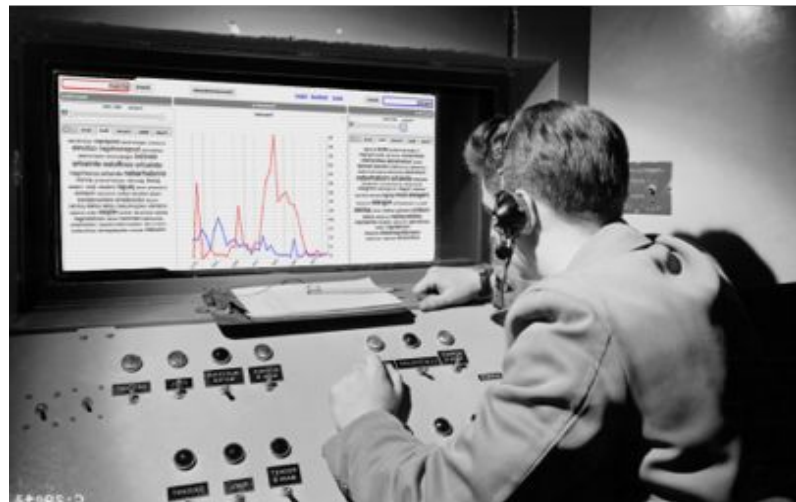


Towards a model of Digital Tool Criticism: notes from an Interdisciplinary Workshop

These slides are based on research that resulted in the following paper,
please cite this paper to refer to the ideas mentioned here:

Marijn Koolen, Jasmijn van Gorp, Jacco van Ossenbruggen;
Toward a model for digital tool criticism: Reflection as integrative
practice, *Digital Scholarship in the Humanities*, 2018,
<https://doi.org/10.1093/llc/fqy048>

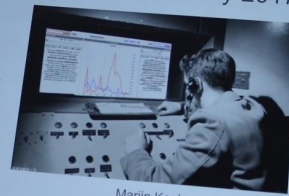


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Digital Tool Criticism

Workshop, 3 July 2017



Marijn Koolen
Jasmijn Van Gorp
Jacco van Ossenbruggen



Goals presentation

1. Give insight in all **aspects**, both reported during the workshop and deriving from our own discussions, that play a role in Digital Tool Criticism
2. Offer a ready-made **format** for a workshop on Digital Tool Criticism, including assignments, tools and methods for analysis, that can be reused for training and education
3. Provide **recommendations** for future workshops, researchers, data custodians and tool builders

Slides shown to workshop participants

Program

09:30 Opening, tour de table

10:00 Background Tool Criticism, explanation of the experiments

10:30 Brief training relevant tools

11:00 Experiment 1: Using explorative tools to refine a research question

12:00 Lunch

13:00 Experiment 2: Using explorative tools to collect digital sources

14:00 Reflection: make a poster reflecting on experiments

14:15 Poster presentations & discussion

15:15 Closing session, planning workshop report

Workshop Materials

All materials available online

- [Google Drive folder](#)
- [Collaborative workshop notes](#)
- <http://bit.ly/2si98CU>

Please contribute to notes with anything you deem interesting, noteworthy

Add photos and screenshots!

Focus workshop

- Digital heritage collections: digitized data
- Avoid *unintended* influence of tools on DH research
- Collaborative work
 - Sharing ideas
 - Sharing notes
 - Towards collaborative paper
- Style: THATCamp

Goal of workshop on 'digital tool criticism'

Setting:

- A massive amount of digital and digitized (heritage) data available
- Many digital tools available
- Methods (hand)books in the humanities primarily aimed at analogue research → not yet up to date with digital research in the heritage domain

Questions:

- Which methodological steps do we have to take to use digital tools and data?
- To what extent do these steps differ from the steps taken in the pre-digital era?
 - How to avoid technology-induced bias?
 - How to ensure reproducibility?

Goal: protocol or checklist for performing Digital Tool Criticism

Digital Tool Criticism

- Starting point: source criticism
 - Method / approach in the humanities and specifically in historical research (cf. Fickers, 2012)
 - Internal source criticism: content of the text
 - External source criticism: metadata of the text (context)
 - **Who** created the text?
 - **What** kind of document is it?
 - **Where** was it made and distributed?
 - **When** was it made?
 - **Why** was it made?
 - Question: what makes 'digital' source criticism different from 'analogue' source criticism?
- Tool criticism
 - What makes digital tool criticism different from digital source criticism?
 - Question: what is a digital tool (versus a digital source)?

Digital Tools

- Tools
 - Tools as research instruments
 - Tools as methods
 - Tools as platforms
- Digital tools = computational tools:
 - a tool which is online available?
 - software to be installed (excel, gephi,...)? Web-based version?
- Working definition referring to **stages** of humanities research in heritage domain:

“Digital tools are used in **opening up**, **presenting** and **curating** textual and multi-media sources, in heuristic **techniques** of retrieval and accumulation of **digitised** data, in data **analysis**, in various forms of **visualisation** and in enhanced and multi-media **publications** of research results.” (van Eijnatten et al, 2012)

Focus on exploratory phase in research process

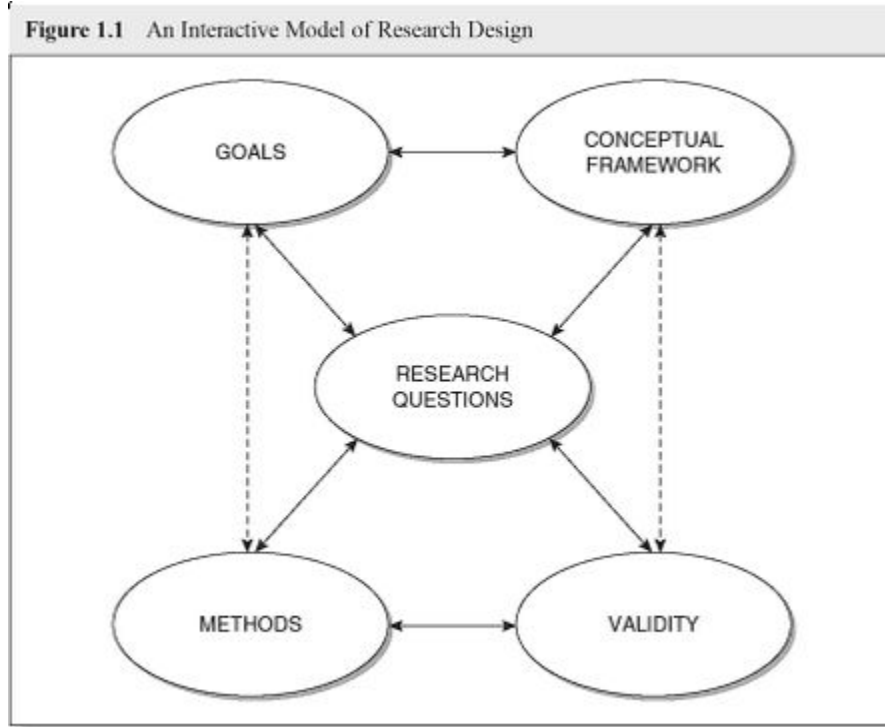


Illustration of how research questions should be iteratively defined and developed. From Maxwell 2014 via [Owens 2014](#)

Method of Workshop

- Two experiments on exploratory research phase
- Limited number of digital tools (overlap)
- Broad research topic/theme
- Do experiments in groups, keep track of findings
- Participants log/write down steps and choices
- Present and discuss findings
- Draft checklist/protocol

NB. We log and take photographs to gather data for the collaborative paper -> permission / opting out

Experiment

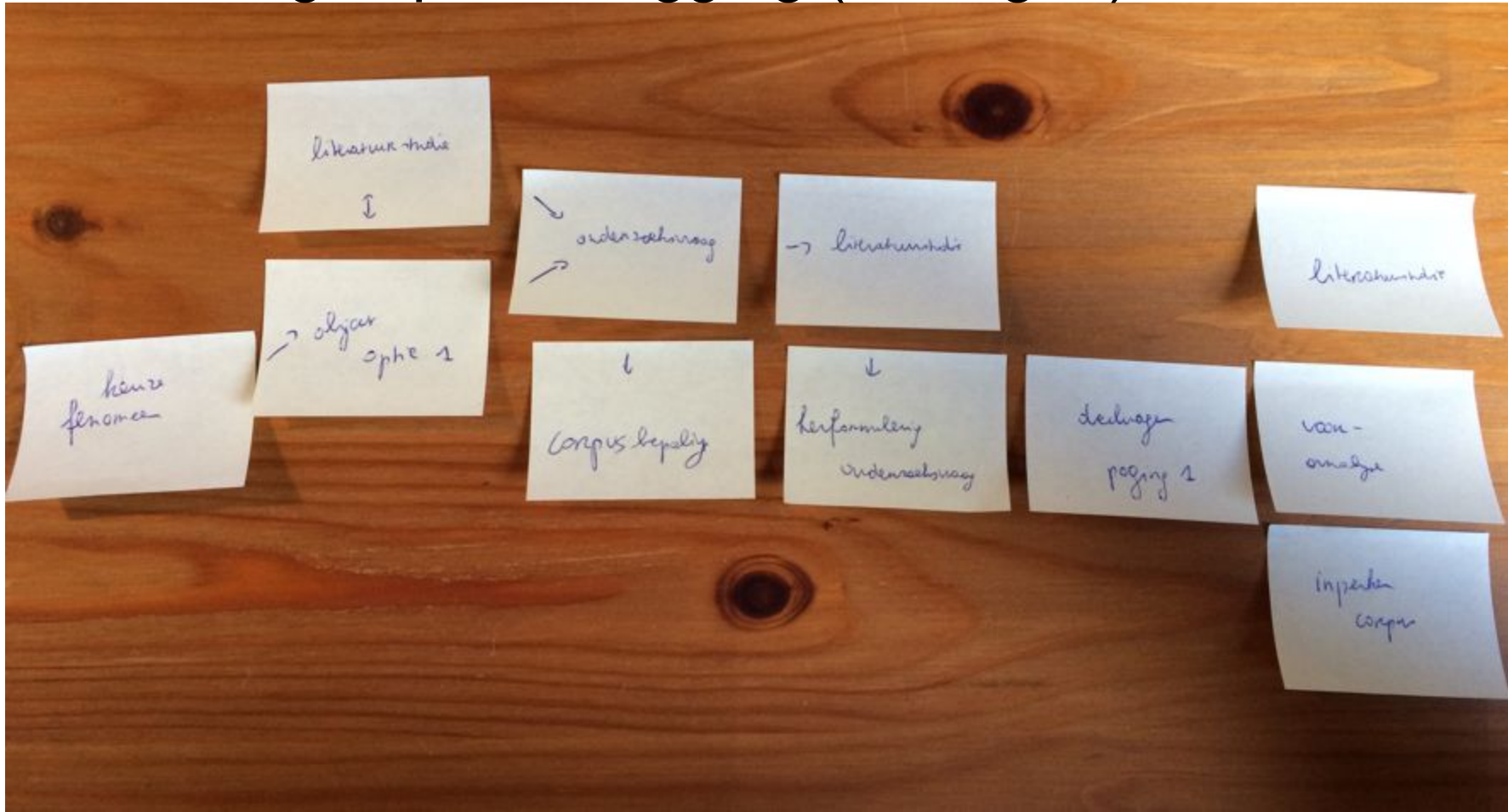
Two parts

1. Using explorative tools to refine a research question
2. Using explorative tools to collect digital sources

Assignment: Logging process

1. Write down reflections/insights/questions on Post-it notes
2. Appoint one person to log considerations, choices, questions, observations
 - a. Take screenshots, photos
3. Keep track of: **goals, framework, question, method, validity**
4. Talk, talk, talk: discuss with each other during this process!

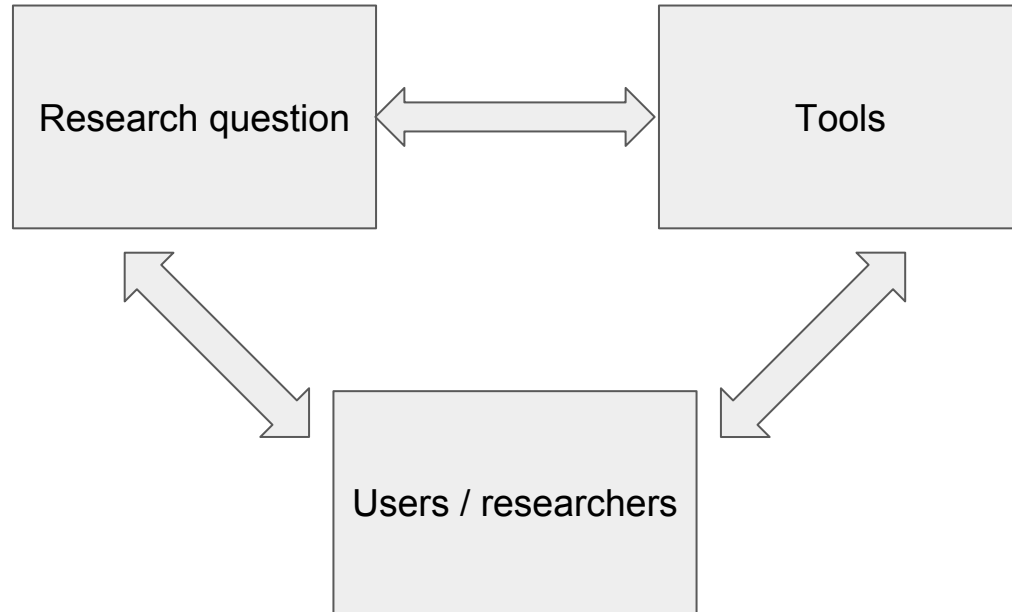
Don't forget: post-it logging (analogue)



Questions To Keep In Mind

- Which tools do you use, and why? When do you switch, and why?
- What should you know about a tool w.r.t. access, presentation, transformation?
- Do digital tools change our research, and if so, how? in shaping questions, in selection of materials?
- To what extent can digital source criticism and digital tool criticism be separated?
- Five W's of source criticism: what, where, when, why, who

Part 1: relation RQ - Tools - Researcher



Assignment Part 1

- Overarching theme: migration and refugees
- Goal: **define research question** within the overarching theme
- Method:
 - Use tools to explore data sets, choose and refine research question
 - Use post-it notes to keep track of questions regarding tools and data, considerations and choices you make

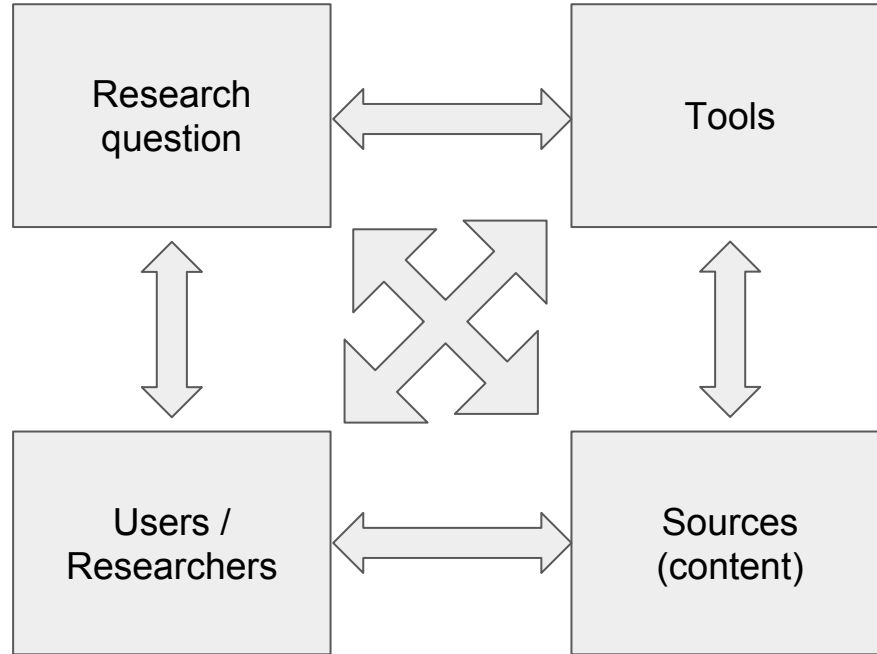
Tools for Specific Datasets

- Cultural heritage
 - Europeana (europeana.eu)
 - European Library (theeuropeanlibrary.org)
- Broadcast media
 - EuscreenXL (EU) (euscreen.eu)
 - AVResearcherXL (NL) (avresearcher.clariah.beeldengeluid.nl)
 - Plus: Delpher newspaper collection (NL) (delpher.nl)
- Politics:
 - Parliamentary debate search (<http://search.politicalmashup.nl/>)
 - Talk of Europe (<http://www.talkofeurope.eu/data/>)
 - Migration Flows - Europe (<http://migration.iom.int/europe/>)

Generic Tools

- Voyant-tools.org (<https://voyant-tools.org/>)
 - [An example corpus of blog posts by Trevor Owens](#)
- OpenRefine (<http://openrefine.org/>, only available as desktop app)
- Digital Methods Initiative tools
(<https://wiki.digitalmethods.net/Dmi/ToolDatabase>)
- Digital Research Tools Directory (<https://dirtdirectory.org/>)
- Excel

Part 2



Assignment Part 2

- Overarching theme: migration and refugees
- Goal: **gather data** for analysis to address research question
- Method:
 - Use tools to explore data sets, select collections, sources,...
 - Again, use post-it notes to keep track of questions, considerations, choices, limitations, ...

Reflection and Formulation

Step back and analyse your post-it notes

- What are most important questions on specific tools and tool use?
- What are important considerations, reflections, insights?
- How did tools influence/steer your exploration and analysis?

Take 15 minutes to prepare a poster

- Structure your findings, draw, visualise
- Each group presents their poster
- We'll then summarize and discuss

Results

(not shown to participants... yet)

Participants of workshop

- 19 participants
- Mixed (inter)disciplinary background
 - Humanities
 - Computer Sciences
 - Information studies
- 6 groups of 3-4 participants

Overview RQs formulated by 6 groups

1. In what way can we use word frequencies for an indicator for Political Viewpoints? PVV and VVD discourses
2. What terms are used to talk about migrants from Suriname?
3. How topic of migration is represented in theatre?
4. Terminology used by migrants themselves?
5. In which ways do the terms used in newspapers ...?
6. In what terms is migration discussed?

Process to get to RQs very different!

See next slide for role of different discussions about the

- Research Question (blue)
- Method (red)
- Data (green)
- Tools (pink)
- Critical Reflection (yellow).

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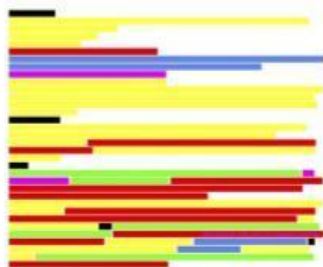
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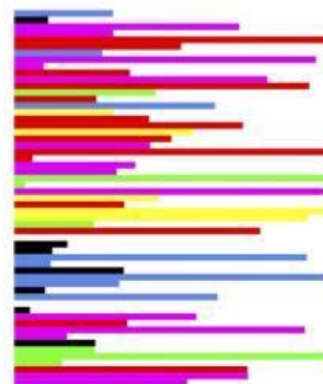
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6



Quotes from participants

“You are not always conscious about what you are doing”

“We don’t want a tool, we want the raw data”

“What **is** raw data?”

“We kept having questions about the composition of the datasets, often realizing that we wondered about crucial aspects rather late into the process. “

[Preliminary] Conclusions

Lessons learned

Workshop was a success: thanks to active participants

“Discussion notebooks” showed that researchers are able to reflect along the lines of digital source criticism

Qualitative analysis of all data produced during workshop non-trivial

For now focus on analysis of online shared notebooks

TODO: posters, audio transcripts

Make analysis potential 3rd part of future workshop

Trade off between:

stricter guidelines & format versus

freedom of scholars to follow their own interest & expertise

Conclusions

Discussions about research topics, research questions, research methods, research tools and research data all interact in unpredictable ways

Focus on exploratory phase >< need to know and identify relation between tools and research phase

Needed skills

- Data criticism: source criticism on data
- Tool criticism: source criticism on tools and working of the tool
 - Cf. Schmidt's data transformation-level

Workshops tend to focus on skills only, but reflection and methods for reflections are also important

Future steps

- Propose a **set of questions** for conducting Digital Tool Criticism [=digital tool criticism aid], that will be extended and questioned in a follow-up workshop with (partially) the same participants and result in a follow-up article or set of guidelines @DHBenelux2018
- Annotation visualisations
- Other phases of research process (e.g. analysis, publication) -> during Summer School?

“Late 19th and early 20th century scholarship was dominated not by big ideas, but by methodological refinement and disciplinary consolidation. Denigrated in the later 20th century as unworthy of serious attention by scholars, the 19th and early 20th century, by contrast, took activities like philology, lexicology, and especially bibliography very seriously. Serious scholarship was concerned as much with organizing knowledge as it was with framing knowledge in an ideological construct.”

Scheinfeldt (2008)

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