



Medieval & Modern MS Studies in the Digital Age

Palaeography

Peter Stokes

dixit-mmsda@uni-koeln.de

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Introduction



Terminology

- Script: is ‘the model which the scribe has in mind’s eye when he writes,’
- Hand: is ‘what he actually puts down on the page’ (Parke 1969, xxvi)
- A script is an *abstract concept*
- A (scribal) hand is the *physical manifestation* of that concept



What is Palaeography?

- Study of 'old' writing
- Identification of scribal hands
- Dating and localisation of hands
- Often restricted to writing with ink
- Usually not inscriptions (epigraphy), papyrus (papyrology)



‘Integral’ Palaeography?

Argument that script doesn't exist in isolation:

- Palaeography must include all aspects of writing and book-production
- Must include not only writing with pen and ink but also inscriptions, etc.
- Debate about nature of manuscript-studies and its specialisations



What is Palaeography?

Some have take this further:

- Study should focus on the social element of script-history
- Therefore focus not on writing itself



What is Palaeography?

More precise terminology:

- Palaeography: the study of handwriting
- Codicology or archaeology of the book: the study of the book as physical artefact
- Manuscript studies: the field as a whole



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Nomenclature



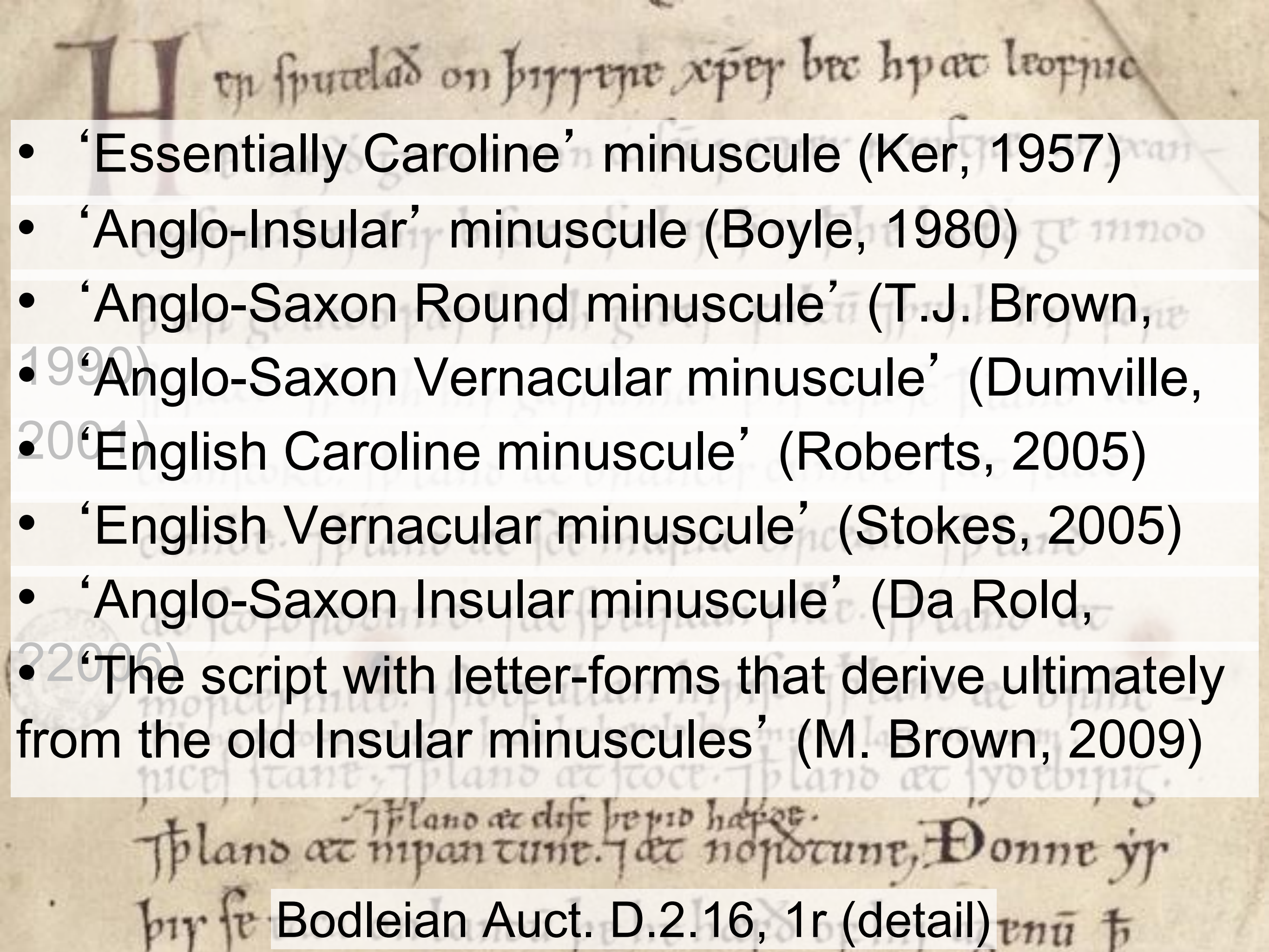
Nomenclature

‘In forensic handwriting research, experts have developed a personal and individual knowledge on handwriting. **This expertise is difficult to verbalize, and to explain to others.**

...

[T]here is no common language on shapes and styles of handwriting.’

Schomaker, ICDAR 2007 (*pace* Davis pp. 254–5)

- 
- ‘Essentially Caroline’ minuscule (Ker, 1957)
 - ‘Anglo-Insular’ minuscule (Boyle, 1980)
 - ‘Anglo-Saxon Round minuscule’ (T.J. Brown, 1990)
 - ‘Anglo-Saxon Vernacular minuscule’ (Dumville, 2004)
 - ‘English Caroline minuscule’ (Roberts, 2005)
 - ‘English Vernacular minuscule’ (Stokes, 2005)
 - ‘Anglo-Saxon Insular minuscule’ (Da Rold, 2006)
 - ‘The script with letter-forms that derive ultimately from the old Insular minuscules’ (M. Brown, 2009)

Bodleian Auct. D.2.16, 1r (detail)



Nomenclature

- How do we describe handwriting?
- What do we call different scripts?
- Who decides?

Comité international de paléographie latine has been discussing this — since 1954!

There is no easy answer



Nomenclature

- How do we search for a script?
- How do we cross-search resources?
- How can we produce a useable database of letterforms?
- How do we mark up script in XML?

The honest answer is that we don't know!



Nomenclature

I challenge you:

Go to any online manuscript catalogue and — with a single query, however complex — find all manuscripts with handwriting from the first third of the twelfth century.



Nomenclature

- Are other approaches possible?
 - What is an *i*? What is a stroke?
 - Can we express this in a formal language?
- Might sound unimportant, but is critical if we are to be clear and unambiguous

P.A. Stokes, 'Describing Handwriting' (<http://digital.eu/>)

D. Stutzmann, 'Alphabet, Ambiguïté et Actualité' (<http://ephepaleographie.wordpress.com>)



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‘Objectivity’, Evidence and Argument



Problems of Method

- How can we be objective?
- How can we communicate our arguments?
- How can we (constructively) debate issues?
- How can we avoid 'authorities'?

Lindsay, 'Beneventan Script' (1914)

'Dr Lowe ... shows us in detail each criterion for dating and localising ... with such a wealth of illustration and explanation and **such a mass of evidence that we can neither doubt it nor forget it.**'



**James, in Pfaff, 'M.R. James'
(1977 [1906])**

'I cannot teach the art of assigning dates to manuscripts: I am even inclined to think that it cannot be taught. ... For myself I have come to depend almost entirely upon **general impression** in forming an estimation of date.'



Problems of Method

‘The method applied hitherto in palaeographical handbooks has produced an **authoritarian discipline**, the pertinence of which depends on the **authority** of the author and the **faith** of the reader.’

Derolez (2003): *The Palaeography of Gothic Manuscript Books*, p. 9



Problems of Method

‘An obvious answer is: **by replacing qualitative data by quantitative ones** ... Indeed there is very much to be said in favour of a quantitative approach to a matter so difficult to treat adequately with other techniques.’

Derolez (2003), p. 9



A Solution?

‘A quantitative approach’ these days usually implies the use of computers:

‘Computational’ palaeography



‘Computational’ Palaeography

- Draws on image-processing and data mining
- Allows analysis of large body of material
- Should allow objective analysis and debate
- Should be reproducible and communicable

But, it almost never is in practice!



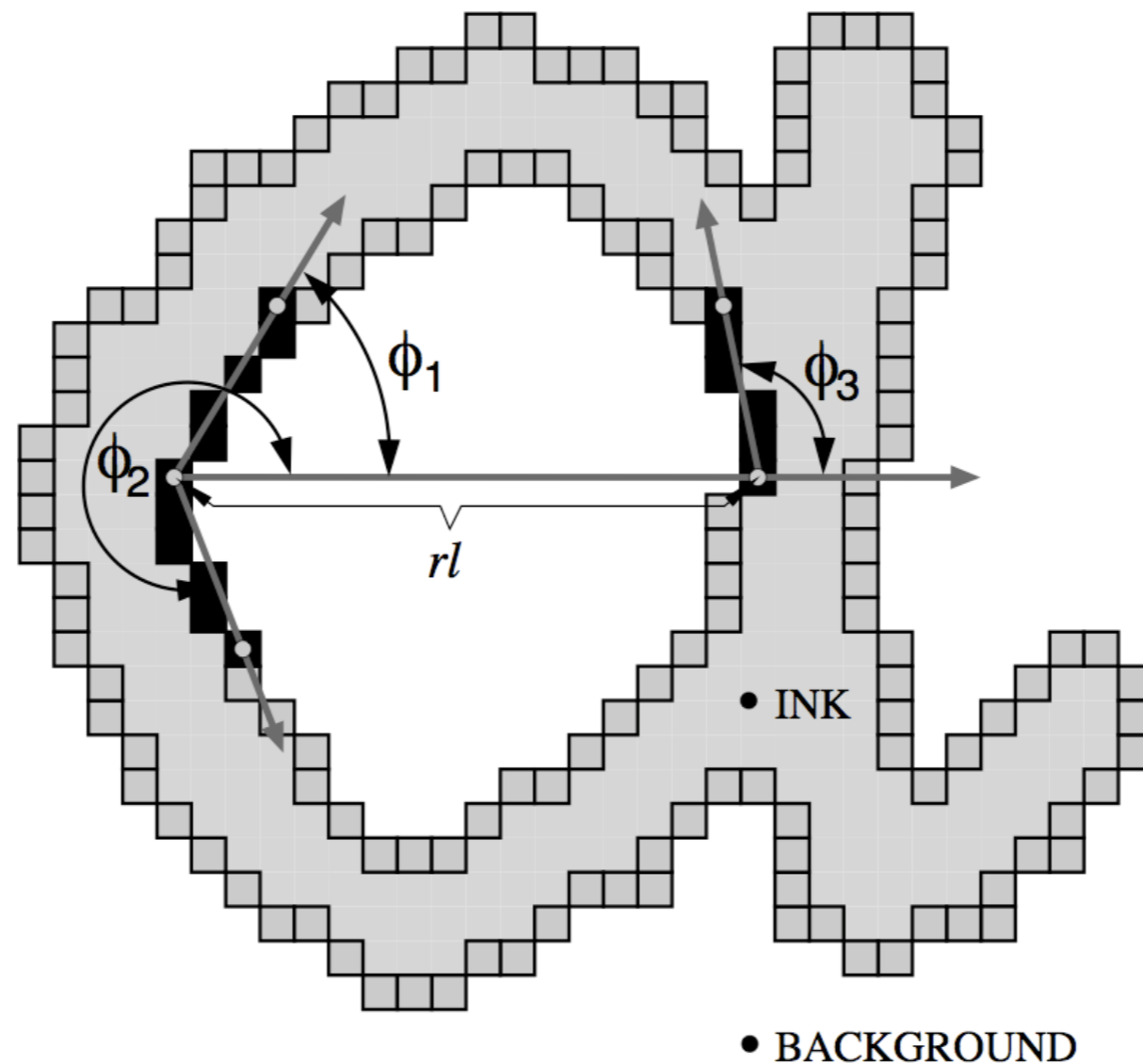
Digital Analysis

Automatically generate statistics from images:

- Many different ways of doing this
- No idea which way is best
- No idea what works with medieval writing
- No real way of assessing the results!



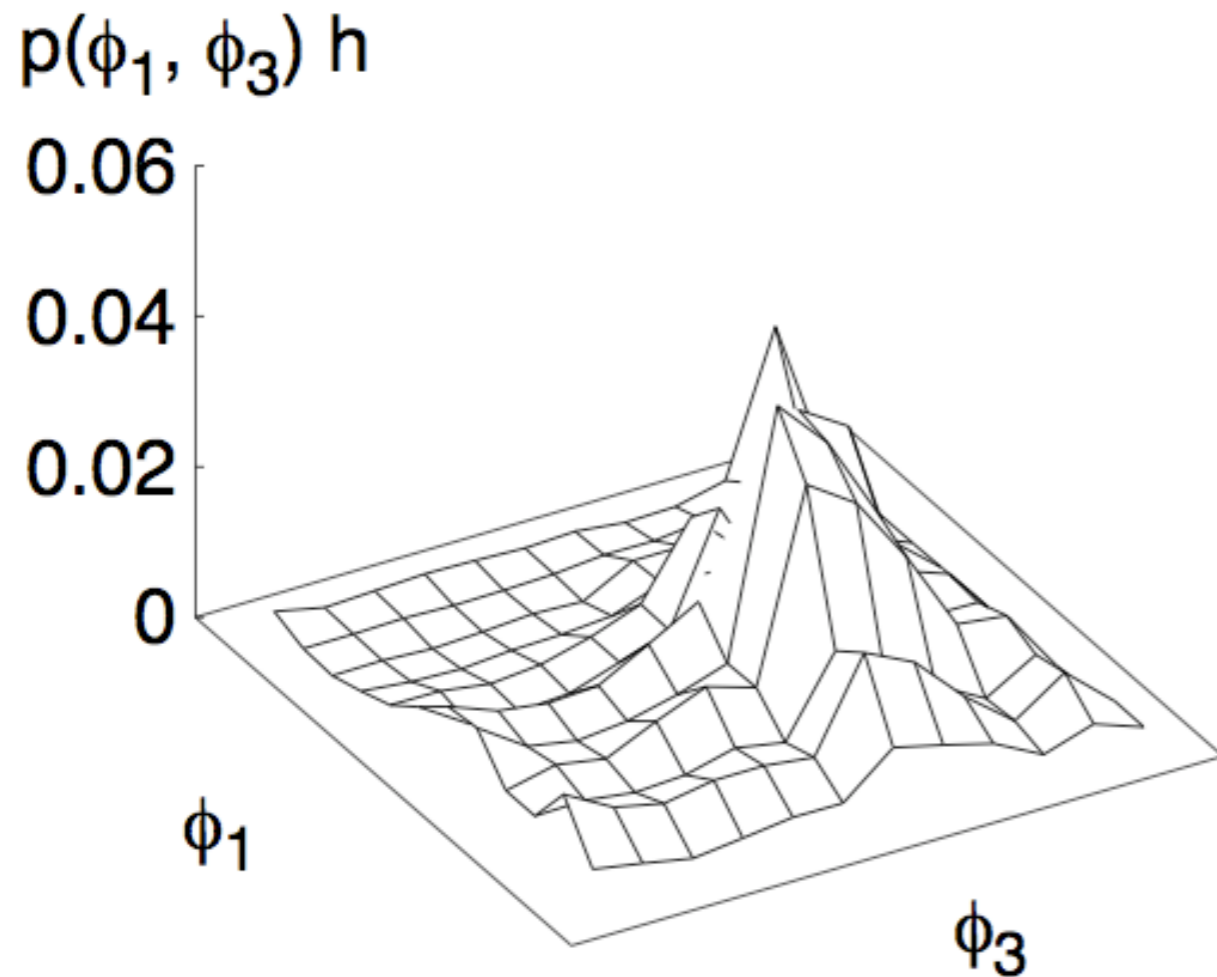
Digital Palaeography



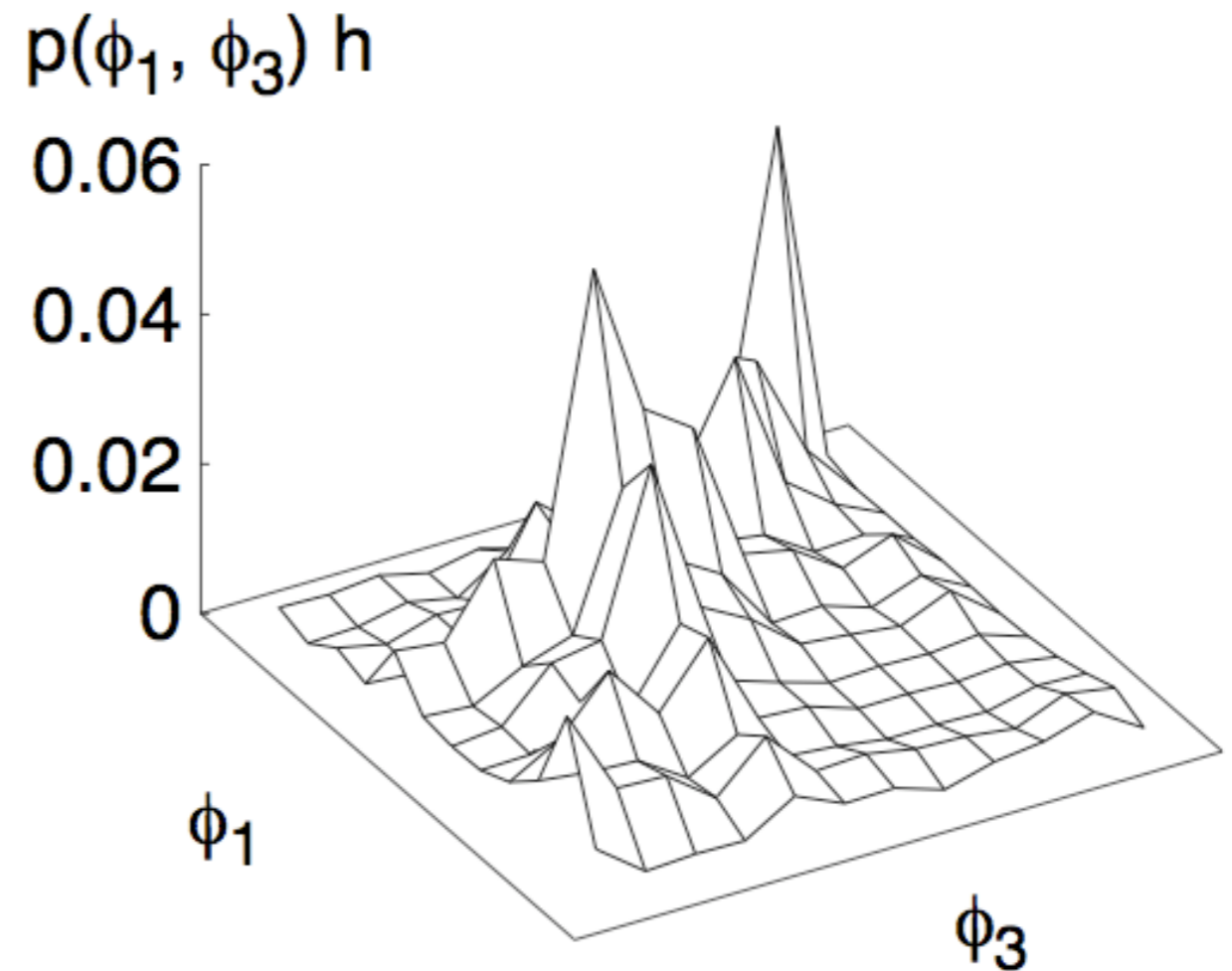


Digital Palaeography

writer 1 - sample 1



writer 2 - sample 1





Digital Palaeography

Question: What do all these numbers really tell us?

- That the samples were written by the same person?
- That the samples were written in the same scriptorium?
- That they were written in the same style?
- That they were digitised in the same way?
- That they have the same patterns of dirt on them?
- All of the above? None of the above?

How can we as scholars in the Humanities decide?

(Besides, there's more to palaeography than just identifying hands)



Digital Palaeography

‘Although, technically speaking, black-box systems may be very advanced they cannot answer important questions such as: “**Why** is the decision: *similar?*” or “**Why** does individual X appear at the top of the hit list?”’

Schomaker, ‘Advances in Writer Identification and Verification’ (2007), § 6

‘These methods are unlikely to replace, though they may supplement, the work of the document analyst, because, however powerful computers will (surely) become, it will **probably not be possible to cross-examine them.**’

Davis, ‘The Practice of Handwriting Identification’ (2007), 266 n. 27



What is Handwriting, Really?

- Traces of ink on a page?
- Areas of dark against a background of light?
- The movement of the pen on a page?
- A sequence of graphs which make up a scribal hand?
- A sequence of symbols drawn from an alphabet?
- The physical manifestation of a learned set of conventions?
- A cultural product for the purpose of verbal communication?

All of the above and much more!



Digital Palaeography

‘Avoid approaching the application of this technology as a matter of proving the truth of a hypothesis. ... Whereas text-mining is usually about prediction, accuracy, and ground truth, in literary study, I think it is more about surprise, suggestion, and negative capability.’

John Unsworth, ‘How Not to Read a Million Books’



Digital Palaeography

- How can we search for letterforms?
 - No common terminology, but visual alone insufficient
- How do we avoid the illusion of objectivity?
 - Computers are always designed, built, and used by **people**. Therefore **they are not objective** in any meaningful way.
- How do we avoid the temptation of ‘truth’?
 - Computers are tools, not oracles
 - Can convey **appearance of certainty**
- To what extent should statistics be involved?
 - Are they helpful? In what way? What are the limitations?
 - What about computer-assisted searching?
 - Does it matter if ‘old guard’ are alienated and the discipline divides?