Cartographic Principles

- Principles presented to British Cartographic Society Design Group meeting at Glasgow University, 2000
  - The proposed principles did not go unchallenged
  - The following slides are reproduced from SC website http://www.shef.ac.uk/uni/projects/sc/cartosoc/1999/Nov/msg00044.html

- Alan Collinson, chairperson
  - British Cartographic Society Design Group, February 2000
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CARTOGRAPHIC PRINCIPLES

- Good maps and bad maps
- 3 important statements
- 5 principles of map design
- Summary
Good maps and bad maps

- We all know that there are good maps and bad maps, the problem is defining which is which.
  - The reason for this is that whenever we discuss the principles of map design we have to admit that we don't know what they are.
- Principles are different from rules.
  - E.g. there are rules regarding placement of type.
- Rules contribute to the design process, but rules are not principles and don’t guarantee a good outcome.
THREE STATEMENTS

♦ * The purpose of design is to focus the attention of the **user**
♦ * The principles of cartographic design are timeless, the results are not
♦ * The rules of cartographic design can be taught and can be learnt, principles and concepts have to be acquired
THE 5 PRINCIPLES OF MAP DESIGN

♦ 1. CONCEPT BEFORE COMPILATION
♦ 2. HIERARCHY WITH HARMONY
♦ 3. SIMPLICITY FROM SACRIFICE
♦ 4. MAXIMUM INFORMATION AT MINIMUM COST
♦ 5. ENGAGE THE EMOTION TO ENGAGE THE UNDERSTANDING
1. CONCEPT BEFORE COMPILATION

♦ Without a grasp of concept, the whole of the design process is negated.
  – The parts *embarrass* the whole. (*Did Coliinson mean embrace?*)
    Once this concept is understood, no design or content feature will be included which does not fit it.

♦ Design the whole before the part.
  – Design comes in two stages, concept and parameters, and detail in execution.
  – Design once, devise, design again

♦ User first, user last.
  – What does the user want from this map?
  – What can the user get from this map?
  – Is that what they want?
  – If a map were a building it shouldn’t fall over
2. HIERARCHY WITH HARMONY

♦ Important things must look important, and the most important thing should look the most important.
  - "They also serve who only stand and wait".
    • Lesser things have their place and should serve to complement the important.
    • From the whole to the part, and all the parts, contributing to the whole.

♦ Associated items must have associated treatment
HIERARCHY WITH HARMONY 2.

♦ Harmony is subliminal.
♦ Harmony is to do with the whole map being happy with itself.
♦ Successful harmony leads to repose.
♦ Perfect harmony of elements leads to a neutral bloom.
   – (Professor Elmes asks: Is repose and a neutral bloom always the objective of the user?)
3. SIMPLICITY FROM SACRIFICE

♦ Great design tends towards simplicity. (Bertin)
  – Its not what you put in that makes a great map but what you take out.
  – The map design stage is complete when you can take nothing else out.
  – Running the film of an explosion backwards, all possibilities rush to one point. They become the right point. This is the designers skill.
  – Content may determine scale or scale may determine content, and each determines the level of generalization (sacrifice).
4. MAXIMUM INFORMATION AT MINIMUM COST (after Ziff)

♦ How much information can be gained from this map, at a glance

♦ Functionality not utility. Design makes utility functional
  – All designs are a compromise, just as a new born baby is a compromise between its father and mother

♦ The spark which makes a map special often only comes when the map is complete.
5. ENGAGE THE EMOTION TO ENGAGE THE UNDERSTANDING

- Design with emotion to engage the emotion. Only by feeling what the user feels can we see what the user sees.
- Good designers use Cartographic fictions, Cartographic impressions, Cartographic illusions to make a map. All of these have emotive contents.

* The Image is the Message |

- Cf. Marshall McCluhan
ENGAGE THE EMOTION etc.

♦ Good design is a result of the tension between the environment (the facts) and the designer.

♦ Only when the reader engages the emotion, the desire, will they be receptive to the map’s message.

♦ Design uses aesthetics but the principles of aesthetics are not those of design.
  – We are not just prettying maps up.
SUMMARY OF THE PRINCIPLES

♦ The philosophy is simple:
  – Beauty (aesthetics) focuses the attention
  – Focusing the attention is the purpose of map design
  – User first, user last