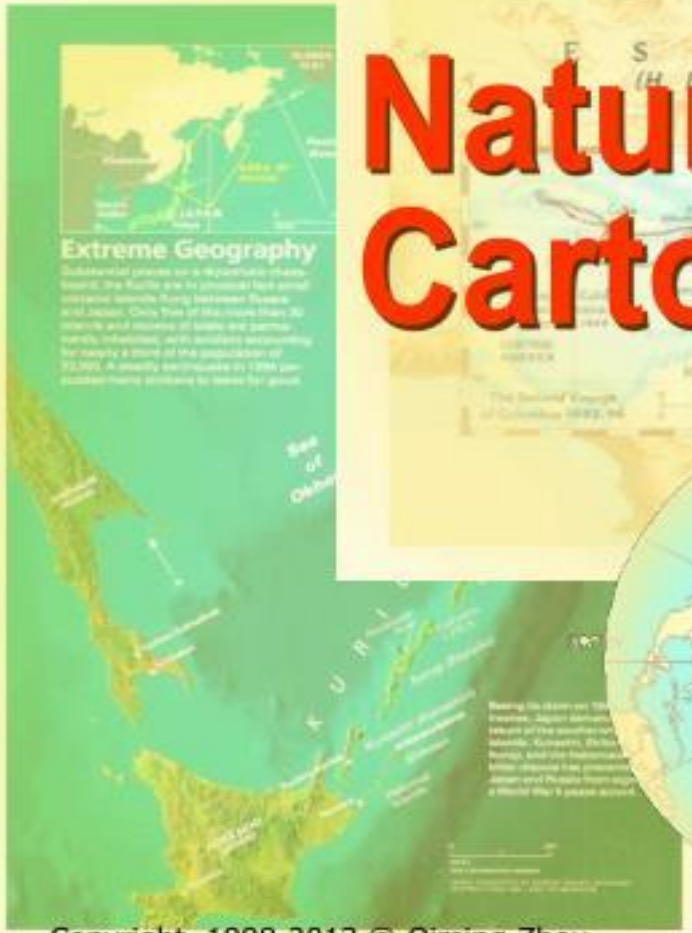
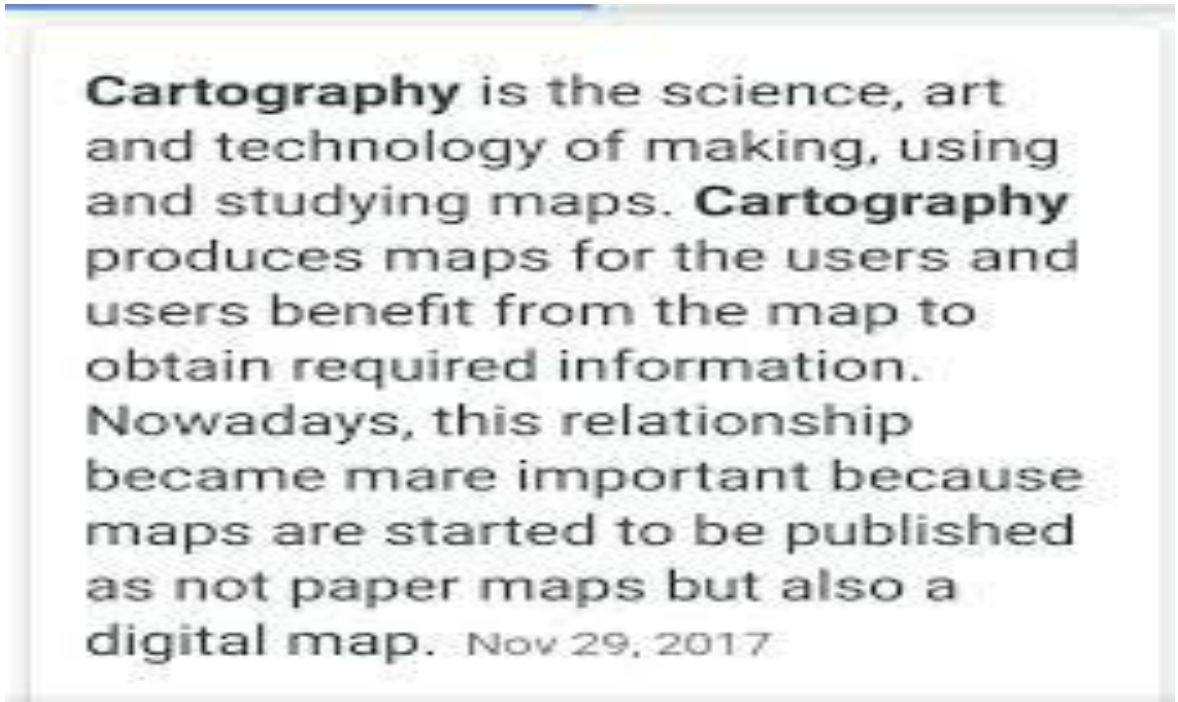
香港浸會大學
HONG KONG BAPTIST UNIVERSITY

Nature of Cartography



Nature of Cartography

- Forms of representation
- Need for maps
- Basic characteristics of maps
- Purposes maps serve
- Categories of maps
- Emphasis on cartographic representation
- The scope of cartography



Cartography is the science, art and technology of making, using and studying maps. Cartography produces maps for the users and users benefit from the map to obtain required information. Nowadays, this relationship became mare important because maps are started to be published as not paper maps but also a digital map. Mobile mapping technologies and methods which aim to design maps for mobiles devices (Pocket PC, Mobile Phones, in-vehicle computers and etc) introduced mobiles cartography or small display cartography as a new interest of cartography.

Forms of Representation

- Literacy - the use of written language
- Articulacy - the use of spoken language
- Numeracy - mathematics: a way of symbolisation
- Graphicacy - the use of graphics
  - "A picture is worth of thousands of words"

Hang Seng Index

Daily prices 2012-01-12 - 2013-01-10 更新

日期	開市價	最高價	最低價	收市價	成交量
2013-01-09	23,154.71	23,235.39	23,141.67	23,218.47	-
2013-01-08	23,264.03	23,264.03	23,088.40	23,111.19	-
2013-01-07	23,345.20	23,402.45	23,254.23	23,329.75	-
2013-01-04	23,370.36	23,370.36	23,172.28	23,331.09	-
2013-01-03	23,390.54	23,400.74	23,234.43	23,398.60	-
2013-01-02	22,860.25	23,317.39	22,860.25	23,311.98	-
2012-12-31	22,584.44	22,698.33	22,566.89	22,656.92	-
2012-12-28	22,706.33	22,706.33	22,628.46	22,666.59	-
2012-12-27	22,705.46	22,718.83	22,608.60	22,619.78	-
2012-12-24	22,494.71	22,577.56	22,494.71	22,541.18	-
2012-12-21	22,565.09	22,565.09	22,423.16	22,506.29	-
2012-12-20	22,602.99	22,661.74	22,483.95	22,659.78	-
2012-12-19	22,654.65	22,683.72	22,562.02	22,623.37	-
2012-12-18	22,525.46	22,588.48	22,449.74	22,494.73	-
2012-12-17	22,590.76	22,625.41	22,453.59	22,513.61	-
2012-12-14	22,396.72	22,636.43	22,396.72	22,605.98	-
2012-12-13	22,500.99	22,563.14	22,380.78	22,445.58	-
2012-12-12	22,412.90	22,508.01	22,412.90	22,503.35	-
2012-12-11	22,295.99	22,393.20	22,244.02	22,323.94	-
2012-12-10	22,377.56	22,377.56	22,235.76	22,276.72	-
2012-12-07	22,294.73	22,371.40	22,188.07	22,191.17	-
2012-12-06	22,355.89	22,355.89	22,215.08	22,249.81	-
2012-12-05	21,819.01	22,274.04	21,804.93	22,270.91	-
2012-12-04	21,786.07	21,853.15	21,687.88	21,799.97	-
2012-12-03	22,070.44	22,162.47	21,716.77	21,767.85	-
2012-11-30	21,949.40	22,091.61	21,918.55	22,030.39	-
2012-11-29	21,821.05	21,996.40	21,786.03	21,922.89	-
2012-11-28	21,764.91	21,764.91	21,629.58	21,708.98	-
2012-11-27	21,969.71	22,002.86	21,820.15	21,844.03	-
2012-11-26	21,986.36	21,986.36	21,827.27	21,861.81	-

Show rows: 30 1 - 30 of 246 rows

HSI Chart

HSI: Analytical Chart (2)

Spatial Imagery

- Map - the graphic representation of the geographical setting.
- Cartography is the making and study of maps in all their aspects.
- Cartography is an efficient way of manipulating, analysing and expressing ideas, forms and relationships that occur in two- and three-dimensional space.

Need for Maps

- Reducing the spatial characteristics of a large area and putting it in map form to make it observable.
- A map is carefully designed instrument for recording, calculating, displaying, analysing and understanding the interrelation of things.
- Its most fundamental function is to bring the things into view.

Basic Characteristics of Maps

- Locations in two-dimensional space
- Attributes - qualities or magnitudes
- Examples:
  - Relationships among locations, e.g. Distance
  - Relationships among various attributes at one location, e.g. Temperature, rainfall and soil
  - Relationships among the locations of the attributes of a given distribution, e.g. Rainfall
  - Relationships among the locations of derived or combined attributes of given distributions, e.g. Relation of GDP and population

Basic Characteristics of Maps (Cont.)

- All geographical maps are reductions.
  - Scale.
- All maps involve geometrical transformations.
  - Map projection.
- All maps are abstractions of reality.
- All maps use signs to stand for elements of reality.
  - Symbolism.

Purposes Maps Serve

- Store geographical information.
- Serve mobility and navigation needs.
- Analytical purposes, e.g. Measuring and computing.
- Summarise statistical data to assist forecasting and spotting trends.
- Visualise invisible.
- Stimulate spatial thinking

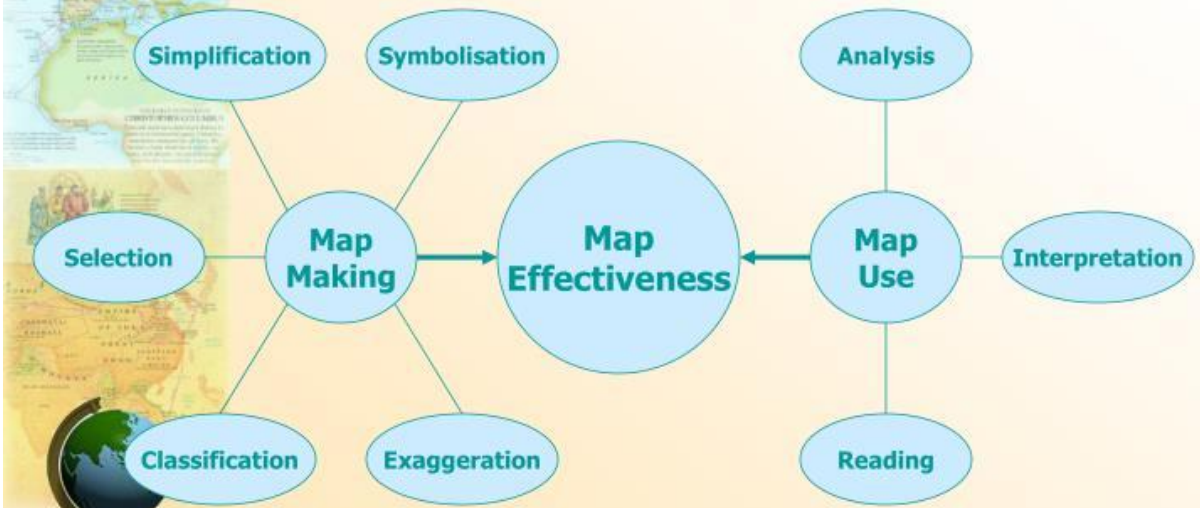
Categories of Maps

- Classed by scale
  - Small-scale map
  - Large-scale map
- Classed by function
  - General reference maps
  - Thematic maps
  - Charts
- Classed by subject matter

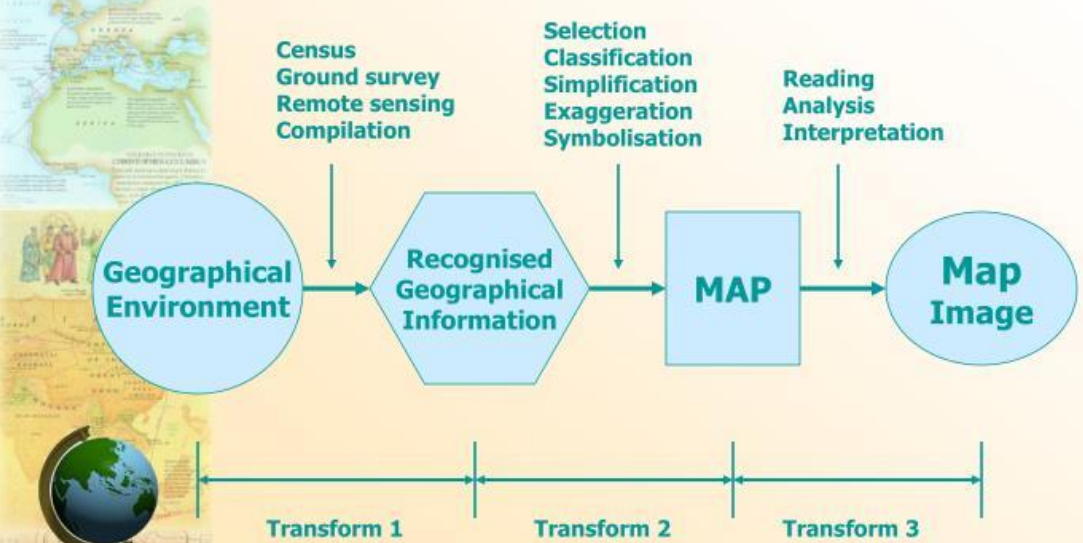
Emphasis on Cartographic Representation

- The principal task of cartography is to communicate environmental information.
- The emphasis on cartographic representation is map effectiveness in thought and communication.
- This is best achieved by treating the making and using of maps equally.

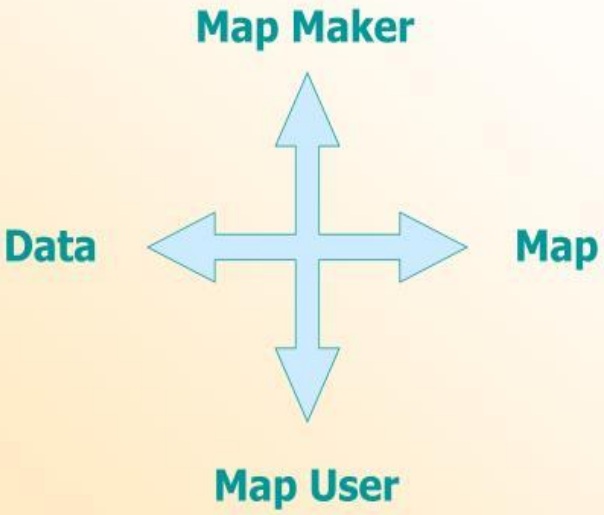
The Theme of Map Effectiveness



Information Transformation



The Scope of Cartography



Processes in Cartography

- Collecting and selecting the data for mapping
- Manipulating and generalising the data, designing and constructing the map
- Reading or view the map
- Responding to or interpreting the information

A Cartographer Must...

- Be familiar with all mapping activities (geodesy, surveying, photogrammetry, remote sensing and GIS); and
- Know a lot about human thought and communication (cognitive science) and the disciplines associated with the environmental features being mapped.

Geographers Are the Primary Users of Maps