

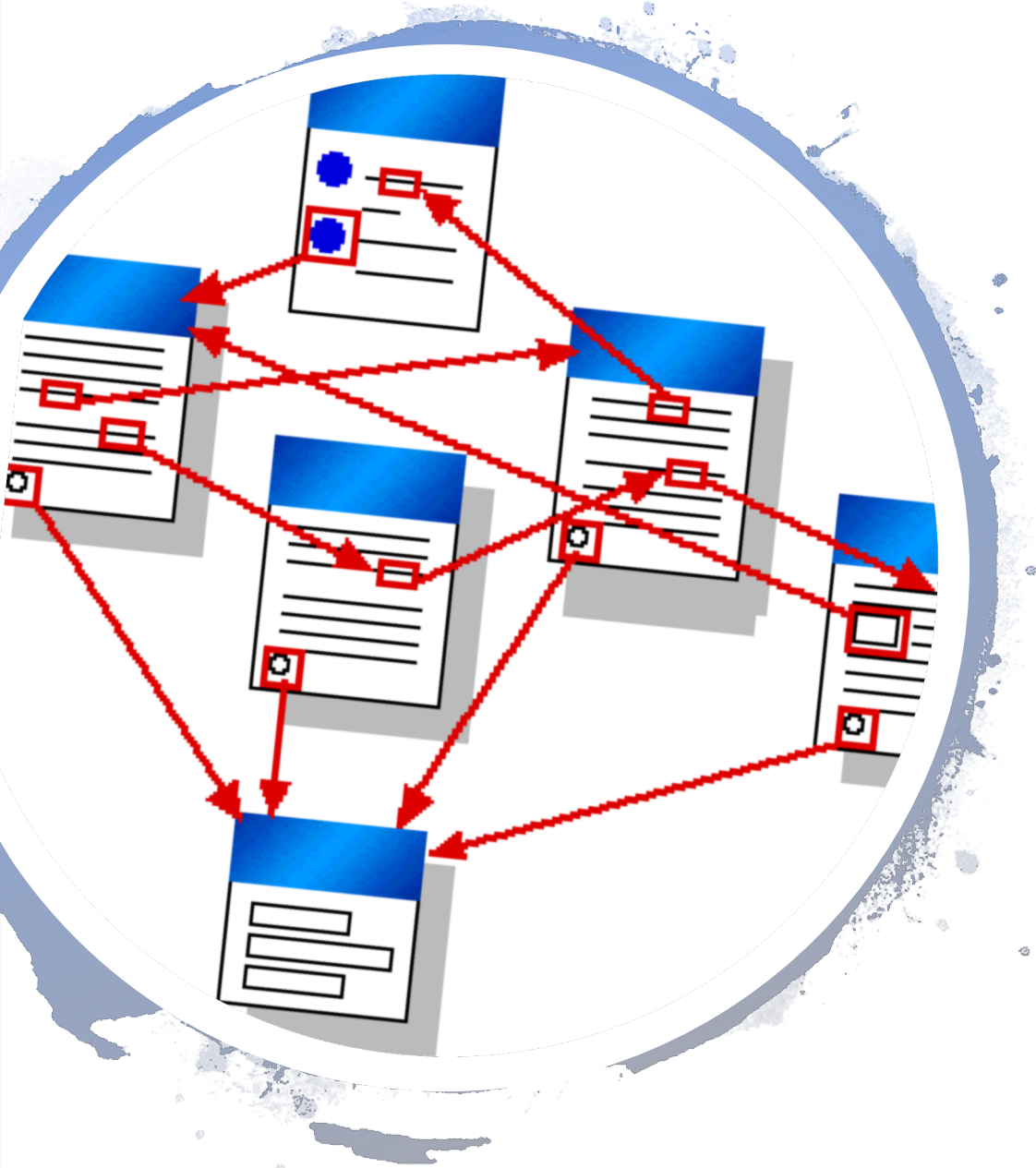
# Data Linking for Humanities Research & Research Data Management

Ralf Möller, Universität zu Lübeck

Stefan Thiemann, Universität Hamburg

Cluster of Excellence Understanding Written Artefacts  
Research Unit Data Linking





# Links and Anchor Text

- Exploit link structure to provide services to humanities researchers
- Avoid ever more tools



# Linking has a Long Tradition

Margin for further information

Links to Bible texts

*Cantl. 1, 5.*

*Isai. 5, 7.*

*Isai. 5, 4.*

*Habac. 3, 17.*

Critical remarks on text

a) sanctos plures 6.    b) memed 1.    c) fehlt 1. 2. 3; von anderer Hand nachgetragen 2.    d) secu 3.    e) iussi 1. 3.    f) rogata 1. 3.  
g) confinium 6.    h) labrucas 3.    i) mentientur 1. 3.    k) faciunt 1. 3.  
l) frange 3.    m) subfodire 1. 3.    n) domom 3.    o) defensiones 1. 3;  
defensiones et 2.    p) fehlt 1. 3. 6.    q) adnuntio 1. 3. 6.    r) universi 1.  
s) fehlt 1. 3.    t) fehlt 6.    u) inquit 3; so auch im folgenden.    v) in 1. 3.    w) alinum 3.

Remarks on certain issues

1) Nach älterer, von der Vulgata (hier: et arva non afferent cibum) abweichender Übersetzung; vgl. Sabatier, *Bibliorum vers. ant.* 2, 969. → 2) In actibus — perditione servarem nach Julianus Pomerius II c. 3, Migne 59, 445.

hac vita tunditur, non est tamen relinquenda, set regenda'. Cuius rei in exemplo priores patres habemus Clementem et Cornelium et ceteros conplures<sup>a</sup> in urbe Roma, Cyprianum in Carthagine, Athanasium in Alexandria, qui sub paganis imperatoribus  
5 navem Christi immo carissimam sponsam eius aecclesiam scilicet docendo defendendo laborando et patiando usque ad sanguinis effusionem gubernabant. Possum enim de memet<sup>b</sup> ipso pro certo iuxta vocem cantici canticorum dicere: 'Filii matris mee pugnauerunt contra me; posuerunt [me]<sup>c</sup> custodem in vineis,  
10 vineam meam non custodivi'. Vineam enim secundum<sup>d</sup> Naum prophetam domini Sabaoth domus Israhel est; nunc videlicet ecclesia catholica esse comprobatur. Cuius synodum congregandam et hortandam iussu<sup>e</sup> pontificis Romani et rogatu<sup>f</sup> principum Francorum et Gallorum sub spe restaurande legis Christi  
15 suscepi. Circumfodi, cofinum<sup>g</sup> stercoris adportavi, set non custodivi. Cum expectarem, ut faceret uvas, fecit autem labruscas<sup>h</sup>; et iuxta alium prophetam: 'Mentietur<sup>i</sup> opus olive et campi non facient<sup>k</sup> escas'<sup>1</sup>. Sed, pro dolor, officium laboris mei rerum conlatione simillimum esse videtur cani latranti et  
20 videnti fures et latrones frangere<sup>l</sup> et subfodere<sup>m</sup> et vastare domum<sup>n</sup> domini sui; et quia defensionis<sup>o</sup> auxiliares non habeat, submurmurans ingemescat et lugeat.

Nunc autem, quod mihi in tali periculo posito iustum et cautum esse videtur, salubre consilium vestrum querens et scire  
25 desiderans insinuo libertatem predicandi; dico, ut in actibus<sup>2</sup> apostolorum Paulus apostolus sacerdotibus intimavit dicens: 'Contestor vos hodierna die<sup>p</sup>, quia mundus sum ab omnium sanguine. Non enim subterfugi, quominus adnuntiarem<sup>q</sup> vobis omne consilium Dei. Adtendite vobis et universo<sup>r</sup> gregi, in quo  
30 posuit<sup>s</sup> vos spiritus sanctus episcopos<sup>t</sup> regere ecclesiam Dei, quam adquisivit sibi sanguine suo'. Regnum, inquit<sup>u</sup>, Dei inter<sup>v</sup> vos ambulans predicavi, ut me alienum<sup>w</sup> ab omnium perditione servarem. Nam apostolus episcopum, propheta speculatorem, salvator mundi pastorem aecclesiae sacerdotem ap-



3<sup>rd</sup> person

Tension

Small community  
family  
loyalty

honour

property/  
ownership  
inheritance  
land

A = Stubborn, self-confident

She was almost through with her figures when she heard a cart drive up to the gate, and looking out of the window she saw her two older brothers. They had seemed to avoid her ever since Carl Laramie's arrival, four weeks ago that day, and she hurried to the door to welcome them. She saw at once that they had come with some very definite purpose. They followed her stiffly into the sitting-room. Oscar sat down, but Lou walked over to the window and remained standing, his hands behind him.

"You are by yourself?" he asked, looking toward the doorway into the parlor.

"Yes. Carl and Emil went up to the Catholic fair."

For a few moments neither of the men spoke.

Then Lou came out sharply. "How soon does he intend to go away from here?"

"I don't know, Lou. Not for some time, I hope." Alexandra spoke in an even, quiet tone that often exasperated her brothers. They felt that she was trying to be superior with them.

Oscar spoke up gruffly. "We thought we ought to tell you that people have begun to talk," he said meaningly.

Alexandra looked at him. "What about?"

Oscar met her eyes blankly. "About you, keeping him here so long. It looks like you're hanging on to a woman this way. People think you're getting taken in."

Alexandra shut her account-book firmly. "Boys," she said seriously, "don't let's go on with this. We won't come out anywhere. I can't take advice on such a matter. I know you mean well, but you must not feel responsible for me in things of this sort. If we go on with this talk it will only make hard feeling."

Lou whipped about from the window. "You ought to think a little about your family. You're making us all ridiculous."

"How am I?"

"People are beginning to say you want to marry the fellow."

"Well, and what is ridiculous about that?"

Lou and Oscar exchanged scornful looks.

"Alexandra! Can't you see he's just a tramp and he's after your money? He wants to be taken care of, he does!"

"Well, suppose I want to take care of him? Whose business is it but my own?"

"Don't you know he'd get hold of your property?"

"He'd get hold of what I wished to give him, certainly."

Oscar sat up suddenly and Lou clutched at his beasty hair.

"Give him!" Lou shouted. "Our property, our homestead?"

"I don't know about the homestead," said Alexandra quietly. "I know you and Oscar have always expected that it would be left to your children, and I'm not sure but what you're right. But I'll do exactly as I please with the rest of my land, boys."

"The rest of your land!" cried Lou, growing more excited every minute. "Didn't all the land come out of the homestead? It was bought with money borrowed on the homestead, and Oscar and me worked ourselves to the bone paying interest on it."

Brothers = awkward determined men vs. women

superior attitude

men/women's rights

Brothers united

brain vs. brawn

the absent man, Carl

money

she's independent - they're influenced by community to justify herself.

for, hasn't it? The farms and all that comes out of them belongs to us as a family."

Alexandra waved her hand impatiently. "Come now, Lou. Stick to the facts. You are talking nonsense. Go to the county clerk and ask him who owns my land, and whether my titles are good."

Lou turned to his brother. "This is what comes of letting a woman muddle in business," he said bitterly. "We ought to have taken things in our own hands years ago. But she liked to run things, and we humored her. We thought you had good sense, Alexandra. We never thought you'd do anything foolish."

Alexandra rapped impatiently on her desk with her knuckles. "Listen Lou. Don't talk wild. You say you ought to have taken things into your own hands years ago. I suppose you mean before you left home. But how could you take hold of what wasn't there? I've got most of what I have now since we divided the property; I've built it up myself, and it has nothing to do with you."

Oscar spoke up solemnly. "The property of a family really belongs to the men of the family, no matter about the title. If anything goes wrong, it's the men that are held responsible."

"Yes, of course," Lou broke in. "Everybody knows that. Oscar and me have always been easy-going and we've never made any fuss. We were willing you should hold the land and have the good of it, but you got no right to part with any of it. We worked in the fields to pay for the first land you bought, and whatever's come out of it has got to be kept in the family."

Oscar reinforced his brother, his mind fixed on the one point he could see. "The property of a family belongs to the men of the family, because they are held responsible, and because they do the work."

Alexandra looked from one to the other, her eyes full of indignation. She had been impatient before; but now she was beginning to feel angry. "And what about my work?" she asked in an unsteady voice.

Lou looked at the carpet. "Oh, now, Alexandra, you always took it pretty easy! Of course we wanted you to. You liked to manage round, and we always humored you. We realize you were a great deal of help to us. There's no woman anywhere around that knows as much about business as you do, and we've always been proud of that, and thought you were pretty smart. But, of course, the real work always fell on us. Good advice is all right, but it don't get the weeds out of the corn."

"Maybe not, but it sometimes puts in the crop, and it sometimes keeps the fields for corn to grow in," said Alexandra dryly. "Why, Lou, I can remember when you and Oscar wanted to sell this homestead and all the improvements to old preacher Ericson for two thousand dollars. If I'd consented, you'd have gone down to the river and scraped along on poor farms for the rest of your lives."

A. has done most to build up the business

Willa Cather, *O Pioneers!* (1913)

Adventure/hardship new frontiers

Turn over/Voir au dos/Véase al dorso

Sounds like a call - a rallying cry before a march.

bitter

responsibility

A = angry

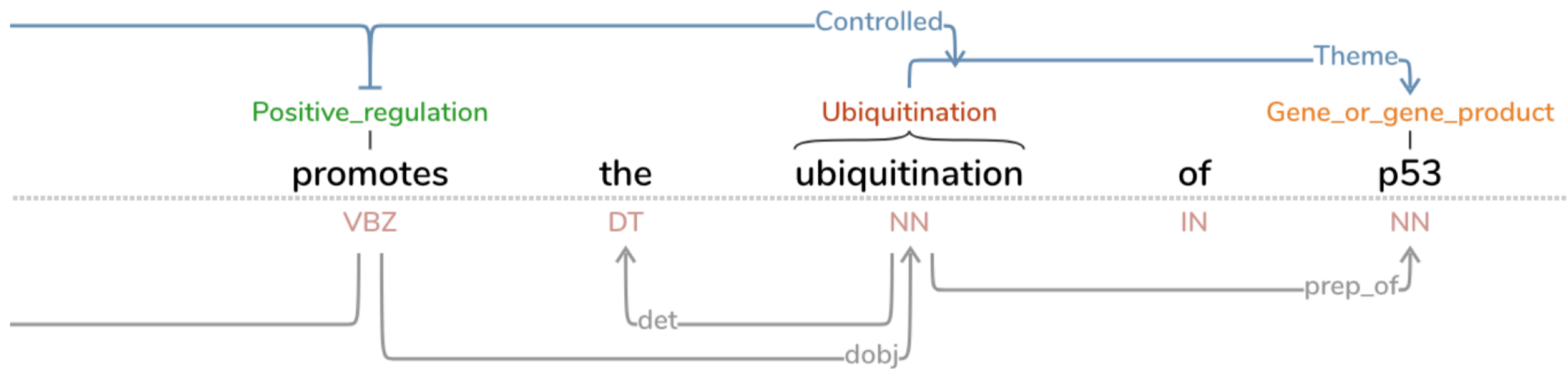
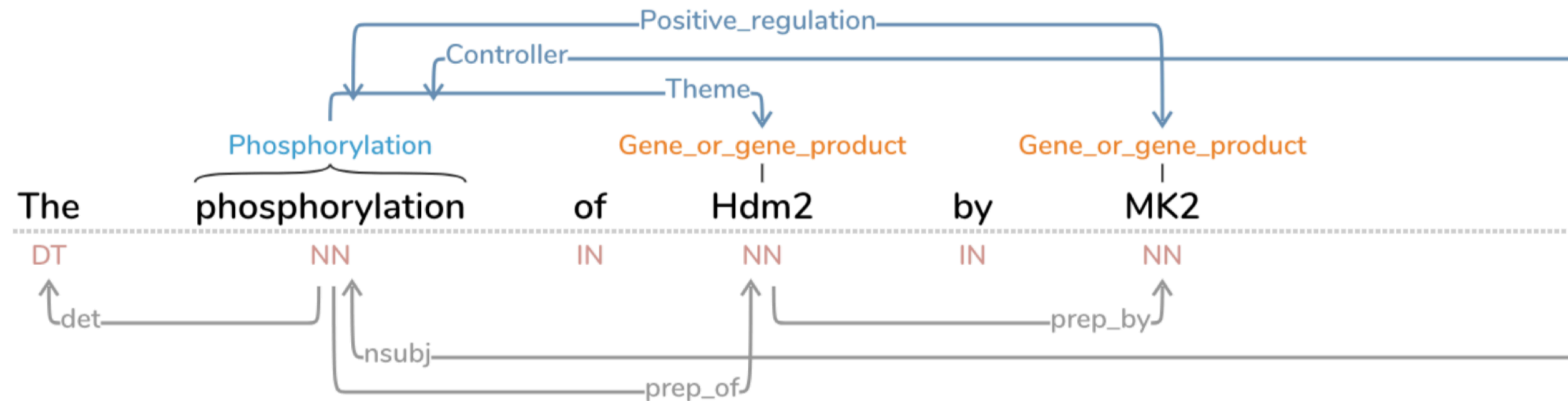
more understanding

patronizing brothers

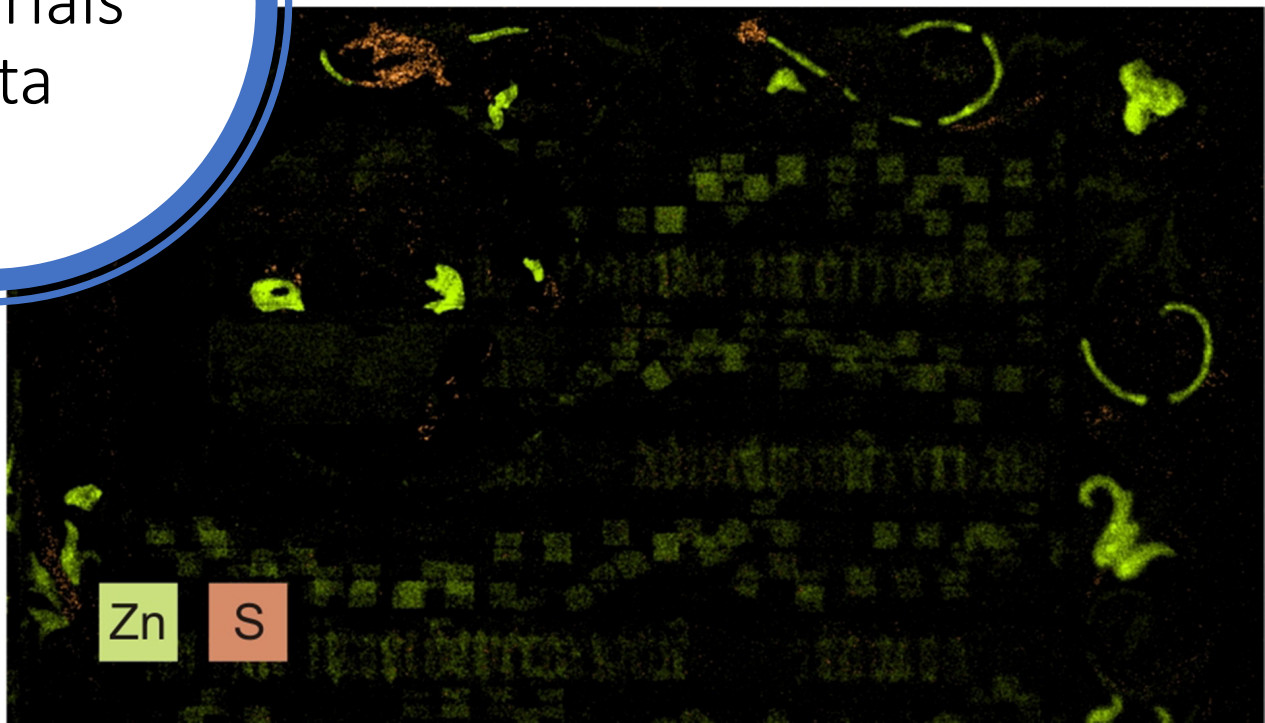
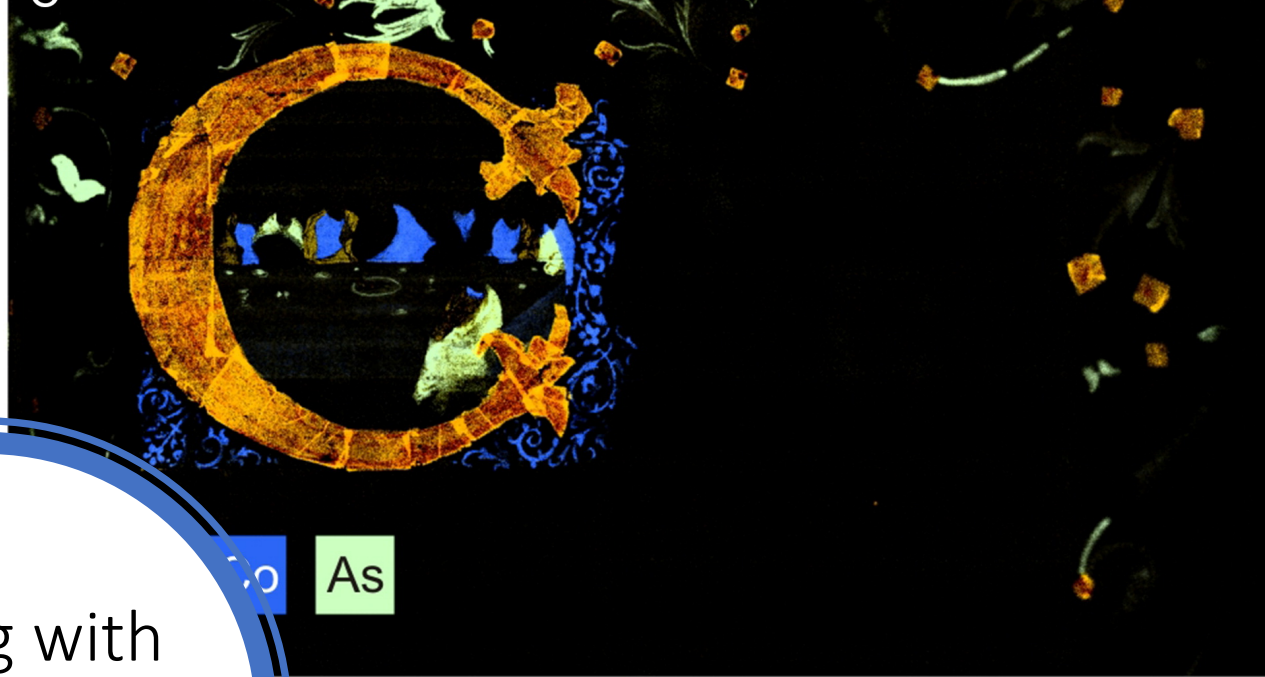
TASK 2: RE-READING AND ANNOTATING [10-30 MINUTES]

PART ONE



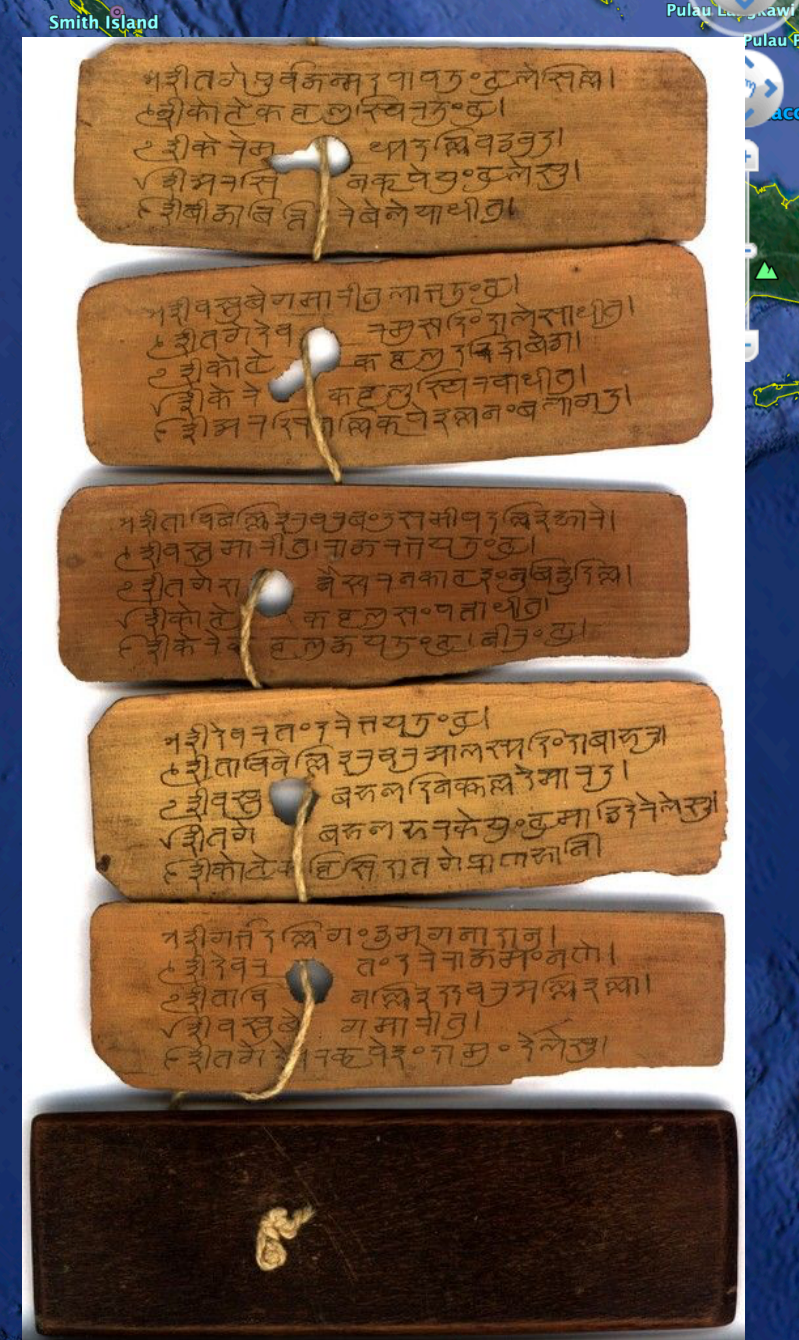




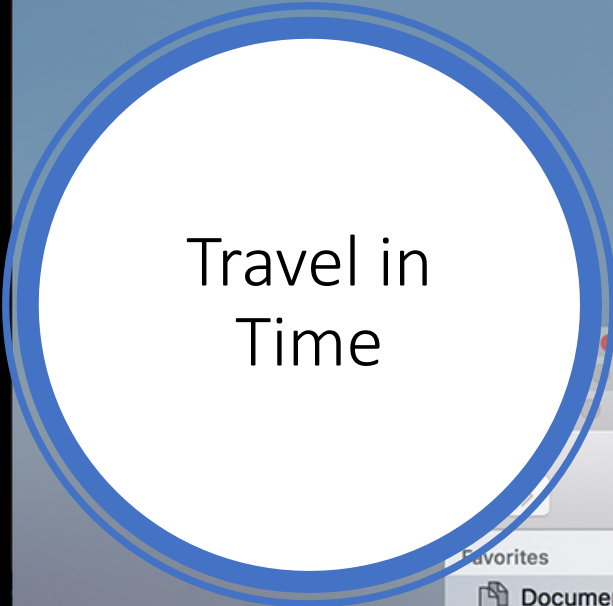


Linking with  
Materials  
Data

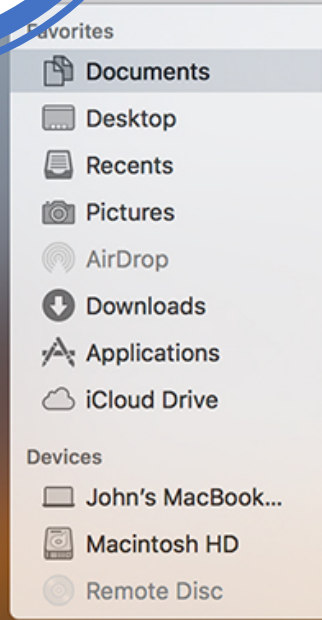








# Travel in Time



Cancel

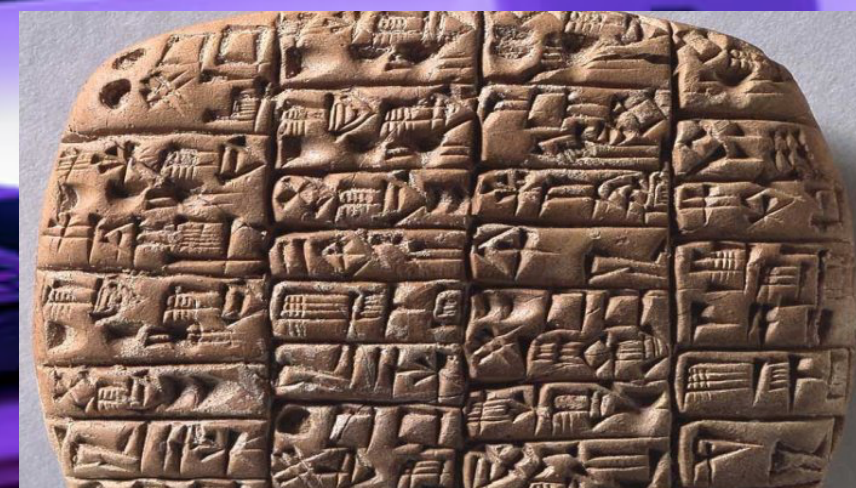
Today



# Data Linking for Humanities Research

1. Take local reference library as a specification of information need
  - Provide pointers to similar or complementary documents
    - Extend reference library
  - Make relevance of materials data easily assessable
2. Take critical editions
  - Provide browsable version
  - Provide merging services
3. Take reference library of artifacts in archive (replicas)
  - Have researchers touch artifacts and interact with them
  - Locate artifacts in space and time (use space and time for linking)
    - Possibly order additional spatially and temporarily related artifacts
  - Possibly adopt ancient view from time data of artifacts
    - Which information could be principally available in old archives at the respective time frame







# Research Data Management

- Metadata
  - DataCite standard plus project metadata
- Open vs. Closed
  - as open as possible
- Data/File types
  - no limitations
- FAIR principles
  - **F**indable-**A**ccessible-**I**nteroperable-**R**eusable
- Technical
  - Software
    - Invenio (Open Source, CERN, e.g. zenodo.org)
  - User interface
    - easy to use (up-/download, basic viewer, search...)
  - Identifier
    - Digital Object Identifier (DOI)
  - Storage
    - S3 Cloudstorage, three locations



# Problems/Challenges

- Motivation

- „Cool tools out there“ – „I use special repositories for my research field“ – „Everything is on my hard disk“ ...

You have to ask yourself:

How sustainable are the cool tools?

Do I know something about the provider and the storage?

How secure is my hard disk and who can use my data?

- Open vs. Closed – several dimensions

- DataLinking - works only for open (meta)data!
  - DataLinking - needs machine readable data/documents
  - Language problems
  - Usable? (special hard-/software necessary?)
  - Legal problems