

Chapter: *Tooling* – outline and context

From Platforming to Tooling

In the chapter *Platforming as Practice* I discuss the relationships that social and digital environments – referred to as platforms establish, sustain and disrupt. I argue that such environments can be considered design or designable only to a certain extent. I build upon Lucy Suchman who refers to design as a practice of boundary-making and Anna Lowenhaupt Tsing refers to design as a practice of creating stable units as, when I argue that the platform-design configuration misses out on addressing the unpredictability of socio-technical relationships and their non-scalable effects. That is, effects of a transformative design process that cannot be anticipated and formalized are rendered invisible in a request such as “Do you want to design our platform?”. Such request presupposes a certain fixedness – a beginning and an end of a platform and the possibility to foresee a platform’s trajectory.

In the previous chapter I laid out how being involved in formalization processes in different ways – as a designer but also as part of what is being designed – is the multilayered position from which I pursue this research. It is from a position of convoluted involvements, transgressing boundaries of disciplines, methods and formats that I aim to trouble design’s involvement in for instance the platform-design configuration.

It came to the fore that – even though digital platforms are considered designable – platforms obtain a certain agency that cannot be completely anticipated and planned. I would argue that designers have not found articulations to address non-scalable effects and affects of such scalability projects. That is, they cannot be addressed through conventional methods of design as they are contingent and messy.

I would like to pay attention to the notion of the *tool* and particularly the encounters entailed in processes of tool-making, which – building forth on the previous chapters I describe here as *tooling*. That is, I will lay out the transformative processes that encompass a collectively envisioned tool. During that process the tool took more and less concrete forms, however never solidified in a way that would adhere to common characteristics of a tool – a device or instrument that can be handed out, given away, that helps someone in accomplishing a predefined task, activating and controlling a particular function.¹ The tool that will be discussed is not thought about as a means to an end. Instead the tool-making or tool-imagining process complexified and expanded the ways tools and their implications were understood in specific contexts.

When I refer to tools in this chapter I mostly refer to software, digital tools that were imagined, discussed and built in the context of an ongoing project entitled “Feminist Search Tools”². The depiction of the tool and its different moments of articulation, is informed by a

¹ <https://www.merriam-webster.com/dictionary/tool>

² <https://feministsearchtools.nl/>

legacy of practitioners in and around the field of design, who are blurring the lines between *using* and *making tools*, for instance by taking on the task of building and maintaining tools themselves, as well as creating communities around these tool-building practices. Those practices have inspired my own design work as well as my work as an educator and community organizer. Within H&D the interest in tool building reflects in the term 'hacking' as well as the educational formats the collective experiments with – also referred to as pedagogical tools or tool kits. The hacking approach put forward by H&D implies self-determinacy, "do-it-yourself" and "re-mix" cultures and practices³, but also encompasses the sociality implied in these practices, the awareness of complex collectivities that constitute the tools that take part in our practices.

Structure of the text

I want to give some background about this collaborative project, the different stages and collaborations it has undergone to outline the context for a conversation that I am currently planning and structuring together with the collaborators in this project. Initiating this conversation I intend to make explicit the different voices that have shaped and are shaping this ongoing project. The format of a conversation has furthermore become an important and recurring method of driving further as well as documenting the FST project, including the different perspectives and subjectivities of the project.

The initiation of the conversation about the forms of tooling following the trajectory of this project, will build forth on a previous conversation that was held in October 2020 in which the collaborators have met and discussed their different experiences and positions within this project.⁴ A subsection of this conversation is entitled: "Understanding one's own tools" and briefly addresses the collaborators' different angles on problematizing the 'toolness' of a prototype that is referred to as the visualization tool, one of the more concrete outcomes of this project. This part of the conversation marks off – although only very shortly – different possible directions for a problematization of forms of tooling.

Questions / topic to address in a follow-up conversation:

- Locating the discomfort with tools
- A tool as a 'conversation piece': In what ways does our envisioned tool cater to dialogue?
- What is a non-solutionist tool?
- Search tool conventions: In what ways did we break or reproduce conventions of the 'seamless' interfaces
- Using the tool: Can we reflect on our experiences of using the tools we made?
- Releasing the tool: Conditions of publishing a tool
- The problems with programmatic computational approaches to looking at complex matter (intersectionality)
- Communities surrounding and deriving from tools and tool-building

³ A.Groten, "Hacking and Designing. Paradoxes of Collaborative Practice" in: Critical Makers Reader

⁴ <https://feministsearchtools.nl/>

- How did we get from *Tool* to *Tools* and what were the detours that got us there?
- Transition moments: There were many moments in which we questioned the tool aspect of this project. What were in our different experiences transition moments – shifts in our understanding of ‘toolness’ and could you locate them in a sort of tool time-line.

This outline of the *Tooling* chapter intends to give an outlook and a kind of inventory of the different project elements. The different textual elements still need to be rewritten and restructured into a cohesive text. The structure as I envision it at this point puts the conversation at the center. I will write an introduction that will give the necessary context to the conversation format and its placement within the general thesis. Following the conversation I will conclude the chapter with a reflective part that will make explicit the relevant learnings and reconnects the conversation to the argumentation of the general thesis.

The Feminist Search Tools project inventory

Background

The Feminist Search Tools Project is a collaboration between the two collectives H&D and Read-in⁵ that has been initiated in 2017. The first iteration of the project focussed on the searchability of the digital library catalogue of the Utrecht University Library. The second iteration of the project took place from 2018 to recent and focused on the catalogue of IHLIA LGBTI Heritage Collection based at Openbare Bibliotheek Amsterdam (OBA), the Public Library in Amsterdam. The Feminist Search Tools project aims to address the power structures that library search tools reproduce. Looking into different ways of applying an intersectional⁶ lens to computational search mechanisms, we explore different ways of engaging with digital library catalogues and to rethink programmatic ways of sharing and distributing knowledge so that marginalised voices within libraries and archives become accessible and searchable.

The Feminist Search Tool – 1st prototype⁷

The first prototype of the Feminist Search Tool works with a search field, in which a search term can be typed in. The search takes place within a selection of records of the Utrecht University Library – specifically of works published in the period of 2006 till 2016⁸. The

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⁷ Previously developed tool <https://feministsearchtool.nl/> Code documentation: <https://github.com/hackersanddesigners/fst>

⁸ The current Feminist Search Tool provides a possibility to query an xml file containing a selection of 355000 records that were added to the Utrecht University Library in the period of 2006-2016. The selection was made based on the MARC21 fields:

Predominant language, Original language, Place of publication, Country of Publishing, Publisher, Date of publication (part 1), Date of publication (part 2), Relator term

‘Gender’ is not an MARC21 field but was added to the database by trying to find the author on wikidata and using the “gender API” as a fallback if there was no entry on wikidata

(https://gender-api.com/de?utm_source=adwords&utm_medium=cpc&utm_campaign=ga3&gclid=Cj

choice was made based on a number of so-called MARC21⁹ fields – a cataloguing standard which the digital catalogue of the Utrecht University library was based on at that time. The first prototype attempted to speak to the question: How many female non-Western authors and female authors of colour are represented in the catalogue of the Utrecht University library? Through an interpretation of different MARC21 fields that were accessible to us, the aim was to offer different filters, through which to look at the records of the Utrecht University library. The selection made was:

The information regarding gender assigned to an author is information, which the Utrecht University (UU) library cannot provide access to. Information about “gender assigned/attribution to an author” is stored in a separate database – for which the UU library does not possess direct access. The separate database hosts the so-called ‘authority files’ which include more detailed information regarding the gender and nationality of an author. For the 1st prototype of the Feminist Search Tool, we have linked the dataset to Wikidata and 2 other databases. Possible flaws that come with this linking of these data sets, is that Wikidata attributes gender on the basis of the name. Self-narration, particularly important when it comes to trans* and non-binary identities, unfortunately aren’t included in this data set, which might lead to misrepresentations.

Apart from the concrete digital object, a backend infrastructure and interface that gives access to a library catalog, *FST* has been and still is, an open process to which we invite different stakeholders at different moments. The different work sessions have confronted different challenges that come about when incorporating feminist approaches into search and discovery tool design (Ray Henry, 2015). Although everyone agrees thinking and making can hardly be separated the understanding and expectation of the meaning of practice seems to diverge. I observe a reoccurring dynamic arising during moments in which ideas and theories start to materialise. As soon as thoughts are translated to – for instance interface elements, forms of interaction – tension grows. All collaborators involved are (as researchers, artists, designers, programmers) implicated in different ways in the matter of critique. Putting forth the bold question: “Why are the authors of the books I read so white so male so Eurocentric”, the project addresses our own part-taking in the issues at stake. The approach of designing an actual tool can therefore only be, and needs to be complicated. The process has been lengthy, troubling, and painful at times. While trying to build a tool we constantly stagnate, questioning the conditions under which the tool is developed. To give one example; the distribution of funding within the group became an issue to discuss when we had to acknowledge that our group represents a privileged part of society. If we wanted to address the shortcomings of Western knowledge economies, didn’t we have to address those of our own constellation as a group first – and critically examine how we distribute our funding? I was confronted with my own belief that through making things, engaging directly with processes of designing and building technology we can study and develop a critique of technology design. However, even though we privilege process and conversations over concrete outcomes, we still produce and reproduce knowledge, practices and habits, and therefore need to be aware and more importantly take responsibility for our own actions.

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⁹ MARC21 (abbreviation for Machine-Readable Cataloguing) is an international standard administered by the Library of Congress; it is a set of digital formats used to describe items that are catalogued.

Feminist Search Visualization tool – 2nd prototype¹⁰¹¹

(Developed In the framework of the *Digital Methods Summer School 2019*, UvA)

During the *Digital Methods Summer School 2019* at UvA we've had the chance to revisit our 1st prototype, by testing and developing methods for the *Feminist Search Tool* to further explore what mechanisms of inequality are at place within a library catalogue. Questions we've investigated for instance were: Which publishers are present in the library? How can we organize publishers according to subjects of intersectionality (e.g. gender, race, social class)? And how are these subjects distributed over gender of authors and publishers?

One of the outcomes of this testing phase has been an interactive visualization. The aim of this tool is to facilitate search through an intersectional lens. The search results can help understand some of the mechanisms of inequality and dominance when it comes to big publishing houses within academic publishing, but also demand a detailed qualitative reading and further elaboration of the search results.

You cannot count intersections in intersectionality:

https://www.youtube.com/watch?v=-DW4HLgYPIA&ab_channel=SouthbankCentre

Feminist Search Visualization tool – 3rd prototype

Complexifying gender categories with the help of the Homosaurus¹² a collaboration with IHLIA LGBTI Heritage Collection, Alice Strete and Aggeliki Diakrousi

In October 2018 we introduced the Feminist Search Tools project to Atria Kennisinstituut voor Emancipatie en Vrouwengeschiedenis and IHLIA LGBTI Heritage collection. Besides, there were short presentations of the Women's Thesaurus by the drafters of the Women's Thesaurus (Maria van der Sommen & Gusta Drenthe) and the Homosaurus by the initiator and current board member of the homosaurus and head of collection in 2018 of IHLIA (Jack van der Wel).

The session aimed at bringing these different projects into dialogue with each other and to reflect on the first prototype of Feminist Search Tools. Furthermore, the roundtable aimed to gain deeper insights into the design and drafting process of the Women's Thesaurus (Atria) and the Homosaurus (IHLIA) as well as aligned content to see how the latter could inform the new iteration of Feminist Search Tools. A thesaurus is a reference tool that might help to search for words by which a concept or idea is adequately expressed. For Atria and IHLIA, their distinct thesauri have functioned as a form of self-empowerment by not trusting the mainstream way of searching and offering additional tools – namely thesauri – to the communities or people that use their archives. This has been an important entry point for our research in digital library catalogues. Audio fragments of the roundtable are made available on the project's website of the new iteration (<https://feministsearchtools.nl/>). Furthermore, the event has been the starting point for our collaboration with IHLIA LGBTI Heritage Collection and more in-depth conversations about the cataloguing system used for their collection, CardBox, and the Homosaurus.

¹⁰ <https://github.com/hackersanddesigners/fst-viz-tool> in collaboration with DMI and Density Lab

¹¹ <https://github.com/hackersanddesigners/ihlia-vis-tool> in collab with Angeliki and Alice Strete, Thea

¹² <https://homosaurus.org/>

With the help of Alice Strete and Angeliki Diakrousi we developed further the visualization tool starting at the Digital Summer School. The development of this visualization tool has been an important process in our research. Visualizing a library database helps to understand the relationships within the database, which helps researchers and librarians to interact differently with their catalogue. It gives a glimpse in the blackbox of a big database. The dataset used for this tool are the IHLIA cataloguing system and the vocabulary of the Dutch homosaurus that is already used by IHLIA librarians as a way to categorise books and other material for their collection.

While the y-axis of the visualization tool is still dedicated to publishers represented in the IHLIA collection (as developed in the DMI Summer School), the x-axis has been developed into a series of clusters speaking to an intersectional lens of a possible search movement. This intersectional lens is approached by the clusters: race, gender, sexualities, disabilities and structural oppression. These x-axis clusters would be fed by the vocabulary of the homosaurus providing not only different terms for the x-axis but as well providing context of related terms, their relevance and potential gaps in the collection highlighted as redlinks.

The Feminist Search Tool Wiki¹³

The FST Wiki uses DokuWiki – an open source wiki software that doesn't require a database. Editors can read, edit and create articles and use an embedded Etherpad, a real-time collaborative writing tool that comes with every article. The combination of wiki articles and notepads offered the FST group an infrastructure to collaborate. The platform has been used to take notes during meetings, write and edit outlines for conversations and interviews, accumulate resource lists, write workshop plannings, structure library categorization clusters. The note pads can be used to draft, brainstorm and set agendas. The wiki articles offer a more elaborate form of editing, and can be used to finalize and structure text as well as add media such as images and videos. The FST Wiki is a predecessor of the FST project website.

Repository of Feminist Search Tools

Beginning of 2020 the FST collective organized a workshop entitled “Repository of Feminist Search Strategies”. The workshop was imagined as a hands-on workshop to think through and test out feminist approaches to search and create a collective tool box – a repository for feminist search strategies. It has proven to be important as a contact point to other related projects and provided us with a more in depth introduction to the concept of red links as developed during XPPL. The workshop shifted the placement of one tool at the center of the project to various tools, prototypes, methods and conversations. This change also is reflected in the recently published project website (<https://feministsearchtools.nl/>) that functions as an archive of the project, opening up the different stages of the FST project.

The structured and edited conversation addresses the potentials, fallacies, and desires around the project and simultaneously functions as navigation – interlinking highlights of important keywords that connect to audio recordings of conversations as well as visual process documentation.

¹³ <https://wiki.feministsearchtool.nl>

The project's website has already been launched during the event "Intersectional Search in Queer and Trans Archives"¹⁴ however is still in the process of being completed.

Feminist Search Assistance:¹⁵

In collaboration with Emile den Tex at Digital Methods Summer School 2019

Another tool that we've been looking into during the Digital Methods Summer School was the Feminist Search Assistant and the way it provides a gateway into a more gender sensitive search experience. The Feminist Search Assistance is a search bar that builds on Amazon's book recommendation system and is imagined to suggest readings that are oriented towards topics related to intersectionality. The basic principle is to provide the potential user with a search bar in which to query terms, and select a set of interests (of which 'feminism' is added by default). The queries are then sent to Amazon. Through the initial search page, the set of interests become embedded in the link sent to Amazon, which prompts Amazon's advanced search feature to configure around those interests (called 'departments' in Amazon.com). This is making it more likely for the searcher to find results by feminism-filtered sources.

The project builds on a body of literature on the intersection of gender studies, critical algorithm studies, and search engine critiques. Algorithms are known to reinforce gender and racial bias (O'Neill 2018; Noble 2018). Search engines tend towards personalization. Thus in the context of online recommendations, asking "Why are the authors of the books I read so white, so male, so eurocentric?" also leads to question the extent to which the "I" is complicit in the recommendations one gets (Rogers 2009). Acknowledging that "I" might be part of the problem, we decided to seek the assistance of a "search persona" inspired by the notion of a "research persona" (Dieter et. al). The feminist search enhancement is informed by book selections, which were carefully curated by grassroots libraries and archives, such as the Vrouwenthesaurus of Atria Kennisinstituut voor Emancipatie en Vrouwengeschiedenis (<https://atria.nl/bibliotheek-archieef/collectie/thesaurus/459/>), and Mapping Slavery (<https://mappingslavery.nl/en/kennisbank/literatuur/>).

Paper Prototyping

In order to think more through the interface design I hosted a paper prototyping workshop with the Feminist Search Tools project group to think through questions of interface design with regard to the new iteration of the project. Creating an understanding how interfaces can challenge notions of agency when related to interaction design, the workshop also aimed at critically interrogating established conventions such as 'usership', 'user profiles' or 'user-friendliness with regard to search interfaces. The workshop looked into how to 'un-smoothen' technology design and technology design processes to rethink modes of knowledge production. The term 'un-smoothen' hereby refers to the attempt to complicate users-technology relations and to implicate users in the choices made at the different steps of their search process. The discussions that came up during the workshop played an important role for the decision-making processes that went into the interface design of the new project's website (<https://feministsearchtools.nl/>). Instead of placing one tool at the center of the project, we publish various tools that we have worked with and developed

¹⁴ https://hackersanddesigners.nl/s/Activities/p/Intersectional_Search_in_Queer_and_Trans_Archives

¹⁵ <https://github.com/hackersanddesigners/fst-amz-shadow-search> in collab with Emile den Tex at DMI2019

during the project including discussions around their interrelationships, their potentials and fallacies. This way the visitors of the websites are reminded to remain critical of the notion that one universal feminist search tool could even exist or would be desirable.

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