

Thinking Geographically

AP Human Geography • Unit 1

AP Human Geography



Thinking Geographically

What we will cover

- 1 Maps & projections
- 2 Geographic data
- 3 The power of data
- 4 Spatial concepts
- 5 Human–environment
- 6 Scales of analysis
- 7 Regions

1 Maps and data

Thinking Geographically

Maps and data

Maps and projections

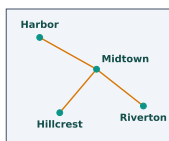
- A **reference map** 参考地图 shows locations; a **thematic map** 专题地图 shows one variable's pattern.
- Earth is a sphere and a map is flat, so every **projection** 投影 **distorts** one of shape, area, distance or direction – the choice is which.



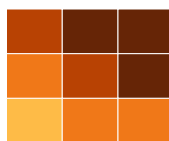
Population density is a classic thematic pattern

Introduction to Maps

Reference map
(shows fixed locations)



Thematic map
(shows a variable: density)



AP HuG • U1 : reference map vs thematic (choropleth) map
low high

Geography asks **where** things are and **why** they are there, and the map is its basic tool – a flattened picture of part of Earth's surface. Reference maps show location; thematic maps show how one variable varies over space.

Thinking Geographically

Maps and data

Geographic data

- **Geographic data** 地理数据 is any information tied to a **location** 位置. **Quantitative** 定量 data are numbers; **qualitative** 定性 data are descriptions.
- The three **geospatial technologies** 地理空间技术 to know: **GIS** 地理信息系统 *layers* many kinds of spatial data so patterns can be compared; **GPS** 全球定位系统 *pinpoints* an exact location; **remote sensing** 遥感 *gathers* data from satellites or aircraft without touching the ground.
- Written sources count too: field observations, media reports, travel writing, policy documents, interviews and photographs.

The power of geographic data

- Individuals use it to navigate and find services.
- Businesses use it to site stores and target markets.
- Governments use it to plan, respond to emergencies, and set policy – raising **privacy** 隐私 concerns.

Data drives decisions – and data is never neutral

business	chooses store locations from customer and traffic data
government	plans schools, roads and clinics from the census
aid agencies	target relief using population and damage maps
but	who collects the data, which categories they use, and how a map is drawn all shape the message
so	a map can inform or mislead – ask whose question it was built to answer

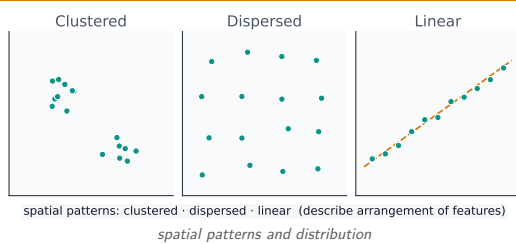
"Data is objective" is the wrong answer. Every dataset carries the choices of the people who made it, and naming those choices is the analysis.

2 Space, scale, and region

Spatial concepts

- **Absolute location** 绝对位置 = coordinates; **relative location** 相对位置 = position to others.
- **Distance decay** 距离衰减: interaction falls with distance.
- **Time-space compression** 时空压缩: technology makes far places feel close.

Spatial concepts, in detail



sep=0.5em **Absolute location** 绝对位置 = coordinates; **relative location** 相对位置 = position to others.

Distance, and the pattern things make

absolute distance	measured in kilometres – fixed
relative distance	measured in time, cost or effort – and it changes
space-time compression 时空压缩	the shrinking of the <i>felt</i> distance between places as transport and communication improve
spatial pattern 空间格局	clustered 聚集 (bunched), dispersed 分散 (spread apart), or linear (along a road, river or coast)

Beijing to New York is the same kilometres it was in 1900, and a fraction of the days. That gap between absolute and relative distance *is* space-time compression.

Worked example – density is not distribution

Egypt: 109 million people in 1,010,000 km². Give the density – and explain why it tells you almost nothing about where Egyptians live.

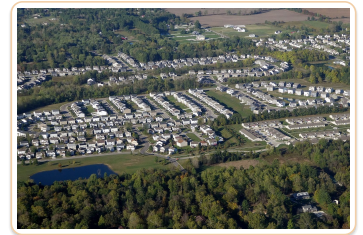
$$\text{density} = \frac{109,000,000}{1,010,000} \approx 108 \text{ people/km}^2$$

But over 95% live on the Nile and its delta – a few percent of the land. The **average** spreads them evenly across desert they never occupy.

Density is one number (people per area). **Distribution** is the **pattern** – clustered, dispersed, linear. A question asking for distribution earns **nothing** for a density figure.

Human–environment interaction

- **Environmental determinism** 环境决定论 (rejected): environment decides development.
- **Possibilism** 或然论 (accepted): environment sets limits; people choose.
- **Sustainability** 可持续性: present needs without harming the future.



People choose within environmental limits

Three positions on environment and culture

environmental determinism 环境决定论

the physical environment **determines** how a culture develops – **now rejected**, and used historically to justify colonial rule

possibilism 可能论

the environment sets **limits** and offers opportunities; people choose within them – the accepted view

cultural landscape 文化景观

farms, cities and roads built on the land – the **visible result** of that choosing

sustainability 可持续性

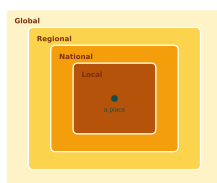
asks how people can use the land without exhausting what the next generation needs

Naming determinism as **rejected** is worth a mark on its own; the exam sets it as a distractor precisely because it sounds plausible.

Scales of analysis

- Data is read at **global** 全球, **regional** 区域, **national** 国家, or **local** 地方 scale.
- The scale chosen changes the pattern you see.
- **Aggregation** 聚合 into large units hides local variation.

Scales of analysis, in detail



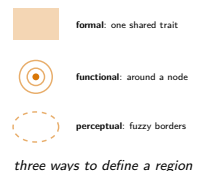
AP HUG – UCL: scales of analysis nest inside one another

how scale changes the pattern

sep=0.5em Data is read at **global** 全球, **regional** 区域, **national** 国家, or **local** 地方 scale.

Regional analysis

- **Formal region** 正式区域: a shared measurable trait (a climate zone).
- **Functional region** 功能区域: organised around a node (a commuter zone).
- **Perceptual region** 感知区域: based on feelings, fuzzy borders ('the South').



The three kinds of region

formal (uniform) region 正式区域
shares a measurable trait throughout – a wheat belt, a country, a French-speaking area

functional (nodal) region 功能区域
organised around a **node**, weakening outward – a newspaper's circulation, a metro network, a pizza delivery zone

perceptual (vernacular) region 感知区域
exists in people's minds, with no agreed border – "the Midwest", "the South"

the catch
regions are **made** by geographers, not found in nature – so their borders can be argued about

That arguability is not a weakness. It is exactly why regions are useful: drawing one forces you to say which trait you think matters.

Key points

Projections always distort; pick one to fit the purpose

Scale of analysis changes what a pattern reveals

Possibilism: environment offers options, people choose

Regions are **formal, functional, or perceptual**

Worked example – the command word is the question

"The map focuses on a regional scale. Explain a possible limitation of drawing country-scale conclusions from a regional-scale map." (real AP question)

"The map shows only one region, so its pattern may not represent the whole country – other regions could look very different, so a conclusion drawn at the regional scale would be inaccurate at the country scale."

Explain asks for **reasoning**: state the limitation and say why changing the scale changes the pattern. "The scales are different" earns **nothing**.

Exam tips

- Always name a **map projection's** trade-off: what it preserves versus distorts (Mercator keeps direction but exaggerates area).
- State whether data is **quantitative** or **qualitative**, and match a source (**GIS, GPS, remote sensing, census**) to its use.
- Distinguish **absolute** from **relative location**, and use **distance decay** and **time-space compression** in any flow answer.
- Mind the **scale of analysis**: a national average hides local variation – say so explicitly.
- Classify every region as **formal, functional, or perceptual**, and justify it by the defining trait.

3

Recap

Unit 1 – key takeaways

1 Projection

name the trade-off: preserve vs distort

2 Data

quantitative vs qualitative; match GIS/GPS/census to use

3 Location

absolute vs relative; distance decay; time-space compression

4 Region

formal, functional, or perceptual – justify by the trait

Check yourself

- 1 Does a map projection distort shape, area, or both?
- 2 Name the three scales of analysis.
- 3 What does a regional-scale map fail to tell you about a country?
- 4 Is population density the same as distribution?

Answers 1. both – every flat map distorts something 2. local, regional (national), global 3. whether other regions differ 4. no – density is people per area