THE ARCHAEOLOGICAL DISTRIBUTION MAP:
WHERE ARE THE EMPEROR’S CLOTHES?

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site distribution maps

- favourite visualisation tool
  - ease of use and production
  - long tradition
  - easily interpreted

- more sophistication with GIS
  - visualisation of attribute data
  - combined with other cartographic information

- but what do they show?
a cartographic puzzle

- high level of reduction vs.
- information overload

- implicit assumptions:
  - sites as points
  - attributes certain
  - unreliable information left out
sources of uncertainty

- information categories
  - location
  - dating
  - function
  - documentation

- uncertainty categories
  - error
    - wrong measurements
  - ambiguity
  - vagueness
    - approximation
  - incompleteness
example #1 - what is a site?

- **Vos (2009)**
  - inventory Roman sites Kromme Rijn
    - mainly survey data
  - goal: establish location and dating of settlement sites
  - criteria:
    - number of sherds (> 10)
    - proximity of finds (< 250 m)
    - ‘diagnostic materials’

- **issues**
  - what to do with smaller counts?
  - what to do additional sources of information?

‘In all these investigations, it seems that hardly any use was made of previous studies and it is impossible to understand why almost every study – at a more detailed level – has led to different outcomes’

(Vos 2009, note 151)
Kromme Rijn – 117 ‘sites’
Kromme Rijn – 117 ‘settlements’
Kromme Rijn – 900+ ‘Roman’ findspots
Kromme Rijn – density of finds
Kromme Rijn – density of finds within 125 m
example #2: dating accuracy

- ARCHIS dating codes
  - 1 timeslice: ROM
  - 3 timeslices: ROMV-ROMM-ROML
  - 6 timeslices: ROMVA-ROMVB
    - ROMMA-ROMMB
    - ROMLA-ROMLB
  - timespan?

- dating provided per object
  - counts often not registered
  - object category can be unspecific
    - e.g. AWH – AWG (thrown/ turned pottery)

- site dating often based on ‘educated guess’

Galinié et al. 2004
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5 records, average 'dating quality' 1.4

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12 records, average 'dating quality' 2.4
Kromme Rijn – reliability of dating info
Kromme Rijn – detailed reliability of dating info
Kromme Rijn – reliability of dating Late Iron Age
Kromme Rijn – reliability of dating Early Roman A
Kromme Rijn – reliability of dating Middle Roman A
Kromme Rijn – reliability of dating Late Roman A
### Example #3: Reliability of Interpretation

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- **WNG_NR 17260**: trial trenches
- **WNG_NR 21911**: excavation
- excavation report (half page) mentions a 3-aisled house plan and ditches - but no finds

Departing from the data obtained from those trenches, an excavation pit was dug, in which a Roman house plan soon appeared. The three-aisled house was located on a rectangular compound surrounded by ditches, that could be investigated almost in full. The house seems to date from the first quarter of the second century. It does not seem probable that the house was part of a larger settlement. However, since not all outer limits could be reached, this cannot be proven. A wide parcel ditch leaves the settlement area in the direction of the nearby, larger settlement of Rijswijk-De Bult.

Hessing et al. 1990
issues

- unreliable find registration
  - focused on ceramics; features often ‘forgotten’

- no direct link to literature
  - literature listings often incomplete
  - digital availability limited
  - needs to be checked on ‘forgotten’ items

- base documentation poorly archived and often incomplete
  - much improved since 2006 (DANS archive)
• standardized classification schemes
  ▫ what are the diagnostic finds?
  ▫ reassessment of ‘complex types’

• reliability of classification
  ▫ what combinations of finds are ‘proof’ of a certain type of occupation?

• completeness of documentation
  ▫ what types of information are available?
  ▫ where can these be found?

• storage, retrieval and visualization tools
  ▫ integrated geodatabase
  ▫ visualization of uncertainty

Oštir et al. 2008
conclusions

• documentation practices are a real problem
  ▫ various degrees of completeness and reliability
  ▫ poorly archived, limited digital availability
  ▫ fragmented datasets

• current approaches to interpretation are inadequate
  ▫ implicit, intuitive approaches prevail
  ▫ little attention for uncertainty issues
  ▫ no standard approaches
  ▫ no cartographic flexibility

• a balance is needed
  ▫ assessment of availability of documentation
  ▫ easy referencing to base information
  ▫ standardized, transparent classification schemes
  ▫ straightforward uncertainty assessments
  ▫ but: no straightjacket!