

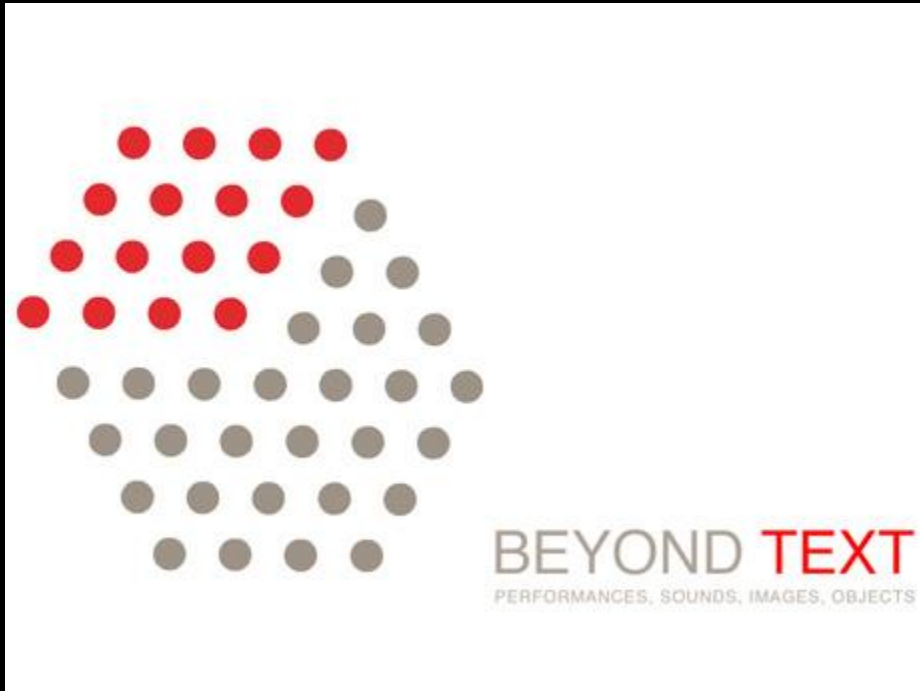
ATS1208

# Digital Humanities: Concepts, tools and debates

Week 4: Beyond text



# Outline



- Text as digital data
- Hypertext
- Non-linear discourses
- Evidence beyond text

# Representing text in binary code

- All text on a computer (device) is binary code
- ASCII uses 8 bits to represent 64 characters
- Unicode uses bigger blocks
- Over 137,000 code points defined so far
  - Coding scheme allows 1,114,112



# What can we do with digital text?

- We all use search functions:
  - Word processor
  - Web pages
- More powerful techniques:
  - Regular expression searching
  - Concordancing
  - Counting – finding patterns in large bodies of text

# Hypertext – first mention in 1965

can adapt very far to the interests or needs of a particular reader or student.

However, with the computer-driven display and mass memory, it has become possible to create a new, readable medium, for education and enjoyment, that will let the reader find his level, suit his taste, and find the parts that take on special meaning for him, as instruction or entertainment.

Let me introduce the word "hypertext"\*\*\*\*\* to mean a body of written or pictorial material interconnected in such a complex way that it could not conveniently be presented or represented on paper. It may contain summaries, or maps of its contents and their interrelations; it may contain annotations, additions and footnotes from scholars who have examined it. Let me suggest that such an object and system, properly designed and administered, could have great potential for education, increasing the student's range of choices, his sense of freedom, his motivation, and his intellectual grasp\*\*\*\*\*. Such a system could grow indefinitely, gradually including more and more of the world's written knowledge. However, its internal file structure would have to be built to accept growth, change and complex informational arrangements. The ELF is such a file structure.

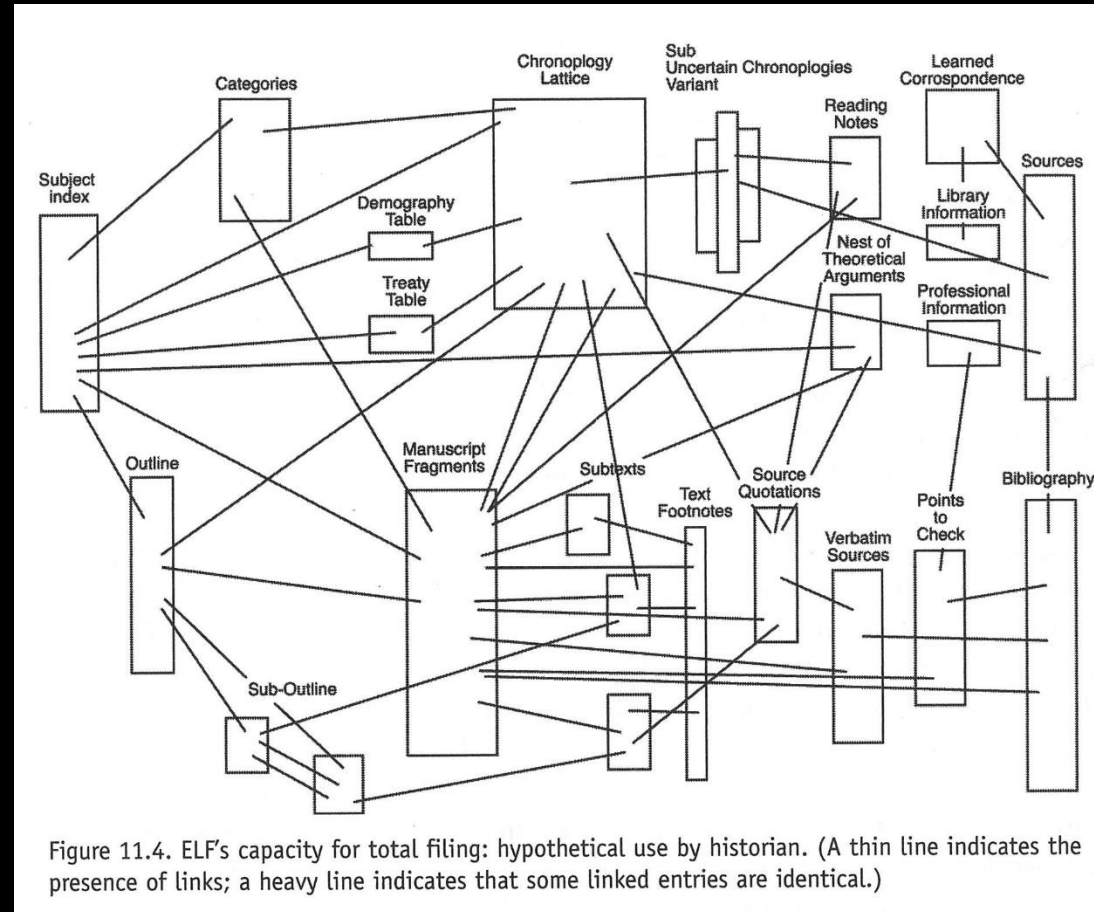
Films, sound recordings, and video recordings are also linear strings, bas-

Nelson, Theodor H. 1965. Complex information processing: a file structure for the complex, the changing and the indeterminate. *Proceedings of the 1965 20th national conference*, 84–100. ACM.

# Hypertext beginnings

- Hypertext initially on single computers
- Key questions already relevant
- Landow (amongst others) points to them
- How do we best utilise these possibilities?
- What sort of context is needed to relate pieces of information?

# Linking materials



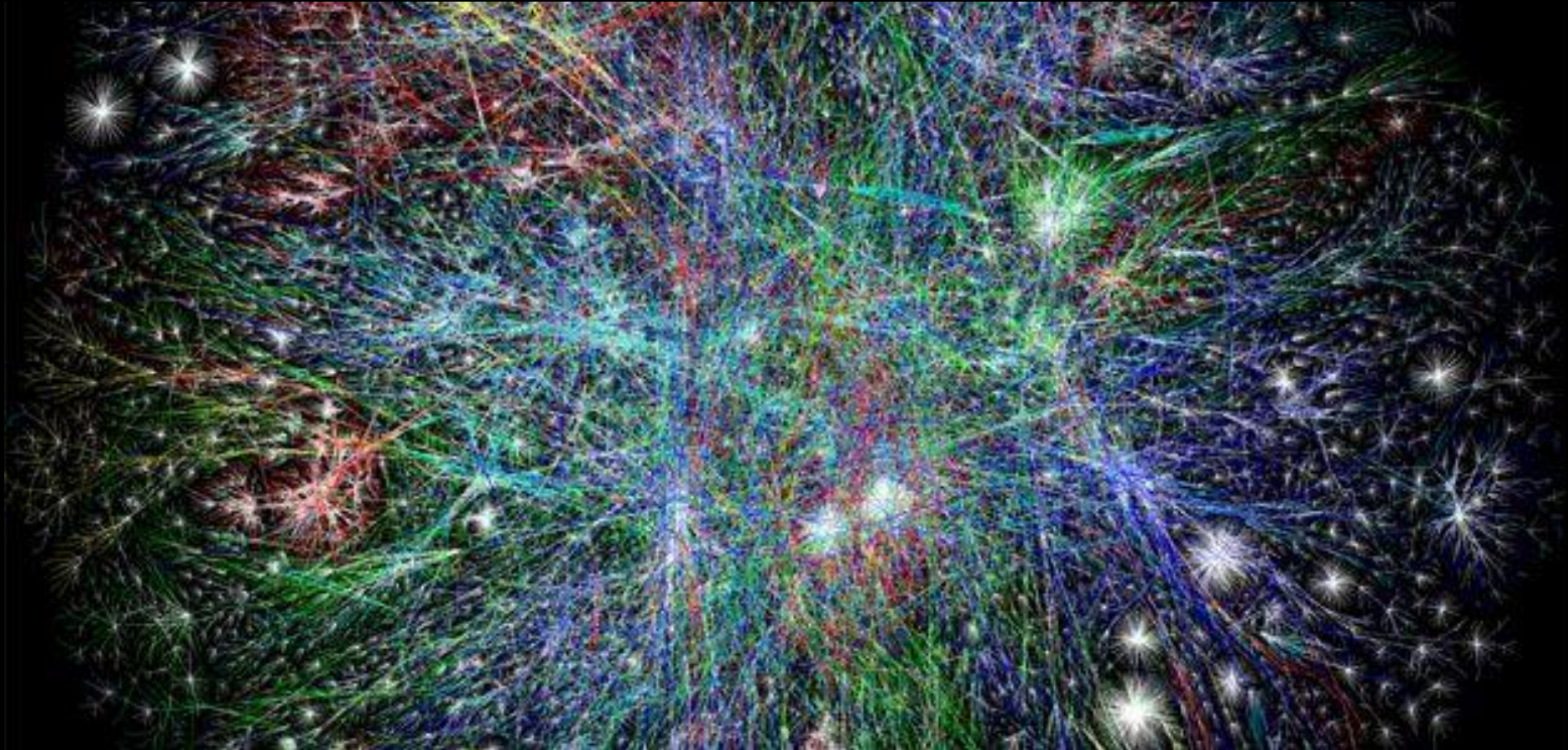
# Hypertext goes gangbusters

- Networking and the World Wide Web change everything
- No longer limited to linking to local material
- Link can be to anything accessible on the network



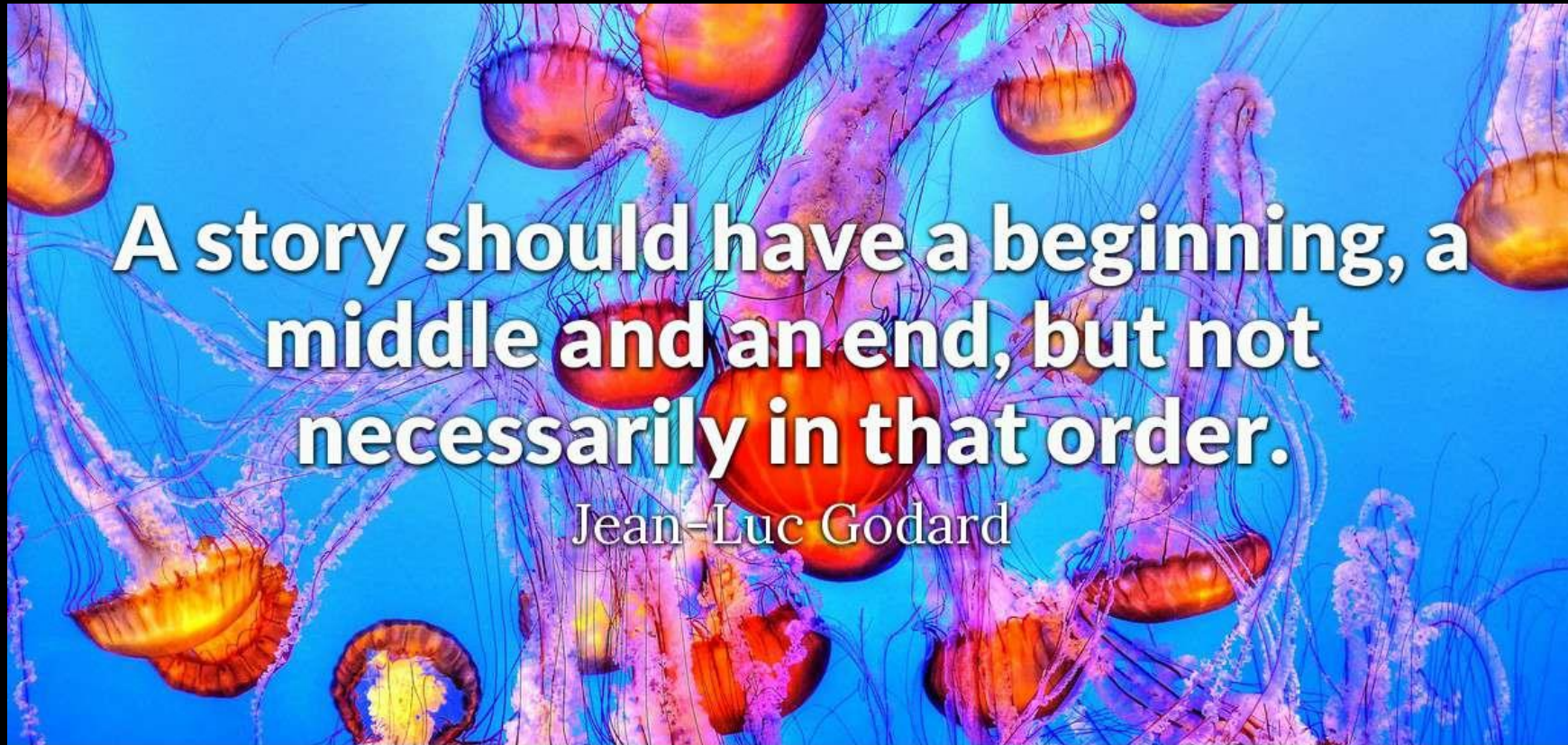


‘Any Two Pages on the Web Are Connected By  
19 Clicks or Less’





# Linear narrative



# (Non-)linear narrative

- Can you think of examples of non-linear narrative:
  - Films?
  - Fiction?
  - Other genres?

# Linearity and medium

- Film and writing allow manipulation of narrative line
- But this means imposing one alternative order
- Consumer has no control
- Moving around is awkward:
  - Think how annoying endnotes are
- Hypertext allows real non-linearity

# Hypertext fiction

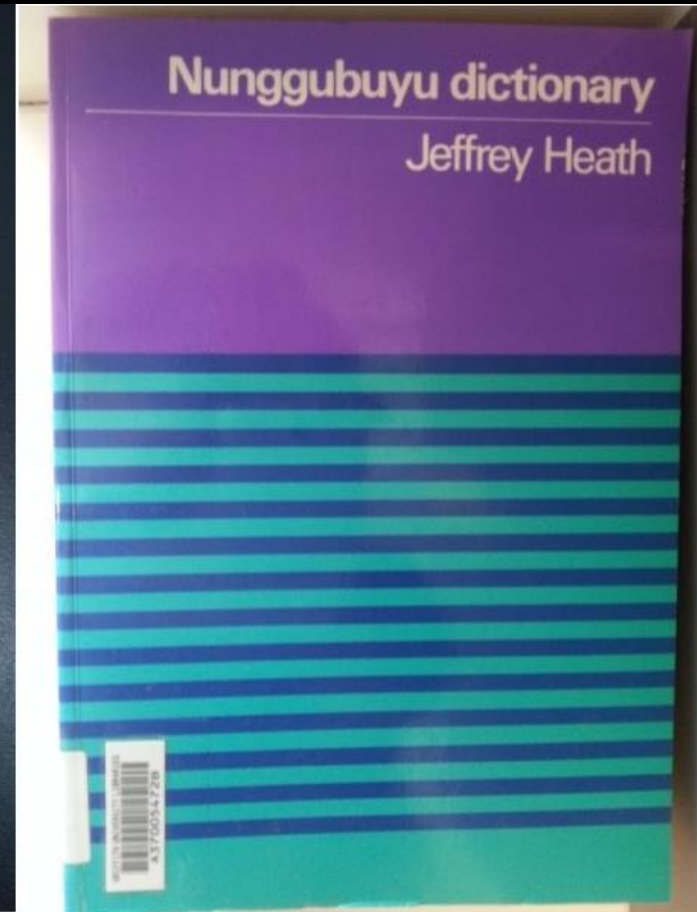
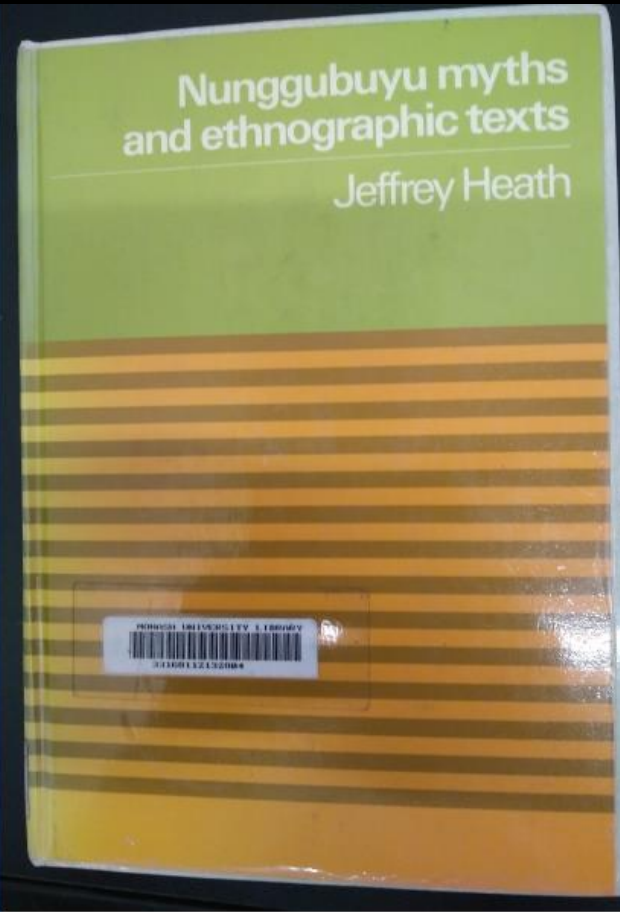
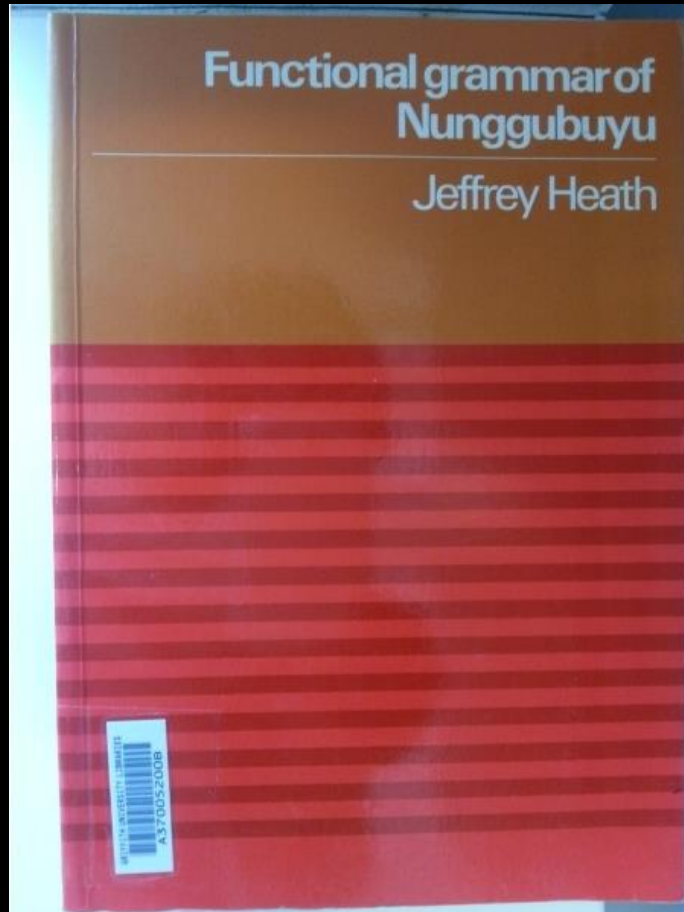
- *The Garden of Forking Paths* (1941) by Jorge Luis Borges is often cited as a starting point for non-linear narrative
  - But there are earlier examples e.g. *The life and opinions of Tristram Shandy* (1759-67)
- Hypertext allows a new context for non-linearity in literature and reader interaction.

“The reader typically chooses links to move from one node of text to the next, and in this fashion arranges a story from a deeper pool of potential stories.”  
(Wikipedia “Hypertext fiction”)
- Example: [\*Luminous Airplanes\*](#) by Paul La Farge

# Hypertext and scholarship

- Lots of interesting and imaginative presentations
  - You have looked at some already
- But these don't necessarily count for much in academic culture
  - It took c400 years to develop the current culture
- Online journal = “we publish pdfs of every article”
- More radical work exploits affordances of hypertext in a way that precludes (replaces) print
  - McCarty's *Onomasticon*
  - New approaches to language description

# Heath and Nunngubuyu



# Heath and Nunggubuyu

- Examples are all from texts:
  - Supporting analysis in grammar
  - Illustrating entries in dictionary
  - But all examples are references
- User has to manipulate three volumes
- Hypertext as an alternative
  - Work in progress at <http://users.monash.edu.au/~smusgrav/Nunggubuyu/>



# Examples

This particle can combine with other particles. We mentioned /mari wurugu/ and /wurugu n<sup>g</sup>a/ in the previous section (it is likely that /n<sup>g</sup>a wurugu/ also occurs). We can cite /n<sup>g</sup>ijan<sup>g</sup> wurugu/ (cf. next section) 'again later' or 'more later' 21.9.1, 21.10.1, 33.1.2, 43.4.3 (with preceding /mari/), 43.5.2/4, 52.5.2/3, 163.19.2/3, showing this order to be consistent. There is also an ex. of /wurugu yin<sup>g</sup>ga/ (cf. §12.7) 'later' (with anticipation nuance) 71.2.4.

43.4 wu=wayama-n<sup>g</sup>i-ya-j mari dhan<sup>g</sup>gid! adaba ∅=lhi-n<sup>y</sup>,  
 as it proceeded<sub>c</sub> and chop then it chopped it<sub>p</sub>  
 2 ana-ran<sup>g</sup>ag, ∅=madhari-n<sup>y</sup> ∅=madhari-n<sup>y</sup> ∅=madhari-n<sup>y</sup>, yin<sup>g</sup>ga<sub>p</sub>  
 wood it chopped it<sub>p</sub> nearly  
 wu-ragar=bayama-n<sup>g</sup>i mari n<sup>g</sup>ijan<sup>g</sup> wurugu dulmurg!,  
 it went along forcefully<sub>c</sub> and more later run  
 4 wini=wilbili-n<sup>y</sup> arwagarwar-ala-aj,  
 they (MDu) flew<sub>p</sub> around on top

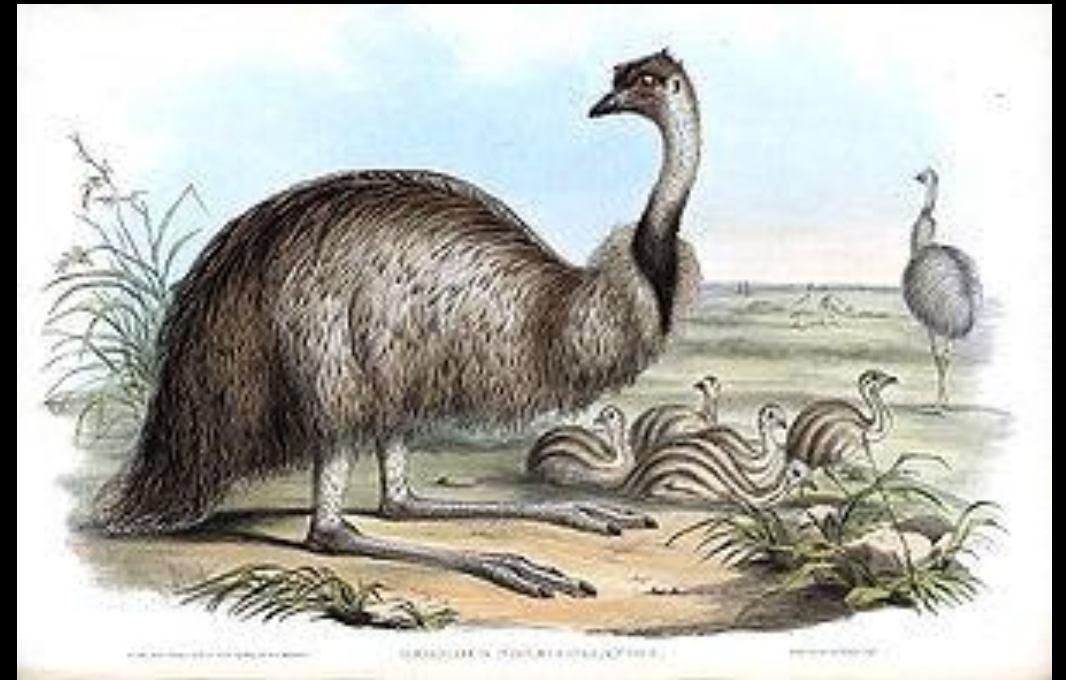
It (devil) came along and began to chop down the tree. It was chopping and chopping. It (tree) was about to crash down, but then they (two) flew away. (They flew) around up high.

dhan<sup>g</sup>gid! Rf to chop. 16.14.3, 43.4.1, 43.6.4.  
 Associated with verb =lha- 'to chop'.

# Non-text content

- Reproducing pictures (maps, diagrams) was expensive
- Publication by subscription was a common solution:

John Gould was an immensely successful publisher. Over the course of his lifetime he produced 21 titles, 15 of which were folio sets consisting of 49 volumes containing 2999 unique plates. In 1870, 1062 individuals, institutions and libraries possessed one or more of his titles and, at one point, Gould's subscription list was valued at £143,000.  
(<https://australianmuseum.net.au/gould-the-publisher>)



# Digital dissemination

- “Yet the importance of these images is distressingly undervalued by those who do not rely on them as evidence, and the characteristics that make them useful for research are too seldom recognized. Digital imagery offers us the opportunity to make available for the first time large numbers of high quality color images which would be prohibitively expensive to reproduce in hardcopy.”  
(Rhyne, Charles S. 1997. Images as Evidence in Art History and Related Disciplines. *Museums and the Web 97: Selected Papers*. Pittsburgh: Archives & Museum Informatics, pp.347-361)

A picture is worth  
a thousand words



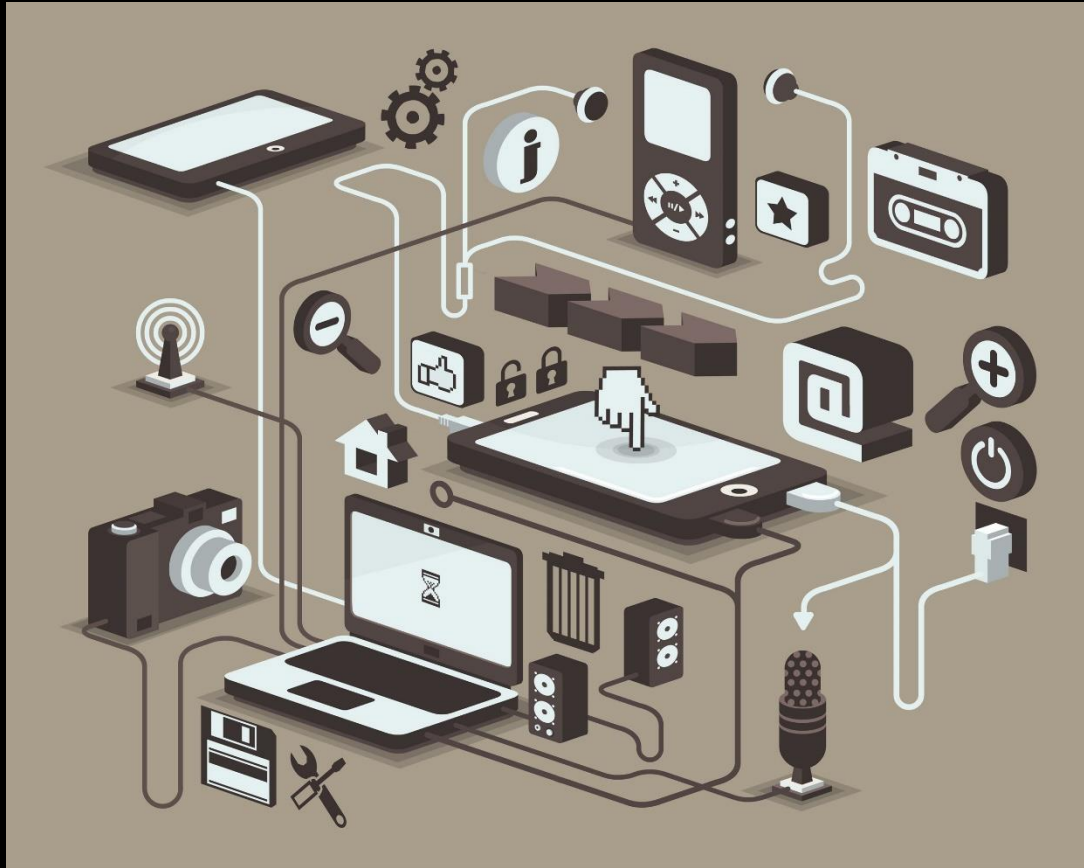


# A mirror?

- ... art historians and curators generally ask different questions than social or cultural historians do. Art historians ... assume that "photographs engage viewers directly and thus should be mediated by only a minimum of explanatory text". For them, "explaining who is in the photograph and what those subjects are doing misses the point entirely: a photograph is a mirror of of the creativity and context of the photographer". The historian ... can construct useful new narratives, however, "by moving back and forth between what is in the photograph, who took it, and why".

Sandweiss, M. A. 2007. Image and Artifact: The Photograph as Evidence in the Digital Age. *Journal of American History* 94(1). 193–202. doi:10.2307/25094789. (quoting Colleen McDannell)

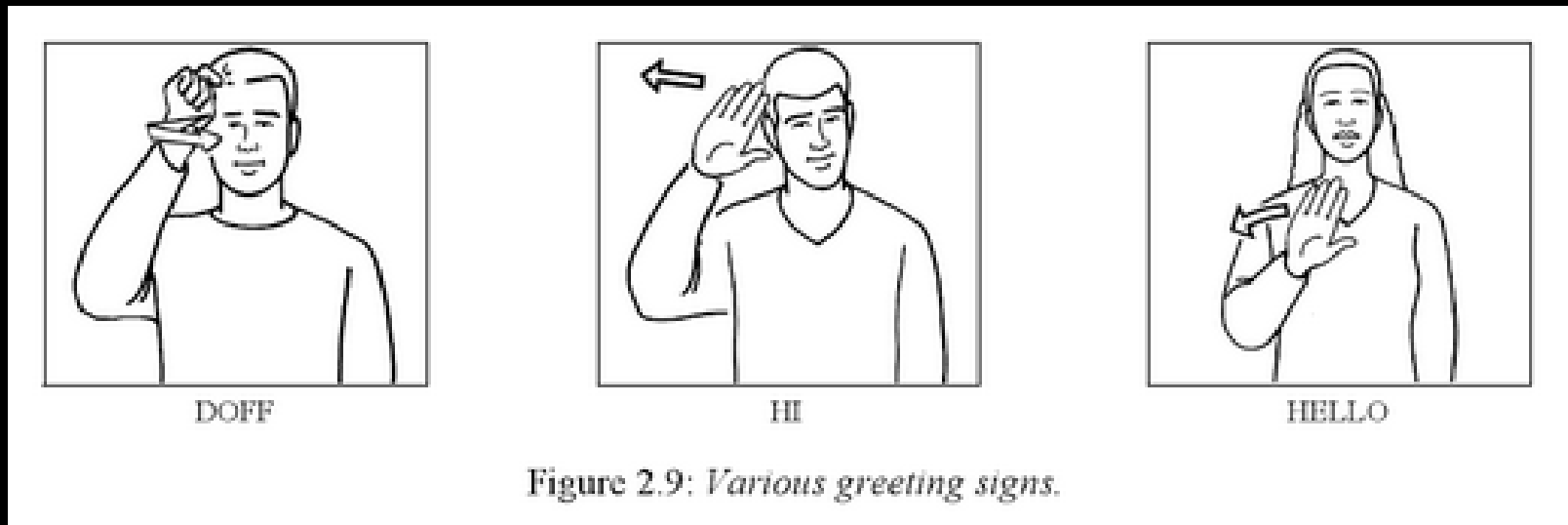
## Other media



- Discussion here has been about images
- Similar considerations apply to other types of evidence:
  - Video
  - Sound
- Other possibilities?

# Multimedia example

- Sign language
- From book on Auslan published in 1987:



- Compare: <http://www.auslan.org.au/dictionary/words/hello-1.html>

# Continuity

- Sandweiss/McDannell's concerns reflect Landow's thinking 20 years before
- Initial exploration of hypermedia brought up questions of contextualization
- Assessing value of evidence is key aspect of humanities scholarship
- And this still applies to new sources of evidence