to certain fn.

5) theory is a prac tool to use in planning as it has real life features

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Total dist b/w prodⁿ plc. is minimized i.e. value of shipments n transport flow, & high route is reduced. As prodⁿ centres coincide, max purchases can b made locally.



- Called as Revenue maximⁿ theory.
- LCT due to economy of scale (dense resources)
- agglomeraⁿ → takes already present resources users & most of ↑ order region → revenue maxⁿ.

(12) Marketing — Losch vs Christaller — retail/ services

similar assumpⁿ, diff approaches.

① L hierarchy is less rigid. centres of same size may produce diff combinaⁿ of grds.
② C : top down approach. L ; bottom-up.
③ C dsnt allow specialised prodⁿ centres.
④ " gave better understanding of retail biz & services.
⑤ L " " " marketing.
⑥ C assumes constant with transport costs. no such assumpⁿ in L. Losch has no constant transport cost. (13)
⑦ C is suited to understand; sparse settlement reg.

CPT dsnt appear to b relevant at national or state level but at regional or local level.

L : market
C : retail

CPT is similar to RSR & PC as it envisages an inverse relation b/w settlement numbers and their size. (no of settlement is inversely proportional to status in hierarchy.

It differs from both in that it rejects idea of settlement continuum & favours discrete hierarchy of settlements. Also it is normative. other 2 are empirical inductive. PC appears to b valid at state level too. CPT conc only on tertiary activities. RSR & CPT not at State level

(most many deficiency)

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City regions : Umland.

Urban centres don't exist alone. exist near oth interdependent centre. each c has sphere of influence that ↓ away frm centre.
N whr ↓ is ≈0, it is called limit of influence = city region = umland.
easy to demarcate city reg in ancient T as : ↓ comm", ↓ transport, confined within fort, encl wld a forest, river etc.
Nw ↑ transport, road → ↑ influence → difficult to demarcate → diffused concept
URBAN SPRAWL : Spontaneous urban expⁿ → city grows ↑ → demarcⁿ tough.

Imp of city reg : Plan amenities for present popⁿ, plan for future popⁿ, plan retail shops in area.

Methods
admin boundaries can't be used as method.
criteria : shud b able to calculate influence.
influence of fn' ojed by city
a popⁿ of city
challenge : find the fn that influences & tech or method used to identify.

Qualitative descriptive method
identify fn → questionaire, survey, sec/tertiary data source → city limits. challenge to find fn. → subjective to researcher.

RL singh used qualitative descriptive method. have 6 fn for varanasi.

reg supply, milk, grain, dress service, newspaper distribⁿ, admin.

Plot boundaries for 6 fns → superimpose → median boundary is city reg limit
considers 2 way interaction of city wid hinterland. don't use cultural centre intentionally as it has influence of whole country.

Quantitative
1) use facts, numerical values, expⁿ,
2) based on assumpⁿ, generalisaⁿ to quantify aspects.
3) Quantificaⁿ in geog to dev geog as sci discipline.

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Breaking pt theory & Stewart gravitational model to demarcate city region.
uses gravity law of newton (social physics)
based on Popⁿ dependant on city.

↑ Popⁿ → ↑ attractiveness → ↑ influence (3)

d_{B_x} (2) $\frac{d_{AB}}{1+\sqrt{\frac{P_A}{P_B}}}$ (1) x is breaking pt limit.

(distance b/w B, x) A's influence ends here.

Prop: Popⁿ size can't be used always.
There are villages with ↑ Popⁿ than city. Thus importance can turn out to be more.



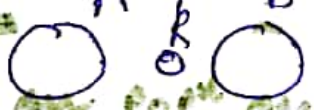
quantitative

Reilly added retail option apart from Popⁿ option in breaking pt theory

$$\frac{R_{AK}}{R_{BK}} = \frac{P_A}{P_B} \times \left(\frac{D_{BK}}{D_{AK}}\right)^2$$

K is intermediate loc.

Both Reilly & Stewart don't consider imp functions like infra, commⁿ employment.



Quantitative
depend on Popⁿ only.



- features manifest as land-use pattern, infra amenities, std of living.
- R-U fringe wasn't present in ancient T.
- urban sprawl → R-U fringe.

features of RUF

- mixed land use, unplanned dev,
(not in US, EU as they have planned sub-urbs)
rural areas can't support urban. called urban fraddore.

stages in dev of RUF

RUF & rural area. gradually it sees urban encroachment and develops towards becoming Urban

① Rural lifestyle/land use. (entirely rural)
② agri change (food crops cash crop or ↑ price crops (veg, flowers, horticultural etc.)
③ occupaⁿ ch.
farmers → odd jobs. out of agri.
unskild semiskilled.
④ urban land use in RUF (dumps, airport, malls, amusement parks)
⑤ Proper urban growth.
active planning, adm, legislaⁿ
no active planning or regulation → real estate
↓ backside

features of urban sprawl.

① single used land < residential or commercial
② no mixed commercial use.
③ Residentials are single storied. (↓ density)
④ growth of car dependant community
⑤ no mass transport. ∴ inefficient land use, ↑ emissions.
⑥ Strip malls.
⑦ Shopping malls.

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System Analysis

A whole which functions as such because of inter dependence of its parts.

Bertalanffy

Amp in geog — Berry & Chorley based on bertalanffy cybernetics

- geog deals wid complex relation b/w living and non-living organisms in an eco-system. SA provides framework in understanding these phenomenon.
- advocated in geog by Berry & Chorley. based on general systems theory of Bertalanffy & concept of cybernetics

System consist elements and the relationship wid env.

Types < open (interacts wid env) (river).
closed (ex hydrological cycle.

adv of closed system : ① helps in developing a theory, provides info on possible sts & behaviours, used to examine empirical problems.

helps in developing a theory & provides info abt sts, problems, behaviours.

Elements of a system

① defin^n of element depends on level of which it is considered

② systems A & B interact as ~~sub~~ units, with subsystems interacting within system.

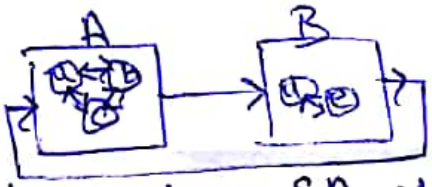
Relations : series relation, || relation [one element influencing 2 or more elements or inversely].
feedback relation, simple compound relations, complex compound relation.

Geog system is/ wher 1 or more var are spatial. static systems are easy to construct s/t dynamic.

Criticism

① based on positivism
② normative values beliefs & faiths are ignored.
③ lead to over generalisa^n.
④ over rates sm elements and ignores others.
⑤ no help in forma^n of scientific laws.

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It is defined as a whole which in as whole bcz of interdependence of its parts. SA used for long but technique to analyz complex system developed post ww-2 only.

geog deals with ecosys, its complex components & relations hence SA suits to geog analysis.

+ves: study systems r/t isolated phenomena, identifi" of various principles,

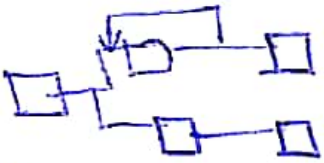
Bertalanffy: study organism in whole, not indi organs

Relan b/w elements


simple.




feedback,


simple compound.


complex compound.

ex of closed n open systems.

earth system: 4 subsystems lithos, atmos, bios, hydros



system: open, closed, isolated.

open: energy, mass pass across boundary. ex: tree

closed: energy ✓, mass ✗ · earth system.

isolated: E X m X

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Perroux n Boudeville

growth pole theory (Perroux) (1955) & later Boudeville (1966), moves along somewhat similar lines in that growth is assumed to originate in some region where a propulsive industry is located and then spreads to surrounding regions. but it is p&b that contiguous regions are deprived of their factors of product^{n} and market once of growth of growth pole.

theory describes processes of growth which have land use implications in both growth pole and its contiguous reg but these are not explicit in theory.

Mechanisms that a/c for growth pole are not specified.

eg Brazilian dev policies were heavily influenced by Perroux's development pole theory. Main reason for its wide acceptance is that it suggested that economic growth, interregional equilibrium and ↓ of backward regions

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need be achieved thru a strategy of decentralized dev.

In relation to amazonia, this region, with its great potential of natural resources and vast areas of unpopulated land, was regarded by military gov as a means of rapidly tackling those objectives.

" As a field of forces, economic spaces consists of centres from which centrifugal forces emanate and to which centripetal forces are attracted. Each centre being centre of attract^{n} & repul^{n}. "

Boudeville was resp for transforming economic phenomenon that was observed in an abstract space into a concept apt to geographical space. Transformed theory to be used as an operational tool for regional planning.

∴ It was implemented in US, Spain, Italy, Brazil, Venezuela etc.

" growth does not appear ~~ever~~ everywhere and all at once. It appears in points or poles with variable intensities. It spreads along diverse channels and has varying terminal effects for whole of economy. " ∴ growth poles became tools to solve problems of regional inequalities

An imp contribu^{n} to understanding of Incidence of economic growth in spatial terms was Friedman's core - periphery model.

In case of dev countries, dev - inducing linkages were transmitted to & fro b/w larger & smaller centres.

In developing countries, probs like unemployment, inequalities exist. In order to solve these probs, planners think growth pole structures to be pmp.

∴ policies shud be base on infra, manufacturing industries etc.

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Criticisms

① spread effect was smaller than claimed and in limited geographical extent. ∴, peripherals wr not benefited

② coraggio claimed that it was designed for dev of poles and its associated grups only. (design faulted)

③ instead of strengthening existing poles, new have been created in disadvantaged regions. Higgins pt that this was Boudeville's failure and not perroux's.

④ selection of region based on urban popn growth proj^n r/t on dev potential.

⑤ encouraged migran /com outsyd dregion where dev poles wr located

⑥ It was unable to improve socio-economic well being of popn who live in peripheral regions.

It is top down approach focussing on urban areas ist.

another ex

regional economy of Paris can be considered to be a growth pole. Paris shows that effect of polariza^n on the surrounding geog area is not always tve → very low dev outsyd paris (nearby) : Paris & the french desert.

Growth centres related to agglom^n are imp in US.

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Also settlement notes

Growth Pole : Francois Perroux

(1) influenced by schum peter. gave > structured theory of industry.
(2) used concepts of external eco, polarisation, spurter.
(3) growth pole is an industry ym whr centrifugal forces emerge & towards which centripetal forces are attracted. centres / poles influence field around them to generate growth at other places.

(4) CONCEPTS :
(a) dynamic industries : innovative, capable of change. by incorporating new tech, ↑ managerial expertise.
dynamic, dominant, propulsive, multiplier, ↑ income elasticity, ext eco linked.

Polarisation (b) propulsive industries & multiplier effect : +ve effect on other industries like construction on cement & comm on mobiles. (ex)

(c) dominant industries
dominance measured in terms of size, output, profit, emp etc.
dominance → propulsive effect.

(d) high income elasticity of demand
products demand (of such industries) do not ↑↓ despite ↑↓ in income level of consumers

(e) final inter linkage and hinterland (ex of ext economy)

dsnt tell actual location, type of industry.

Growth centre : Boudville.

① Boudville converted Perroux's economic theory into geographical theory by giving growth pole a locn & calling it growth centre.
These are urban centres (cities) industrial centres ym whr growth emanates / emerges & spreads out.

② has > grat relevance in neg dev as it has a locnal aspect. dsnt tell where the locn shud be. choices to be made using various locational theories.

③ limitations of growth pole / centre both :
* dsnt specify exact type of industry : use words lyk propulsive industry but do not tell which industry.

Industries of mentioned qualities can vary place to place, T-T.

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* dont tell loc^{n} 4 such industry.
* if final linkages / ext economies dont exist then they have to be artificially created & industry or centre can't do this on its own.
ex: Marmagao cudnt help adjoining hinterland as there were no ext economies. (Paris-desert)

Relevance of Growth pole in dev / regional planning :

① capable of inducing growth in related economies & proximal loc^{n} (agglomeration)
② 1st Gnd → Mehlanobis → capital intensive industries (Poles).
2nd FYP → set up of 3 steel plants (Bhilai, Rourkela, Durgapur)

Challenges :- (in implementation) -ves

① capitalist theory presents final rigidity in dev^{tal} planning. (1) (2)
No role for agriculture, service sectors. (3)
② Not a locational theory. (4)
③ centres mostly rely on political considern (5) ext economic n.
④ w/o external economy, pole develops vertically n become islands of dev^{t} (6) → hinterland remains as such. → disparities
⑤ ∴ GP/GC critisized for ↑ disparities but prob is not in theory but implementation. (7)

R. P. MISHRA'S MODIFICA^{N}

① original theory had final rigidity. India being agrarian can not apply d original theory
② focus shud be on agro based industries. and also other service sectors (banking, retail, edu etc).
③ growth centre shud b centre for diffusion of info & innov^{n}

Modifications

① He developed system of hierarchy whr at diff levels, diff types of GP/GC wud operate with diff set of functions.
He suggested 5 level hierarchy called growth loci / focus based on GP/GC but having ↑ relevance for India's agri. :

(a) Growth loci at village panchayat level :
Smallest level. serve 2-3 villages. Popn ≈ 6000.
More like village mrkts / mandi / haat.

(b) service centre : / block level
≈ block level centre. It has Market + (dispensaries, schools, PO)
size : 25-30000.

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(c) sub regional level / district level :

these will have agro based industries supporting lower level growth foci n service centres. More like market towns serving 1-1.5 lakh popn having hospital, coll, manufacturing agri implements.

V → B → D → R → N

(d) regional scale

popn > 12 lakhs. ≈ state capital. heavy engg, consumer goods centre, banking, tech institn, research centres etc. (Madurai, Mysore)

(e) National scale

large industrial agglomern. > 1 cr popn. (Metropolitans).

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Dev disparities

due to bad planning, deprivation, uneven growth.

disparity is measure of dev diff, diff in rate and quantum of dev tal achievements.

Since 3rd FYP, balanced reg-dev is a key aim; disparities undermine resource utility and multiply over the years & wreak sense of perceived deliberate deliberan & is 1 of basic reason of conflicts. It also ↓ coperative dev, social capital & sus-dev.

Global disparities

reasons

① Natural reason related to natural phy condition like presence) absence of fav climate, terrain, resources, locn.

ex: coastal cities are better placed then conti as they hv better climate, accessibility, ports, export/import → 10 largest cities except mexico are at/near port.

- also plains have > dev than hills. ex Rockies vs lowlands.
- area with resources develop better. ex manchester, liverpool > dev than scottish. german ruhr valley > R.O.germany, brazilian coasts, russian ural (with lignite) > E. sibria etc

climate

adverse climate reg of sahara, Tundra, siberia, mt reg, aus outback are ↓ dev. NZ, S/E aus, S/W SA etc mid lat climate (Brit type) > dev.

In Japan Hokaido (forested, mt, cold) < Honshu (Modisak, river plains).

Hokkaido < Honshu

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Historical reasons

(1) colonial influence : S. asia despite its abundance & diversity of resources is lagging behind its european counterparts due to colonial drain of wealth policies.

(3) tropical areas are exploited & poor due to colonisation.

(4) historical inertia

- W, S US have ∵ resources as N.A.E. abt E, N.E are > dev. as they started early. They got 1st wave of migrants. also delhi grew at cost of others. due to this Africa despite being resource rich is poor.
- Industrial / tech reasons are linked to inertia. Eu had early begining than Asia, LA. it has ↑ tech, R&D, innovation
- developing cntries have ↑ poverty burden → ↓ η, ↓ expenditure in skill training, conflicts → N-S divide in India, S. France has more migrants & poor.

Brazil : W, N/E brazil (amazon) < dev than E, S region (saupolo).

summary : resource adv, history, phy condⁿ, innovation, climate/env reasons like floods, disasters, droughts.

Imbalances in India

(1) due to natural + human factors

(2) adverse phy condⁿ in deserts, mt, & agri resource are under dev or < dev. eg ....

(3) gud agri reg (UP, coasts etc) are MODERATELY developed.

Human factors

- tech, social dev, urbanisation (missing in Jharkhand → ↓ dev despite resources)
- disparities due to history, cultural, caste differences etc.
- " " brit rule have ↑ now. (drain of wealth)
- drain of wealth → changes in economic str, crop choices → depressed rural economy, ↑ disparities.
- industries not developed. Reg made a source of raw material-
- infra dev only at import/ export centres & presidencies-

these have been inherited & continued with. Ports + presidencies → mega cities now. Port centric disparities identified by S.R. Hashim.

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Post independence disparities

4 phases

① Initial years : ↓ agri, port cities grew.

② 1956 IPR : deliberate imbalance ... → ↓ external economy → disparities.
neglect of agri → ↑ rural poverty.

③ GR (65, 66) : Agri - Industry, port - hinterland, R-U divide
now shifted to disparities within agri region. GR region
vs R.O. India. ryt att poor plateau reg, N/E, N. plains.

④ +90 reforms : ↑ gap btw shares & havenot

When disparity is low it implies dev'tal convergence. 2 convergence types are :-

(a) depressed areas are allowed to grow & prosperous regions are controlled. This is β convergence (due to regulations).

(b) convergence due to growth in both areas. like ↓ gap of delhi - gurgaon. This is sigma (σ) convergence. (trickle down)

pre reforms : Both β, σ existed. Post reform β was removed but σ didn't happen. ✓✓ β removed but σ didn't happen

despite abs reduction in poverty, relative poverty has increased. β - pre reforms only.

disparities due to industrial dev

① deliberate imbalance
GP, UC, polarisation, industrialization, ↓ agri.
Gunnar Myrdal cumulative causation, Hirschman's trickle down, Friedman's core periphery all talk abt ent economy that was missing → no trickle down.

disparity



T

mudit jain blog

② backward area dev

Pande committee → backward reg of fwrd states favoured → cornered benefits. (Maha, Guj, Bengal) due to criterias chosen like length of road in ∝ to S. area, % of industrial workers & state popn etc.

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③ 1990 reforms + dibn

forward states performed better. ex Gujrat 2011 investment mela generated record FDI in investment in 20 yrs of entry.

globalisn problems ...

Inter state disparities

- study by PC.
- forward S [AP, guj, haryana, kar, Kerala, TN, Maha]
- bkward S [assam, MP, Bihar, UP, Raj, WB]. | Empowered action groups
- post reforms, industrialized states of Guj, Maha, kar grew > 80%. • orisa, assam, NE < 30%.
- N-S divide in SDPs. N, E < S, W. due to history of industrial dev & dibn of economy in frwrd states.
- bkward states a/c for 70% of Ind's poor due to ↑ rural sector.

Social disparities (HD report)

- Bakward s have higher PCR, ↓ SR, traditional societies.
- S. states have recorded popn decline with near stablisn of popn. Hindi states of UP, bihar, Raj, WB have 720% PCR: Bihar 25%. Ind: 17.6%. → effects (P) representn.

Intra-state disparities

① bkward districts of forward states → separatist tendencies. ex: Telangana.

② plateau interiors ill-favoured since brit rule.

Strategies for balanced reg-dev

① diverse, inclusive, agro-climatic planning, dry land planning rainfed based planning, watershed, disaster mgnt ...

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Von-Thunen (agri location)

1826. not a agri theory. It is locational theory. It is empirical observn while he was managing his estate. It is 1st example of quantification in human geog.

It explains patterns in agri like crop choice and land use intensity depending on locn of place.

It is normative, idealistic ∴ real life patterns are not reflected.

Concept of isolated estate flat, monotonous, equal fertility

- imp assumpn. isolated estate, idealized estate, isotropic surface (flat, monotonous, no diff in relief, fertility)
- isolated estate is cut off from all other settlements
- It has 1 market at centre. transport n/w in region (roads, canal) is poor.
- isolated by phy barrier
- perfect competn all farmers relieve d same price for a p/r crop at any 1 firm.
- rational economic man (monetary considern)
- It is pre-behavioural paradigm.

Locational rent

It is innovn of Vonthunen. It is rent that a land commands on basis of locn in terms of proximity to Central market. (other factors except dist are excluded).

- differ frm economic rent (Ricardo's). (ER is affected by fertility, infra on land, buildings etc). Abt isotropic surface → locational rent. LR = fn(d)

$$Pxy - Cxy - tyd.$$

P: price / yield, C: cost / yield, y = yield,

T: transport cost / yield / unit distance

d: distance of travel.

Profit = $Py - Cy - ytd$.

This is a straight line eq with -ve slope. (cost ↑, d ↑ → LR ↓).

d ↑ → Profit ↓ → LR ↓.

isotropic surface → rate of decrease of rent is same in all dirn.

∴ crop choices & intensity varies in concentric circles.

∴ due to ↑ LR near market farmers grows high value crops and low value crops progressively away.



1. market gardening
2. wooded forests
3. crop farming (↑ intensity)
4. " " (↓ ")
5. 3 field rotn system
6. extensive pastures & grazing.

Evaluation

- not applicable in letter & spirit
- man not national economic
- & or wbr theory explains real life patterns:
  (a) agri pattern of US (new eng) (away from which intensity)

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① europe (Johnson & Svenson)

on going away from gr. European plains, Intensity of agri declines. but true reason was decreasing land quality and not distance. (not, rough terrain)

Sinclair's interpretn of vonthunen Sinclair studied RUF on basis on vonthunen concn on RUF that supports real estate inplace of agri theory.

He found that in many countries pattern of cropping was opposite. land is fallowed deliberately in RUF due to ↑ retail profit → wasted → urban blight

Ricardo's pattern : economic rent. Ricardo used economic surplus on basis of land fertility & isotropic surf.

- high intensity of land use, ↑ value crops near market
- non-isotropic surface. rent α fertility.

vonthunen is based on concept of closed system. (No Interacn beyond isotropic boundaries).

recent modifican

① after intro of tube wells, farmers wid better inputs are able to produce perishable crops even in distant fields.

② land consolidan → intensity affected.

③ HYV introducn, better transportation.

④ extent & locan of zones changed over a period of time.

⑤ as popn increases, factors like prices change. • Margins of zones move outward creating ripple effect

inputs; irrign, HYP, gov policies export extensn, colonisans, popn, choice non-farm acti

current relevance concentric zones not present though d'mat farming methods have changed but basic principles have remaine same. but concentric zones do not exist now though dist still effects crop locan / intensity.

theory is dynamic. she said that with demand changes, the trend to ripple effect in pattern, influence of secondary market, transparent.

It was implemented in IDRISI S/w at NCGIA in 1990s. and in south africa after Eu & US.

implemented in IDRISI S/w in S.A.

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Weber Industrial loc^n

① 1929. german
② LCT, normativ, rational economic man,
③ Isotropic but less than that of southunen.
④ perfect competition
⑤ location cost a fn of transport cost < transport of raw material, " " finished products.

Loc^n = fn(dist) or transport cost.

case 1

- 1 raw material, 1 market centre
- raw material can be ubiquitous or localised.
- industry shud be at market centre itself if RM is ubiq....
- localised raw < pure (wt by & after produc^n is same)
  impure. (" " " " " is more or less.)

RM I C

- Pure-localised : industry shd b in straight line to centre.
- impure- " : " " towards raw material if wt gaining industry.

It is wt losing industry. else towards market if wt gaining industry.

M.I (material index): wt of raw material / wt of finished. MI = RM

If M.I > 1 : towards raw material.] Linear distribo^n good along 1 line.
M.I < 1 : " market.]

This is linear locational pattern of industrial centre.

1RM, 1Market = linear locational pattern.

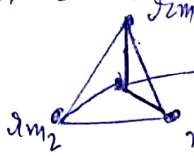
case 2

2 RM, 1 market

① both are ubiquitous → near market.
② 1 ubiquitous, 2nd localised ✓
   ↳ decides loc^n
again linear pattern along st line joining loc^n of localized raw Material & market centre.

M.I > 1 : raw material based.
M.I < 1 : market based.

③(a) both localized (both will decide)
If both pure, then at Incentre as transporta^n dist is same.



Incentre (Industry)
market centre

③(b) If both RM are impure. if M.I of RM, is more then towards RM, else RM$_2$.

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It assumes

labour is ubiquitous, distributed evenly, closed system wid 1 market centre

assumes isotropic labour, other condⁿ on a quantitative model. but is ↓ normative.

2 exceptⁿ: labour cost saving (isodapanes)
agglomeration. → scale of economy.

applicability:
(1) for input intensive industries. (coal, iron)
(2) not for skill intensive. (carpets etc).
(3) gov factors SEZ, NIMZs..
(4) gov policies (Bhatinda, growth poles)
(5) future prospects to be considered.

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ROSTOV'S MODEL

① a development theory / model.

② Post 1950 (WW-II)

③ **Reason**
- long recession
- revive economy
- tide over eco mess of war expenditure.
- Sign for developing nations.
- Plan to help & reciprocate West's experience
- ↑ % of scarce resource usage.
- developing nations could not afford ↑ gestation tym & errors

④ Prescriptive, Capitalism based, Marshall plan, Keynesian.

⑤ Ex: Rostov, Perroux's, GC, GP, Hirchman's [trickle down], Friedman's [core periphery], Grunnar's [CCT], Rosen-rodenstein [balanced growth model].

⑥ Marshall plan [aids, state interven" → ↑ investments → ↑ demand ...]

⑦ Capitalist due to prescrip" of industries as basis of dev.

⑧ Based on Adam Smith's "invisible hand" → ignored social-dev.

⑨ Now not applied in original forms → ∫, holistic dev.

⑩ Ethnocentric interpretation of dev, Deterministic.

⑪ Traces Eu's ind-dev.

⑫ Studied > 50 european nations & gave "Temporal Gren" of their growth → Descriptive of their economic transitions.

⑬ 5 stages:

A • **Primitive**: agrarian, rural, feudal → no modern / commercial energy, DTM-1.

B • **Pre condin of Take off**: change agent emerges, eco remains agrarian Due to "exposure" to Eu nations → tries to Δ lifestyle ∴ Ethno... ∴ Justifies colonial rule as white man's burden.

C • **Take off**: Few industries develop, begining of modern centres. Manufacturing starts • Used in FYP-1 by Nehru.

Then FYP-II → industries led development. Takes 10-40yrs due to ↑ gestation period.

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• D **Drive towards Maturity**

↑ industrial economy, ↑ manufacturing . × self-growth • bcov need

• E **Stage of mass consumpⁿ**

Auto-mode economy → govt withdraws active role. eco drive by society's consumpⁿ → ↑ living std, lifestyle, service sector

• F Later economists added 6th stage → full circle → stagnaⁿ → decline → social crisis. ex: Europe's Hippy culture.

• Approach questioned by late 70s. → efforts to redefine dev → HDR in 1990s.

• Analysis :- ① Linear dev model, sequential, simplistic, superficial, dont address social concerns ② agri as -ve concept while it is comparative adv of India.

③ In reality, dev / growth is organic n not linear, social dev is not guaranteed by eco-growth.

④ Poverty isnt consequence of "stage of dev" unlike presented. Ex. ↓ in India is due to Brit role.

⑤ others mentioned B4.

⑥ Telescoping stage by Ind / China → [Industrial bypassed for services]. → [take off " " 4rth].

Mackinder's Heartland Theory → creog pivot of History (book) 1904 - 1919 - 1943

1400 - 1500 : conflicts / rivalries in Eu were localized [around empires]. [changez etc]

1500 - 1700 : age of voyages → ↑ sea powers → pwr shift due to navies → Mongols, Khirgis became ↓ imp.

1700 + : Sea powers [Portuguese, Eng, Dotch, spanish].

• Explains creog causaⁿ [adverse / good condⁿ, forest etc] of History.

" Herodotus in 5th cent : All histry shd b studied geographically + vice-...

" Labensraum by Ratzel in 1870s → States are living organisms → req space, ↑d space, die of denying space".

" Haushofer, pol sci of Hitler used this concept".

• Predicts shift of power back to land from sea as land is where lies inherent strength → Land-Sea Conflict Theory.

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Geog Pivot of History-

① 3/4th world = water. 1/4th Land.

② Eu., Asia, Africa = 2/3 of land, 7/8 popⁿ.

③ called these 3 "world island". Americas, Aus, Brit, Pacific lacked significance.

④ World island = Pivot + inner/marginal crescent + outer/insular crescent.

⑤ **Pivot** : • North of volga river, steppes, siberia.
• Bordrd by ural, C.A. mts, mongolian plateau, arctic Ocean.
• Was dyk of yort, inaccessible [only caspian sea - ural mt gap]
• Adv of plains, horsemen [mobile / fast]

⑥ **Inner** / **Marginal crescent** / **Rest of Eurasia** = W.Eu, W.Asia, India, S/E russia, Japan, china.

⑦ **Outer** A Buffer area [desert, I/o, pacific, atlantic] Sep outer & Inner. ∴ **Outer** = America, Brit, Africa beyond Sahara, Aus, Pacific islands. Not Imp [↓ Resources, ↓PoP]

⑧ Till 15-16th cent Pivot under C.A. Nomadic tribes → plunder as far as inner crescent. 1500-1800 sea power emerged → Pivot reduced to powerless vacuum. But M asserted that heartland was still powerfull.

⑨ He alerted Brit against pssbl German invasion of Pivot due to german proximity to U-C gap/ Japanese, from S/E would comprise yellow Peril for world island.

⑩ 1919 Modification → concept of Heartland.

① Post WW-1, German defeat, Russian Rev. other events :-
② Germans signed treaty with russia
③ Brit wr unable to enter black sea thru turkish straits
④ " " " " " Baltic " due to germany
⑤ Germany " " " " "Russian platform"
⑥ ∴ Redrew boundaries → strategic heartland =
ⓐ Extended west till Baltics
ⓑ S, S/W for black sea, danube river, asia minor, armenia, turkey etc
ⓒ Excluded E. Siberia [beyond Lena river]

⑦ Threat by Proximal Germans.

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⑧ Alerted Brit against concen to Germans as it had military power.

⑨ Slogan: " who rules E.Eu, commands heartland. Who rules H, commands W.I. who rules W.I commands world."

E.Eu → H → W.I → world.

⑩ M successfully predicted German's Eastward expan to Poland

1943 concept of Midland Basin

① gave at peak of WW-II. ② Germany was dominating.
② Predicts rise of Anglo-America, canada & their partnership due to shared history, lang, culture etc. ⇒ called it MB.
③ Forsee conflict b/w H & MB in book "democratic ideals & reality"
④ ∴ Predicted cold war correctly.

Evaluation

① innovative ② ✓ descrip of medieval history ③ ✓ WW1, 2, CW.
④ overestimated adv of pivot & H. It was not so flat & horses were of adv only till medieval.
⑤ "Disadv" of being land-locked [SPYKMAN].
⑥ overstated relative isolan of H due to map of Mercator projec [unrealistic enlargement towards pole]. In real, US is ryt across Berrig strait using missile → arctic isn't a "buffer"
⑦ Pol dominance is now fn of economy, HDI, trade etc. & not only of security & military strength.
⑧ current threats are stateless [cyber, IS etc].
⑨ Modern security also inc supra national instn [WB etc].
⑩ Didn't anticipate role of trade blocks.

SPYKMAN

① 1940 ② H is not resourceful, not all flat, important.
③ Relative isolan is disadv.
④ Main adv is with inverland / Rimland.
[adv of both land & sea, can't be confined, ↑ resources, ↑ Popn
cradle of world civiliza [W.Eu, S.A, E.A, S.E.A]
⑤ ∴ conflict is more within countries of Rimland. [x R-H].
⑥ ex: I/O, arab spring, S.C.Sea etc.
⑦ Rimland keeps the world together.
⑧ Slogan: " He who rules rimland controls Eurasia → destiny of world
⑨ Influenced policy of JFK, Truman, Nixon [containment of communism, Domino effect, stop finlandization by Russians]
⑩ Do not talk about eco, tech, trade, cc, terror etc.

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Paper 1+2 | Paper - 2 Settlements | Mudit jain blog -

Types, patterns & morphology of rural areas

Types involves clustering. Based on ° of compactness types are:- compact, semi dispersed/ clustered & dispersed.

Compact

houses, villages, dwellings are closely packed/clustered & agri land spreads beyond clustered landscape.

high compactness is reg where:-

fertile land, ↑ Popⁿ, ↑P, popⁿ tends to cluster together, ↑ land for agri, intensive land use; ex: N. plains, khadar plains, peninsular river basins.

other reasons of compactness: security, feat of medieval times, border areas.

Dispersed

houses, villages are scattered, area has marginal fertility, extensive farming, grazing practiced.

feat of tribal communities p/r Ramlets, hill area tribes etc.

semi dispersed (amorphous pattern) SD

are stage in extension of clustered areas. Mostly due to centrifugal forces like congⁿ, over popⁿ, arterial transportⁿ routes, emigration, cultural compulsions for lower castes.

centripetal forces on dispersed settlement where gradually families prefer to move towards emerging market or water source as in deserts (wet point settlement). ✓ (wet point settlements)

We mostly have compact settlement due to ↑ Popⁿ, ↑P and the earlier dispersed settlements of hills & dry areas are gradually agglomerating to become semi clustered. D → SD → C → SD. ✓

Shapes / Patterns

apt to clustered/compact and thr r 3 shapes.

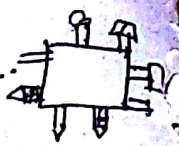
① Rectangular in areas which are agrarian.

- feat of irrigation dependent agri area.
- as □ shape agri plots are easily managed & operated. (Plough, harvest etc).
- roads cut ⊥ly. ⊥ roads



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variants of □ pattern



① Hollow : large tank / temple / palace @ centre.

② checkered : 

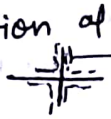
③ linear ribbon : along a ~~ribbon~~ river, or major transport route (rail, highway)

when village changes frm compact → semi clustered, it expands in 1 direction.



Ribbon's variants not equally as a circle...!

① star settlement : intersection of roads, confluence of rivers





② Arrow head settlement : confluence of rivers,



(B) CIRCULAR settlement

security, water, ↓ cost.

due to security reasons, agglomeran abt a water body; sm tribes develop Ovsegments as it is cost effectives to enclosures of Olar area. ex Masais of Africa.

Variants of ○ hollow, annular, spider, radial, horseshoe/semi circle.

① Hollow

② based on transportan connectivity ← Annular spider webs

gateway →

Annular's centre is not easily accessible → tve as well as −ve.

spider has much easy access to centre.

③ Semicircular / Horse shoe ⊃ not.

abt foothill of a mt or spur of a mt. around a lake.

(ex Nainital)





(C) Amorphous settlements

: semi dispersed

no pattern, irregular ex: most of semi dispersed.

Morphology of rural settlements.

(internal look of a settlement)

: internal arrangement / layout / pattern of RS. also a/c shapes & types of houses etc. i.e. how does settlement looks frm within is morphology.

→ internal str, spatial orgn, internal str (shape) typ of dwellings & thr architecture.

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Features of Indian villages

① compact, ~~regular~~ □. though thr r ○ settlements too.
② Roads & houses are kachcha.
③ no distinct economic-market segregn & non-commercial LU but vilge can have small weekly mrkets (Naudi, Haat).
④ ↓ definite planning.
⑤ spontaneous LU.
⑥ roads intersect ⊥ly. but not in ○ lar villages.
⑦ traditional villages hv social segregn too based on varna / caste system.
⑧ high castes have more central locn.
⑨ In medieval times ~~caste~~ based change to class based whr rich preferred to live at central locn.
⑩ Brit → communal settlements based on religious identities

Each vill has 2 components : built up area & open area.
built up area (arrangement of houses, roads, ponds, temple etc).
open area (fields) cultivators grow their crops here, cattles etc.

Doxiadis one of leading settlement geographer has identified 4 main parts within morphology :
① fields ② roads/ streets ③ built up area ④ cultural/ special area like panchayat, temple etc.

built up area is generally surrounded by agri lands : main village site " " with upper castes. This forms nucleus of settlement. In vicinity of the, settlements are called as Matra / Purva, Tola etc.

built up → agri land → vicinity

vicinity of built up area : Matra, Tola, Purva.

Agri land in vicinity of settlement is ↑ fertile and is called Goira, Nohnda or Gauchan. less productive outer fields r called Manjha (Punjab).

agri field : Goira, Gouhan etc.

~~vicinity of~~

R-U Fringe

① city influence ↓ with ↑ dist frm centre : dist decay
city (U) merges gradually with rural landscape.
② zone of transition → mixed character → beyond city adm but has its few features though largely it is rural.

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③ RUF is area whr city ~~largely~~ moves into rural area.
→ unplanned, haphazard urban sprawls.

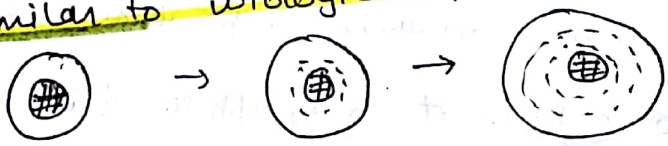
④ dev of RUF is bcz of its proximity to city.

⑤ village auth has ↓ resources, ↓ incentive to manage RUF.
check Paper-1 settlement.

Morphology of urban cities

Set argmnt, spatial orgn, layout, land use, architecture.
earliest theory is **concentric zonation theory** (CZT).
by **Ernest Burgess** in 1925. Acc to it :-

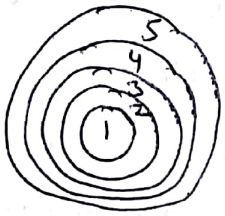
① city has distinct spatial segregan
② central part or CBD becomes dead heart post office hours.
③ If we assume isotropic surface, we will have distance decay effect of in all dirn → concentric zonan.
④ process of estblishment of LU pattern & city layout is similar to biological processes of invasion & succession.



successive invn of new class people by rich.

● CBD
○ influential/rich
⊗ poor

model



1 : CBD
2 : light manufacturing
3 : shanty town, LI & dwellings for employees of ①, ②.
4 : residentials (middle + high) (in open spaces)
5 : commuter zone beyond city.

In process of city expansion zone 3 will invade n succeed into zone 4. 4 → 5.

Assumpn : isotropic surface → 0 zonations.

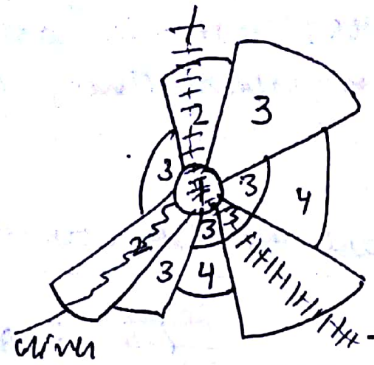
sectoral model of HOYT (1939)

① modifican of burgess model. surface is not 100% isotropic.
→ city centre not equal accessible frm all sides → no regular concentric zones but sectors are formed.

② diff zones of city's land use may expand disproportionately in some direcn due to accessibility/ resource factors.
ex: delhi's expan's is more along major highways delhi - mumbai, - jaipur etc.

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Applicable to numerous dvlpt cities. ex: Newcastle, older cities tend to follow Hyots model, recent is ↑ CBD.

limitation : dsnt a/c for private cars dvlpt 20th cent railway and growth of a sector cn b dtd by leapfrog land use.

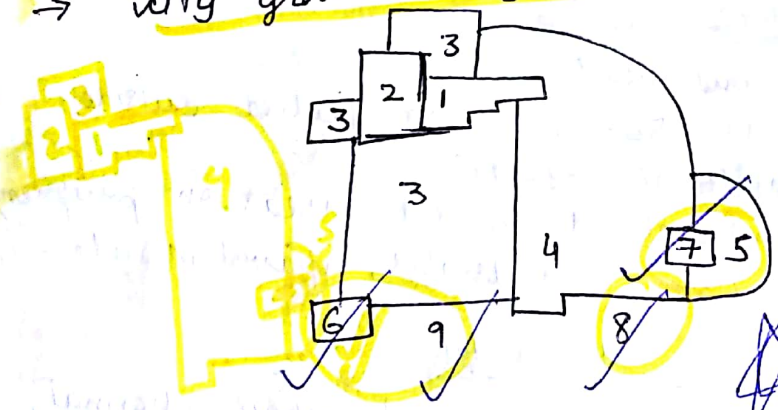
Multiple nuclei model by Ullman & Harris (1945)

① thr can be more than 1 CBD unlyk in prev 2 models as 1 CBD may not b able to cater needs of entire city.

② cities need not grow in a set dirn only. Gov policies can alter the given flows. Policies may encourage sm centres.

③ thr is element of specidlisn n agglomern in CBD as sm fn are inherently opposed n others accepted.

→ city grows along multiple centres / nuclei.



Internal morphology of Indian cities (Kusum Lata's)

① no city strictly follows 1 model.

② most Indian cities are overgrown villages, cultural char is superimposed on urban features like primary fn continue to exist inside or in vicinity of city.

③ cities have grown spontaneously, unplanned growth

④ cities grown during medieval dym have islamic architecture such as cities from ancient villages & towns are ↑ crowded & may b dvlpt around temples (nas/by madurai etc).

⑤ dvlpt influence added new features to towns like ports,

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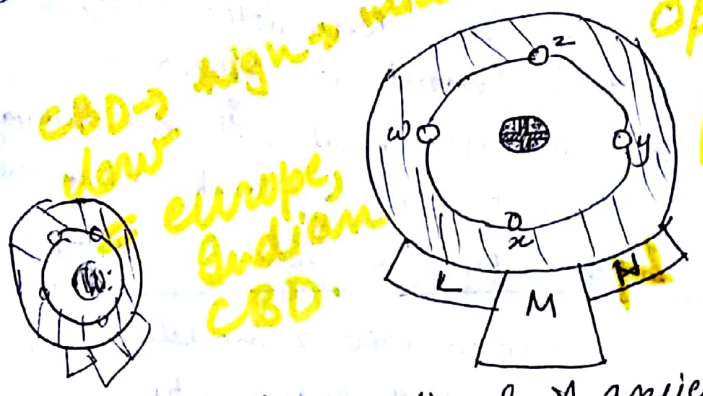
railways, civil lines, roads, catholic architecture-

(6) Social n cultural segregn on class lines, communal segregn, caste, lang, etc.

(8) Bazaar Model (also applicable to LA countries)

CBD → high → middle → low

europe, Indian CBD.



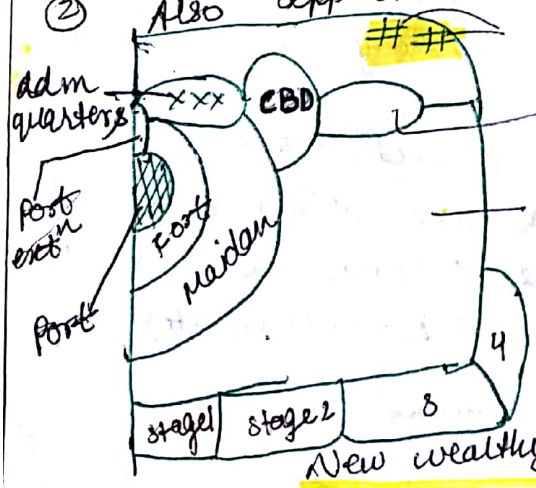
opposite to prev.

: Bazaar
: high class dwellings
: low " "
: middle class
w, x, y, z : linguistic, communal, occupational grup.
LMN : planned extn of city during colonial rule.

1) Applicable to medieval n ancient towns.
2) Indian CBD in unlyk us' CBD. us CBD is exclusive commercial, vertical growth (intensive land use), dead heart during night
3) Indian CBD has mixed commercial activities; shops on G.F n families on upper. These are similar to europe.
4) Old ancient CBDs have become ↑ crowded, ↓ infra, narrow lanes etc.
5) Ind CBD do not bcm dead heart.
6) rich prefered to live near CBD. poor r pushed outside.
7) urban areas have cultural segregn
8) British added more developed model areas on periphery (cantonments, civil lines, landscapes, paved roads etc.

(9) Port Based Model

1) applicable to 3 presidencies India, bombay, chennai, calcutta + Pondicherry.
2) Also app to colonial cities in LA n africa.



old bazaar based towns
Anglo Indian town (small)
European town (large)

New wealthy n middle class extn

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Ports had forts and maidaan areas on peripheries. Ports wr factories for processing, packaging products for exports.
- these forts later developed into barracks & garrisons centres for brit's interests. Maidaan were buffer zone, a wide open space for security purposes.
- european towns developed independent of traditional bazaar towns which wr crowded, ↓ aminities, has ghettosisaⁿ whr as Eu towns wr modern & open.
- city extenⁿ wr planned whre emerging influential class lived.
- thr was racial segregaⁿ → europeans didnt mingle wd natives & made their own CBD, cultural art centres etc.

FUNCTIONAL CLASSIFICATION OF INDIAN CITIES

① urbanisaⁿ is a multidimensional process involving variety of economic activities grouped into sec / tertiary.
② urban areas has ↑ infra, ↑ quality of life.
③ defining urbanisaⁿ is subjective. for understanding urban centres thr hv been attempts to classify them. The earlier classificaⁿ based on development were given by griffith taylor & Lewis mumford.

④ HOUSTON / NFM : nuclear stage → formative → Mature stage. (rural, agri based) (dev begins) (proper urban area).

⑤ taylor / IJMS : infantile → juvinile → Mature → Simple. (like nuclear) (formative) ↓ in urban dev (↑ popⁿ, ↑ congeⁿ ↑ pollⁿ)

These two are temporal classificaⁿ of city dev.

⑥ mumford final classification

In terms of technology used
- (animal, river) Eo-technique
- (fossils) Paleo-technique
- (electricity) Neo - "
- (biotech) Bio - "

This is highly subjective.

In terms of city dev / quality of living
- +ve dev: Eopolis (depend on natural resources), Polis (begining of urban dev), Metropolis (urban city at peak), Megalopolis (bloating city → decline starts) (pollⁿ, popⁿ, P)
- -ve dev: Tyranopolis (crimes, mafia), Necropolis (dead city)

These represent more of growth of settlements & not classificaⁿ. ∴ final are better than these. (all mentioned till now)

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final classification

(1) ① classification on basis of dev is highly subjective as dev itself is subjective. ex many metropolis can have ↑ congestion & problems similar to megalopolis / tyrano-

② final classification represent char of city properly.

③ it has been challenge to define & differ U & R settlement

④ some classical approaches in differential settlement had been on basis of culture, size, GOL, infra but these are descriptive & qualitative features.

⑤ final characterisation is better. R-areas are predominantly agrarian (3) while U-areas r manufacturing / service based.

⑥ no city performs only (4) fn. ∴ categorized on basis of dominant fn.

⑦ 1st final classification given by Aurroseau (5) gave 6 types:

(a) administrative cities delhi, brasilia, washington etc.

(b) defence cities jabalpur, edinborough, aborden towns but most of these hv changed to admin or industrial.

(c) cultural cities cairo, varanasi, athens, madurai

(d) communicational itarsi, kharagpur, karachi, Rotterdam, frankfurt

(e) recreational hill stations, las vegas

(f) manufacturing cities / industrial bhilai, birmingham, detroit etc.

limitation: simplistic classifica, ↓ objective, superficial descriptive examina, no city does only 1 fn, also, fns change T-T. it ignores many other fns.

Modern techniques that use statistical analysis hv tried to incorp modern multiple fns where along with dominant fn, their imp subsidiary fns are also considered.

some multi-final classifica are given by:

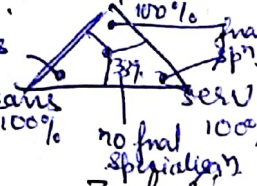
Amrit lal, Qazi ahmad & Ashok Mitra.

Mitra use Δ var graph to classify cities using 3 fns.

Trade – transport cities, service centres & manufacturing centres

Nelson & webb have used statistical tools like % of workers in an economic activity, nature of city etc. thr r no fixed set of economic activity to b considered in this scheme-

ashok mitra: Δ var { trade trans manufac. service.

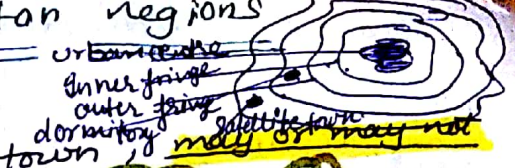


a d r c c i

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conurbations & metropolitan regions



satellite towns

- It is a small town / city near larger town, may or may not be linked to larger city. It is not a suburb. not a commuter town, not a dormitary town (bedroom town).
- suburb/ dormitory are due to expan^n & devt of larger city & exists only in context of larger city. (linked). no independent relevance.
- satellite town has its own history & own economy. It has its own cultural down town. It is not always an extension town. own economy & market means historical & economic independent existence of larger city. It is not a twin city.
- when large city encroaches upon satellite → common economy) market.
  ex: mumbai → central → s. mumbai → sat towns (Boriwali).
  chandigarh → ext in pinjar, panchkula.

Gurgaon is more like suburb n not satellite unlike Panipat, Sonipat.

EDGE CITY (suburbs with own economy)

concept by Joel garreau in book "Edge city : life in new frontier" in 1991. These are result of expan^n of motor transport & transport corridors. These are suburbs having their own economy but not satellites of larger city. ex: gurgaon, Noida, dwarka.

TWIN CITIES

Both cities are comparable in size & are equally imp in terms of economy & labour (potential) & hv a || history.
ex hyd-secunderabad, cuttack-bhubaneswar, dallas-fortsworth etc.

✱ Physical sep^n from larger city coz of not) river → satellites own history.

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① cities can b classified in terms of hierarchy / fns / size / pp^n.
② they can grow as single centre city or multiple centres.
③ Metropolis, megacity, conurbation, metropolitan area are used for large differentiating urban areas.
④ 10mn Megacity / Metropolis = 1mn - 10mn pop^n. This varies.
ex for India, Megacity has pop^n > 10 mn (D, C, M, C)
while " canada, " " pop^n ≈ 1 mn (toronto).
Metropolis in India = 4mn pop^n ex: Surat, Ahmadabad, Pune, jaipur.

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Megacity / Metropolis have 3 features: continuous urbanized area, single centre cultural area, expand beyond adm / municipal limits of larger city.

Megalopolis ← of Lewis Mumford
of Jean Gotman.

Mumford -ve

In 1930 book "The culture of cities" wher megalopolis was large, overgrown, congested, ↑ Popⁿ, ↑ P, ↑ pollⁿ, bloating (inflating) city → ↓ QOL, ↑ crime, ↑ poverty. ex London was megalopolis in 14th - 18th cent.

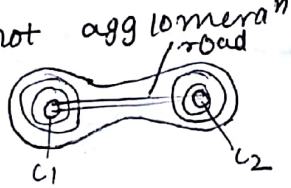
Gotman tve

1957 book "Megalopolis". He refured to cities of N/E coast of US (boston, NY etc) which wr fast expanding bcz of modern motorways

David gradden's megalloping, for cities along transport routes-

Conurbations (phase of continuous urbanisaⁿ)

Large agglomeran where urban areas expand along transportaⁿ routes but are not same as megalopolis or megacities as there are polycentric & not agglomeran around 1 centre alone.



Not seen in India

These comprise large cities / megapolis of ≈ sizes & even if the economy merges, conurban remains polycentric.

* ex: BoWash (US) has megapolis like Boston, Philadelphia, Washington, Maryland
* Canadian golden horseshoe (dense industrial reg): Montreal + Toronto + windsor etc.
* UK has greater London conurbation / London > 8m Popn.
* " also has midland conurbation [dudley + S. hampton, birmingham, sheffield etc].
* largest conurbaⁿ of Europe is rhine-Ruhr comprising of Bonn, Koln, Essen, duesledorf, dortmund all in W. germany.
* netherland has randstan (rotterdam + amsterdam + hague etc).
* china has 3 mjor conurbations
  ① Pearl river - Sikiang river [hongkong, guangzhou, macau]
  ② Beijing - [Beijing + Tianjin + Tangshan]

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③ chang jiang [shanghai, nanjing, chongqing, guhang]

Japan's Taiheiyo has 80 mn of Japan's 127 mn popn - it inc tokyo + yokohama + Nagoya + kyoto + osaka etc.

conurban used by patrick getts in his 1915 book "cities in evolution"

geddes

Metropolitan Regions NCR

not same as metropolitan city or metropolis. ✓

It is urban agglomeran having 1 or more urban centres that may be linked and smaller urban centres may have their undependent cultural/ socio-eco existence.

diff with conurbation is ; metropolitan reg's urbanisation is not continuous & can include suburban regions, RUF, satellite centres, rural tracks in b/w. eg is NCR which inc delhi, satellite cities/ villages around delhi such as meerut, moradabad, bulandshehar, alwar, haryana's, up's, RJ's few districts].

Urban sprawl

① process of spontaneous, unplanned growth (not dev). Almost all cities have experienced this once during their expansion. developing cntries cntinue to have probs due to urban sprawl.

② non involvement of gov agencies → unplanned, haphasard expan^{n} → ↓ infra, ↓ harmonizan in land use.

squatters/residential, pvt, roads, commercial residential complexes in

Phases of urban sprawl expansion

① expan begin with squatters & illegal urban shaddow zone.

② pvt contractors acquire area → scattered large houses, extensive land use.

③ roads + connectivity cms up due to pvt investment, some housing & develops due to pvt investments. lacks proper power supply & sewage disposal.

④ commercial fns cm up along the arterial road. like malls, light manufacturing etc. major arterial roads. In US strip malls are seen along these have extensive LU (high horizontal cover, ↓ vertical). have parking lots, drive in eating/ screening of movies.

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(3) Land's are clearly differentiated for residential or commercial use → extensive → wasteful

(5) eventually there is need of proper dev, infra etc due to presence of sizable metropolitian popn.

Urbanisan in India

① 30% compared to ≥ 70% in developed nations.

② 40% is avg of developing world.

③ World's urban popn : ≈ 3 bn.

④ India is in 2nd phase of urbanisan → ↑ rate of urbanisan (2.73% annually though Popn ↑ is 1.7%).

world : 40% = 3 bn

2nd phase.

⑤ **census defn of urban area**

It is difficult to diff U,R area b/c in India whr sm of d largest villages are comparable to urban areas in Popn, area. Urban areas not always perform non-agri fn. DOL can also be ↓. this becomes more evident in comparison of Indian urban areas with western villages.

In India there r 2 ways to declare a settlement as urban:

① statutory town
municipal corpn or are notified area council.
have municipality, cantonment,
municipality, cantonment, municipal corpo

② census town
It must adhere to 3 specifications:
(a) popn ≥ 5000 (this is very low in India).
(b) Popn density ≥ 400 people/km²
(c) ≥ 75% of male popn in non-primary activities.

③ An adm/executive can also declare an area as urban.
∴ thr is ↑ subjectivity in defining urban area & differing wid rural area.

④ based on popn size & it is also used by UN.

class-1	> 1 lakh	class-2	: 50K - 1 akh
class-3	: 20K - 50K	class 4	: 10K - 20K
class-5	: 5K - 10K	class 6	: < 5K.

< 5K
5 - 10 K
10 - 20 K
20 - 50K
50 - 1 lakh
> 1 lakh

Urbanisan trend in India

yr	urban centres	urban %			
1901	1827	10-11%	2001 :	5000	29%
1981	3300	23%	now		30%
1991	3700	25.7			

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Conclusion

$\frac{121 \times 30}{100} \approx 37$ cr. Africa = 38%. world = 47

(1) 2.5 cr → 30 crore urban popn from 1901–2001

(2) Ind urbanisan % < global average ex Africa (38%)

LA : 77%, world av : 47%, developing : 40%.

(3) U-R ratio for India is 38.5%. (for every 100 rural popn, 38.5 live in urban). developing = 40

(4) In early part of 20th cent, diff classes of cities had comparable popn, however in 2001 census class-1 had ≃ 2/3 of total urban popn. there r more than 400 class-1 cities. (400 cities wid. > 1 lakh popn)

(5) share of popn in class 4 & below have fallen and larger cities have increased disproportionately.

(6) D, M, C, K have popn >10mn : Megacities. Africa 38%, developing 40%, world av 47%, LA 77%.

Factors of urban growth in India

① DR – BR differential i.e the natural ↑.

② In-migran (more imp factor).

Nature of urbanisan

globally it a +ve concept associated with better amenities & improved way of life, income, tech etc.

In idia however, rapid urbanisan has feat of lopsided growth wher larger cities are growing disproportionately at expense of smaller. → crowd out of larger city due to ↑ in-migration due to push-pull factor.

This has ↑ urban poor, slums, disparities.

Urban poverty report published for 1st T. In 2010 suggests thr r atleast 80 mn poor popn in urban centres.

∴ It is poverty i.e urbanising n not dev. → dysfunctional urbanizan / regressive urbanizan.

In-migran to U-Areas → ↑congen, strain on amenities, traffic issues, ↓ dwelling units.

Sols

PURA (Kalam), PMGSY – Bharat Nirman, NCR planning (samridhi in order to inhibit in-migran to delhi, dev of vicinity reg was done by developing satellite towns / suburbs.

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Probs of Urbanizan

1. infra ...
2. services ...
3. ↑ P
4. ↑ Popn
5. slums
6. social probs
7. env
8. waste (sewage treatment plants).
9. disaster
10. Urban poverty

Rural hilly settlement

1. circular, semi-circular.
2. 3 types in himalayas: nucleated, dispersed, isolated.

nucleated: dow dying valleys, with regular stretch of fairly level land.

dispersed: in patches

isolated: on high elevations

ex: J&K

smaller villages are nucleated. larger are dispersed. Spring settlements too.

ex: Uttranchal: undulating relief, cold climate, paucity of agri land, khorti, cattle → small dispersed. terraced farming is common.

ex: summer settlements at 2700-3000m winter settlements at 1800 m.

ex: Eastern himalayas steep slope, heavy rain, dense forest, many tribes → widely dispersed.

ex: compact, well organized villages in Indo-Hut Meghalaya: isolated, dispersed, composite. etc.

Plains

1. star shaped.
2. Rectangular. (flat, fertile, alluvials). roads ⊥ to each other

ex: ganga sutlej, germany plains etc

Raj: (3) small, compact, sparse.

(4) nucleated near water points.

(5) large/compact in E, NW.

Indira canal: compact, permanent, circular,

flood prone Ravi: small, widely spaced.

upper ganga: villages.

Tarai: ~~sparsed~~ uneven.

Middle ganga: pattern depends on alluvial.

Lower: hydrological factors Machans in brahmaputra at its/ levees & transport art-eries.

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CHAPTER 10

Human Settlements and House Types

Human population lives in villages and towns of different shapes and sizes distributed over the surface of the earth. The basic unit of residence is a house which may be a hut or an elaborately built house, a mansion or an apartment. Clusters of houses make a settlement which may consist of hamlets of 6 to 12 huts or compact villages accommodating ten, twenty or a few hundred houses. Settlements may also consist of even bigger agglomerations such as towns or cities. Large cities called metropolis or megalopolis are all examples of large settlement types. The term, settlement thus refers to a grouping of houses or huts with a certain layout plan. It includes the building meant for residential or other purposes, such as pens for animals or stores for equipment or machinery, as well as the streets or the roads which connect them together. It is customary to distinguish between rural and urban settlements on the basis of their primary functions. This distinction is necessary because people in a rural settlement are largely dependent on agriculture. A rural village has a small size as it cannot support a very large population. Urban settlements, on the other hand, have non-agricultural functions and can accommodate very large population. Calcutta or Delhi are examples of large urban settlements, where several thousand people live over a single hectare of land.

Rural Settlements

As noted earlier a settlement consists of houses as well as the streets. The surrounding farm land is also considered to be a part of the rural settlement. The farm land may belong to different families who divide it according to their own choice and under the given circumstances making a variety of field patterns. Rural settlements may differ among themselves on the basis of type and the pattern they form. A common type of rural settlement is a village which predominates in many parts of the world. People in the hilly and forested parts of the world live in dispersed or isolated settlements. A typical example of the dispersed type of settlements is a farm stead which is so common in North America. In India the rural settlements vary from one region to the other (Fig. 32). From the undulating hilly and the forested tracts to the extensive alluvial plains and deltas one observes a distinct variation in their shapes, sizes and layout plans. In broad terms the rural settlements in India may be classified into the following types :

(a) clustered, agglomerated or nucleated
(b) semi-clustered, and
(c) dispersed or isolated

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The clustered type is generally characterised by a compact block of rural dwellings, with narrow, winding streets separating the two rows of houses. Very often such settlements have a definite layout plan which may be linear, rectangular, L-shaped, and so on. The semi-clustered or partially agglomerated rural settlements generally have a small but compact nucleus around which the hamlets are dispersed forming a ring around the main settlement. If the houses are situated along a road the settlement forms a linear pattern. In a dispersed type of settlement hamlets are scattered over a vast area. There is no specific plan and settlement unit is a single hamlet. The type of rural settlement is determined by number of factors. These factors may be grouped as follows: (i) physical, (ii) cultural, and (iii) historical.

Physical factors such as relief, altitude, drainage, depth of water-table, climate and soil, play an important role in determining the type and spacing of settlements. In dry regions, for example, water is the most important single factor. The houses are clustered around a source of water which is a well or a pond. In the desert region of Rajasthan the compactness of a settlement is largely determined by water supply.

Ethnic and cultural factors such as tribal, caste or communal identity, are also important in determining the layout of a rural settlement. In India the main land-owning caste occupies the central part of the village and forms the nucleus. It attracts other caste groups (such as the potter, blacksmith and the weaver) who provide services to the village community. They occupy a specific place in the settlement plan. Harijan dwellings are generally situated on the periphery away from the main settlement. This shows social segregation. But it leads to fragmentation of a compact settlement into several units.

Historical factors have also been an important influence on the type of rural settlements in India. Regions such as North Indian Plain which were exposed to frequent invasions from outside during which the swarms of armies inflicted terror, village communities preferred to live in compact settlements. This helped them a lot in defending against their enemies. A compact settlements also protects from internal enemies, particularly during periods of turmoil when villages were plundered by rival groups fighting for political power.

The tightly nucleated rural settlements are a common feature of the North Indian Plain from Punjab in the North-West to West Bengal. It is also a common type in Assam and Tripura, coastal Orissa, Mahanadi basin in Madhya Pradesh, Kaveri and Vaigai basins of South India, Maidan district of Karnataka and Rayalaseema region of Andhra Pradesh. Obviously such a settlement type is a characteristic of a fertile, well-watered plain. In terms of shape it may be rectangular or even shapeless. The streets criss-cross at different angles forming *alis* and *galis*. The word *ali*, in use in Maharashtra, refers to a narrow lane which passes between the houses of the same caste facing each other. The *gali* on the other hand, is a wider lane which divides segments of two castes and serves as the thoroughfare. A compact or nucleated settlement often gets fragmented because of social segregation imposed by the caste system. Secondary settlement units are often known as *para*, *palli*, *nagla* or *dhani*. The para is generally made up of houses of more than one caste. In eastern U.P. and Bihar as well as in Tamil Nadu and Karnataka hamlets inhabited by low castes are generally situated away from the main

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nucleus of the village.

The general features of a nucleated settlement may be described by giving the example of Aminbhavi, a village in the Deccan plateau region, situated at a distance of about 10 kilometres to the north-east of Dharwar. Located in the black soil region, it represents the typical characteristics of an agricultural village in India. The morphology of the village has evolved over the last thirteen centuries or so. The houses belonging to different castes have a particular location within the settlement. Different caste groups occupy their own solid blocks of neighbouring houses in a lane carrying the name of the same caste. Lingayats are the main agricultural caste and account for some 40 per cent of the village population. Then there are Muslims, Desai (Jain) and Deshpande (Brahmin) families constitute the two culturally dominant groups. Talwars, Harijans and Wadars are the main service castes.

Lingayat houses are situated all over the village. Other caste groups occupy a specific position within the settlement. Low castes, such as Talwars and Harijans live on the fringe of the village.

The 'linear cluster' type of settlements have two parallel rows of houses facing each other across a wide village thoroughfare. These linear settlements are sometimes situated along a stream as in the case of Manipur, or in Balaghat, Mandla and Raigarh districts of Madhya Pradesh. Such linear settlements are predominantly inhabited by different tribal groups in the Chhotanagpur plateau. Linear settlements are also a common feature of Nagaland. The settlement is generally situated atop a high hill and is often fortified. The fishing villages in the coastal areas also look like linear settlements.

The dispersed settlement is a common feature of the undulating, hilly and the forested tracts of the country. Houses are generally placed on hillocks or knolls overlooking the fields along the hill slopes. This type of settlement is generally associated with the tribal communities in North Bengal, Chhotanagpur Plateau, parts of Madhya Pradesh and Rajasthan. The dispersed settlements are also found in the hilly districts of Jammu and Kashmir, Tamil Nadu and Kerala.

Sometimes a hamlet is a basic unit of a dispersed settlement type and generally consists of 2 to 5 or 8 huts. The households organise their labour on a cooperative basis to carry out agricultural operations and, therefore, live together. This type of settlement is generally found in Meghalaya and other hilly districts of the North-East, hilly districts of UP, Himachal Pradesh and parts of Chhotanagpur Plateau in Bihar, Orissa and Madhya Pradesh.

Settlement Patterns

The spatial organisation of houses in a village defines its pattern. As a matter of fact the street system within the settlement plays the most important role in defining the pattern. When houses are built in groups the street often plays the decisive role and the houses face not a particular direction but the village lane. Besides the street plan, other factors such as the location of a well or a pond or cultural elements such as temples and mosques give a peculiar pattern to the village. Rural settlements may acquire different pattern — radial-star shaped, check-board, circular, rectangular, hollow square or fan-shaped. A village acquires a radial-star patterns — when streets radiate from a common centre. Expansion of these villages due to population growth leads to the formation of a double radial pattern. Rectangular villages are a common feature in many parts of India. Other related forms are check-board plans, hollow rectangle or

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square plans or L-shaped ones. When the houses cluster around a pond, villages often form a semi-circular or crescent-shaped pattern. There are other villages which have no compact nucleus. The huts are huddled together to form a settlement without forming any specific geometric shape.

Urban Settlements

We have noted in Chapter 8 that the Census of India recognises six size categories of towns and cities. Many of the smaller towns belonging to Class V and VI of the Census are simply 'grown-up' villages. They perform predominantly agricultural functions, collecting agricultural produce from the surrounding villages and marketing it. The *mandi* (grain market) forms the hub of the town. A market springs up along the road which provides access to the *mandi*. With the passage of time some local administrative functions were also assigned to the urban agglomeration and it acquired the characteristic features of a *tehsil* town.

Many towns continue to have administrative functions only. A town performing the role of a district headquarters is mainly an agglomeration of houses divided into separate blocks, or *mohallas*, laid out along two or more main streets. A network of lanes connects these *mohallas* with the main road. *Mandi* continues to be important and markets develop along the main roads. The district towns are generally uniform as they have a peculiar townscape. The British added a few administration buildings — a Collectorate, a Civil Court, a Kotwali, a PWD Office, a Dak Bungalow, and a Circuit House(in larger towns only).

The morphology of a town in India has its own distinguishing traits. There is hardly any difference between the residential and the commercial areas. Traders prefer to live over the first floor level of their shops in the market place. The residential houses are located on the first floor while the shops or offices are located on the ground floor.

Artisans in these towns live in one or two *mohallas*. This adds an element of social segregation as many artisans belong to specific castes or communities. Segregation based on income levels is also a common feature of our towns. The municipal administration very often makes a distinction between the high income and the low income quarters in providing civic amenities. The residential locations of low income groups often degenerate into slums. Many Indian towns retain their original character so far as segregation based on caste and community is concerned.

The British added a number of new elements to the traditional townscapes. They developed separate areas for the settlement of the British officers. These were more open and well planned parts of the city with bungalows located in wide open lawns and gardens. These quarters came to be known as civil lines. Cantonments and railway colonies were also added to these towns.

The old cities of Agra and Delhi are reminiscent of the medieval urban agglomerations. Some of the older towns of the Indian princely states, such as Jaipur, were planned on an elaborate basis with wide, open roads. The streets crossed each other at right angles. Jaipur used to be the best example of a planned Indian town.

Many urban places began as temple towns and their basic function was to cater to the needs of the pilgrims. Varanasi (formerly Banaras), Mathura and Madurai are the best examples.

The modern cities in India today, particularly the metropolitan centres such

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as Calcutta, Mumbai, Delhi, Bangalore, Chennai (formerly Madras) and Hyderabad to name only a few, are a mix of the old and the new. Their modern elements evident in high income-group housing schemes, shopping centres (such as Connaught Place in Delhi and M.G. Road in Bangalore), fly-overs, sports stadia, golf courses, clubs and luxury hotels are as modern as any European city. But the interior parts of the city, such as Shahjehannabad in Delhi or the squatter colonies in Delhi, Calcutta, Mumbai and Chennai are as Indian in looks as any other old town. The distinction between the old and the new in an Indian city is not that easy.

House Types

The rural house in India is a type in itself. It grows from the soil. The building materials — mud, thatch, bamboo, pieces of stones, wood or unburnt bricks are locally procured. The house in its design or internal plan reflects the social or cultural values of the people. Development has brought about changes and houses made of burnt bricks, cement or concrete are now common sights in many affluent villages. But the traditional house still conforms to a type which has the stamp of the region in which it is situated.

Rural houses may belong to several types varying from a single room hut made of mud and with a thached or tiled roof to houses with several rooms and elaborate plans and raised platforms at the entry point (Fig. 33). There are scores of varieties in between. These distinctions are based on several considerations :

(i) climatic conditions are such that a courtyard is necessary in all parts of India;

(ii) a peasant house should have separate space for storing agricultural produce and pens for draught animals and dairy cattle;

(iii) the walls and the roofs are made according to the weather conditions and with the help of locally available raw materials;

(iv) cultural values very often play a role in determining the direction in which the houses open or their main entrance is situated. Domestic layout or the architecture often reveals ethnic connections, rituals and whims.

A distinguishing feature of the Indian house type is the courtyard (*angan* or *uthan*). It is universal. It is here that the family performs most of the activities. In fact, it is the main living space. Rooms are used for storing property, for privacy and for sleeping in winters. The courtyard has its varieties in the form of a porch or an overhanging verandah as an extension of the main house in the cold and wet highland regions of Jammu & Kashmir, Himachal Pradesh, UP, West Bengal, Sikkim, Arunachal Pradesh, Nagaland and other states in the North-East.

In regions where shifting cultivation is still practised and where the village economy is still dependent on collection from the forest, the common house type is a single-room hut. Its shape is generally rectangular. It has a single or double-slope roof, other huts have a round or circular shape and a conical roof. There is space for storing the grain, for the livestock and the kitchen inside the hut. The space in the front is used as the courtyard.

The North Indian Plain displays a variety in house-types. They have an elaborate courtyard surrounded by mud walls and rooms. Sometimes there is a common village courtyard enclosed by huts. The huts are very often laid out in two parallel rows facing each other across a common courtyard. In the fishing villages of Kerala, the courtyard is often open-

courtyard, agri/livestock, walls/plan, culture/religion/traditions.

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ende- An elaborate peasant house in UP. Haryana or Punjab may have one or several rooms on the first floor which overlook the courtyard. The double-storey house belongs to the richer families only.

If the household consists of two huts, they are usually placed at right angles to each other and enclosed by a fenced rectangular courtyard. This type is common in the peninsular region of India. The two-hut and courtyard arrangement undergoes a change. The two huts face each other and the courtyard encloses them on two sides. Such type is common in Kerala, Orissa, West Bengal, Assam, Tripura and Manipur. The impact of temple designs on the house types is commonly observed in the southern states of India. Here houses have multiple courtyards.

It may be observed that despite the regional variations in domestic architecture and house types, the Indian house reflects the basic elements of the Indian civilization. These are expressed in our concept of the family and the kinship relations and our adherence to the religious faith. Agriculture very often is a way of life and the place of livestock in the day-to-day activities of the household adds common elements which cut across the regional boundaries. The Indian house type reveals both the diversity and the unity of our common Indian tradition.

agri +

EXERCISES

Review Questions

1. Answer the following questions in brief:
   (i) What is the basic unit of residence?
   (ii) What is a settlement?
   (iii) Into how many categories can rural settlements be classified? Name them.
   (iv) What kind of rural settlements predominate in the North Indian Plain ?
   (v) What do we understand by the term 'settlement pattern'?
   (vi) Which two components basically define a settlement pattern?
   (vii) What is the most distinguishing feature of the Indian house type?
2. Distinguish between:
   (i) Rural and urban settlements.
   (ii) Clustered and dispersed rural settlements
   (iii) 'Ait' and 'Gali'
3. Describe briefly the types of rural settlements found in India.
4. Discuss the factors that determine the type of rural settlements.
5. Describe the various patterns of rural settlements commonly found in India.
6. Discuss how the character of a settlement changes from rural to urban. Why many smaller towns in India are still considered 'grown-up' villages?
7. "The house in its design or internal plan reflects the social and cultural values of our people". Elaborate with the help of suitable examples.

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migration rates to better-off states (Kundu and Gupta 2000). The increasing assertion of cultural and political identities may have constrained the growth of interstate migrations. Also, sharpened intra-state socio-economic inequalities may sometimes have encouraged intra-state (rather than interstate) movement.

The populations of economically advanced states (such as Punjab and Gujarat) are slightly more likely to be migrants. In contrast, people enumerated in Uttar Pradesh and Bihar are less likely to be migrants. In both these states a particularly high proportion of migrants are female, reflecting the especially strong influence of village marriage exogamy. Females form a noticeably smaller fraction of migrants in the southern states. The particularly developed urban system of western India is reflected in the measures for Maharashtra and Gujarat, where rural-to-rural movers comprise a relatively low, and rural-to-urban and urban-to-urban movers a relatively high, proportion of migrants. It may be noted that, with the exception of Kerala, urban-bound movements tend to be somewhat more important in the southern states, reflecting their generally higher levels of urbanization. The proximity of Delhi helps to account for the relatively high proportions of urban-the frequency of rural-to-urban and urban-to-urban migrants is relatively low, reflecting their comparatively low levels of urbanization.

SETTLEMENT GEOGRAPHY

MORPHOLOGY OF INDIAN CITIES

Morphology includes the set up of the cities and their functional characteristic. The city develops around the central place and has specifies characteristic of its internal structure. Several scholars have tried to identify the theoretical perspective of the patterns generally identified with a city- Burgess, Homer Hoyt, Ullman and Harris- are the prominent ones. These theoretical explanations however are least applicable in term of Indian cities as the causative factors paving way to it includes-

1. Several cities of India represent specific sequence of historical development. It includes the religious towns and the medieval towns continuous population growth has converted these cities into unplanned conjusted near slum dwelling.

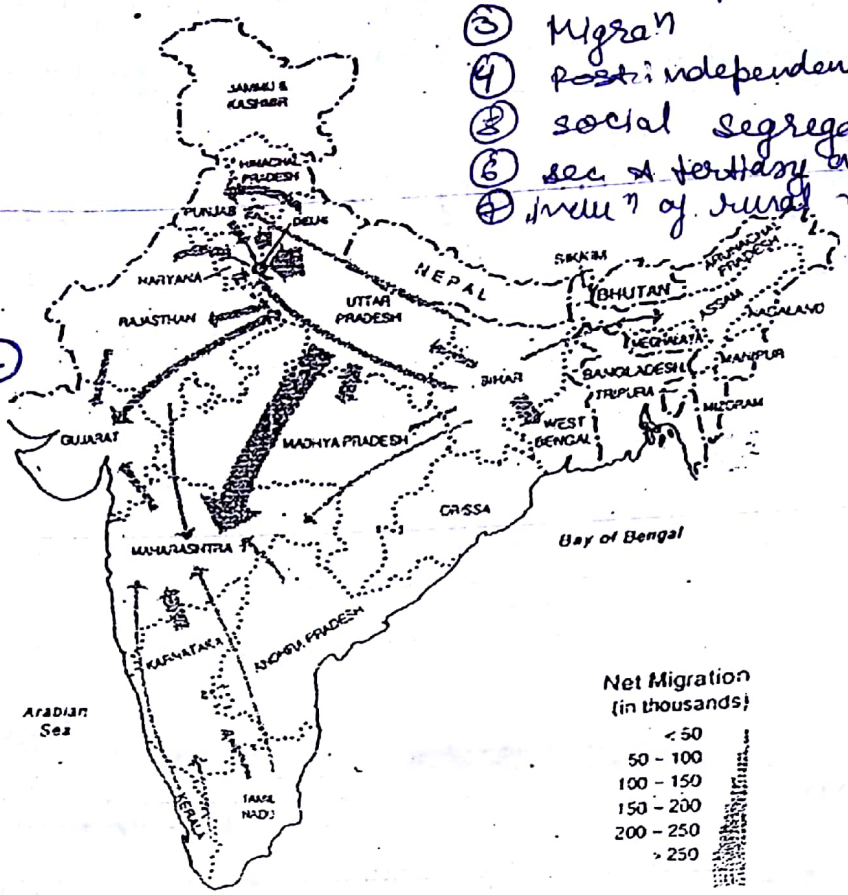
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① Historical sequences
② Brit impact
③ Migran
④ Post-independence plans
⑤ social segregan
⑥ sec & tertiary activities
⑦ Invln of rural morpho in urban

7

2. The impact of colonial rule is also visible. It has created two distinctive internal structure that was established prior to the colonial rule. Second is the planned colonial rule development including residential premises of British officers, cantonement & other constructs for administrative requirements.



3. The impact of rural urban migration can also been seen. This process has attained prominence in recent past and has resulted in population explosion in urban areas and the development of slums & squatter areas with poor infrastructure development even in the peripheries.

4. After independence master plans have been developed especially for the big cities. It has moulded the new outer zones in developing planned residential and/or industrial structures.

5. Social and political impacts are also seen in the internal structure. Social segregations has created several settlement patterns. It specially levy its influence on the settlements of lower orders.

6. Since independence the development of secondary & tertiary activities have evolved new industrial based morphology predominantly slums and squatter settlement.

7. Inclusion of rural-morphology within the urban areas especially lower ranking towns is again a special characteristic of urban morphology. The cause identified for this characteristics is the change in the economic set up of rural settlements generally to fulfill their growing demands.

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① CBD is diff
② segregation grounds
③ building gradation
④ ↓ planned
⑤ old + new mixed.

How it is unique?

Based on the impact of these factors following characteristic have evolved in Indian cities-

3 Indian cities have also evolved around CBD as in most of western countries, however structure characteristic are totally different e.g.. CBD are the regions of trade commerce etc. but in Indian context these also includes residential areas also generally the ground & first floors are devoted for commercial purposes and subsequent floors are residential. (1)

Western countries urban morphology is characterized with high multistorey buildings concentrated in the central urban zone with continuous decline in height a way from the centre Indian cities lacks such specific gradation. Multistorey buildings, duplexes or single story houses have randomly evolved. (2)

3 The morphology development of Indian cities are more pressurized than planned, this the total city layout is quiet random. Hardly any road network identifies the framed development mechanism. (3)

NIMZ? smart city?

3 The residential complexes are also mixed. The law of segregation applicable to the developed nations is totally on the bases of income, however in India regional caste, religion and language implies such strong impact that the different income group people belonging to some social set up prefer to live together. The immense immigration has however moulded this profile a lot. (4)

3 Maximum territorial stretch of urban areas have very old buildings with prominent lack of maintenance as specific societal structure administration has precisely failed in moulding it to new set up. (5)

Three scholars are credited of projecting their specific studies oriented to wards the understanding of morphology of Indian cities.

garryson's composite growth model 1962. studied Kolkata

I GARRYSON'S- COMPOSITE GROWTH MODEL 1962

American geographer, who conducted detailed study of Kolkatta in 1962 proposed this model. He has advocated that concentric zonation, sectoral & multiple need it patterns is available in Indian cities. It always initiate with the pattern of concentric zonation and requisites eventual changes. Calcutta till 1887 registered concentric pattern, subsequently sectral

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and after independence multiple nuclei. Garrison believed that this temporal modification has been experienced by Kanpur, Lakhnow, Banglore etc. The population explosions experienced in the urban areas have actually facilitated such morphology development to incorporate largest number of population. However, this model is not applicable to the morphology of small Indian cities.

II ASHOK DUTTA'S 1974 ANALYSIS-

A research paper A.K. Dutta concluded following characteristics of Indian urban morphology-

a. Kolkatta, Mumbai, Delhi and Chennai representing the colonial metropolitan have developed around CBD. However the other cities represents mixed pattern.

b. All the establishments prior to the British administration are totally unplanned.

c. the social segregation in the cities are totally regional, religious, caste based irrespective of the income groups. no income based social segregation.

III DR. KUSUM LATA'S 1968 ANALYSIS-

internal str is fn of final rings of dynamic char (geog, Brit, Pop, migration etc)

She concluded that every city has the internal structure based on specific functional rings, with each ring representing dynamic characteristic just like the total urban structure in India this dynamic characteristic developed in reference to geographic causes, British rule, urban planning in post independence era, population increase and resultant rural urban migration. The structure developed includes 3 types-

a. Unplanned city-This group of cities have been subcategorized into two on the grounds of structural development. First includes very old cities which eventually has attained large size- Varanasi. The second includes recently developed cities due to functional variation or population increase. Both these types have densest central city with mixed urban functions.

b. Unplanned cumplanned city- This group of cities are the representatives of British legacy. The old settlements continued to have the unplanned profile however associated new

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class developed planned morphology. These cities usually have rectangular layout with main aim of developing civil lines, administrative area and cantonment. The older cities were Expanded in terms of its administrative boundary to include new ones. The best example is New Delhi, it represent the spider web layout, i.e.. each web representing a node of Specific functional and its sub rounding connected by road with the next node.

c. Totally planned city- These is marked absence of planed cities in India, however Chandigarh, Jamshedpur, Bhubneshar etc. forms the good

Example. Total rectangular layout has been planned for Chandigarh with specific division of land use pattern. But the population increase in the city has eventually developed slums considerably.

CONURBATIONS AND METROPOLITAN REGIONS

During 20th Century the trends of urbanization has increased prior to it, this was the trend of developed nations eventually population explosion in the developing countries led to the urbanization even in these areas. The urban settlement development facilitated several horizontal land use modification- including conurbation, metropolitan regions, urban sprawl. Conurbation term was corned by Geddes in 1914 to identify the British urban expansions it includes these urban places where the administrative boundaries of two or more cities merges (that is the termination of boundary of one city marks the beginning of the other). Industrial development, transport development and the trade commerce development have been the cause of conurbation n most of the European countries Liverpool-Manchester, Rotterdam-Amsterdam, Yokahoma-Kawasaki (Asian Example). In India- Hawrah-Kolkata, Hyderabad-Sikanderabad, Kochi-Ernakulum etc. are the example. The conurbation has not only led to the horizontal expansion of cities but also the urban amenities leading to large number of population residing in urban areas. In India, the conurbation development is the outcome of rural-urban migration.

A B

Three types of conurbation have been identified-

a. Nodal b. Bi-Nodal c. Multiple Nodal

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Nodal Conurbation:- Incorporates one big city and associated small city. The small city characterizes individual growth in initial phase, with its eventual merger with the main city, as the latter register horizontal expansion. Pune Pimpri can be quoted as a good example.

Bi-Nodal Conurbation:- Develops when the two cities represents the similar significance in size and activities, the parallel attractions lived by both leads to the growth of conurbation- Hyderabad-Sikanderabad, Kochi- Erankulum can be the example.

Multiple Nodal Conurbation:- Develops when in a region two or more big cities prevails with the development of several small cities. The important aspect to ascertain is that the small cities also develop itself due to their own functional expertise Kolkata-Hawrah is the best example. Along with the two municipalities, Dum-Dum, Utarpara and Budge-Budge municipalities marks their beginning at the termination of Kolakata municipality, Dum-Dum for air transportation and high income residential, Utarpara for industries and Budge-Budge is important for jute textile industries. Multiple Nodal Conurbation has also developed in the metro cities of Delhi, Mumbai and Chennai. The only difference between the Kolkata-Hawarh and rest of the metros is that the former marked its beginning as Bi-Nodal Conurbation and letter marks the single nodal beginning eventually, the increasing geographic centrality and population pressure has molded the metropolitan regions into conurbation.

- Recently, India has experienced urban sprawl, in the comubation, which is eventually leading to the development of metropolitan characteristics also. After 1970s all the big cities of India has developed sub urban areas, rural-urban fringe motel, and industrial cluster around it.

use in morphology.

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