



Universiteit
Leiden

The Netherlands

Figuring things out together: on the relationship between design and collective practice

Groten, A.

Citation

Groten, A. (2022, November 24). *Figuring things out together: on the relationship between design and collective practice*. Retrieved from <https://hdl.handle.net/1887/3487176>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3487176>

Note: To cite this publication please use the final published version (if applicable).

Figuring Things Out Together

On the Relationship Between Design and Collective Practice

Anja Groten

Figuring Things Out Together: On the Relationship
Between Design and Collective Practice

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr.ir. H. Bijl,
volgens besluit van het college voor promoties
te verdedigen op donderdag 24 november 2022,
klokke 13.45 uur

door Anja Groten,
geboren te Willich, Duitsland in 1983

Promotor: Prof. dr. Janneke Wesseling

Copromotores:

Dr. Florian Cramer (Willem de Kooning Academy)

Femke Snelting

Promotiecommissie:

Prof. dr. Joost Grootens (Royal Danish Academy
in Copenhagen)

Prof. dr. Anke Haarmann

Dr. Aymeric Mansoux (Willem de Kooning Academy)

Prof. dr. Andrea Sick (Hochschule für Künste Bremen)

6	Introduction
22	Chapter 1: Design & Collectivity
74	Chapter 2: Workshop Production
156	Chapter 3: Tool Building
230	Chapter 4: Platform-design Issues
290	Conclusion
306	Summary
310	Samenvatting
316	Bibliography
334	Acknowledgements
338	Curriculum Vitae
341	Imprint

Introduction

Figuring Things Out Together: On the Relationship between Design and Collective Practice

Context

I make websites. I teach. I design platforms. I host workshops. I write. I organize events. I build tools. I make books. I am involved in an array of activities at various organizations, institutions, and in the context of self-organized groups. It can be disorienting and difficult to speak about my work in a way that is easily packageable. All of the activities that constitute what I do and the contexts I do them in, come with their own specific vocabularies, manners and expectations.

There are many of us who work this way—people who blend practices rather than choosing one specialization or one fixed definition of their practice. Sometimes we form collectives; conglomerates of ambiguous practitioners who come from domains that may seem ostensibly separate. By coming together in this manner, we diffuse disciplinary boundaries. We challenge the divisions between user and maker, product and process, friendships and work relations, student and teacher.

For nine years, I have been working closely with the collective Hackers & Designers (H&D). Due to my close involvement with this collective, it has become central to my practice-based inquiry into the relationship between design and collective practice. H&D started as a workshop-based meetup series in Amsterdam in 2013.¹ Since then, we have been organizing workshops, sometimes

¹ I have been organizing workshops with H&D since its inception in 2013. H&D started as a meetup-series organized by James Bryan Graves (software developer) and Selby Gildemacher (visual artist) and myself (graphic designer). Since 2016 other members have joined, such as André Fincato (2016), Juliette Lizotte (2018), Heerko van der Kooij (2019), Karl Moubarak (2019) Loes Bogers (2019), Margarita Osipian (2019), Christine Kappé (2020), Pernilla Manjula Philip (2022). James left the collective in 2018. Margarita left in 2021.

self-organized, sometimes by invitation.² H&D workshops are informal get-togethers and usually follow a hands-on practical approach. Attendees mostly work at the intersection of technology, design, art, and education. Along with organizing workshops people involved with H&D produce on and offline publications and build open source tools and platforms.

Collective design practices, as I discuss them in this thesis, lean into the complexity of issues while resisting the impulse to ‘solve’ anything. Moving through a variety of contexts (from institutional to grassroots informal) such collectives are responsive to changing conditions. They are mutable and at times fragile structures that, notwithstanding, manage to hold together fragmented practices, multiple places, schedules and economies. Such collectives are constantly in-the-making, and along the way, they develop “terms of transition”³—socio-material conducts that help them navigate, and ‘stay in touch’ in uncertain times.

Open source spreadsheets and notepads become administrative tools for decentralized collective organization, subject or site for a workshop, and design and publishing tools. Shared anecdotes, distributed documentation practices, asynchronous writing of workshop scripts, unstable technical infrastructure are all part of what holds collectives together. Such relational utter-

ances cannot be considered products or examples of collective design in the sense that an example could be a blueprint. Collective design practices are site, context, and time specific, and so are their expressions.

Research Question

This research investigates the relationship between design and collectivity. I argue that this relationship is one of mutual entanglement and therefore requires situated perspectives on working and designing together that resist linearity, and a progress-based understanding of the design process. The central question that I will return to throughout this dissertation is: How to design *for* and *with* collectivity? I propose the notion of ‘designing *with*’ (rather than through or by means of) to open up design approaches and perspectives towards processes of designing with *others* (other people, other things, other environments) that are non-successive and contingent as they are constantly emerging.

Problem

Collective design is difficult to align with conceptual, material and organizational confinements currently upheld in the field of design and formal design education. I found that conventional design vocabularies are not capable of expressing and accounting for collectivities’ resistance to fixation and stabilization. In existing design discourses much attention has been paid to modes of designing together. Yet, in my view, these accounts fall short of addressing the nature and meaning of collective design practice. For instance, there is a difference between collectivity and collaboration or teamwork. Collectivity is not a design method, or an antidote to an individualistic design approach. I argue that collectivity should be considered a condition that

2 A recurring activity for H&D, which usually involves all members of the collective, is the H&D Summer Academy, a self-organized 1-2 week-long workshop program that takes place in the summer, in Amsterdam since 2015. https://hackersanddesigners.nl/s/Summer_Academy_2015, https://hackersanddesigners.nl/s/Summer_Academy_2016, https://hackersanddesigners.nl/s/Summer_Academy_2018, https://hackersanddesigners.nl/s/Summer_Academy_2017, https://hackersanddesigners.nl/s/Summer_Academy_2020, https://hackersanddesigners.nl/s/Summer_Academy_2021, last accessed March 2022.

3 Lauren Berlant, “The commons: Infrastructures for troubling times*,” *Environment and Planning D: Society and Space*, 34, no.3 (2016): 393–419.

is intertwined with certain issues and their material consequences such as fragmentation and flexibilization of cultural work, in addition to the economization of art and design education.

Contribution to design discourse

Design approaches such as ‘participatory design’, ‘cooperative design, and ‘co-creation’, have been discussed at length,⁴ in urban planning, industrial design, and human-computer interaction design.⁵ Participatory Design (PD) derived from the 1970s Scandinavian labor movement, and shifted attention from top-down design approaches to the “politics and ethics of ‘workplace democracy’”.⁶ PD introduced methods of joint decision-making regarding the implementation of new tools, technologies and organization models in the workplace. These decision-making processes involved those most affected; the workers in a factory for instance. The workers were to use the newly introduced technologies in their daily work routines. The PD approach brought into focus how collaborative processes, across different positions, organizational hierarchies, and diverging skills, can be considered an essential part of the design process. It also introduced social questions into the design process, actively involving different perspectives in order to improve design objects and their implementation.

4 Erling Bjgvinnsson, Pelle Ehn, Per-Anders Hillgren “Design Things and Design Thinking: Contemporary Participatory Design Challenges,” *Design Issues* 28, no. 3 (Summer 2012).

Susanne Bødker, Kaj Grønbaek, and Morten Kyng, “Cooperative Design: Techniques and Experiences From the Scandinavian Scene,” *Participatory Design: Principles and Practices*, Aki Namioka and Doug Schuler, eds. (New Jersey, NY: Lawrence Erlbaum Associates, 1995).

5 Tad Hirsch, “Contestational Design: Innovation for Political Activism” (PhD diss., Media Art and Sciences, MIT, 2008), 23.

6 Mahmoud Keshavarz, Ramia Mazé, “Design and Dissensus: Framing and Staging Participation in Design Research,” *Design Philosophy Papers* 11, no. 1 (May 2013), 7–30.

PD has been critiqued by design theorists⁷ for only inviting some to participate in the process while excluding others. Furthermore, it is argued that PD builds upon consensus models for decision-making, which can be implemented in ways that affirm established power relations,⁸ while maintaining the appearance of an inclusive process. Design theorists such as Ramia Mazé, Mahmoud Keshavarz, Carl DiSalvo and Tad Hirsch, have problematized PD, building upon the work of political philosophers such as Chantal Mouffe and Jacques Rancière, and have advocated for design approaches that privilege difference over consensus. Like PD, their propositions for adversarial,⁹ dissenting¹⁰ and contestational¹¹ design pays attention to design processes rather than products, and the politics inherent in such processes. Yet they emphasize the importance of sustaining the possibility for different positions, including potential friction and conflict as part or even an aim of the design process.

Furthermore, Mazé and Keshavarz offered useful tactics for resisting generalization around tropes of collaboration in design by challenging the presupposition that positions, identities and preferences are pre-consti-

7 For instance Tad Hirsch wrote that in some contexts, participatory design processes only reinstate the division between experts and laypeople (“In most cases, designers’ status as experts confers relatively greater authority in decision-making than laypersons.”) Tad Hirsch, “Contestational Design: Innovation for Political Activism” (PhD diss., Media Art and Sciences, MIT, 2008), 23.

8 Furthermore, Keshavarz and Mazé wrote that “to approach design in ways that do not merely affirm the current constitution of society, along with exclusions and differentials, we seek alternatives to concepts such as consensus.” Mahmoud Keshavarz, Ramia Mazé, “Design and Dissensus: Framing and Staging Participation in Design Research,” *Design Philosophy Papers* 11, no. 1 (May 2013), 7–30.

9 Carl DiSalvo, *Adversarial Design* (Cambridge, Massachusetts, MIT Press, 2012).

10 Mahmoud Keshavarz, Ramia Mazé, “Design and Dissensus: Framing and Staging Participation in Design Research,” 2013.

11 Tad Hirsch, “Contestational Design: Innovation for Political Activism” (PhD diss., Media Art and Sciences, MIT, 2008).

tuted and well-defined. Drawing on Rancière's concept of 'dissensus', as "a process concerned with the potential emergence of new political formations,"¹² Mazé and Keshavarz argue "for increased criticality—and dissensus—in contemporary practices of design and design research."¹³ Other design theorists have put forward design philosophies such as Ontological Design or Xeno Design, which displaces the human/designer as the apex of the design process in an attempt to fundamentally question the complexity of designed worlds and design's implications for social, economic, and ecological issues. Design theorists such as Anne-Marie Willis, Johanna Schmeer, Danah Abdullah, and Tony Fry further complicate the pluralistic design approach of being and working together 'in difference', by appealing to a multilayered design perspective that transgresses boundaries between disciplines, timelines, geographies, scales, human and non-human entities. Such theories call for "new imaginaries and design approaches that question human-centrism, and open up paths towards alternatives."¹⁴

All these critical design accounts have contributed to greater self-reflexivity in design perspectives and articulations, and as such, have also been important orientation guides for my research trajectory. Yet, these design theories—perhaps because they evolve within and respond to the established design discourse—are in my view still too attached to, and therefore insufficiently question, the notion of a 'purposeful' relation between design and collectivity.

12 Mahmoud Keshavarz, Ramia Mazé, "Design and Dissensus: Framing and Staging Participation," *Design Research*, 2013.

13 *ibid.*

14 Johanna Schmeer, "Xenodesign—Towards Transversal Engagement in Design" (PhD diss., Royal College of Art London, 2020). <https://johannaschmeer.net/johanna-schmeer-phd>, last accessed January 2022.

As I will discuss in my first chapter 'Design and Collectivity', it is often during moments of crisis, for example increasingly porous disciplinary boundaries and specialization in design, that collectivity becomes an alternative proposition, or a potential resolution to the issue at stake. The tropes of design and collectivity, in their various interpretations and meanings, tend to uphold each other.

Approach and scope of the research

Throughout the different chapters I will make the thresholds of collective design legible. I will do this by discussing the ways collective design weaves together a range of places, legacies, objects and people across practices and disciplines, and timelines.

To forestall rushing into generalizations about collective design *as such*, my analysis focuses on people, objects and situations, which I have been closely involved with, in different capacities. Thus, in this written part of my research I chose an approach to theorizing collective design that draws to a large extent from personal experiences. I would argue it is due to their subjectivity, and the attempt to locate that subjectivity, that the cases discussed here offer a perspective on collective design that is specific rather than generic.

More specifically, the focus on the case of H&D and the wider ecosystem of collective practices that H&D is connected to allows me to pay attention to the details, the marginal and mundane aspects of collective design. Such personal, everyday tales are often remaining invisible within existing frameworks of analysis for instance as defined by design's disciplinary frameworks.

Drawing from personal experiences and my involvement in *collectivity-in-action*, I will analyze different formats, utterances and social-technical conduct, in order

to critically question how collective design practices can negotiate their relationships with the material conditions of everyday life.

There are many examples of collective practices that could have served as interesting case to analyze and compare. For instance, at date of publishing, widely discussed is the ecosystem of collective art practices presented at, and evolving from documenta fifteen in Kassel, Germany. Examples are the collective *ruan-grupa*, the curators of documenta fifteen, and invited collectives such as Question of Funding collective, the Nest Collective, Atis Rezistans, Nhà Sàn Collective, Party Office and Jatiwangi art Factory amongst others.¹⁵ Another example is the Turner Prize which selected in 2021 for the first time a shortlist consisting entirely of artist collectives. Nominated collectives were Array Collective (winners), Black Obsidian Sound System, Cooking Sections, Gentle/Radical, Project Art Works.¹⁶ Also within the wider ecosystem of Hackers & Designers, a manifold of collectives can be found and studied, each of which developing their own context-specific vocabularies and practices¹⁷.

Yet, I chose not to pursue a comparative study of different groups but commit to the vantage point of H&D and pay attention to collective conditions, the ways a collective may be not a self-contained entity, but is intertwined with various interpersonal and socio-technical relationships. Other voices and viewpoints are brought into discussion through the wider scope of the research, the different social, technical, and economic topics introduced through the different chapters.

Chapter 1: 'Design & Collectivity'

The chapter 'Design & Collectivity' sets the scene by locating my personal affinities with collective practice. I trace the ways in which my understanding of collectivity has changed over time, and is intertwined with personal experiences and frustrations with the established design field. I will contextualize the main research question of this thesis (How to design *for* and *with* collectivity?) by approaching collective design not as a result of successive or comprehensible processes, but as resulting from and implied in particular socio-economic, socio-technical conditions that pervade and shape collectives, often in unforeseen ways. Collective design practice therefore requires articulation that does not presume collectivity to be a resolution to a problem.

In the following chapters, I will discuss three concepts: "Workshop", "Tool" and "Platform", dedicating a chapter to each. They are all ubiquitous and hazy terms that travel through a manifold of contexts with ease. They are also implied in the ways the H&D collective has been (mis)understood and actualized. All these terms—workshop/tool/platform—have been overused and so these chapters seek to clarify their meaning specifically in the context of collectivity.

Chapter2: Workshop production

The chapter 'Workshop production' interrogates the pervasiveness of the 'workshop' as a concept and format within a vast range of fields and raises the question: "Why and how are workshops valued and practiced?" As a format for time-boxed collaboration, as well as temporary and dynamic learning environments, 'workshops' cross many boundaries, for instance between art and activism, between different disciplines and institu-

¹⁵ <https://documenta-fifteen.de/lumbung-member-kuenstlerinnen/>

¹⁶ https://www.metropolism.com/nl/news/43380_shortlist_turner_prize_bekend_alleen_collectieven_genomineerd

¹⁷ A list of collectives that are in close proximity to H&D can be found in the acknowledgement of this dissertation.

tions, between commercial and educational contexts. Supposedly, workshops can be applied to any context. In this chapter I will discuss the different perspectives on workshops including the workshop as a site for specialized material production, in addition to its meaning as a format for bringing together groups of like-minded people; to meet, spend time together, work on a specific topic, or explore new techniques or tools. Furthermore, I will address the tension between, on the one hand understanding and practicing workshops as egalitarian learning formats, and on the other hand workshops' role in reinforcing neoliberal conditions. I will argue that the workshop is a format that is implied in the economization of education and the learning economy, and perpetuates a culture in which self-employment, self-improvement, and self-reliance is normalized. Drawing on different workshop situations I will exemplify how possibilities and pitfalls of the workshop as a format for cultural production are being dealt with within collective practice. Central to this chapter's inquiry is the question; can workshops can be organized responsibly? Can they resist this neoliberal impulse?

Chapter 3: Tool building

In this chapter I will discuss the question: Are other-than-utilitarian relationships to tools possible? If they are, how can such relationships be articulated? H&D hands-on workshops feed off and nurture communities of tool users and makers who consider it relevant to 'open up' tools and tool-building processes, to learn about the ways tools are constructed in hands-on practical and often playful ways. The practical and experimental approach to conceptualizing and building tools *differently* allows for imagining and testing out other

scenarios for tool-designer relationships and interaction. The chapter 'Tool building' analyzes different understandings and functionings of 'tools'. More specifically, I will discuss an ongoing / non-conclusive process of collectively imagining, building, and modifying a set of digital tools entitled 'Feminist Search Tools', that yields a growing repository of prototypes, workshops, documentation, and recordings of conversations. In this chapter I argue that the articulation and actualization of 'tools' within the context of the Feminist Search Tools project, is driven by a certain resistance towards tools as merely practical and discrete objects.

Chapter 4: Platform-design issues

The starting point for the chapter 'Platform-design issues' is the question "Do you want to design our platform?". This request, as it has been recurrently posed to the H&D collective, extrapolates the complicated relationship between design and collectivity. That is, the way platforms are discussed in this chapter, puts into focus the manner in which technical objects and context-specific social conducts are composed together and are therefore deeply intertwined with a collective's characteristics and functioning. These self-made platforms involve and converge content management systems, chat applications, collaborative writing tools, online spreadsheets and file sharing systems. They are actualized on-the-go and in a manner that caters to the particular needs, curiosities, and abilities of the collective, which makes it difficult to separate them as technical objects from that context. The question that will be discussed is: If such platforms-in-the-making are inseparable from a collective's functioning, including their characteristic of constant emergence, spontaneity, and unreliability—can such platforms be designed at all?

The title of the dissertation “Figuring things out together” evokes the collective effort of working through the complexities of our times, as well the effort required in disentangling and disambiguating certain metaphors and tropes that occur in the context of collective practices. Living and working conditions are increasingly complex, fragmented, and precarious. Can collective practices like H&D develop, uphold and support critical, ethical, and sustainable ways of working and being together?

Each chapter will take a different approach in order to ascertain what binds us together in collective practices. While these chapters appear in a linear order, they are also intertwined with each other. For instance, I will discuss workshops that took place on experimental platforms and I will discuss platforms and tools that took shape in and through workshop situations. The structure of the thesis resists a linear narrative of collectivity (forward-moving, progressing, improving, innovating) and invites the reader to remain alert, and on the lookout for *other*, multiple, and parallel collective utterances.

Bibliography

- Abdullah, Dana. “Disciplinary Disobedience: A Border-Thinking Approach to Design.” In *Design Struggles*, edited by Claudia Mareis, Nina Paim, Amsterdam: Valiz, 2021.
- Berlant, Lauren. “The commons: Infrastructures for troubling times*.” *Environment and planning. D, Society & space* 34, no. 3 (June 2016): 393–419.
- Bj gvinsson, Erling; Ehn, Pelle and Per-Anders Hillgren. “Design Things and Design Thinking: Contemporary Participatory Design Challenges.” *Design Issues* 28, no. 3 (Summer 2012).
- Bødker, Susanne, Grønbaek, Kaj and Morten Kyng. “Cooperative Design: Techniques and Experiences From the Scandinavian Scene.” *Participatory Design: Principles and Practices*, Aki Namioka and Doug Schuler, eds. New Jersey, NY: Lawrence Erlbaum Associates (1995).
- DiSalvo, Carl. *Adversarial Design*. Cambridge, Massachusetts: MIT Press, 2012.
- DiSalvo, Carl. “Critical Making as Materializing the Politics of Design.” *The Information Society* 30, no. 2 (2014): 96–105.
- DiSalvo, Carl. “Community and Conflict.” *Interactions* 18, no. 6 (November-December 2011): 24–26.
- Dockx, Nico and Pascal Gielen, eds. *Mobile Autonomy. Exercises in Artist’ Self-organization*. Amsterdam: Valiz, 2015.
- Fry, Tony. *Becoming Human by Design*. London, New York: Berg, 2012.
- Hirsch, Tad. “Contestational Design: Innovation for Political Activism.” PhD diss., MIT, 2008.
- Keshavarz, Mahmoud and Ramia Mazé. “Design and Dissensus: Framing and Staging Participation.” In *Design Research*. *Design Philosophy Papers* 11, no 1 (May 2013): 7–30.

Miessen, Markus. *The Nightmare of Participation*.

Berlin: Sternberg Press, 2011.

Mouffe, Chantal. "Deliberative Democracy or Agonistic

Pluralism?" In *Social Research* 66, no. 3 (Fall 1999).

Mouffe, Chantal. "Democracy and Pluralism – A Critique
of the Rationalist Approach." Toronto: Faculty of Law,
University of Toronto (1995).

Mouffe, Chantal. "The radical center. A politics without
adversary." *Soundings*, no. 9 (Summer 1998).

Rancière, Jacques. *Dissensus: on politics and aesthetics*.
London and New York: Continuum, 2010.

Raqs Media Collective. "Nautonomat Operating Manual.
A Draft Design for A Collective Space of 'Nautonomy'
for Artists and their Friends." In *Mobile Autonomy*.
Exercises in Artists' Self-organization, edited by Nico
Dockx & Pascal Gielen. Amsterdam: Valiz, 2015.

Schmeer, Johanna. "Xenodesign—Towards Transversal
Engagement in Design," PhD diss., Royal College
of Art London, 2016–2020.

Willis, Anne-Marie. "Ontological Designing—laying the
ground." *Design Philosophy Papers* 4, no. 2 (2006):
69–92.

Chapter 1: Design and Collectivity

Within the contemporary design landscape much attention has been paid to modes of designing together, emphasizing process over outcomes, and inviting others (other human and non-human perspectives) into the process. Yet, even though such perspectives have contributed to a critical design discourse, they remain attached to, and therefore insufficiently question, the notion of a 'purposeful' relation between design and collectivity.

This chapter discusses aspects of collective practice that designerly articulations fall short of addressing; that is, the implications of a reciprocal entanglement of collective practice with unstable working and living conditions.

Introduction

My affinity for collective practice has evolved along with my practice as a designer, educator and organizer. This affinity has shaped particular affiliations and commitments, as well as a design approach and aesthetics. I have been interested in involving *others* in design processes: other people, other tools, other conditions, other materials. Involving others, as I see it, is not a method or a goal in itself—as opposed to participatory design, where the design process follows a certain goal by involving others, i.e. to improve design processes or outcomes. More so, designing with others can be an ‘excuse’ to imagine being and doing things together differently from how it might have been conventionally done. The desire to design with *others differently* derives from frustrations with how design is taught in schools and practiced in the professional design field. Collective practices offer possibilities to temporarily imagine and test out alternative forms of organizing life and work. Designing as part of collective practice is not about designing better or designing faster, but relates to what Lauren Berlant described as “an imaginary for managing the meanwhile within damaged life’s perdurability, a meanwhile that is less an end [but] allows for ambivalence, distraction, antagonism and inattention not to destroy collective existence.”¹

It is difficult to articulate collective aspects of design practice in a manner that does justice to its relational and contingent tendencies. Collectivity, as I understand it and discuss it in this thesis, challenges notions of individual authorship, differentiations between disciplines, between product and process

or between the user and maker. ‘Things’ that evolve with collectivity—i.e. publications, tools, technical infrastructure as well as social conduct—require unconventional design criteria to determine their purpose, or lack thereof. Such criteria are context-specific. They are imagined and articulated spontaneously, unexpectedly and may be abandoned instantly. Thus, it is difficult to speak about such collective aspects in general terms. Collectivity-in-action seems to constantly challenge and erode boundaries, organizational hierarchies, boundaries between formal planning and spontaneous impulse, between friendship and work relationships.

It has always been challenging for me to design *for* collectives, especially those that I was involved with closely. How to express and account for collective environments that are described entirely differently depending on who you ask? Collectivity is in constant flux and so are those who it (temporarily) binds together. How to design for and along with collectivity; that is, how to negotiate collective dynamics, their resistance to confinement, their reciprocal, as well as vulnerable tendencies?

Collectivity is often confused with other notions of working together. However, collectivity is not equal or approximate to collaboration or teamwork.² Collectivity deviates from concepts such as ‘collectivism’, the ‘commons’, or ‘cooperation’ that focus on norms and values of social groups, deliberate organizational formats for living, working or being together. The artist collective Ruangrupa’s description of itself as an “organism with-

- 2 According to Dictionary.com teamwork describes the “cooperative or coordinated effort on the part of a group of persons acting together as a team or in the interests of a common cause.” Merriam Webster defines teamwork as “work done by several associates with each doing a part but all subordinating personal prominence to the efficiency of the whole.”

1 Lauren Berlant, “The commons: Infrastructures for troubling times*,” *Environment and Planning D: Society and Space* 34, no 3, (2016): 393–419.

out fixed structure”³ aligns more with my experience of working with collectives. This description indicates that there may be contingencies at play in collective practices. In her text “Art is Going Underground”, Janneke Wesseling also refers Ruangrupa and describes a tendency in contemporary collective art practices toward the “ephemeral, changing, and processual: it is open and indefinite, more an open-ended assemblage than a definable object.”⁴

Collective design practice, as it is discussed in this dissertation, is a result of processes that are not successive nor fully comprehensible. Collectives are also a result of particular socio-economic, socio-technical conditions and intersections that pervade and shape working conditions, often in unforeseen and perhaps undesirable ways. Therefore, collective design practices require utterances that do not presume them to be the resolution to a problem.

Some artists/designers have found means of articulating ‘feral’⁵ aspects of collectivity, embracing the incompatibilities of working collectively within prevailing systems of arts and culture. They move between the spheres of economics and art, logistics, ecosystems and technical infrastructure, friendship and business. The ‘trade artist’ and ‘feral economist’, Kate Rich established an “artist-run grocery business and underground freight network, trading coffee, olive oil, dried bamboo shoots and other vital goods outside official channels

since 2003.”⁶ Goods are traded in “spare baggage space of friends, colleagues and passing acquaintances, while museums, offices, hotel reception desks, and other quasi-public places act as trans-shipment points and depots”⁷. The project “Light Logistics” by the collective Display Distribute is another example of an ‘inefficient’ global courier system for artist publications described as “a free but not-in-time service.”⁸

Such collective utterances cannot be pinned to one location, product or artist. They play with unreliability, and embrace a complex of issues, while resisting the impulse to offer a solution to these complexities. Along the way, they develop relational articulations that cannot really be considered examples of collectivity in a sense that an example is akin to a stencil. An example can be reproduced. Yet the unreliability of collectivity resists cookie cutter ideas about what constitutes such collectivity. Collective design practices are situated. They are site, context, and time-specific, and so are their various expressions. They weave together a range of places, legacies, objects and people across practices, disciplines, and timelines.

This chapter defines collectivity in relative rather than absolute terms. As opposed to speaking from the position of a generalized ‘we,’ I will take a personal approach and draw connections between my experiences of collectivity-in-action on the one hand, and, on the other, draw from various legacies, writings and practices

3 Thomas J. Berghuis, “Ruangrupa New Outlooks on Artist Collectives in Contemporary Art,” in *Mix & Stir. New Outlooks on Contemporary Art from Global Perspectives*, Helen Westgeest, Kitty Zijlmans (Amsterdam: Valiz, 2021): 81–87.

4 Janneke Wesseling, “Art is Going Underground,” in *Mix & Stir. New Outlooks on Contemporary Art from Global Perspectives*, Helen Westgeest, Kitty Zijlmans, eds. (Amsterdam: Valiz, 2021), 89–95.

5 Feral Atlas <https://feralatlas.org/>, Feral Trade <https://feraltrade.org/>, last accessed January 2022.

6 Kate Rich, “Feral,” in *Making Matters. A Vocabulary of Collective Arts*, Florian Cramer, Janneke Wesseling, eds. (Amsterdam: Valiz, 2022), 273–277.

7 *ibid.*

8 Florian Cramer, Elaine W. Ho, “Collective Organization”, in *Making Matters. A Vocabulary of Collective Arts*, Florian Cramer, Janneke Wesseling, eds. (Amsterdam: Valiz, 2022), 67–75.

Florian Cramer, Elaine W. Ho, “Distribution,” in *Making Matters. A Vocabulary of Collective Arts*, Florian Cramer, Janneke Wesseling, eds. (Amsterdam: Valiz, 2022), 213–223.

that have inspired and challenged me, and have inevitably informed this research which grapples with the complicated relationship between collectivity and design.

Beginning with the section ‘Collective beginnings’, I will trace my attraction to collectivity in order to explicate how my understanding and problematization of collectivity has changed over time, and is intertwined with personal, subjective experiences, i.e. frustrations about a lack of possible outlooks or points of orientation within the established field of design.

In the section ‘(Un)disciplinarity’, I continue to address how collectivity tends to be conceptualized in moments of disorientation, taking as an example the discussion around eroding disciplinary boundaries and specializations in design. ‘The collective’, or ‘collective approaches’ tend to be put forward as a possible resolution to issues at stake. What is set aside, in assuming collectivity as a solution to ‘de-disciplining’, is that collectivity may be not a tool to resolve the issues of disorientation but may also be a symptom of the crisis of design disciplines.

In the section ‘Self-organized’ I will connect the ways in which collective articulation is enmeshed with unstable, unreliable conditions. Vocabularies that tend to evolve from collective practice, phrases of empowerment and self-determination, such as “self-organization” to some degree reinforce precarious working, learning and living conditions.

The following passage ‘Specialized amateurs’ discusses the manner in which socio-technical relationships evolve along with collective design practice to create *other* kinds of relationships, affinities, and affiliations, that seem to be ‘looser’ than the relation between an ‘expert’ designer and their specialized tools. Collective sites and situations bring together people who approach tools, methods and conditions for the first time, and test

out tool-designer relationships that have not yet established dependencies, expectations of purposefulness or efficiency.

The manner in which collective design processes are actualized cannot be traced in linear ways, or analyzed from a single vantage point. A collective designing requires articulations that shift the focus away from the *who* or *what* of a design process towards *how* and *why*. In the final section ‘Approaching the ‘we’ in collective practice’, I will introduce and contextualize the method of writing and designing *with* collectivity as a way of approaching and accounting for design practices that are distributed across different people, technical objects, timelines, fields of knowledge and socio-economic realities.

Collective beginnings

Loose commitments

I remember sitting in a park with my friends, in the summer of 2007. We were all students in design and talked about starting something together, a collective. We wanted to do ‘self-initiated’ projects, rather than design products. Projects that mattered, with people we cared about. After our meeting we created email addresses—a first step towards our collective endeavor. Each of our emails would start with the word “sagmal”⁹:

```
sagmal@jeannetteweber.com
sagmal@thomasrustemeyer.com
```

Adding this prompt to our email addresses allowed us to sustain our individual web domains while being able to share the pun at the beginning—a loose commitment towards our imagined collective future.

9 Sagmal is an expression used in German vernacular language. You use it before actually saying what you want to say. “Tell me, ...”. It is a way to signal that the other person should get ready for what is about to come. Sagmal indicates determinacy and curiosity. What follows sagmal, is a prompt for the other person to respond. If someone says: “Sagmal...”, you know you will be invited to share your perspective on a matter. Another way of using sagmal, is without something added to it. “Sagmal!” can be an outburst—a discreditation of what has been said or done. Something like: “Pardon me?!” Suggesting that what has been said maybe went a nudge too far and crossed a boundary of what is acceptable.

We never started ‘the collective.’ Yet, I still use the email address sagmal@anjagroten.com almost every day—a remnant of that short energizing moment in the park, of imagining a future practice together.

Self-organized collectives often emerge during moments of uncertainty, frustration or (dis)orientation. The Dutch artist researcher Ruchama Noorda described collectives as “[e]xperiments in communal living [that are] building around a rejection of individualism and private property, and [are] based on principles running directly counter to the laws and norms of capitalist societies.”¹⁰ Yet, in my experience, while often driven by a certain frustration with the status quo, collectives do not necessarily set themselves apart from prevailing societal, political, ecological, disciplinary developments, but rather try to relate and interact differently with such conditions.

Collective practices do not stand in opposition to, but are intertwined with and are affected by multiple realities, economies and timelines. Collectives seem to be in constant flux, taking turns and merging into one another, and therefore cannot be easily located, anticipated or explained in terms of absolute beginnings or endings, or as an antidote to existing systems. As I illustrated using the anecdote of a group of friends sitting in a park imagining starting a ‘design collective’, collectives seem to be not plannable in that way. The prompt “Let’s start a collective!” may set into motion a process of imagining *other* affiliations, other than those com-

10 Ruchama Noorda’s PhD project ‘ReForm’ investigated the cultural, artistic and spiritual legacy of the late nineteenth- and early twentieth century Lebensreform (Life Reform) movement. Ruchama Noorda, “ReForm” (PhD diss., Leiden University, 2015), 120–167.

monly known and accepted within the field of design. Collective imaginaries seem to fill gaps temporarily and accommodate moments of (dis)orientation, in our case the moment between study and our future professional lives. In such moments, the meaning of collectivity, the perception of their importance or perhaps even their redundancy is shaped and carried by shared excitement or lack thereof.

Contingency and imagination seem significant to the manner in which collectives are actualized. To take H&D as an example, the formation of H&D was not decided upon or planned in a causal manner. Yet, there are conditions in place allowing for H&D to evolve. There is a certain ecosystem of self-employed practitioners who work at the intersection of art, design, computer programming and education, and attend H&D events. They often do so at moments of (re)orientation, when they feel the need to expand their networks, acquaint themselves with new skills or to meet new friends. As a collective, H&D's evolves along with the interests of its individual members and the larger community around it. Many of the people who are involved with H&D are also involved with other collectives and projects simultaneously, and intersect socio-technical conducts, software repositories, peculiar terminologies, organizing principles, learning methods from various contexts.

It is therefore rather difficult to determine or define collectives in terms of absolute beginnings or endings. Yet, there are moments of shared memories that seem to create a stable picture of 'the collective'. For example, a commonly told story at the beginning of the H&D collective—the moment when 'we' organized our first workshop-based event in 2013 under the title "Hackers & Designers". The constellation of people involved with H&D at the time has changed significantly since this first

event. The organizers grew from three to nine members and not everyone who was involved in 2013 still participates.¹¹ Yet, such narratives of collective beginnings are reproduced over and over again until they solidify and are accepted as a shared conception of a beginning, of a turning point, or an end point.

To recap: A collective beginning may be determined only in retrospect, and *begins* to solidify within the progression of a collective narrative, along with evolving collective vocabularies and socio-technical conducts. While initially not perceived or planned as such, the evolving narrative of the 'collective beginning' binds a collective together. An email address materializes an imagined and yet deferred collective beginning. Articulating collective beginnings in relative / relational / contingent terms recalibrates the perception of 'a collective' from being deliberate and purposeful, towards collectivity as something that may *design itself* to some extent, that responds to and results from specific and multiple contexts.

In an attempt to locate my own personal collective beginning, my motivation for my involvement with H&D, I may need to go as far as trying to understand my attraction towards collectivity as such. I reflect on my experiences as a design student and on working as an emerging designer in the design field in Germany and the Netherlands between 2003 and 2011. In the next section, I will attend to the ways in which my conception of collectivity and my interest in it, are intertwined with the experience of (dis)orientation within the field of design, including certain frustrations with design as a discipline

¹¹ During the time span of writing between 2021 and 2022, members of the H&D collective were Loes Bogers, André Fincato, Selby Gildemacher, James Bryan Graves, Anja Groten, Heerko van der Kooij, Juliette Lizotte, Karl Moubarak, Christine Kappé, Margarita Osipian and Pernilla Manjula Philip.

(an established field), practice (something I am involved in shaping, and reproducing) and concept (a system of thought).¹²

(Un)disciplinarity

When I studied communication design from 2003 to 2008 in Germany, I did not encounter many examples of collective practices within the field of design. ‘Best design practices’ were usually represented by individuals—charismatic designers who led design studios and creative agencies. The tale of the iconic designer included predominantly white and male, either European or North-American individuals. Their design studios were named after their personal names (Studio Borsche, Bureau Mario Lombardo, Stefan Sagmeister, Eikes Grafischer Hort). The name branding also extended into the courses they taught in design schools (Klasse Hickmann, Klasse Hesse, Klasse Uwe Lösch). These predominant figures were recurrently featured in design symposia, design blogs, magazines and books.

In comparison to Dutch art and design education, in Germany individual ‘masters’, seems to be pronounced more explicitly, in the way curricula are designed. Yet, design discourses’ preoccupation with individualized design icons is not a uniquely German phenomenon. In her paper “Is there a canon of graphic design history” Martha Scotford took a close look at what and who was represented most frequently in the historical literature on graphic design (in the European and North-American context). She posited that there is a graphic design ‘canon’, which she critiqued as crea-

ting “heroes, superstars, and iconographies.”¹³ However, according to Scotford “[i]n singling out individual designers and works, we may lose sight of the range of communication, expression, concepts, techniques, and formats that make up the wealth of graphic design history.”¹⁴ Recalling my experience as a design student at the time, these icons of graphic design spurred the realization that most of them seemed to represent what I was *not* or did not want to be: Loud, provocative, competitive. I was seeking forms and manners that allowed for ambivalence and being disoriented together, formats for trying things out in the classroom—in the presence of others, leaving things unresolved, picking up where someone else left off.

In *Glossary of Undisciplined Design* (2021) the editors Anja Kaiser and Rebecca Stephany, themselves both graphic designers and design educators, write:

“Where there is discipline, there is a master—as design schools continue to be the official sites of “learning design,” they remain hubs for the introduction, transmission and normalization of connections for “good design.” Implied in the very texture of any design study program is the legitimization of certain conceptual and aesthetic tools and ideas, substantiated by a corresponding canon and the role models—through naming of courses, through the appointment of teachers, through their respective internalized convictions, to the belief system behind a foundation course.”¹⁵

13 Martha Scotford, “Is There a Canon of Graphic Design History?,” in *Graphic Design: History in the Writing (1983–2011)*, De Bondt, S. and de Smet, C., eds. (London: Occasional Papers, 2012), 226.

14 *ibid.*

15 Anja Kaiser, Rebecca Stephany, *Glossary for Undisciplined Design* (Leipzig: Spector Books, 2021).

12 The differentiation of ‘design’ into these three categories refers to the work of Anne-Marie Willis on ‘Ontological Designing’. Anne-Marie Willis, “Ontological Designing—laying the ground,” *Design Philosophy Papers* 4, no. 2, (2006): 69–92.

I experienced study as a time of orientation, a process of making sense of the design field and trying to find a way to relate to it. Yet, what left me rather disoriented was the perception of the design discipline as somewhat immutable, i.e. through certain prefigured conceptions of expertise, skills, and ‘best design practices’, rather than something I could actively participate in shaping. Today design practices are typified by fluidity, “that regularly traverse, transcend and transfigure historical disciplinary and conceptual boundaries.”¹⁶ New adjectives are frequently added to design lexicons, such as service design,¹⁷ social design,¹⁸ open design,¹⁹ critical design, speculative design,²⁰ design thinking.²¹ Paul A. Rodgers and Craig Bremner wrote extensively about the dilution of solid historic disciplinary boundaries in design into indeterminable pieces. According to Rodgers and Bremner “fluid patterns of employment within and

between traditional design disciplines,”²² have become commonplace. “The fragmentation of distinct disciplines has shifted creative practice from being discipline-based to issue or project-based,”²³ which may be the cause of recurring existential crises when asked the all too familiar question: “What do you do?”, “I’m a designer.”

“What kind? Graphic? Fashion? Furniture? Interior?.”²⁴

Following Eleni Kalantidou and Tony Fry’s concept of border-thinking,²⁵ designer and researcher Danah Abdullah calls for an erosion of borders between different specializations within design altogether, rather than expanding design into other fields and developing yet another form of disciplinarity. Instead, Abdullah proposes, design should move towards more collective approaches.²⁶ She does not define what is precisely meant by ‘collective approaches’ here but, in my reading, Abdullah’s appeal to collective approaches, conveys a belief in collectivity’s ability to renegotiate boundaries between affiliation, expertise and dominating knowledge systems.

I can relate to the anxiety of not being able to explain or defend what I am doing as a design practitioner on the one hand. On the other hand, I resist fitting into pre-established disciplinary categories. It is perhaps precisely that unfulfilled desire for other forms of affiliation that binds me to the collectives I am involved in. However, I have also come to understand that collectives do not function as antidotes to disciplinarity but

22 Paul A Rodgers, “The Concept of the Design Discipline,” *Dialectic I*, no. 1, (Winter 2017). <https://quod.lib.umich.edu/d/dialectic/14932326.0001.104?view=text;rgn=main>, last accessed April 2022.

23 *ibid*.

24 Dana Abdullah, “Disciplinary Disobedience: A Border-Thinking Approach to Design,” in *Design Struggles*, Claudia Mareis, Nina Paim, eds. (Amsterdam: Valiz, 2021), 228.

25 Eleni Kalantidou and Tony Fry. *Design in the Borderlands* (London, New York: Routledge, 2014).

26 *ibid*.

16 Paul A Rodgers, “The Concept of the Design Discipline,” *Dialectic I*, no. 1, Winter 2017, last accessed April 2022, <https://quod.lib.umich.edu/d/dialectic/14932326.0001.104?view=text;rgn=main>.

17 KISD (Cologne International School of design) was the first university to establish ‘Service Design’ as a field in design education. “Systemic and holistic thinking, interdisciplinarity, facilitation and inspiration of cocreation processes, development of mock-ups and prototypes—these core competencies of designers are applied to service organizations and processes, to interactions and to physical evidences.” last accessed April 2022, <https://kisd.de/en/kisd/areas-of-expertise/service-design-en/>.

18 Jan Boelen, Michael Kaethler, eds., *Social matter, social design* (Amsterdam, Valiz, 2020).

19 Bas van Abel, Roel Klaassen, Lucas Evers, Peter Troxler, eds. *Open Design Now*, <http://opendesignnow.org/>, last accessed May 2022.

20 Also referred to as Speculative Design by Dunne Raby. Accessible online at: <https://www.critical.design/> “The term critical design was popularised by product/ interaction design team Anthony Dunne and Fiona Raby. Its central idea is to use design to speculate about the social, political and cultural implications of everyday objects, producing design works that question and challenge the status quo rather than reinforcing it.” <https://modesofcriticism.org/critical-everything/>, last accessed January 2022.

21 Design thinking makes “it seem as if complex problems and challenges were easily solvable and manageable” Dana Abdullah, “Disciplinary Disobedience: A Border-Thinking Approach to Design,” in *Design Struggles*, Claudia Mareis, Nina Paim, eds. (Amsterdam: Valiz, 2021), 231.

are implied in different ways in a certain crisis of design disciplines. This involves the fragmentation and dissolving of established boundaries between design fields. The people I am involved with in collective work are usually freelancers, working in and in-between many fields and institutions, and not entirely recognized by any. Collectives, and those who they bring together, negotiate many different, at times precarious realities at the same time, which also determines what can and cannot be done and how much one can rely on them.

The desire for belonging is perpetuated every time I use the word ‘we’, and when I refer to H&D. Yet it is perhaps impossible to ‘belong’ to a collective, in the possessive, or stable sense of the term ‘belonging’. Collectives do not fix or replace the insufficiency of established domains, disciplines, institutions. Collectives are unreliable and difficult to discipline—they are not a recipe, not an entity, not a site, or a method—yet they may involve all of these things. By challenging fixed definitions, I do not intend to “throw everything into the same pot, to efface the distinct features of the various parts within the collective.”²⁷ Design and collectivity develop relationships but they cannot be presupposed as relationships of utility and therefore require context-specific nuances when articulating and practicing collectivity. Working *with* or being involved *with* collectives, rather than “*at* H&D we do...” , or “I am working at H&D” is an important difference. In my view, such nuances differentiate collectivity and collectives from other modes of working together.

To recap: In this section I discussed how collectivity tends to be conceptualized in moments of disorientation, taking as an example the crises of disciplines

in the field of design. The call for a ‘collective approach’ presumes collective design practice to act as a potential resolution to conditions which have brought about disorientation. What is disregarded in articulating collectivity as a suitable response to ‘de-disciplining’ is the possibility that collectivity may also be a repercussion and/or be perpetuating unstable conditions. Yet, thinking with Sara Ahmed’s queer phenomenology,²⁸ I came to wonder if a state of disorientation could also become the starting point for moving towards other understandings and articulations of affiliation that may be more reflective of their entanglements with the environments they find themselves involved in.

Self-organized

The notion of ‘self-organization’ often occurs along with collectivity. The term is often used interchangeably with ‘self-initiated’ or ‘artist-run’. “Taking things into one’s own hands” is often connoted with empowerment and self-determination. H&D did not intend to become ‘an’ organization. It seemed to grow and mature by itself. As a self-organized collective, H&D could also be understood as an accidental collision of people and conditions—as if it has organized itself. There was no prefigured plan or distinct moment where organizational principles were explicitly decided upon and then followed through. Following up on the previous section in which I hinted at the ways articulations of collectivity tend to be used to temporarily fill gaps, I will now move to a discussion of my time at the Sandberg Instituut in Amsterdam. This institution has close connections to my practice as a designer and educator, in addition to my activities as a member of the H&D collective. Many

27 Bruno Latour, “A Collective of Humans and Non-humans” in *Pandora’s hope: essays on the reality of science studies*. (Cambridge, Mass: Harvard University Press, 1999).

28 Sara Ahmed, *Queer Phenomenology Orientations, Objects, Others*. (Durham: Duke University Press, 2006).

of H&D's members studied art and design at Sandberg Instituut too. I will reflect upon my experience of this educational environment as a design student and then as an educator, with particular attention paid to the ways tropes of collectivity as supposed forms of empowerment, articulated through principles of 'self-organization', are perpetuated within such an institution.

At the time I commenced the Master course in Design at the Sandberg Instituut in 2009, disciplinary boundaries or affiliations were not really of concern. I was motivated to apply by what I knew about the educational culture at this department, a self-determined approach to studying and designing. I recall that during talks with classmates and tutors at the design department, the notion of 'collectivity' recurred frequently and alongside 'self-initiation' or 'self-organization'. I remember the former department head, Annelys de Vet, telling us students upon our arrival in the first week: "This is a space in which you can self-organize. That also means, if you just sit on your chair and wait, nothing is going to happen." I perceived this statement as an invitation to us students to become actively involved in shaping the curriculum and the learning environment. To me, it was an expression of trust in our abilities to take things into our own hands.

In the book *Self-organisation/Counter-Economic Strategies* (2006), the Superflex collective wrote in their introduction that the concept of self-organization is often "used in relation to certain kinds of social groups or networks; in this context, the term does not have a strict definition, but broadly speaking it refers to groups that are independent of institutional or corporate structures, are non-hierarchical open and operate participa-

tory decision-making processes."²⁹ When I think back to my arrival at the Design Department and how we were prompted to self-organize from the get-go, I also have to think about how it had actually been a struggle to get myself organized in the first year of my Master studies at the Sandberg Instituut. Nothing in this environment was as I knew it from my German design education. In addition to there being no seminars, grades or assignments, the difference between art and design did not seem to matter to the department. The manner in which the Design Department of the Sandberg Instituut sustained a certain openness and flexibility towards students' changing needs and interests, is reminiscent of the ways in which curricula, criteria and social conduct were developed 'on the go' at the Haagse Vrije Academie (HVA), which opened its doors in 1947 in The Hague (and closed in 2015). As part of her PhD dissertation, art historian Saskia Gras researched the history of the HVA and the ways in which the pedagogical approaches were perceived by the students.³⁰ At the HVA the notion of expertise and disciplinarity and what commonly qualified as art and design, was fundamentally challenged.

The artist Livinus van de Bundt was inspired by Parisian académies libres, 'Progressive education' (Montessori education) and founded the HVA on the basis of the idea that an art school should be open to anyone who has the ambition to study but perhaps lacks the financial means or academic qualification. The KABK (Royal College of Art The Hague), which was at the time the other—more established—art academy in The Hague, was perceived by educators and students at

29 Will Bradley, Mika Hannula, Cristina Ricupero, (Superflex), *Self-organisation/Counter-Economic Strategies*, (Berlin: Sternberg Press, 2006), 5.

30 Saskia Gras, "Vrijplaats voor de kunsten: de Haagse Vrije Academie 1947–1982," (PhD diss., Leiden University, 2017).

HVA as a normative and authoritative form of art education, and pushed students to work towards predetermined artistic goals. At HVA there were no fixed goals or criteria for assessing students' work. The notion of freedom was understood in a way that the students themselves should define their own criteria for 'good' and 'bad' art and design. The personal growth of a student was more important than the outcomes they produced or the time it took them to accomplish their studies.

Gras also points out that the manner in which the HVA was (dis)organized³¹ seemed intertwined with the ways students affiliated strongly with the learning environment. Students were involved in decision-making, thus they took part in shaping the learning environment. Gras writes about the emphasis on connecting artistic exploration to social and political questions—however, not from an intangible distance, but from *within* the organization and the sociality of the learning environment itself. The notion of the social was constituted by the ways people came together to organize, learn and produce art and design, which in turn influenced the very structure and mentality of the learning environment, and the ways students developed as makers.

I came to wonder about the implication of chaos as an organizing principle within learning institutions today, about potential issues arising from asking students to self-organize, that is, when self-organization is not a mode of self-actualization but a prerequisite to sustain continuity for education. In her essay "The Tyranny of Structurelessness" (2019), Jo Freeman critiqued the

prevailing structureless organizing principles of social justice movements, more specifically the US women's liberation movement in the 1970s. According to Freeman striving for 'structurelessness' in organizations is as useful as it is deceptive:

*"The idea of 'structurelessness,' however, has moved from a healthy counter to these tendencies to become a goddess in its own right [...] People would try to use the 'structureless' group and the informal conference for purposes for which they were unsuitable out of a blind belief that no other means could possibly be anything but oppressive."*³²

Today, the students at the Design Department of the Sandberg Instituut, the same institution where I studied 12 years ago, tell me stories about their experiences studying at the department that are similar to my own. When social ties and affiliations within a group have not been established, the task of self-organizing can actually become a lonely struggle. When everything is mutable and responsive to change, an environment can become rather difficult to navigate. While the idea of self-organization and self-determinacy is charismatic and attractive, cited by many students as reasons for wanting to study at the Design Department, they also experience recurrent disorientation and ask for more structure. It is challenging to respond to these changing needs within a structure that builds upon principles of structurelessness. Under neoliberal conditions that are also very apparent inside learning institutions (for example, tutors

³¹ According to Gras, pursuing research about an institution that regarded chaos as an educational principle and that resisted ordering principles in its own organizational practice, created some difficulties. Archives and documentation were hard to retrieve. Saskia Gras, "Vrijplaats voor de kunsten: de Haagse Vrije Academie 1947–1982" (PhD diss., Leiden University, 2017).

³² Jo Freeman "The Tyranny of Structurelessness," first published in 1970, in *Collective Conditions*, Constant Association for Art and Media, 2019.

at the Sandberg Instituut are hired as freelancers with short-term hourly agreements), prevailing fragmentation and flexibilization of work conditions, study and life, the relationship between self-organization and precarization are closely interlinked, and continue for students after their studies are concluded, and for tutors after they leave the classroom. The H&D collective may be a continuation of such unstable conditions that already evolved when we were still in art school.

Ahead of ourselves

We were on a bike ride from the last H&D Summer Academy in 2018 towards the location where we would celebrate, dance and eat together. Juliette and I euphorically reflected on the experiences we just had, while negotiating the Amsterdam traffic and a group of twenty summer academy participants trying to follow us on their bikes. We felt energized and forged plans for possible next iterations of this annual intensive workshop program and were eager to share our ideas with the rest of the group—all the while feeling a slight guilt about forestalling a more equitable process of proposing and discussing ideas between all members of the collective.

At a distance H&D may be perceived as ‘an organization’, a cohesive whole. From within, the experience of self-organizing can be more blurred, as ‘one thing leading to another’, which can make it difficult to uphold the conception of self-organization as an emancipatory act, or an empowering process. The ‘self-’ of a collective

is not easy to discern in terms of *who* or *what* takes part. There is a definition of self-organization that may be more suitable to understand collectivity-in-action. Deriving from the natural sciences, self-organization describes how particular systems “have a tendency to develop, and take new and more complex forms, in a seemingly unplanned fashion without the influence of an external or central authority.”³³ In this estimation, self-organization is then not about independence but interdependence, about coming-into-being as a process of mutual entanglements.

Being involved in self-organization in the context of the H&D collective, I experience it as an inventive praxis that requires constant (self-)reflexivity and reconsideration of organizing principles, in relation to emerging conditions, other collective configurations, other contexts, other people, other tools, other challenges and needs.

In their text “Nautonomat Operating Manual”, the Raqs Media collective invented a helpful term—‘nautonomy’. It “re-articulates and re-founds the ‘self-organizing’ principle inherent in what is generally understood as autonomy, while recognizing that the entity mistakenly called ‘self’ is actually more precisely an unbounded constellation of persons, organism and energies that is defined by its capacity to be a voyager in contact with a moving world.”³⁴

The concept of *nautonomy* is to some degree illustrated in my anecdote of the bike ride, where we cycled metaphorically and literally from one H&D Summer Academy to the next, all the while negotiating (imagi-

33 W. Bradley, M. Hannuia, C. Ricupero, (Superflex). *Self-Organisation. Counter-Economic Strategies* (Berlin: Sternberg, 2008).

34 Raqs Media Collective, “Nautonomat Operating Manual. A Draft Design for a Collective Space of ‘Nautonomy’ for Artists and their Friends,” in *Mobile Autonomy. Exercises Artist’ Self-organization*, N. Dockx, P. Gielen, eds. (Amsterdam: Valiz: 2015).

nary) boundaries of unspoken organizational principles. I relate these indeterminable moments of forging plans, to what Bruno Latour described as an organizational script. Organizational scripts, according to Latour, “circulate through a set of actors that are either assigned some tasks or are in a momentary state of crisis to re-instruct the scripts with new instructions for themselves or others.”³⁵ Oftentimes, it is in unplanned and short-lived moments in which organizational scripts are re-instructed, spontaneously emerging epiphanies of looking back and forward, that become transitional. As such moments switch timelines, people and contexts, and inventive offshoot ideas evolve into plans for the future.

To recap, in this section I have tried to critically inquire into whether articulations and actualization of collectivity, of which ‘self-organization’ was my example, may also be manifestation of the failure to achieve what it seems to promise—for example to create ‘community’, or to function as a form of empowerment. I propose considering self-organization as critical self-reflexive practice, intertwined with the unstable conditions we find ourselves in—as a way of questioning our collective ties. Why and how do we associate with one another? Our involvement in self-organized collectives may indicate the manner in which they/we are continuously configured anew and never fully achieved. In their potential to be inventive, collectives resist stability. Therefore, in my view, collectivity cannot and should not be taken as a model or prerequisite for formal organization, that is, to patch up institutions’ omissions.

Specialized amateurs

Self-organized collectives, such as H&D, necessitate ongoing (re)articulation of what it is we do, how we do it, why we do it and how we speak about it. That is, our activities blend people, tools, and technical infrastructure together, blurring disciplinary boundaries, distinctions between user and maker, friendships and work relations. Therefore, collective conditions require a certain self-awareness about what one is familiar with most likely deviates from what other people are familiar with (in terms of discipline-specific jargon, daily work routines, tools and methods, and educational formats). In fragmented and fast-paced collective organizing, short encounters are the main mode of operation. H&D workshops bring together people (including the members of the collective) to do activities we would not usually do in our individual daily work lives. We experiment with other formats, tools and methods. Often, it is the state of *not-knowing* that people have in common in such environments. In the following section, I will interrogate the different meanings and functions of the ‘unfamiliar’ in relation to design and collective practice.

Approaching new tools

In *Blind maps and blue dots* (2021),³⁶ Joost Grootens’ proposes an alternative graphic design history, by focusing on tools, rather than people or products of graphic design. By shifting the focus, the graphic designer (a map-maker using expert tools) moves away from the center of attention. Instead, amateur practices of map-making move to the fore, and into the realm of graphic design. While Grootens does not explicitly focus

35 Bruno Latour, “What’s the Story?’ Organising as a mode of existence,” in *Agency without Actors? New Approaches to Collective Action*, ed. Passoth, Jan-H., Birgit Peuker and Michael Schillmeier (London: Routledge, 2011).

36 Joost Grootens, “Blind Maps and Blue Dots. The Blurring of the Producer-User Divide in the Production of Visual Information,” (PhD diss., Leiden University, 2021).

on collective practices, there are a number of aspects from his proposition for a tool-based history of graphic design that resonate with my particular inquiry into collective practice and its relation to design. His reorientation from iconic figures in design (individual people and objects) to processes and tools, enables other possible perspectives and graphic design practices. For Grootens, this shift in focus from individuals towards tools led to considering practices that may not be recognized as legitimate, but also do not depend on disciplinary approval or expert tools.

Educated as a graphic designer myself, there was a moment when my everyday tools, media design software such as Adobe InDesign and Photoshop, became harder to ‘hack’. That is, it became more difficult to find pirate copies that I did not have to pay for. Renting software felt like entering an expensive membership-only club. At the same time it became increasingly difficult to imagine other tool ecosystems. Everyone and everything surrounding me seemed to have established fundamental dependencies on Adobe Creative Suite/Cloud; collaborating designers, photographers, illustrators, post-production firms, printing presses.

Design students are not offered many options when it comes to deciding which design tools they would prefer to work with (invest in, establish skills in, develop long term relationships with and come to depend on). While offered at cheaper rates, or for free, or pirated in art schools, Adobe software is often posited as the only option and is increasingly hard to avoid. Once a student graduates, it turns into a costly service—unaffordable for small scale businesses and independent designers. These discrepancies reinstate arbitrary borders between ‘professional’ and ‘amateur’ software use. More than once, I resolved to break ties with Adobe and to switch instead to free and open

source alternatives entirely (replace Photoshop with Gimp, Illustrator with Inkscape, InDesign with Scribus). So far, I’ve only succeeded sporadically. The moment of complete software make-over is yet to arrive. I came to understand that it is not solely my individual choice that determines what tools I work with. Rather, a whole net of socio-technical relationships have evolved around certain ways of learning and working in graphic design, which has inevitably solidified my ties with certain tools, making outright refusal seem inconceivable. Transformation within socio-technical relationships and practices cannot be done individually. Rather, such a transformation necessitates a systemic shift in design practices and software usage.

In the context of H&D’s, we experiment with publishing tools. These are self-made, appropriated or repurposed design software that allow us to create page layouts in an unusual manner. These processes may remind of generative design principles, where the influence or control of the designer is limited to predefined variables and the outcome retains a kind of surprise effect.³⁷ At other times, the design process is rather inefficient and convoluted and requires an extraordinary amount of manual labor. Such methods and tools break with design habits, the usual ways to design a page layout,—for instance how it would be done using layout programs such as InDesign. Furthermore, the process of developing experimental tools and publications tends to be distributed across different workshop situations, different people, different technical infrastructures, and is driven by spontaneous curiosities as much as by a commitment to capture and share the otherwise ephemeral and fragmented formats and practices of H&D with others.

³⁷ Sivam Krish, “A practical generative design method,” *Computer-Aided Design* 43, no. 1, (January 2011): 88–100.

Grootens used the term ‘amateur’ to refer to map-makers who may go unrecognized as designers by established design disciplines. Such ‘amateur map-makers’ seem to establish other kinds of relationships to their tools. According to Grootens, the maps they produce are more truthful in the sense that they display more openly the very process that brings them into being. By shifting the focus away from ‘professional’ designers and their expert tools, the process of amateur map-making becomes increasingly visible.³⁸ Such amateur maps are outcomes of a specific kind of tool-designer relationship that is perhaps not yet marked by discipline-related dependencies. Therefore, these maps exhibit more about their coming-into-being than a finalized design object and are thus more discursive. Similarly, the convoluted, distributed, inefficient manner in which H&D designs publications, may also function as a tactic to circumnavigate design conventions, but also to create a community of toolmakers and tool users, and a potential discourse around *other* possible tool-designer relationships.

Small gestures

I participated in a workshop facilitated by An Mertens and Michael Murtaugh (‘Constant Association of Art and Media’) during the first edition of the H&D Summer Academy in 2015.³⁹

38 Grootens described such ‘amateur maps’ as visibilization rather than visualizations. Joost Grootens, “Blind Maps and Blue Dots. The Blurring of the Producer-User Divide in the Production of Visual Information,” (PhD diss., Leiden University, 2021).

39 “Code text and text-to-speech” workshop facilitated by An Mertens and Michael Murtaugh, https://hackersanddesigners.nl/s/Summer_Academy_2015/p/Code_text_and_text-to-speech, last accessed May 2022.

I remember one moment particularly: An ran a Python script in the command line of her computer. I was not familiar with using the command line or Python. I followed her actions on a projection on the wall. She typed something into the command line and hit enter. An error message appeared. An’s response (surprised yet somewhat delighted): “Interesting!” I remember that I was puzzled by her comfort, as the error message somehow seemed threatening to me. An used the occasion to explain how error messages can actually be quite generous in the way they expose information about how a program functions. The moment taught me several things. The importance of not giving up with every occurring error, but also how the exposure of unexpected errors can become an occasion to work or think through something together—in the presence of others, how to approach the condition of ‘not knowing’ not as a weakness but as an opening for others to enter into a dialogue.

Contextualizing amateurism

The meaning and approach of the ‘amateur’ resonated within the context of H&D (I have literally heard members of the H&D collective proclaiming “We are just a bunch of amateurs!”). However, as I will point out in the following section, dichotomies such as the amateur and specialized practitioner need to be considered with caution.

In the context of design practice, the counterpart of the figure of the amateur is the expert—a person who is experienced and knowledgeable, someone who

obtained control over a specific skill, or holds authority in a specific field of knowledge. In *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation* (1987) Jacques Rancière recounts the story of a school teacher, Joseph Jacotot, who developed teaching methods for illiterate parents to teach their children how to read.⁴⁰

Rancière proposes that the teacher can inhabit the position of a non-expert. The non-expert empowers the student in ways that the ‘master explicator’ cannot. An authoritative teacher figure will always remind the student of what they do not know, that they will never be able to know as much as their teacher. Philosopher and educator, Paulo Freire, referred to this transactional relation between the teacher (the one who transmits knowledge) and the student (the one who receives knowledge and who did not possess this knowledge before), as a ‘banking model’ of education, which “transforms students into receiving objects. The ‘banking model’ of education is an “approach to learning that is rooted in the notion that all students need to do is consume information fed to them by a professor and be able to memorize and store it.”⁴¹

The figure of the ‘amateur’, as it sometimes appears in the context of H&D, inhabits modes of teaching and learning at once. Yet, I started to question if sustaining assumed dichotomies between ‘specialist’ and ‘amateur’, particularly in articulating the role and functioning of experienced self-organized collectives such as H&D, might risk downplaying socio-economic implications. The notion of the ‘amateur’ has a problematic history of appropriation in the context of graphic design. Designer and researcher Ruben Pater wrote in his book *CAPS*

LOCK (2021) about “how professional standards came into being and how they led to some people being paid and finding recognition for their graphic design work and some not.”⁴² The tendency of so-called professional graphic designers to turn towards ‘amateur’, ‘vernacular’ or ‘anti’ design is indicative of a certain extractivist tendency in designers to turn towards what is ‘low-brow.’ Pater, therefore, prefers to refer to such practices as unpaid design practices rather than amateur practices.

The expert-amateur dichotomy and its relation to the divide between paid and unpaid labor also relates to the way in which work tends to be implicitly ‘devalued’ in the context of the H&D collective, by placing what we do into the scope of fun ‘not-too-serious’ experimentation. Simultaneously, H&D takes part in the Dutch cultural landscape. H&D’s activities are funded by the Dutch Creative Industry Funds. Furthermore, H&D is frequently invited to host workshops at art and design schools, academic symposia and art, design and technology festivals. Thus H&D participates in shaping a certain learning economy that leverages short-term learning formats. The relationships between those involved in H&D are loose. There are no presupposed obligations or dependencies. Whether it be the co-workshoppers we meet, the tools, technologies and methods we learn about, minor commitments and ‘not-too-serious’ experimentation are a fuel for collectives such as H&D. By organizing, hosting and attending many of the short-lived, self-organized activities—including designing ad hoc publications, embracing chaotic organization styles—ignorance (to use Rancière’s term) becomes a ‘professional’ collective skill that is practiced (and funded).

40 Jacques Rancière, *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*. (Stanford, Calif: Stanford University Press, 1991).

41 bell hooks, “Engaged Pedagogy,” in *Teaching to Transgress* (New York London: Routledge, 1994): 14.

42 In his reflection on the notion of the ‘amateur’ Pater draws on designer and researcher Sasha Costanza-Chock. Ruben Pater, *CAPS LOCK* (Amsterdam: Valiz, 2021), 317.

Unknown outcomes

In *The Experimenters Chance and Design at Black Mountain College* (2015),⁴³ the art historian Eva Días discusses how the concept of contingency or letting go of control in a design process, was perceived, practiced and taught at the Black Mountain College. Black Mountain College (BMC) was an art and design school that existed from 1933 until 1957 in North Carolina, and was known for its interdisciplinary and experimental approach to art and design education. BMC built upon John Dewey's principles of experience-based education. At BMC they practiced holistic, non-hierarchical methodologies that attempted to decrease distances between students and educators, but also the distance between daily life and the production of design and art. Students were required to participate in farming work, construction projects, had kitchen duties and were involved in decision-making at various levels of the institution. BMC was about learning to design from *within* rather than *for* a social context.

The interest in contingency as part of design and art production at BMC was described by Días as arising from the desire to break with routines, setting into motion a process of defamiliarization with what one has become used to, such as one's ways of looking at things, one's skills, or thinking patterns. At BMC John Cage staged unrehearsed performances and initiated improvisation workshops to break with the expected (Chance Protocol). In Días' account on the different approaches and motivation for turning toward the unexpected at BMC, they all had rather distinct ideas and expectations regarding the topic of the unforeseen, yet they shared "the impulse to change and control future

conditions, moving toward unforeseen experiences as quest toward new, more adequate, and politically progressive and inclusive understanding of the world."⁴⁴

The protagonists in Eva Días' book,⁴⁵ apparently argued over degrees of contingency during their time at BMC. However, according to Días, they shared the belief that experimentation in art and design education, welcoming chance and the unexpected, would be "a means to think about social stakes of form in a collaborative, interdisciplinary fashion, and to rework outmoded, routinized production that led to repetition and stagnation."⁴⁶

As designers, we set conditions, protocols, we leave parts of the process up to chance in order to be surprised by the outcome and learn to embrace the unexpected as part of a design process. Contingency can be achieved through a variety of strategies that involve including *others* in the design process—other people, other tools, other materials, and other conditions. In collective design practice, there are subtle and yet significant differences in the meaning and expression of the unknown that seem to be intertwined. On the one hand, the activity of playful experimentation enables turning towards the unexpected with curiosity, a certain openness towards the possibility of failure. On the other hand, this openness also reflects a more general condition, that is, a form of not-knowing that derives from uncertainty and instability of working and living conditions.

The concept of contingency in the context of BMC (through Días' analysis), the interest in working with the

⁴⁴ *ibid.*

⁴⁵ Eva Días focuses on the Black Mountain College artists Josef Albers, John Cage, Buckminster Fuller. Eva Días, *The Experimenters. Chance and Design at Black Mountain College*, (The University of Chicago Press, Chicago, London, 2015).

⁴⁶ *ibid.*

⁴³ Eva Días, *The Experimenters. Chance and Design at Black Mountain College*, (The University of Chicago Press, Chicago, London, 2015).

unknown as a design principle, was also related to a larger (social, economic, political) context that necessitated breaking with routine perspectives and practices. The motive for embracing chance was related to an urgent need to reimagine and exercise other modes of living and working together. The introduction of contingency as a design principle exceeded its purpose which was to establish a method for producing design products differently. It was part of articulating and exercising other collective imaginaries for working and living together.

H&D is sometimes approached as if it were a design agency, or web development office, which is to some degree understandable as some projects that evolve from H&D look closely at what a design studio may produce. Yet there is a difference, which has to do with a certain level of unpredictability that exceeds the general acceptance of what can be left up to chance. When people approach us with invitations to design books or websites, they seem to be drawn to the experimental character of what we do. Yet I noticed there is a threshold to what is generally accepted as 'experimental'. In introducing the requirement for somewhat concrete outcomes, in the finite/final understanding of the word 'outcome', collaborators can (unknowingly) introduce other forms of responsibility and attachment, than the collective is attuned to.

To recap: In this section I paid attention to subtle yet significant differences in the meanings and functions of what is *not* familiar, in relation to design and collectivity. Self-organized workshops offer occasions for experimenting with different tools, in a different context, with different people and may bring about other collective imaginaries around design practice—possibilities for rethinking the manner in which designers affiliate with certain tools and build communities around other kinds of tool-building and use. The 'amateur' approach

in such contexts may offer the opportunity to escape pressures and the confines of specialized design work. However, differentiating such short-lived socio-material experiments as 'not-too-serious' and 'not professional', risks obscuring the implications of such collective design practices in relation to the environments and conditions they are working within.

Approaching the 'we' in collective design practice

In previous sections the question arose, how can collective conditions be negotiated when principles of unresolvedness, inefficiency, and chaos move from being just spontaneous occurrences to becoming stabilized modes of operation? Collectives also take part in shaping the socio-material conducts of the environments they interact with, while moving through different spheres of knowledge, disciplines, informal as well as institutional learning environments. Taking the aforementioned example of building experimental publishing tools and making experimental publications in the context of H&D, the collective aspect of such a design practice cannot be explained solely through a designed object—the publication itself. To articulate the meaning of such an object, one has to shift the focus towards the manifold of people, things, environments and practices this object has assembled throughout the process of its making. The question that arises is how to approach and account for the 'we' in collective design practice, if it is in a constant state of change.

The struggle I experience with designing *for* collectives is similar to the challenge of writing *about* collectives. At the beginning of my research trajectory, I tried to write without really knowing who I was writing for and from which perspective I was writing. In retrospect,

I recognize there were various hesitations at play, which I have not necessarily resolved but I have found ways to make sense of and negotiate. Considering that my research involves many actors and ‘actants’, with whom I have had both personal and professional relationships, one of my concerns was that I would speak on behalf of others. That is, claiming a position that is not mine, that I can only partially understand and run the risk of misrepresenting. How to account for and make visible the many voices and perspectives that have informed this research project?

As collectivity is never inert, but rather in constant process, it is difficult to document its characteristics in ways that translate meaningfully across contexts. I am usually suspicious of enthusiastic narratives and photo slideshows of workshop situations, which tend to convey only one message: “We had a great time. You had to be there!” However interesting collectivity looks in these pictures, the actual experience is often quite different. I have therefore been on the look-out for *other* forms and formats of articulating collectivity that are not necessarily more truthful but perhaps more useful. I relate this to Lauren Berlant who wrote: “Form is not only a wish for a refuge, a cushion, it is also social, an exposure, a meditation, and a launching pad in relation to which beings can find each other to figure out how to live in a movement that takes energy from the term “movements” political resonance”.⁴⁷

I have been trying to work through these concerns by considering an approach to designing and writing *with* collectivity, which starts by paying attention to what is already there—the unresolved and unpolished

yet expressive materials and gestures, ephemeral how-tos and readmes, workshop scripts, code snippets, spreadsheets and note taking pads. I have been writing ‘case stories’—combinations of personal anecdotes of everyday collective experiences interwoven with theoretical analysis, which recalibrated my perspective on what is significant to pay attention to. Writing anecdotes helped me to ‘see’ mundane aspects of collectivity that turned out to be influential turning points. Such everyday tales are often rendered invisible within existing frameworks of analysis as defined by design’s disciplinary imperatives. The case stories became my approach to articulating collectivity and design in a situated manner, from a perspective that I can account for to a certain extent and that acknowledges the perspective from which I am writing as necessarily partial. Due to its subjectivity and the attempt to locate that subjectivity, these case stories offer a specific perspective as opposed to a generic one.

Conclusion

In this chapter, I set the scene for the following chapters by contextualizing my understanding, appreciation and frustration with collectivity in relation to my education and work as a designer and design educator. By considering various angles, I have argued that collective design practice needs to be understood and articulated beyond terms of purposefulness and togetherness. Self-organized collectives bring people, tools, and technical infrastructure together and blur disciplinary boundaries, distinctions between user and maker, friendships and work relations. They therefore necessitate ongoing (re) articulation of what it is we do and who we implicate in what we do.

⁴⁷ Lauren Berlant, “The commons: Infrastructures for troubling times*,” *Environment and Planning D: Society and Space* 34, no. 3 (2016): 393–419.

Absolute definitions of collective design practices, depicting collectives as antidotes to individualized design practice or alternatives to design disciplines, obscure the manner in which collectives are intertwined with multiple realities, economies and timelines. Characteristics of collectives may be articulated only in retrospect, and begin to solidify in the progression of collective narratives, along with evolving collective vocabularies and socio-technical conducts. While initially not perceived or planned as such, evolving narratives of 'the collective' may become what binds a collective together. H&D is a group that became invested in exploring alternative tools and other ways of learning and working together while experimenting with unusual publishing methods. Simultaneously H&D is a fragile ecosystem of self-employed practitioners who, due to their unstable and diverging socio-material conditions, resort to short-lived, semi-committed, chaotic ways of working together.

Collective imaginaries often occur in moments of uncertainty, frustration or (dis)orientation. Yet, collectivity is not, and should not be, proposed as a solution to the issues at stake. Rather, such practices are symptomatic of unstable, unreliable social, technical, and economic conditions. It is this double-bind of collectivity that requires other perspectives and articulations that move beyond general, positive and contained definitions. It is necessary to work against stable pictures of collectivity, by paying critical attention to inefficient and convoluted ways of designing / organizing / programming, which, in my view, can also be subtle forms of resistance to the acceptance and normalization of such unstable conditions.

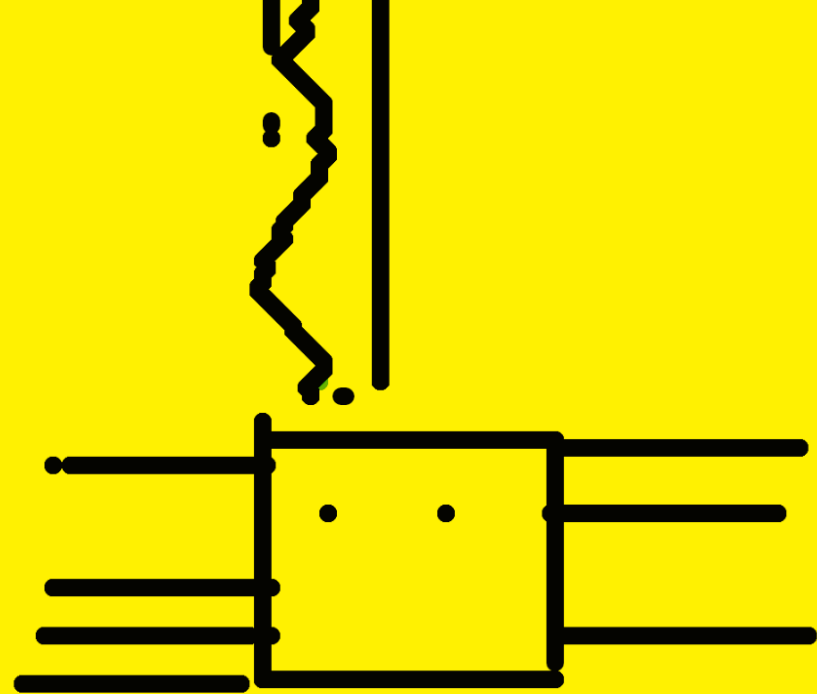
I propose 'designing and writing *with* collectivity', a mode of reflection and practice which, throughout this dissertation, allows me to critically approach articulations and materializations of collectivity and to open up

design perspectives and vocabulary toward the relational, subtle, but consequential interplay of design and collective practice. In the following chapters, I will continue to explore collectivity-in-action. That is, the thresholds of fixation and contingency in collective design practices, through weaving together different formats, articulations, and visual gestures, and by switching registers and timelines.

Bibliography

- Abdullah, Dana. "Disciplinary Disobedience: A Border-Thinking Approach to Design." In *Design Struggles*, edited by Claudia Mareis, Nina Paim, Amsterdam: Valiz, 2021.
- Boelen, Jan and Michael Kaethler, eds. *Social matter, social design*. Amsterdam: Valiz, 2020.
- Abel, Bas van, Klaassen, Roel, Evers, Lucas and Peter Troxler, eds., *Open Design Now*. Amsterdam: BIS Publishers, 2011.
- Ahmed, Sara. *Queer Phenomenology Orientations, Objects, Others*. Durham: Duke University Press, 2006.
- Ahmed, Sara and Anne-Marie Fortier. "Re-imagining communities." *International journal of cultural studies* 6, no. 3 (2003): 251–259.
- Berghuis, Thomas J. "Ruangrupa New Outlooks on Artist Collectives in Contemporary Art." In *Mix & Stir. New Outlooks on Contemporary Art from Global Perspectives*, edited by Helen Westgeest, Kitty Zijlmans, 81–87. Amsterdam: Valiz, 2021.
- Berlant, Lauren. "The commons: Infrastructures for troubling times*." *Environment and planning. D, Society & space* 34, no. 3 (June, 2016): 393–419.
- Bradley, Will, Hannula, Mika and Cristina Ricupero, *Self-organisation/Counter-Economic Strategies*. Berlin: Sternberg Press, 2006.
- Cramer, Florian and Elaine W. Ho. "Collective Organization." In *Making Matters. A Vocabulary of Collective Arts*, edited by Florian Cramer, Janneke Wesseling, 67–75. Amsterdam: Valiz, 2022.
- Cramer, Florian and Elaine W. Ho. "Distribution." In *Making Matters. A Vocabulary of Collective Arts*, edited by Florian Cramer, Janneke Wesseling, 213–223, Amsterdam: Valiz, 2022.
- Dewey, John. *Democracy and Education: an introduction to the philosophy of education*. New York: Macmillan, 1916.
- Días, Eva, *The Experimenters. Chance and Design at Black Mountain College*. Chicago, London: The University of Chicago Press, 2015.
- Freeman, Jo. "The Tyranny of Structurelessness." *WSQ: Women's Studies Quarterly* 41, no. 3 (2013): 231–246.
- Gras, Saskia. "Vrijplaats voor de kunsten: de Haagse Vrije Academie 1947-1982." PhD diss., Leiden University, The Hague, 2017.
- Grootens, Joost. "Blind Maps and Blue Dots. The Blurring of the Producer-User Divide in the Production of Visual Information." PhD diss., Leiden University, 2021.
- Groten, Anja. "Towards critical collaborative practice." *Design Dedication*, edited by Annelys de Vet. Amsterdam: Valiz, 2020.
- Herbert, Stine eds., *Self-Organised*. London: Open Editions, 2013.
- hooks, bell. *Teaching to Transgress*. New York, London: Routledge, 1994.
- Kaiser, Anja and Rebecca Stephany. *Glossary for Undisciplined Design*, Leipzig: Spector Books, 2021.
- Kalantidou, Eleni and Tony Fry. *Design in the Borderlands*. London, New York: Routledge, 2014.
- Krish, Sivam "A practical generative design method." *Computer-Aided Design* 43, no. 1 (January, 2011): 88–100.
- Latour, Bruno. "A Collective of Humans and Nonhumans: Following Daedalus's Labyrinth." *Pandora's hope: essays on the reality of science studies*, 174–215. Cambridge, Massachusetts: Harvard University Press, 1999.
- Latour, Bruno. "What's the Story? Organising as a mode of existence." *Agency without Actors? New Approaches to Collective Action*, edited by Jan-Hendrik Passoth, Birgit Peuker and Michael Schillmeier, 164–177. London: Routledge, 2012.

- Noorda, Ruchama. "ReForm." PhD diss., Leiden University, 2015.
- Pater, Pater. *CAPS LOCK*. Amsterdam: Valiz, 2021.
- Rancière, Jacques. *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*. Stanford, Calif: Stanford University Press, 1991.
- Raqs Media Collective. "Nautonomat Operating Manual. A Draft Design for a Collective Space of 'Nautonomy' for Artists and their Friends." In *Mobile Autonomy. Exercises in Artist' Self-organization*, edited by Nico Dockx and Pascal Gielen. Amsterdam: Valiz, 2015.
- Rich, Kate. "Feral." In *Making Matters. A Vocabulary of Collective Arts*, edited by Janneke Wesseling, Florian Cramer, 273–277. Amsterdam: Valiz, 2022.
- Rodgers, Paul A, "The Concept of the Design Discipline." *Dialectic* 1, no 1 (2017).
- Scotford, Martha (1991) "Is There a Canon of Graphic Design History?" *Graphic Design: History in the Writing (1983—2011)*, edited by De Bondt, S. and de Smet, C. London: Occasional Papers, 2012.
- Tsoukas, Haridimos "Organization as Chaosmos." In *Organization and Organizing: Materiality, Agency, and Discourse*, edited by Daniel Robichaud and François Cooren, New York: Routledge, 2013.
- Wesseling, Janneke. "Art is Going Underground." In *Mix & Stir. New Outlooks on Contemporary Art from Global Perspectives*, edited by Helen Westgeest, Kitty Zijlmans, 89–95. Amsterdam: Valiz, 2021.
- Willis, Anne-Marie. "Ontological Designing—laying the ground." *Design Philosophy Papers* 4, no. 2 (2006): 69–92.



HACKERS & DESIGNERS
HARDWARE HACKING & MODES OF (RE)-PRODUCTION
WITH KAROLINE SWIEZYNSKI AND ARJAN SCHERPEN
THU – AUG 22ND – 19:00 HRS @DEPUNT

HACKERS & DESIGNERS IS AN INITIATIVE THAT BRINGS
TWO PROFILES CLOSER TO EACH OTHER
IN ORDER TO DEVELOP A COMMON VOCABULARY
AND COLLECTIVE DESIGN CONCEPTS

THERE WILL BE SOUP FOR 3 AND
BEERS ARE 2 EUROS.
COLA – THE REAL THING REVOLUTION
(3,- POST 1903 / OR 5,- PRE 1903)

FIGURES ALGORITHMIC RECIPES



Figure 19: SichuanCucumber.png

PAGE 110

How to organize a summer academy

Preface by Arja Grooten, James Bryan Graves, Sally Oldenbacher

The first book in the series is a collection of recipes, stories, and photos from the summer academy.

FIGURES ALGORITHMIC RECIPES

HOT Algorithms

FROM recipes
WHERE
Description LIKE "spicy%"
AND description LIKE "salad%";

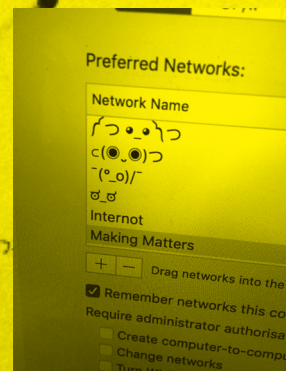
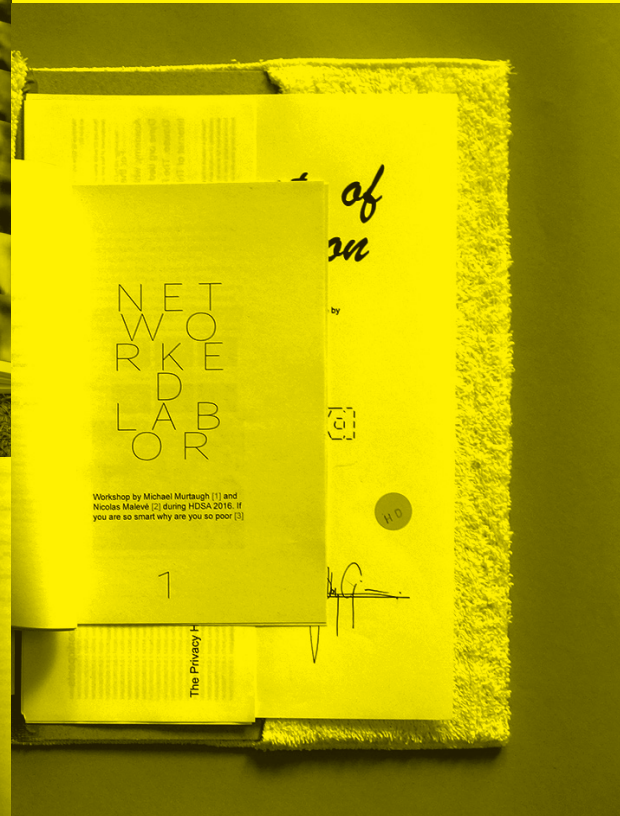
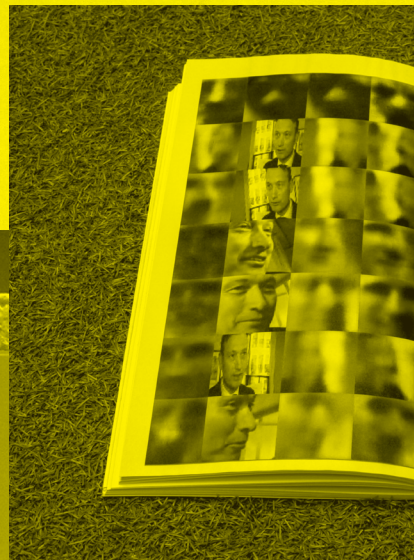
ID 1026
u'Chunky bacon and cucumber salad'
u'A spicy Sichuan-style salad of cucumber
and fried bacon.'

Serves 6
PT30M
PT10M
re = store.find(Recipe, Recipe.id == 1026).any()
print "name", re.name
#print "photo url", fs.photo.url
print re.ingredients.count()
print re.ingredients.count()
for i in re.ingredients:
print i.name

PAGE 111

<MEETUP.COM/HACKERS-AND-DESIGNERS-AMSTERDAM-NL>
<DEPUNT.ORG>

TOP OF HEAD





Preserving the Internet Park

Interview with Jon-Zyle Effner by Juliette Lysotte, designer and member of Hackers & Designers

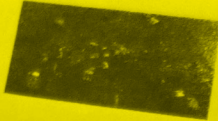
In 2017, Hackers & Designers followed the Peñon to their last Los Angeles event. From downtown, we were really happy to be able to get in touch and collaborate from a distance. We noticed how Juliette does such a great job in interviewing and preserving his own and his team's work.

Juliette: What is your background and how did you become interested in Peñon?

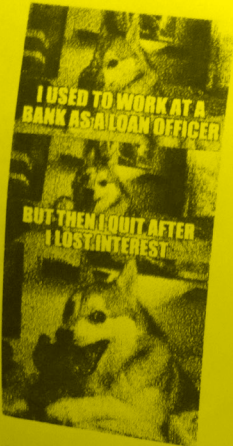
Jon-Zyle: My background is totally unimpressive. I only went to Peñon from a lack of commitment, growing up. I was living in the Northeast of the U.S. in a very small corner of 1980s people. This town had a very bad school system and I was going to school. Because



RAKING BEEN
7 YEARS

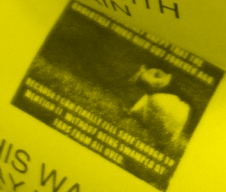


THOUSANDS
UPON
THOUSANDS
OF DAYS



I USED TO WORK AT A
BANK AS A LOAN OFFICER
BUT THEN I QUIT AFTER
I LOST INTEREST

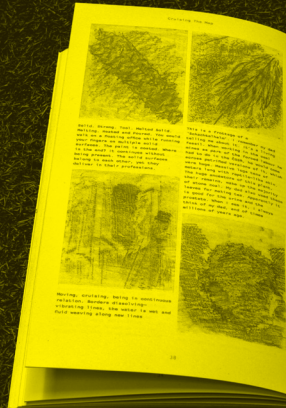
COMPOUNDE
D AND FILLED
FROM ONE
END TO THE
OTHER WITH
THE RAIN



THIS WAS THE
WAY LIFE

ME
T
W ME
SELF

SHOW ME THE
UNIVERSE



the zine

where are the pickles



are you still listening to
pickles

pickles



pickles pickles pickles



yes it is always sticking
their



I don't know if it's still

SEE IT AS
A GAME



ENJOY

PLEASE
DO NOT
LISTEN

HOUT
URE

URE

PRINT
PAGE
PLEASE

FIND A
WAY NOT
TO

AN

EXCISE

Chapter 2: Workshop Production

The workshop is an ambiguous format for time-boxed collaboration. It encompasses a vast range of domains and design practices, crossing boundaries between art and activism, between different disciplines and institutions, between commercial and educational contexts. The pervasiveness and, at times, confusing use of the term ‘workshop’ raises the question; why and how are workshops valued and practiced? My argument draws on different perspectives and understandings of workshops, including the workshop as a site for specialized material production and as a format for assembling groups of people to learn together by practicing new techniques and using new tools. This chapter critically interrogates the workshop as a temporary, dynamic learning environment. More specifically, the significance of the ‘workshop’ as a concept and format for the actualization of self-organized collectives will be discussed.

Introduction

I have been involved in workshops in various roles; as a participant, facilitator, observer and organizer. I have facilitated workshops by myself and with friends and colleagues in the Netherlands and abroad, in art schools,¹ academic and commercial conferences,² art, design and technology festivals,³ within grass-roots

self-organized contexts,⁴ and in the context of client work as a designer.⁵

In fact, workshops have, for a long time, played a prominent role in my work as a designer, educator, and organizer, and have also been central to the Hackers & Designers collective. Yet, it was only after I started this PhD research that I realized I had overlooked the ‘workshop’ as such.

When referring to the workshop ‘as such’, I already touch upon one of the main concerns that is underlying this chapter,—a certain acceptance or unquestionability

- 1 Some examples of workshops I facilitated at art and design schools in the Netherlands and abroad:
2018: ‘Controller Hacking,’ Design Academy Eindhoven, Information Design, The Netherlands. (In collaboration with Heerko van der Kooij)
2018: ‘ctrl-c’, Hochschule für Gestaltung Karlsruhe, Germany.
2018: ‘Challenging interfaces’, KASK, Gent, Belgium.
2018: Live coding workshop, Aalto University School of Arts, Design and Architecture, Helsinki, Finland. (In collaboration with Jamesy Bryan Graves)
2017: ‘Face the Interface’, 1-week workshop, Design Master, Sint Lucas, Antwerp, Belgium.
- 2 Selection of workshops I facilitated at academic and commercial conferences:
2020: ‘Network Imaginaries’ at ‘Glossary for Undisciplined Design’ symposium, GfZK Leipzig, Germany. (In collaboration with Juliette Lizotte)
2019: ‘Interfacial Workout’, ‘POST Design Festival 2019’, Copenhagen, Denmark. (In collaboration with Loes Bogers and Selby Gildemacher)
2018 Workshop about the ‘Feminist Search Tools’ at ‘Society for Artistic Research’ conference in Plymouth, UK.
2018: ‘Smart Cities’ workshop and talk, University of Twente, The Netherlands. (In collaboration with Dani Ploeger and Lucas Evers)
2018: ‘Tools for co-creation and situated making’, talk and workshop at ‘In/equalities - Narrative & critique, resistance & solidarity Conference’, Central European University, Budapest, Hungary.
- 3 Selection of workshops I facilitated in the context of art, design and technology festivals:
2021: ‘Chattypub’ workshop with H&D at the summer festival ‘DigIt’, at GfZK, Leipzig, Germany. (In collaboration with André Fincato, Heerko van der Kooij and Karl Moubarak)
2017 Zine making workshop at the conference MAKE!, organized by the Willem de Kooning Academy, in Rotterdam, The Netherlands.
2016: Presentation and workshop, FORMS Festival, Toronto, Canada. (In collaboration with James Bryan Graves and Selby Gildemacher)
2016: ‘The Momentary Zine’, Northside Festival, New York. (In collaboration with James Bryan Graves and Selby Gildemacher)

- 4 Selection of workshops I facilitated in the context of grass-roots self-organized environments:
2013: ‘Our Autonomous Life?’ workshop, at the Metelkova squat in the context of the ‘City of Women Festival’, Ljubljana, Slovenia. (In collaboration with Maiko Tanaka, Klaar van der Lippe, and Bart Stuart)
2015: ‘The Momentary Zine’, at ‘Zinefest Berlin’, Germany. (In collaboration with James Bryan Graves and Selby Gildemacher)
2013: ‘Dramatize your Housing Struggle’, 4-day workshop, MilesKm residency, Rood Noot, Utrecht.
- 5 Selection of workshops I facilitated in the context of design commissioned design work:
In 2018 I facilitated a ‘paper prototyping’ workshop for a group of gender studies researchers, who commissioned me to develop an online exhibition. The workshop took place at the conference ‘In/equalities - Narrative & critique, resistance & solidarity’, Central European University, Budapest, Hungary. The final website, which I developed in collaboration with Joana Chicau, can be accessed at: <https://footnotesonequality.eu/>, last accessed: February 2022.
Between 2013 and 2014, I facilitated monthly workshops with the editorial team at Perdu, a center for experimental poetry in Amsterdam. The purpose of these workshops was to design the monthly printed newsletter ‘Post Perdu’ together. Opening up the design process to the editorial team gave me, as the designer, the possibility to discuss and develop a better understanding of Perdu as an organization, its history, the people who worked there, and the audience. The workshops and the conversations deriving from the workshops served as input for a new visual identity, which I was developing simultaneously at the time, and which can still be seen on the website: <https://perdu.nl/nl/>, last accessed: February 2022.
Examples of the ‘Post Perdu’ newsletters/posters:
<https://perdu.nl/nl/archief/2013/r/post-perdu-201310/>
<https://perdu.nl/nl/archief/2013/r/post-perdu-201311/>
<https://perdu.nl/nl/archief/2013/r/post-perdu-201312/>

of the workshop in general terms.⁶ The term ‘workshop’ travels through a manifold of contexts, crossing boundaries between art and activism, between different disciplines and institutions, between commercial and educational contexts. It is perhaps due to its flexible characteristics that it is co-opted frequently. At times, it seems anything can be a workshop. Furthermore, the workshop format is often expected to be highly productive, where outcomes can be achieved, learned or produced within a short amount of time. Some workshops draw inspiration from rapid prototyping,⁷ sprints,⁸ or

6 After I began work on this chapter, a conference titled “The Workshop. Investigations Into an Artistic-Political Format” was organized by ICI Berlin Institute for Cultural Inquiry. I attended the conference and felt affirmed in my endeavor to look closely and critically at the specificities of the workshop, its various lineages, understandings and adaptations in different fields of knowledge. The conference description aligned with the concerns of this chapter, “This international conference will investigate the workshop at the intersection of art, politics, and economy, examining the format both in its historical success and in its relevance for current notions of collectivity.” <https://www.ici-berlin.org/events/the-workshop/>, last accessed May 2022.

7 In the context of workshops that have crossed my paths the notion of rapid prototyping broadly describes a process that leads to certain workshop outcomes. To give one example: “Yes, we will be building prototypes in one day! [...] In the first half of the day we will [...] create a storyline and explore sensory aspects to incorporate in the virtual environment. The other half we will spend on building (and testing) a rapid prototype.” Border Sessions, Labs, “Building a VR Empathy Machine” <https://www.bordersessions.org/lab/building-a-vr-empathy-machine/>, last accessed October, 2018.

8 The notion of the ‘sprint’ occurs in the context of ‘agile’ or ‘scrum’ sprint cycles for product-oriented software-development <https://www.agilealliance.org/agile101/>, last accessed May 2022. Kelly Waters “All about Agile. Step 4: Sprint Planning (Tasks)”, “How To Implement Scrum in 10 Easy Steps” (October 2007). <http://www.allaboutagile.com/how-to-implement-scrum-in-10-easy-steps-step-4-sprint-planning-tasks/#sthash.jbSG5ulV.dpuf>, last accessed October, 2018.

The booksprint is another example of time-boxed high-velocity workshop production Mushon Zer-Aviv; Michael Mandiberg; Mike Linksvayer; Marta Peirano; Alan Toner; Aleksandar Erkalovic; Adam Hyde (2010). “Anatomy of the First Book Sprint,” in *Collaborative Futures*. Transmediale, Berlin: April, 2011.

hackathons,⁹ all formats and methods that originate in soft- and hardware development. Alongside the establishment of the ‘new economy’, these modes have become attractive for time-boxed collaboration within tech companies and creative agencies. Such methods frequently appear in workshop outlines at cultural institutions, art and design symposia and festivals, academic conferences, as well as in curricula at art and design schools. In such contexts, the workshop may or may not include soft- and hardware development, however by using such rhetoric (rapid, sprint, agile, marathon), the workshop organizers (perhaps unintentionally) insinuate high-velocity, efficient and result-oriented production.

Taking H&D as an example, it is undeniable there has also been a sustained attraction to the workshop format since the first workshop-based event that I co-organized under the title ‘Hackers & Designers’ in 2013. Since then, the workshop format has been interpreted, practiced and circulated in various ways and has significantly influenced how H&D evolved as a collective. Through the recurrence of the workshop format within H&D’s activities it could be argued that H&D contributes to and feeds off the growing popularity of workshops. In addition, H&D workshops may be implicated in knowledge economies that promote the ease with which the workshop, as a temporary, dynamic learning environment, can be applied to supposedly any context. The overuse as well as confusing use of the term ‘workshop’ and the term’s pervasiveness within this vast range of domains and practices raises the question, why and how are workshops valued and practiced?

9 A ‘hackathon’ (neologism of ‘hacking’ and ‘marathon’) is a time-constrained collaborative soft- and hardware development event. The aim of a hackathon is to combine different expertise of soft- and hardware development to come to a (useful, creative, or unique) product or to find solutions to a problem. Hackathons often focus on a specific topic or technology.

A clue may be found in the word ‘work’ within ‘work-shop’. In his book *The Corrosion of Character: The Personal Consequences of Work in the New Capitalism* (1998), the sociologist Richard Sennett referred to the changing meaning of work and the effects of contemporary flexibilization of work conditions on people’s characters (within the context of Western societies). That is, changing working conditions also influence the ways people build and maintain social relationships. Thus, a person’s ‘character’ does not only imply ‘personality’ but rather describes “the ethical value we place on our own desires and on our relations to others.”¹⁰ In its ambiguity, the term ‘workshop’ blends effectively into the trajectories of contemporary flexible workers who, according to Sennett, do not build carriers in a cumulative fashion anymore. Rather, workers today “are asked to behave nimbly, to be open to change on short notice, to take risks continually, to become ever less dependent on regulations and formal procedures.”¹¹ According to Sennett, the emphasis on flexibility within conceptualizations of work, changed the very meaning of work and the words we use for it.¹² Flexibilization of work may require flexible terms like ‘workshop’ (or ‘collective’, or ‘tool’, or ‘platform’). In its interpretive flexibility the concept and format ‘workshop’ also relates to what sociologists Susan Leigh Star called ‘boundary objects’. A boundary object is “a set of work arrangements that are at once material and processual [...] that allows different groups to work together without consensus”¹³ That is, there is no need for a group to agree on what

10 Richard Sennett, *The Corrosion of Character: The Personal Consequences of Work in the New Capitalism*. (New York: W.W. Norton, 1999), 10.

11 *ibid.* 9.

12 *ibid.*

13 Susan Leigh Star, “This is Not a Boundary Object: Reflections on the Origin of a Concept,” *Science, Technology, & Human Values* 35, no. 5 (2010): 601–617.

defines ‘workshop’ precisely for workshops to be put into practice. In fact, the ambiguity and interpretive flexibility of ‘workshop’ enables it to move between and combine various contexts and sustain various meanings simultaneously. Boundary objects “are at once temporal, based in action, subject to reflection and local tailoring, and distributed throughout all of these dimensions.”¹⁴

Flexible terms such as “workshop” have become part of the common vocabulary used by creative workers, freelance artists, designers and programmers who, according to designer and writer Silvio Lorusso, deal with “disorientation caused by a constant shuffling of the cards [...] ‘living in flexible time, without standards of authority and accountability’ (Sennett, 1999).”¹⁵

My relationship to the workshops is conflicted. On the one hand, workshops’ flexible characteristics have functioned largely in favor of the H&D collective, in the sense that the shared activity of organizing workshops (while simultaneously defining and redefining what that means), is an activity that is equally loose and stable enough to keep doing what H&D’s is doing, and keep those involved in H&D connected. On the other hand, there are certain ethical concerns arising when perpetuating an image of the workshop as a format full of ‘potential’. Building collective ties and practices based on conditions and formats that are flexible, spontaneous and open for interpretation, can become difficult to combine with values such as commitment and responsibility, caring for someone or something long-term. In my view, this tension becomes particularly apparent when workshops are organized with the intention of solving problems or resolving issues. The act of organizing a workshop in and of itself can falsely signal that issues are

14 *ibid.*

15 Silvio Lorusso, *Entreprenariat: Everyone Is an Entrepreneur. Nobody Is Safe*. (Eindhoven: Onomatopee 170, 2019), 44.

being dealt with, while in reality, it often remains unclear how such issues are being dealt with in the long term, and who is accountable for checking on these issues.

The difficulty of defining the workshop, or rather the format's inherent flexibility, contributes to the (mis)conception that anything can be workshopped. Due to the format's ambiguity, it is rather difficult to argue *for* or *against* the workshop as an interesting, productive, appropriate, format, and it therefore also remains unclear what the workshop does or might do in different contexts, what is expected from it, who is responsible for the conditions in which it is organized and the effects it has in the long-term.

Thus, my desire to articulate workshops more precisely, relates to a more essential question: Can workshops be organized responsibly? In order to address this question, it is necessary to pay attention to the two sides of 'workshop'. On the one hand, there are the manifold contexts that shape articulations around workshops, different workshop meanings, practices and legacies. On the other hand, there are some circumstances in which a workshop is not only a flexible format that can be 'applied' to different contexts, but a consequence of uncertainties, contingent and fragmented work and social relations. In the following section, I will focus on different, possibly contradicting registers of workshops.

Workshop: Site and/or format?

Workshop / Werkstatt / Werkplaats

In German and Dutch, the Anglicism 'workshop' is used mostly to refer to the more ephemeral derivation of the workshop. Bringing together groups of like-minded people, the workshop, in that understanding of the term, may be an occasion to meet, spend time together, and work intensively on a specific topic, exploring techniques or tools. Such workshops usually take place within a defined time frame and are somewhat exceptional as they tend to occur outside of daily work routines. Throughout this chapter, I use the term 'workshop format' when referring to the particular meaning outlined above and in order to differentiate it from other meanings of 'workshop'.

In addition to the workshop as a format, the workshop may also be understood as a 'site', the artisan workplace or place of specialized manufacture. In German, the word *Werkstatt* or in Dutch *werkplaats* differentiates the site, the artisanal workplace from the workshop as a format. *Stätte* or *plaats* describes a place that brings together tools, machines and materials, to produce or repair goods. The 'workshop site' centers expertise, skillful processes of working with specific materials, equipment and techniques such as woodwork, textile, metal, electronics, glass, ceramics and metal.

In the context of art and design schools where I have studied and taught, both meanings; *format* and *site* seem to merge at times.¹⁶ In these often international

¹⁶ At the time of writing this dissertation, I studied Communication Design in Germany (BA/Diplom) and in Scotland (exchange year, BA), Design in The Netherlands (Master), and in the U.S.A. (exchange semester, MA), taught at Willem de Kooning Academy, Sandberg Instituut Amsterdam, at the Design Academy in Eindhoven, and as a guest tutor in various international institutions.

and interdisciplinary environments where meanings are unstable and travel with translations, the terms workshop/werkplaats/werkstatt are often used interchangeably and describe sites and/or formats for material and knowledge production. In art schools (and here I am mostly referring to the European / Western art educational context in which I was educated), principles of hands-on as well as interdisciplinary learning are practiced similarly to the way they were practiced at the Bauhaus (founded by Walter Gropius in Weimar in 1919). At the Bauhaus, the workshop was regarded as a place that bridged the divide between making and thinking, in addition to disciplinary divisions such as sculpting and painting. The role of workshops at the Bauhaus was to bring together art and technology in an attempt to provide solutions to the social problems posed by an industrialized, capitalist society.¹⁷

Distinct from the understanding of the workshop as a format, the workshop as a site can also be understood as bound to a fixed location as it relies on specific infrastructure, equipment, and sometimes heavy machinery. Committed and skilled people are required to coordinate, maintain and take care of such facilities. The people running these workshops develop a close relationship to the place. Their expertise, as it is obtained over a long period of time, is intertwined with the particularities of the specific place. Having studied and worked with workshop instructors at art and design schools, their knowledge and ways of working seems site-specific. They know how to produce, repair and

manipulate materials, that is, according to what is available in their specific workshop, aware about its possibilities and limitations.

Workshop instructors shared their knowledge with me, as I have been passing through their workshops as a student and tutor, by explaining how to operate machines, by demonstrating how to apply certain techniques, and by showing off examples with excitement and pride. Donald A. Schön, philosopher and professor of urban planning, described the habitual, embodied forms of knowledge of a skilled maker, as challenging to make verbally explicit. Making processes, according to Schön, entail sequences of skillful judgements, decisions and actions that an experienced maker undertakes spontaneously and without conscious deliberation, a process he terms “knowing-in-action.”¹⁸ The revealing and transmission of such embodied knowledge to others is not explainable solely with words. Rather, it requires demonstration and observation.

In my view, the role of workshop instructor/master as the experienced maker and their acquired knowledge, which Schön has described as habitual and embodied, should not be considered in a vacuum. In a number of workshop contexts that I had access to and was able to familiarize myself with, the demonstration and knowledge of a skilled instructor must be understood in relation to the wider context of the workshop. Importantly, it needs to be considered within the ecology of social relations that take shape within and actively shape a workshop environment. Knowing-in-action is not a solitary process. Rather, it is relational and distributed amongst many. Examples of this relationality are those moments in the workshop when an instructor proudly

17 “[...] to use fundamental craft and design training to prepare young people for the modern, industrially-determined labour market, by bringing art and technology together as a “new unity” to meet the design challenges of the period and to create a new kind of human being by reconciling art and life (Kentgens-Craig, 1998)” Christina Volkmann, Christian De Cock “Consuming the Bauhaus,” *Consumption, Markets and Culture* 9, no. 2 (June 2006): 129–136.

18 Donald A. Schön, *Educating the Reflective Practitioner* (San Francisco: Jossey-Bass Publishers, 1988).

shows off what students managed to create within the specific possibilities and limitations of a workshop. These gestures of slight surprise and astonishment signal a moment of acknowledgment of the relationality of the workshop space.

During two years of studying at the Sandberg Instituut Amsterdam, (master course of the Gerrit Rietveld Academy), I made extensive use of the workshops (werkplaatsen) at the Gerrit Rietveld Academy.¹⁹ I established affinities with certain places. I often visited the printing and book binding workshops. The more often I went, the more I understood what is (im)possible in terms of production. Yet, perhaps even more important, I learned the importance of taking time to get to know the people working there. Workshop instructors developed their own terms which others had to abide by while working in their facilities. Such terms were sometimes explicit but, oftentimes, I had to test the boundaries to find out more about them. I learnt how to read and interpret an instructor's gestures and their implicit ways of choreographing the space. Spoken and unspoken rules seemed necessary to ensure careful treatment of tools and facilities but also to sustain a reasonable and sane work environment.

Workshop sites bring about particular ways of coexisting in the space, social codes and forms of interaction, such as the skill of negotiating the expectations of those who enter the workshop without much experience. I remember rushing into a workshop as a student and taking out my stress, accumulated due to upcoming assessments, on the workshop instructor. My expectations of how much time certain processes would take were quickly recalibrated as they did not align with the

wider ethos, pace and culture of the workshop. It was as if the clock ticked slower in the workshops. I had to learn to attune to these slower conditions, to the gentle rhythm and to the prevailing social conduct.

I learned to cooperate, not to demand things, not to enter the workshop with a predefined idea of what I wanted to execute and when. Instead, I learned to approach a workshop with curiosity and openness, to adjust to its 'vibe'. After all, I was a guest in someone else's domain, and I had to adjust to its boundaries. It seemed out of the question that I might change the music in Kees Maas's silkscreen workshop.²⁰ Whether or not I liked jazz, it would become part of my printing experience. I also remember this particular workshop set up as highly efficient. There was no time to waste, no slippages permitted. Conversations were friendly but short and to the point. One needed to stay focused, to not let the ink get too dry.

The bookbinding workshop had an entirely different mood. Chatter and gossip were welcomed. It felt like an informal, laid-back place to hang out in. Asking if it was possible to add paint to the bookbinding glue, Xavier would respond: "Just try and see".²¹ I returned to certain workshops because I was interested in learning about specific techniques and using specific equipment but almost equally important were evolving affinities with specific atmospheres of workshops as social spaces, an alignment with their (implicit) socio-material conducts, that evolved along with the students passing through.

²⁰ At the time the silkscreen workshop was run by Kees Maas.

²¹ Xavier Fernandez Fuentes († April 17, 2017) studied Graphic Design at the Gerrit Rietveld Academie where he graduated in 2008. He ran the bookbinding workshop from 2008 until his passing in 2017. <https://rietveldacademie.nl/en/page/9927/xavi%E2%80%99s-books-at-the-rietveld-sandberg-library>, last accessed March 2022.

¹⁹ The workshop facilities of the Gerrit Rietveld Academie: <https://rietveldacademie.nl/en/page/375/workshops-facilities>, last accessed, May 2022.

Workshops and events: The first H&D workshop-based events (2013-2015)

Most people I graduated with ended up working 'on their own'. Some say they are 'self-employed', some call themselves 'independent', 'without a boss'; some say they are 'freelancers', and others say they are 'precarious creative workers' or 'unemployed'. What we have in common is that there is seemingly no pre-given structure or system to abide by in our working environments. Having worked as an employed graphic designer in advertising agencies for about two years before I embarked on a postgraduate degree in design, I was equally anxious and excited after my graduation to finally shape my own work life, to set up my own schedules, decide who I wanted to work with and under what conditions.²² Yet, I missed regular contact and exchange with peers, sharing moments, discussions about work-in-progress, learning from, and getting inspired by each other. These new self-organized working conditions were lacking a form of stability or comfort that comes with having peers around, as I had gotten used to during my study time. My personal motivation for involving myself with the Hackers & Designers collective stemmed from my desire to connect and exchange, to continue to learn, organize and make things together, virtues that appeared not to be pre-given in the reality of working as a self-employed designer.

At first, 'Hackers & Designers' (H&D) was the title of a series of workshop-based events (which we also

referred to as 'meetups').²³ I co-initiated H&D in 2013 with James Bryan Graves (software developer) and Selby Gildemacher (visual artist). At the time, Selby and I were running a project space with a few peers, most of whom were fellow graduates from the Sandberg Instituut Amsterdam. The monthly and later bi-monthly Hackers & Designers get-togethers, were organized in



H&D Meetup, September 2013, with Stëfan Schäfer, Johan Otten,
<https://hackersanddesigners.nl/s/Activities/p/ICalligraphy>

a rather spontaneous and sometimes chaotic manner. However the possibility of hosting the workshops at De Punt (the name of the project space) provided a stable venue, which would contribute to their recurrence.²⁴ The interest in sharing knowledge across disciplines and through 'making things' and the possibility for sharing of skills, were some of the distinct characteristics of the H&D workshop-based events. At the time, it seemed that the combination of ad-hoc, self-organized, and community-driven activities with a hands-on practical approach was uncommon and interesting to the communities we were involved with.

²³ At the beginning H&D workshop-based events were announced on the platform meetup.com, which is the reason why the term meetup was often used to refer to these events, <https://www.meetup.com/>.

²⁴ De PUNT was a space in the ground floor of the same building in which I rented a studio/atelier. The studios were offered for an affordable rental price, by the Sandberg Instituut Amsterdam to artists and designers who had recently graduated.

²² After my graduation at Hochschule Niederrhein Krefeld in Kommunikationsdesign in 2008, I first worked as a graphic designer at the advertising agency 'Cayenne', and then in 2008-2009 as a junior art director at the advertising agency 'Grey Worldwide' in Düsseldorf, Germany.

Spontaneity seemed to have been part of H&D's charisma. Yet, it was not without commitment and effort that these workshops-based events were realized. The laborious process however was not always visible, even to us organizers. In the following section, I will briefly clarify how responsibilities were differentiated and actualized, not only as tasks or roles ascribed to people but also actualized more implicitly and therefore less recognizable. I will briefly introduce the roles of the organizer, facilitator and participant, which were not always mutually exclusive roles or explicitly articulated tasks, but in my view have influenced the ways 'Hackers & Designers' workshop-based events were (mis)perceived, valued, and continue to be organized.

Organizing

During the first two years of H&D, James, Selby and I took on the responsibility of organizing the events. However, we also relied on friends and colleagues, and their willingness to facilitate and participate in workshops voluntarily. Next to planning and coordinating the get-togethers, we would frequently participate in and sometimes facilitate workshops. H&D was to some extent an opportunistic project. As self-employed artists, designers and computer programmers, James, Selby and I missed engaging in active exchange and receiving feedback in our daily work lives. We saw H&D as an opportunity to open up our individual practices, to share work in progress in the context of an informal setting, to meet new people and gain new insights.

In the lead up to the H&D events, we initially invited people from within our circles of friends and colleagues to ask if they were interested in facilitating a workshop, most of whom were also self-employed and worked at the intersection of technology, design,

art and education. After a while, more people approached us with proposals and we would add them to the program of upcoming H&D events. The events were rather informal, the setup more or less the same at each of them. We planned two workshops of 30-45 minutes at each event. There was a self-run bar, people chatted in



H&D Meetup, January 2015, with Heerko van der Kooij,
<https://hackersanddesigners.nl/s/Activities/p/Toyhacking>

and outside of the space. Nobody was paid. No profit was made. Thus, we did not offer a fee to the workshop facilitators, which may have been the reason that it became challenging to find people who were interested in facilitating workshops, after organizing the events for about two years. After all, preparing a workshop requires time and energy, even if it is very short and spontaneously organized. It seemed we had exhausted our community, and it started to feel as if we were asking for favors. Yet, at the same time, it also felt as if we had established an expectation within our community and a responsibility to continue. I remember being increasingly tired of preparing and cleaning the space and chasing people. Eventually, H&D in the format of

workshop-based, evening events became less regular and eventually we stopped organizing them.²⁵ In parallel to the waning of these events, other opportunities for organizing and facilitating workshops arose, including invitations by cultural and educational institutions and we began organizing the H&D Summer Academy, which took place for the first time in 2015.²⁶ For the HDSA we received a grant from the Dutch Creative Industries Funds, which allowed us to compensate workshop facilitators and ourselves for the organization.

Participating

In the early H&D workshops, the number of participants spanned from 5 to 50. Registration was not required. Therefore, we did not know how many people would join until the event commenced. Participants had often attended H&D workshops before, though there were usually a few first time attendees. Participants represented a wide range of backgrounds. There were visual artists, photographers, film makers, graphic, architectural and web designers, software engineers, system administrators, backend developers, some were educators in art academies or technical universities, others were students, some working and paid for their work. Often-times, workshop participants had been workshop facilitators at a previous H&D event, or planned to facilitate a workshop at a later date. The community of attendees grew mostly through hearsay and our announcements

on the platform meetup.com.²⁷ Attendees seemed to be drawn to the practical and informal approach of H&D, moving away from verbal exchange as the primary means of getting to know and learning from each other, and toward an approach that centered hands-on, material experimentation.

Facilitating

Workshop facilitators prepared a topic, technique or method, which they proposed to explore together with the group of participants. The workshop themes and names of the facilitators were announced prior to the event. As aforementioned, the practices and expertise of participants and facilitators varied. Thus, facilitating a workshop at H&D required taking into consideration different levels of expertise, experience and interests. When facilitating a workshop that involved basic programming markup such as HTML and CSS, it could not be assumed that participants were acquainted with such markup languages. The workshops were not primarily instructive or explanatory, but prioritized learning-by-doing and learning together; about each other's practices and approaches in a non-hierarchical manner. Rather than taking the position of an expert, a workshop facilitator would introduce a subject they were not yet familiar with, something they were curious about and wanted to explore together. Furthermore, the finality or perfection of workshop outcomes was not important. Thus, the focus was not on the product but the *process*,—on learning how to let a plant tweet when it needed water,²⁸

25 H&D started organizing informal meetups starting again in 2021. Examples: https://hackersanddesigners.nl/s/Activities/p/H%26D_Meetup_3%3A_Files https://hackersanddesigners.nl/s/Activities/p/H%26D_Meetup_2%3A_Feminist_Search_Tools, last accessed March 2022.

26 i.e. by organizations such as Waag, Bits of Freedom, or Fiber Festival, V2, or the Willem de Kooning Academy

27 Later we also sent out email newsletters and built a website for H&D to announce and archive our activities.

28 Lightning workshop by Arjan Scherpenisse: https://hackersanddesigners.nl/s/Activities/p/Hardware_hacking, last accessed January 2022.

drawing calligraphy with self-made tools,²⁹ turning battery powered toy cars into drawing robots,³⁰ programming browser animations,³¹ planting dead drops,³² creating generative typefaces,³³ and learning about tricks for color separation in offset printing.³⁴

Sociality

In comparison to the kind of knowledge exchange that would occur in a traditional artisan workshop, a space of specialized production, H&D workshops (particularly those of the early days) only briefly touched upon topics and techniques. The emphasis was not so much on transferring specific skills or tools, but rather on offering an occasion to witness how *others* do and make things. As a designer, I could experience (even though only briefly) how the approaches of practitioners from different disciplinary backgrounds, and different levels of expertise *diverged* from what was familiar to me. Vice versa, others could ‘see’ or experience me doing and making things in my particular way. Observing and learning from each other’s approaches (some of which diverged, some seemed familiar) created a particularly

generative condition. It is particular as it cannot be entirely foreseen by any of the participants. The uncertainty of the moment, the not-knowing, is what workshop attendees had in common.

In her book *In Catastrophic Times* (2015), Isabelle Stengers wrote that divergence does not belong to a single person. Rather divergences “are related to the situation and not to persons, [and] are propositions whose truth derives from their efficacy.”³⁵ I came to



H&D Meetup, January 2014, with Moniker, Emilio Moreno
https://hackersanddesigners.nl/s/Activities/p/So_if_you_are_so_smart...

understand these short workshops as occasions for trying and testing articulations of diverging practices, experimenting with making oneself understood and understanding the other through different registers; verbal, aesthetic, technical, methodical utterances. At the time, I was interested in getting to know more web developers and to learn about coding, seeing how they work through issues, hearing how they speak about or respond to issues, and also trying to learn to code myself. It was not my intention to become a programmer myself. While working on websites as a designer, I noticed a kind of discrepancy between my ideas, con-

29 Lightning workshop by Stefan Schäfer: <https://hackersanddesigners.nl/s/Activities/p/ICalligraphy>, last accessed January 2022.

30 Lightning workshop by Heerko van der Kooij: <https://hackersanddesigners.nl/s/Activities/p/Toyhacking>, last accessed January 2022.

31 Lightning workshop by Jonas Otten: <https://hackersanddesigners.nl/s/Activities/p/ICalligraphy>, last accessed January 2022.

32 H&D meetup ‘NSA’: <https://hackersanddesigners.nl/s/Activities/p/NSA> during which we ‘planted so-called Dead Drops. “Dead Drops’ is an anonymous, offline, peer to peer file-sharing network in public space initiated by artist Aram Bartholl. “USB flash drives are embedded into walls, buildings and curbs accessible to anybody in public space.” <https://deaddrops.com/>, last accessed January 2022.

33 Lightning workshop by Moniker (present were Luna Maurer and Jonathan Puckey): https://hackersanddesigners.nl/s/Activities/p/So_if_you_are_so_smart..., last accessed January 2022.

34 Lightning workshop by Karoline Swiezynski: https://hackersanddesigners.nl/s/Activities/p/Hardware_hacking, last accessed January 2022.

35 Isabelle Stengers, *In Catastrophic Times: Resisting the Coming Barbarism*. (London: Open Humanities Press, 2015), 143.

cepts and desires and the ‘reality’ of web programming (in terms of technical feasibility but also the time it takes to realize things). In my experience of designing websites at the time, I thought it required design mock-ups (sketches that look like websites but do not function as such) to be handed over to a programmer, rather than working on the design and development of a website side-by-side. Furthermore, it seemed that I did not always speak the same language as the developers I worked with. There was difficulty with our communication.

To recap: To some extent both the artisan workplace and what I have called the ‘workshop format’ require a certain openness, flexibility and attunement to their socio-material dynamics. The ways of doing and making amongst practitioners often diverge. Discrepancies between what one is used to and how things are done in a particular workshop do not necessarily have to be overcome, yet becomes a condition that requires attention. As such, workshops (sites and formats) may always be peculiar, temporary social spaces that are uncontrollable to some degree. Besides methods, techniques, tools, and protocols, such environments bring about social dynamics that evolve from the particular composition of participants, facilitators and organizers, the environment they find themselves in, as well as the tools, techniques and materials they are dealing with.

In H&D workshops, workshop organizers, facilitators, participants, environment and tools shape and reshape the dynamics of the here and now. Producing a concrete result, for example a functioning prototype or learning how to master a particular skill, may not necessarily be the goal. Conditions that factor into the composition of the workshop and workshop outcomes are not fully in control of any of the participants or facilitators. On the contrary, a workshop may become an opportunity to escape the pressures of producing some-

thing final or instantaneously useful. When the stakes are low, a unique condition for learning and making things is established. The goal is not to accomplish or finish anything beautiful, functioning or impactful. Yet it would be dismissive to say that nothing is produced, or that it does not matter what is being produced, or how it is being produced. In *Meeting the Universe Halfway Quantum Physics and the Entanglement of Matter and Meaning* (2007) feminist theorist Karen Barad wrote

“the point is not merely that knowledge practices have material consequences but that practices of knowing are specific material engagements that participate in (re) configuring the world. Which practices we enact matter—in both senses of the word. Making knowledge is not simply about making facts but about making worlds.”³⁶

By establishing an informal context in which final products or expert knowledge allegedly does not matter, the notion of “nothing really is at stake” becomes accepted and appreciated. Due to *repeatedly* organizing such workshop-based events from 2013-2015, under the same title ‘Hackers & Designers’, the manner in which they were organized and talked about, H&D’s workshops became known as easy going, easy to join, and easy to organize, and as such, this very fact of ‘not mattering’ started to matter.

The workshops were also ‘packaged’ as events and resonated partially because they were enjoyable activities outside of working hours. Scheduling them in the evenings created an entertaining atmosphere.

³⁶ Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007), 91.

While the workshops were often a laborious process for all who were involved (organizers, participants, facilitators), they were held outside of working hours, and therefore outside of the scope of ‘work’, which shaped the way they were perceived. These workshop-based events blurred the line between work and leisure, friendships and work relations. The spontaneous approach to ad hoc organization may have been perceived as ‘easy going’ or ‘easy to do.’ Yet this spontaneity was also accompanied by stress, often caused by lack of clarity around numbers of attendants. Often we would not know how many people would turn up. At times, a sense of failure was felt if not many people turned up. At other times, it would be overwhelming if more than we could accommodate turned up.

The incentive of H&D workshops has been to create exceptional learning environments. The workshops break with disciplinary routines, habitual ways of doing and making, emphasizing instead collective hands-on experimentation. Simultaneously, the repeated organization of workshops and the particular conditions in which they were organized, also became a kind of practice or routine, which was upheld by the organizers, facilitators and participants, all committed to a particular way of workshoping together. Similar to a workshop instructor who develops certain socio-material skills and conducts that evolve from the activity of coordinating and hosting students and colleagues in their workshop, I have also learned and practiced context-specific social-material skills through the coordination and hosting of hands-on workshops in the context of H&D. Though I practiced this coordination in a manner that aligned with the fragmented experiences of the self-employed creative practitioners involved. Such workshop-based events

reflected and perpetuated a certain culture of flexible work and contributed to a perception of workshop organization being effortless.

The evolving workshop market

Self-organized learning

A student by the name of Lucy once asked me: ‘Why does everything have to be a workshop these days?’ In my understanding the question arose out of a certain workshop fatigue,—an exhaustion with the ‘workshop market’, and perhaps a general disappointment in what workshops are actually capable of. I had asked the design students at the Sandberg Instituut to develop and host workshops in smaller groups. The workshops took place throughout the course of one semester and were intended to function as occasions where the students could teach each other a skill, a subject or a curiosity. I have taught this class several times and usually contextualized the course with a presentation that contained examples of workshops I had co-organized and participated in, in the context of H&D. I also added some historical examples of self-organized extracurricular activities in the 1960s and 1970s that were taking place, in addition to or outside of the regular curriculum of universities, art and design schools. Examples include the ‘Free International University’ (Germany, 1973–

1988),³⁷ ‘Anti University’ (UK, 1968),³⁸ ‘Non-school’ (France, 1966),³⁹ and the aforementioned Haagse Vrije Academie that lasted significantly longer (Netherlands, 1947–2015).

Interdisciplinarity, unconstrained learning and egalitarianism seemed a common desire in these self-organized collective learning environments, some of which run by artists. The Free International University founded by Joseph Beuys after he was dismissed from his professorship of Monumental Sculpture at the Düsseldorf Academy “for his involvement in sit-ins and for disregarding the usual admittance procedures for students (he permitted anyone to enter his class).”⁴⁰ The FIU was an artist-initiated counter-educational initiative to democratize education. Beuys wanted “to free schools and colleges from the control of the political parties and the state.”⁴¹ Beuys’ intention was to fundamentally renew and extend the educational system. (For his “expanded concept of art” the renewal of the entire

educational system was necessary both, the methods and content of teaching and in the organization of research and teaching.”)⁴² George Brecht’s and Robert Filliou’s Non-school of Villefranche rejected any pre-established program. The artists proclaimed “[p]erfect freedom, equality, availability to all, mindfulness, are enough. This is where [the Non-School differed] from “anti-universities”, which seem to carry the hangover of the patterns they inherited from the universities they wish to replace.”⁴³ The Non-school, was a critique on “the expanded commodification and capitalization of art in the 1960” and fittingly, rarely left any material trace. It only existed in the form of an official-looking letter-head “[T]he artists seemed systematically to refuse to advance beyond the phase of ideas and processes.”⁴⁴

In sharing these examples from the past with the students, my intention was to convey a certain emancipatory potential in student-led, self-organized educational formats, to appeal to the students’ own ability to take things into their own hands, rather than relying too much on a given curriculum. It seemed to me as if the format of the workshop as it is interpreted and actualized in the context of H&D, is carried by comparable energies as the aforementioned historical examples of self-organized educational initiatives of the 60s and 70s. Self-cultivation seems to be valued also in the context of H&D, and articulated through notions such as learning-by-doing, experimentation with new techniques and methods independent of established disciplines, institutions or daily work routines. However, the examples of experimental self-organized learning initiatives need

37 Founded by Joseph Beuys in the early 1970’s in Düsseldorf, Waldo Bien “The Founding of F.I.U. Amsterdam with Joseph Beuys,” FIU Amsterdam, 2007, http://www.fiutamsterdam.com/html/f_i_u__history.html, last accessed 17 June 2022.

38 “The Antiuniversity of London was a short-lived and intense experiment in self-organized education and communal living that took off at 49 Rivington Street in Shoreditch in February 1968.” <https://maydayrooms.org/portfolio/antiuniversity-of-london/>, last accessed February 2022. “The group included the anti-psychiatrists R.D. Laing and David Cooper; veterans of the Free University of New York, Allen Krebs and Joe Berke; the feminist psychoanalyst Juliet Mitchell; and the cultural theorist Stuart Hall. In February, 1968, the Anti-University of London opened its doors.” <https://www.historyworkshop.org.uk/remembers-1968-the-campus-of-the-anti-university-of-london/>, last accessed May 2022.

39 Founded by Fluxus artists Robert Filliou and George Brecht, in Villefranche (1966), Natilee Harren “La cédille qui ne finit pas: Robert Filliou, George Brecht, and Fluxus in Villefranche,” Natilee Harren “La cédille qui ne finit pas: Robert Filliou, George Brecht, and Fluxus in Villefranche,” *Getty Research Journal*, no. 4 (2012): 127–143.

40 Christa-Maria Lerm Hayes, “Beuys’s Legacy in Artist-led University Projects,” *Tate papers*, 31, (2019).

41 <https://web.archive.org/web/20110910110005/http://www.beuys.org/fiu.htm>

42 <https://web.archive.org/web/20110910110005/http://www.beuys.org/fiu.htm>

43 Robert Filliou “La Fête est Permanente / The Eternal Network,” *Teaching and Learning as Performing Arts*, first published in 1970.

44 Natilee Harren “La cédille qui ne finit pas: Robert Filliou, George Brecht, and Fluxus in Villefranche,” *Getty Research Journal*, no. 4 (2012): 127–143.

to be understood in relation to the specific time and contexts in which they occurred, and to which they responded. It seems to me as if such initiatives were driven by a particular kind of urgency, and can also be understood as a form of protest, act of resistance or defiance. Workshops, as they are organized today, in my view, do not exclude those aspects. Nevertheless the emphasis in workshop organization seems to lie on the workshop being a format that is easy to access, easy to organize. A workshop is a flexible format for doing things differently, *in* or *outside* of institutions or daily work routines. In my view, ‘taking things into one’s own hands’, changes its meaning within institutional context, and in a time when taking things into one’s own hands seems to have become the norm.

Alternative or complementary learning communities sprouted throughout the 1960s and 1970s “as organizations for underground activism and political education. [...] They were also known as experimental colleges, open education exchanges, and communiversities. [some] moved their programming off-campus and continued to exist as a venue for ‘lifelong learning’.”⁴⁵ Following principles of learning-by-doing, education as an emancipatory practice was not to end with the boundaries of the prevailing learning institutions. As John Dewey wrote “I believe that education [...] is a process of living and not a preparation for future living.”⁴⁶

Around the same time *The Whole Earth Catalog* promoted the importance of self-education in the format of a product catalog that was published between 1968 and 1972 in North America.⁴⁷ It compiled information on

how to build and get access to tools and infrastructures that cater to essential forms of hands-on production and self-education. The emphasis was not so much on mastery of such tools, but learning as much as necessary about them to get around, and to live a self-determined life, independent from industrialized, and capitalist society⁴⁸. According to Florian Cramer, the occurrence of *The Whole Earth Catalog* also marked a turning moment: “the convergence of proto-“Maker Culture,”⁴⁹ Thoreau-inspired counterculture and DIY superstores. As both a manual and a product catalog, it gave ‘access to tools’ (its motto) for squatters as well for homesteaders. Its publisher, Stewart Brand, went on to become a Silicon Valley entrepreneur.”⁵⁰

Notions such as self-motivated self-cultivation, the desire for independence from prevailing educational and governmental bureaucracy, seems to align well with the so-called ‘learning economy’. In her article “Lifelong Learning and the Professionalized Learner,”⁵¹ artist researcher Annette Krauss turns towards European policy papers on lifelong learning. She described developments such as ‘life-long learning’ and the ‘learning economies’ as examples “of progress-oriented accumulative models of learning that pervades institutions and subjectivities today.”⁵² According to Krauss, “learning from preschool to post-retirement, lifelong learning [encompasses] the

48 Jeroen van den Eijnde “A Hall of Mirrors of Art Production,” in *Materialization in Art and Design*, Herman Verkerk and Maurizio Montalti, eds. (Sandberg Instituut and Sternberg Press, 2019).

49 Florian Cramer “Does DIY mean anything? - a DIY attempt (= essay)” (2019), originally commissioned for Anrikningsverket *Journal #1* by Norbergfestival, Sweden, http://cramer.pleintekst.nl/essays/does_diy_mean_anything/, last accessed February 2022.

50 *ibid.*

51 Annette Krauss “Lifelong Learning and the Professionalized Learner,” in *Unlearning Exercises. Art Organizations as Sites for Unlearning* (Valiz, Amsterdam and Casco Art Institute Working for the Commons, Utrecht, 2018).

52 *ibid.*

45 Bill Draves. *The Free University: A Model for Lifelong Learning* (New York: Association Press, 1980).

46 John Dewey “My Pedagogic Creed,” in *The School Journal*, 54 (January 1897), 77–80.

47 Stewart Brand, ed., *The Whole Earth Catalog: Access to Tools* (1968–1972).

whole spectrum of formal, non-formal and informal learning and is tightly interwoven with the commodification of education.⁵³

Thinking back to Lucy, the design student's expression of frustration with workshops, I understand her question "Why does everything have to be a workshop these days?" as a critique of a certain pervasiveness of workshops. The question stayed with me as I started to wonder if workshops' characteristics of being ephemeral, non-binding, solely produce an image of empowerment, while simultaneously perhaps also weakening collective ties. In the context of the students' assignment to develop workshops for each other, and the implied appeal to self-organize collective learning environments, I question whether I have tried to help students in becoming independent thinkers/learners/designers or if I am preparing them to abide by work conditions that are uncommitted, short-term, in which it is left up to the individual to self-sustain and to continuously self-improve. To formulate it more broadly, is a course that focuses on developing workshops, as a way to encourage students to self-organize their own study environments, reinforcing superficial collaboration and fragmentation of work conditions, rather than strengthening connections between them and enabling long-term collaboration?

Postponing accountability

There has been an increase of extra-curricular workshop initiatives, many of which are student-run, some attempting to address structural problems of the academic institution. An example of a student-run self-organized initiative is PUB, an interdepartmental publishing platform, started by a student from the design department,

Daniel Seemayer, who was looking for opportunities to exchange with students of different departments, as well as more opportunities to focus on matters of (self-) publishing. Many students became involved in PUB⁵⁴ and were granted financial support by the institution to continue organizing publishing related workshops, and projects. Other initiatives are Unsettling Rietveld Sandberg,⁵⁵ and HearHere!⁵⁶ and a manifold self-initiated student unions.⁵⁷ The organizers of such initiatives are students, tutors or staff. Usually the motivation to start organizing these initiatives starts from a frustration, in Daniel's case the lack of interdepartmental exchange on publishing matters; others address the lack of representation of certain groups, or a lack of communication between different departments of the institution. The workshop seems to be a recurring format within all of these initiatives. Oftentimes external experts are invited to induce their knowledge by facilitating workshops,

54 PUB is an trans-departmental initiative funded and run by students of the Sandberg Institute. For further information see: <https://pub.sandberg.nl>, last accessed May 2022.

55 Unsettling is a bottom-up initiative that supports "existing initiatives, while also developing outreach programs, drawing in new perspectives, and making the context of the academy more inclusive to other voices, minds and bodies—those who are here and those who are not, yet." For further information see: <https://unsettling-rietveldsandberg.net/>, last accessed May 2022.

56 "Hear! Here! is an experimental listening and dialogue platform that [...] works to encourage a culture of dialogue for students and staff of Rietveld and Sandberg." For further information see: <http://www.hearheredialogue.nl/>, last accessed May 2022.

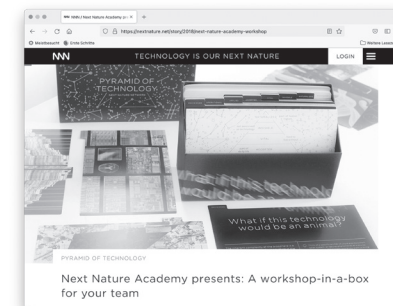
57 The student-organized unions are organized bottom up and aim to represent underrepresented voices in the academy. Examples are the Asian student union <https://www.facebook.com/theasianuniongransandberg/>, last accessed May 2022. <https://www.instagram.com/the.asian.union>, last accessed May 2022, the Black Student Union: <https://www.instagram.com/blackstudentunion.usb/>, last accessed May 2022, the Near East Union: <https://extraintra.nl/initiative/near-east-union/event/near-east-union-gathering>, last accessed May 2022, the Latin American and Caribbean Union: <https://extraintra.nl/initiative/latin-american-and-caribbean-student-union/event/lacu-dinner>, last accessed May 2022.

53 *ibid.*

for example, on issues of inclusivity and diversity, to sensitize and train teachers, students and staff in creating safe(r) learning environments. To give an example, two workshops I participated in were organized by the initiative ‘HearHere!’ who invited two coaches to facilitate a workshop on “Non-Violent Communication,”⁵⁸ and by ‘Unsettling Rietveld Sandberg’ who invited Camille Barton to facilitate a workshop about “White Privilege”⁵⁹ for tutors, coordinators and administrative staff.

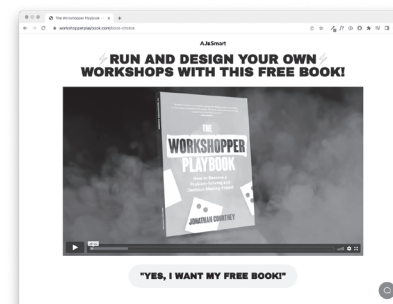
The hope is that workshops can actually lead to structural change in an institution such as an art academy. These workshops intend to empower educators and students but I came to wonder if such workshops merely satisfy an instantaneous need momentarily, by providing a format for superficial engagement of participants with serious issues that run deeply in the fabric of an institution. Workshops are short-lived one-off instances, workshop participation is often non-obligatory and commitments remain brief. How issues are followed-up with, are continued and practiced in the everyday reality of students and staff often remains unclear. The risk of the workshop is that it becomes an evasive strategy in certain contexts. Issues are outsourced to freelance coaches, (often also artists, designers and educators that already work under precarious conditions)—along with the responsibility of creating structural change.

Another question that arose for me is, in promoting temporary learning formats, in privileging processes



Next Nature “Workshop in a Box,”

<https://nextnature.net/story/2018/next-nature-academy-workshop>



Jonathan Courtney, The Workshopper Playbook, “Jonathan Courtney is a facilitation genius who designs and runs workshops for the coolest companies on the planet.

This book contains his secret formula – so don’t just stand there, read it!”, quote by Jake Knapp, author of *Sprint*: how to solve big problems and test new ideas in just five days (New York: Simon & Schuster, 2016),

<https://www.workshopperplaybook.com/book-choice>, last accessed March 2022.

58 “HH#2 Non-Violent Communication /w Cara Crisler and Mirjam Schulpen” <https://extraintra.nl/initiative/hear-here/event/hh-2-non-violent-communication-w-cara-crisler-and-mirjam-schulpen>, last accessed May 2022. The workshop facilitators work under the name ‘Connecting Communication’ <https://connectingcommunication.nl/our-offer/>, last accessed May 2022.

59 “Unsettling Workshop /w Camille Barton” <https://extraintra.nl/initiative/unsettling-rietveld-sandberg/event/unsettling-workshop-w-camille-barton>, last accessed May 2022.



Another example of a workshop-in-a-box “The crazy thing about Workshop Tactics.

It’s now sold tens of thousands of copies all around the globe. To consultants, managers, professors and doctors. Designers, engineers, managers and CEOs.

It’s trusted by folks at the BBC, Microsoft, IBM, Google, Apple, Meta, Stanford University, and Lockheed Martin. The list is endless.” Charles Burdett, founder of Pips Decks

<https://pipdecks.com/products/workshop-tactics?variant=39770920321113>, last accessed March 2022.

over outcomes, do workshop initiatives (which Hackers & Designers is also an example of) contribute to the valorization and commodification of the workshop, and therefore the commodification of learning as such? Does the ‘image’ of the workshop as a potent format, economize the sphere of education? While being occupied with sustaining a space for experimentation, reducing the pressures of finding solutions to problems, or producing final outcomes or products, the process may have become a product.

Commodified learning

The workshop format seems to function well within the context of commercial conferences, incubator programs, and creative retreats and at times it seems the workshop is understood as a product itself. Taking place outside of the daily work routine, workshops ought to be fun while enhancing the participants’ CV. *Next Nature* a Dutch organization that describes itself as “a network of makers, thinkers, educators and supporters [...] interested in the debate on our future—in which biology and technology are fusing”) designed a workshop-in-a-box.⁶⁰ Here, the workshop takes on the format of a saleable card game and is described as a “2-hour dynamic crash course [that] helps you to better understand and discuss technology.”⁶¹ It might not be intended as such, but this workshop-in-a-box comes across as an ironic commentary on compulsive self-improvement, learning-by-doing and the pressure to

60 “Are you working on projects where technology and human interaction are involved, and are you looking for a new approach? As of today, we offer a brand-new workshop concept for you and your team. In just two hours you learn how to work with the Pyramid of Technology toolbox in an active, dynamic and 100% analogue way!” <https://nextnature.net/story/2018/next-nature-academy-workshop>, last accessed March 2022.

61 *ibid.*

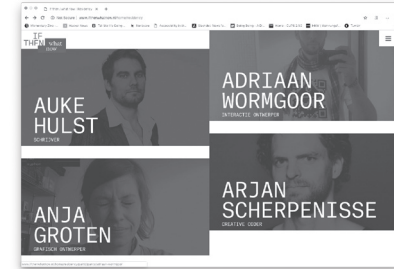
participate in one workshop after the other. The implication of presenting a workshop as a neatly packaged product is that the workshop in and of itself is a highly productive format that can be reproduced easily.

The ‘workshop market’ promises collective experiences as opportunities for self-improvement, and as a return for investment especially if the workshop leaders are renowned, influential players in their professional fields. The free spirit of experimentation is easily replaced by coercive forces of a neoliberal workshop market, the fear of missing out on latest workshop trends and the pressure to constantly engage in processes of self-improvement. I participated and organized workshops in various contexts and frequently encountered a general assumption that the workshop format can save the day, that it is able to offer magical solutions to an array of problems. I found such ‘workshop magic’ depicted astutely in a particular scene of the popular Netflix series *Broad City*, in which one of the protagonists, Ilana, is caught by surprise when invited by her professor to the front of the auditorium to present her research project. She is obviously not prepared to do so, yet she walks to the front, confidently claps her hands together and shouts: “Let’s workshop this!” The phrase “Let’s workshop this!” stands in for what is not (yet) there.

In March 2018, I participated in a workshop by invitation from a friend who worked at a design and technology lab at the time.⁶² I was one of four invited participants. The personal email invitation from my friend emphasized the experimental character of the session and the opportunity to collaborate with a unique group of makers, consisting of a writer, and two pro-

62 The foundation Lava Lab, which profiled itself as a design and technology lab, was founded by the Amsterdam-based design company Lava and dissolved in 2017.

grammers.⁶³ My friend asked me to join because of my expertise as a designer and my involvement with the H&D collective. In the following section, I will reflect upon this workshop as it allows me to highlight certain dilemmas that I have come across frequently, which, in my view, relate to the unquestionability and popularity



Screenshot of the workshop website, ‘If Then What Now’, which is no longer online.

of the workshop that have created certain expectations of the workshop that posit it as a compelling format in and of itself. I refer to this workshop as a hackathon-like workshop, as in my view it is exemplary of the ways principles of different fields—such as software development, travel and change meaning through workshops. In this case such traveling principles that remind of hackathon principles, produced issues that are exemplary also for the commodification of workshops, in the sense that the workshop is often assumed to be a highly productive format (productive in neo-liberal terms).

In its initial meaning a ‘hackathon’⁶⁴ (neologism of ‘hacking’ and ‘marathon’) describes a time-constrained collaborative event that focuses on soft- and hardware

63 Other participants were: Auke Hulst (writer), Adriaan Wormgoor (developer), Arjan Scherpenisse (developer).

64 According to Dictionary.com a hackathon is usually “a competitive event in which people work in groups on software or hardware projects, with the goal of creating a functioning product by the end of the event”, <https://www.dictionary.com/browse/hackathon>, last accessed May 2022.

development. The aim of a hackathon is to combine various expertise of soft- and hardware development to come to a (useful, creative, or unique) product or to find the solution to a problem. Hackathons usually focus on a specific topic or technology. According to the OpenBSD (a security-focused, free and open-source, Unix-like operating system) website, the first event termed ‘hackathon’ was organized in 1999 and developers from around the world gathered.⁶⁵ Since the mid to late 2000s, hackathons started to become popular formats in technology companies as a way to quickly develop new software technologies.

In my understanding, the term “hackathon” seems to combine work and leisure and can be found on event pages and symposia schedules within the cultural sector in the Netherlands, particularly in the context of workshop-based events that target artists and creative technologists.⁶⁶ In that context, the hackathon-like workshop often promises a hands-on practical approach and sometimes involves technology production but not necessarily.⁶⁷ Participants are often unpaid and work towards concrete solutions or products in a compressed amount of time and often within a competitive setup.

65 See: OpenBSD website: <https://www.openbsd.org/hackathons.html>, last accessed May 2022.

66 Thomas James Lodato and Carl DiSalvo, “Issue-oriented hackathons as material participation”, *New Media & Society* 18, no. 4 (April 2016): 544.

67 <https://waag.org/nl/event/ai-ai-barbie-hackathon>, last accessed March 2022.
<https://waag.org/nl/article/hoer-zorgen-we-ervoor-dat-vergroening-van-steden-even-urgent-blijft>, last accessed March 2022.

Sometimes a jury selects the most innovative project, which is then awarded a prize.⁶⁸

Upon arrival at the hackathon-like workshop all participants were asked to engage in an introduction game to get to know each other. The game required physical exercises. One participant refused to take part. The others went along with it although all we had met before in other circumstances,—perhaps to placate the workshop facilitator, who was hired especially to support the collaborative process. What followed were two days of intensive ‘brainstorming’.

We were asked to tackle the following challenge in collaboration: “Create an interactive story that is set in the future. And use code.” The workshop space was well-equipped: markers, sticky notes, and walls covered with paper to sketch on. While intentions for outcomes of the workshop were communicated openly at the beginning of the workshop, during the two days, a certain collective expectation of a tangible, presentable outcome arose. The group’s collective ambition led to producing a functioning prototype, an interactive installation that would be presented and tested at a public event at the end of the workshop process. While it is impossible to fully locate this emerging ambition and determine how it came about, in my recounting of this workshop experience, I realize it may have been related to the fact that one hundred people had been invited for the final presentation before the workshop had officially started. Posters and flyers had been printed and distributed. I felt pressured to ‘perform’ due to the expectation of output, to live up to the expectations of an audience but also feeling conscious of not letting down my friend

68 Hackathons have been criticized for exploiting the willingness of participants to perform free labor.
<https://www.hackerearth.com/blog/developers/good-bad-overrated/>, last accessed March 2022.

and fellow collaborators. Furthermore, our workshop facilitator seemed highly motivated to mediate the ‘idea finding’ process. Drinks and snacks were frequently offered to bolster our energy. A videographer was hired to interview every participant about the qualities and challenges of our collaboration.⁶⁹ The video interviews were published on social media platforms and on the project website.⁷⁰



Video documentation, *if then / what now: the making of*, June 2018,
<https://vimeo.com/273102715>

Towards the end of the second day, the tension was mounting. It became clear we would not be able to produce a functioning prototype within the constraints of the given timeframe. To be able to present a convincing demo to the audience, some of us would have to continue working on the project in our free time. A whole enterprise of workshop facilitation arose, which contributed to keeping up the image of a workshop as a short intensive format for collaboration. In this estimation, a workshop can produce ‘magic’, although the consequences of this were that some participants had to over-compensate working into their leisure time in order to uphold the image of the workshop as full of potential.

69 Video documentation, *if then / what now: the making of*, June 2018,
<https://vimeo.com/273102715>, last accessed December 2021.

70 The workshop website, ‘If Then What Now’ is no longer online.
 Information can still be found on: <http://www.letterenfonds.nl/nl/entry/1910/if-then-what-now>, last accessed May, 2022.

To clarify and temper an overly negative representation, there were also joyful and inspiring moments and shared excitement throughout the days of gathering. However, in my experience as a participant in the workshop, some challenges became apparent that I have also experienced as a workshop organizer and facilitator in other contexts. I found myself in the role of the over-facilitating mediator. I have also been responsible for documenting workshops, capturing the most outwardly collaborative and productive workshop moments, in order to prove to a wider audience, to the funding institutions, but also to myself, that the workshops had in fact taken place, that there was a good turn-out, that something valuable had been produced and that participants had had a good time.

This example demonstrates the extent to which workshops are often ‘dressed up’ as highly productive, creative or inspiring. In reality, these workshops often lack a clear intention or purpose, while the parameters are often tightly defined and inflexible. Furthermore, workshops are often only considered successful if a tangible result is produced: a product or prototype that can be presented to a wider audience. By organizing a public event as the concluding moment for the workshop, the organizers introduced additional pressure to the process. The perception of the success of a workshop then becomes dependent on the result, which in the case of the hackathon-like workshop, needed to be tangible, finished or at least presentable to a wider audience.

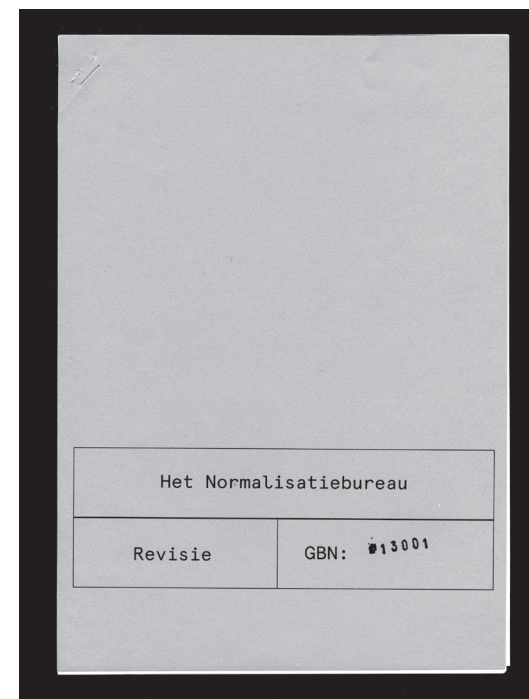
Over-facilitation of the workshop was another pitfall. By introducing a mediator, unnecessary exercises, a wide range of workshop equipment, along with elaborate modes of documentation (external photographers, videographers conducting interviews), the workshop organizers established a controlled environment and decreased the chance for unexpected turns. The arbi-

trairiness of the assignment (“Create an interactive story that is set in the future”) combined with an imposed hackathon-like setup (“And use code”) implied there was a problem that needed to be solved. In my view, without providing the time and space to investigate commonalities or an understanding of the necessity of producing something together in the first place, the workshop became an end in itself.

Through introducing a range of recognizable workshop props a workshop may produce certain aesthetics and articulations, reproducing an image of workshops that emits productivity and professionalism, while criteria for working together, or definitions for productivity remain obscure. Workshop documentation (photos, notes, mind maps), workshop equipment (sticky notes, whiteboards, projection screens), mediation and entertaining presentation formats (video documentary, public evening event) sustain a certain perception of workshops. However, such an overload of probably well-intended facilitation might not align with the actual experience as a participant, and can even create coercive dynamics and discomfort.

Je haalt je schouders op. ‘Het is lekker weer.’ ‘En dat is het.’ ‘Ga je naar het park?’ Uit een tas steken een stokbrood en de hals van een fles rosé. Je ex knikt. ‘Even genieten van de zon.’ Maar je wordt niet meegevraagd, zodat je opeens zeker weet dat in het park een verbeterde versie van jou wacht. ‘Het park is echt opgeknapt,’ zegt je ex. ‘Is dat zo?’ ‘Er wordt in geval niemand meer aangerand of bestolen.’ Je kent niemand die er is aangerand of bestolen. Je haalt je mobiel uit je zak, kijkt naar de tijd. ‘De supermarkt gaat zo dicht,’ lieg je. In de supermarkt sta je eindeloos voor de schappen met chips, in de koelte van de airco. Blonde tieners in Appieblauw duwen kratten door erehagen van kruidenierswaren of staan in een groepje te giebelen rond een kassamedewerker. Je bent een huichelaar, ontken het maar niet, ook al is het uit zelfbescherming. Loochening is onvermijdelijk temidden van de oprukkende Normalisatie. En tegelijk is het van alle tijden. Denk aan de equivocatie van katholieken, die zich in de zeventiende eeuw dubbelzinnig uitlieten om aan

waar je ze in de steek hebt
gelaten. Want dat heb je.
Maar nog niet genoeg.
Je gaat zitten aan de
keukentafel, opent
eerst de rekeningen.
De zuurstofnota is weer
omhooggegaan – het
zal ook eens niet.
Maar betaal toch
maar, voor je wordt
afgesloten. Je kunt wel
boos zijn op Shell,
dat de
exploitatierechten
heeft gekocht met de
toezegging de
luchtkwaliteit te verbeteren, die
niettemin achteruit



Outcome of the workshop: A script produced and designed through an interactive installation. A visitor/reader/listener would be provided with headphones and listen to a text written by writer Auke van Hulst with the title "Het Normalisatiebureau". Furthermore the visitor/reader/listener would be connected to different sensors, i.e. a sensor that measures their body temperature and one that measures their heart beat. While listening to the text a script of the text would be produced. The type size and styling of the text is adjusted according to the sensor data. Eventually the visitor/reader/listener received a print-out of the script, designed according to their personal data.

Temporary critical publics

Resisting finalization

In contrast to the hackathon-like workshop mentioned above, the aim of workshops in the context of H&D is not primarily to fix a presented problem. There is usually no imposed competitive element, and making processes do not necessarily result in producing finalized outputs.⁷¹ On the contrary, the artifacts produced during the workshops have the characteristics of disposals rather than proposals. They are the side-products of a process.

In a talk on Free Jazz improvisation with children, German journalist and cultural critic Diedrich Diederichsen asked if it can be the purpose of the workshop to never finish a thing?⁷² Indeed, the permission *not* to produce anything can be a crucial asset in workshops. In fact, it is often the shared activity of postponement, of usual chores and obligations that offers an opportunity to rethink productivity together.

Shifting the focus away from a preoccupation with producing finalized outcomes towards processes of material, technical, social exploration, can make space for a perspective on personal and collective relationships

71 An exception is the HDSA 2021, where Zimbabwean maker Bongani Ricky Masuku, asked participants to work on and out elements of a DIY water pump. The participants then documented the process and created small publications. As organizers we send Bongani the electronic parts back so he could continue his project in Zimbabwe.
https://hackersanddesigners.nl/s/Summer_Academy_2021/p/Building_On_Demand_Water_Solution_for_the_City_of_Harare_with_Bongani_Ricky_Masuku, last accessed March 2022.

Furthermore H&D workshops at times consist of game or play elements and timed exercises that could be interpreted as introducing competition into the workshop.

72 “Diedrich Diederichsen (Vienna): “Free Jazz with Children,” <https://vimeo.com/547117231>, last accessed March 2022.

with the inner workings of technical objects, their subjectivities and implications. As Thomas James Lodato and Carl DiSalvo write:

“a distinction needs to be made between the prototype and prototyping, as an activity. [...] The object is crucial, but it is a product of the social process of conceptualizing and expressing the wants and needs. The activity of prototyping, then, is dialogic in that its structure is one of exchange and its purpose is the discovery and elucidation of the conditions or factors of a design.”⁷³

As typically temporary and to some extent uncommitted collective environments, workshops create a condition for questioning obligations or dependencies between people and their digital tools. As alluded to in the previous chapter, a workshop at H&D that involves people and technical objects creates collective conditions that uphold possibilities for discontinuation of relationships between them in the future. This is possible because the ties of those involved are loose. For example, the three-day workshop *Internet of Bodies* took place during the HDSA in 2016 and was facilitated by Simone Niquille and Carina Namih. The workshop facilitators invited participants to reflect on the manner in which computers ‘look at’, measure and assess bodies. In one of the exercises, participants were equipped with a map of facial feature points as well as a map of Henry Dreyfuss’ human scale measurements.⁷⁴ Using one sheet of 1m by 2m paper, the

73 James Lodato and Carl DiSalvo, “Issue-oriented hackathons as material participation,” *New Media & Society* (Georgia: 2016).

74 “Henry Dreyfuss Associates’ classic Humanscale design manuals to be reissued,” <https://www.dezeen.com/2017/07/25/henry-dreyfuss-associates-classic-humanscale-design-manuals-to-be-reissued/>, last accessed March 2022.

participants were asked to form groups of three in order to map each other's bodies onto the paper, according to the points on the provided maps. They used the tip of their nose as a starting point for their measurements.⁷⁵

The exercise was a rather tedious and intimate process, at times awkwardly funny but also uncomfortable for some. Participants covered each other with spot stickers, using string and measuring tape to capture their dimensions. This process resulted in a series



"The Internet of Bodies", workshop
by Simone Niquille and Carina Namih, 2016.

of life-size scale data portraits. In another exercise, participants were asked to use an open source 3D scanning app to scan their bodies, and use the Blender app to create new collective avatars—combining several body scans into one image.

The Internet of Bodies is an example of how a workshop may not prioritize finalizing products, but use propositions for outcomes (data body maps, 3D scans, animations, and prints of 3D body renderings) as markers within an evolving explorative learning process. These materializations, of which some were physical artifacts, digital renderings and performative expressions, function as occasions to gather, discuss and

reflect within different constellations—in smaller groups, individually or with the entire group. The workshop was narrated and structured all the while leaving room for participants to explore freely, discuss, reflect, and at times refuse to participate, or change the terms and conditions for their participation. The physical mapping exercise caused some discomfort and probed the limits of some participants' personal boundaries. Therefore, some of them refused to be mapped or to map other people's bodies, which eventually led to a lively discussion around the transgression of personal boundaries in the digital realm. That is, when the 'gaze' or 'touch' of a machine, or algorithm cannot not be directly or immediately felt.

In my view, the potential of the workshop as a space for experimenting with new forms of social-technological interaction lies in it being dynamic and non-conclusive, which makes it a difficult format, impossible to fully control or reproduce as a model.

Critical public

"I respect your difference [of opinion]" is a rather empty thing to say, which smells of tolerance and commits whoever says it to nothing. On the other hand, what can enter into communication with the word "honor" is something that will be apprehended not as a particularity of the other, but as what the other makes matter, what makes him or her think and feel, and which I cannot dream of reducing to the "same" without being insulting [...]"⁷⁶

⁷⁵ https://hackersanddesigners.nl/s/Summer_Academy_2016/p/Internet_of_Bodies, last accessed March 2022.

⁷⁶ Isabelle Stengers, *In Catastrophic Times: Resisting the Coming Barbarism* (London: Open Humanities Press, 2015), 143.

In the earlier example of the hackathon-like workshop, I illustrated how a public event at the culmination of a workshop can influence the ambitions and expectations of a temporary collective. Knowing a large audience had been invited and that we were required to present a final outcome, shaped my expectation of the workshop. An external audience needed to be convinced our workshop production was worthwhile. However the members of the temporary collective of a workshop can also be understood as a temporary public of sorts. Workshop participants and facilitators gather in a somewhat exceptional manner. That is, the workshop takes place in a limited timeframe and outside of daily obligations. A usually implicit, perhaps intimate work routine is, to some extent, exposed in a novel context. The workshopers may apprehend what Stengers described as “what the other makes matter, what makes him or her think and feel.”⁷⁷ The fleeting character of a ‘workshop public’ may become even confrontational, as future, or long-term relations are not a necessity. Yet it seems to me a workshop public is committed enough to bring to the fore, differences of opinions or differences of manners (methodically and in terms of behavior). As temporary socio-technical compositions, ‘workshop publics’ are semi-committed to each other and therefore differences can arise and persist.

Expressing differences

In the following section, I recall a workshop I facilitated with H&D at the Libre Graphics Meeting (LGM) of 2016,⁷⁸ which elucidated my understanding of the wavering

commitments of workshop publics and the ways in which they can bring to the fore and sustain differences as opposed to collapse into consensus.

In 2015, H&D developed an instant publishing tool that we refer to as *Momentary Zine*, and which we experimented with in different workshop situations.⁷⁹ The tool could be described as a publishing-karaoke machine. It uses speech input to instantly produce printed output. By speaking into a microphone, participants



Momentary Zine—walk-in workshop at ZineFest Berlin, 2015

can produce a printed zine—a publication containing image and text.⁸⁰ The person interacting with the zine station enters into direct conversation with the tool, which simultaneously produces the publication. The experience of producing a zine is informed by the immediacy of speaking and instantly creates printed output. The reader is then confronted with unexpected results. Not every word will be recognized accurately by the software, and the result of the image search might be unexpected. The zine is generated in an improvisational manner. This project was presented and ‘workshopped’

⁷⁹ The code for Momentary Zine is available at: <https://github.com/hackersanddesigners/momentary-zine>.

⁸⁰ A zine is a small-circulation self-published work of original or appropriated texts and images.

⁷⁷ *ibid.*

⁷⁸ See Libre Graphics Meeting 2016, <https://libregraphicsmeeting.org/2016>.



Momentary Zine—walk-in workshop at ZineFest Berlin, 2015

in various contexts.⁸¹ It is an entertaining and accessible tool that allows you to produce a publication instantly. The production is easy, fast and cheap. People generally enjoy the surprise effect.

H&D submitted the *Momentary Zine* as a workshop proposal to LGM.⁸² The *Momentary Zine* uses different programming interfaces (APIs),⁸³ one for the translation of speech to text, and one to extract images from the internet. Using the web API provided by Google caused some controversy during the workshop. As the LGM's code of conduct states, the conference exclusively promotes the development and use of free and open-source software graphics applications.⁸⁴ One of

- 81 Some examples of contexts in which the *Momentary Zine* has been activated are: https://hackersanddesigners.nl/s/Activities/p/The_Momentary_Zine
https://hackersanddesigners.nl/s/Activities/p/Get_the_Font_and_Zine_Karaoke
https://hackersanddesigners.nl/s/Activities/p/Publishing_Karaoke%3A_A_Workshop
https://hackersanddesigners.nl/s/Activities/p/Momentary_Zine_in_Bucharest%21
https://hackersanddesigners.nl/s/Activities/p/Momentary_Zine_at_Neulab, all links last accessed March 2022.
- 82 See Libre Graphics Meeting 2016, <https://libregraphicsmeeting.org/2016>.
- 83 In computer programming, application programming interfaces (API) are closed and controlled systems. They are also a set of definitions, protocols and tools for building software.
- 84 "LGM Code of Conduct," <https://libregraphicsmeeting.org/lgm/public-documentation/code-of-conduct/>, last accessed March, 2022.

our motivations for participating in LGM with the *Momentary Zine* was to explore alternatives to Google API / Webkit. During our workshop's introduction it became apparent that we had implemented Google APIs in the software, which caused immediate resistance on the part of two participants.

The choice to use the Google API as a fundamental part of the software was conceived of as unacceptable in the context of an open-source software conference. The two participants left the workshop after clearly and vocally opposing and disregarding our contribution to the conference. Around fifteen participants remained to continue the workshop. The workshop took a different turn than we had planned. We had initially prepared a few exercises that would give direction for producing publications in smaller groups, taking a 'telephone game' approach.⁸⁵ Yet, inspired by the protest against the Google API, the *Momentary Zine* became a kind of documentation tool for a discussion about working with proprietary software and whether it should be fully abandoned in the context of a conference for open-source software graphics applications.

As the workshop proceeded, zines were produced and vital conversations were had. Admittedly, it was not a moment I look back on fondly. Yet, I do think about the workshop frequently because of—to borrow Isabelle Stengers' words—its 'stupidity'. The workshop and the reasonably critical response to it were a result of our lack of attention for the contexts within which it took place, a conference that has been organized since 2006 out of a need to create an occasion for developers,

85 Also referred to as the 'broken telephone', or 'transmission chain experiments' are , usually is about information passing from one person to the another. In our workshop, we initially planned to proposed the participants would use the Momentary Zine as their telephone and explore the unreliability of the speech recognition in this way

artist and designers to gather and exchange ideas about using and improving free and open-source software graphics applications.

The explicit rejection, the vocality of disagreement and the drastic departure on the part of the two participants made an important contribution to the workshop. As Stengers wrote they made "divergences present and important [which] has nothing to do with respect for differences of opinion [...]. It is the situation that, via the divergent knowledges it activates, gains the power to cause those who gather around it to think and hesitate together."⁸⁶ I have seen other forms of resistance in workshops. For instance, participants may silently disengage, roll their eyes and sneak out. Sometimes, they stay in the room to boycott or nag throughout. While our workshop continued without the two protestors, their message was clear and remained with us—made us hesitate and think together. It became part of the workshop and continues to stay with me as a sore spot that sometimes reappears when preparing for a workshop.

Explicating workshops

The H&D Summer Academy (2015-ongoing)

At the time of writing this dissertation, the H&D collective has grown from three to nine members, has been organizing workshops in different formats for nine years, and is starting to plan the eighth edition of the H&D Summer Academy (HDSA). The HDSA is an annual one to two week intensive workshop program, taking place in the summer in Amsterdam. With the first edition in 2015, H&D's approach to organizing workshops

86 Isabelle Stengers, *In Catastrophic Times: Resisting the Coming Barbarism* (London: Open Humanities Press, 2015), 143.

changed. After two years of organizing ‘Hackers & Designers’ as a workshop-based event series that took place during workdays in the evenings, we envisioned the HDSA as a more committed format, a temporary school of sorts, that would give us an opportunity to expand on the preceding shorter evening events and experiment more with the workshop format as such.

Since then, each edition of the HDSA has been organized in a slightly different manner, taking into consideration learning from previous editions and experimenting with new approaches. In 2018, during the organization of the fourth edition of the HDSA, for the first time, we did not differentiate workshop participants from workshop facilitators in our open call. People who were interested in joining the HDSA would all apply by submitting a workshop proposition. Thus, they would commit to facilitating a workshop and participating in the full duration of the two week long workshop program. No prior experience in teaching or facilitating workshops was required. As part of the preparation towards the HDSA in 2018, we introduced a peer review process during which workshop proposals would be reviewed by everyone who had submitted a workshop. That way, we involved workshop facilitators in developing each other’s workshop preparations and created connections between them before the actual HDSA began.

However, it seemed that the lack of specificity as to what exactly characterizes the ‘workshop’ as a format, made it hard to describe, defend or critique the proposed workshops in a peer review process. The submitted workshop descriptions remained brief. They either reflected on the subject of the workshop or on the technicalities, but rarely did they address both, or in ways that invited suggestions and feedback on the workshop. The proposals did not incorporate descriptions of how a workshop

would actually play out in a space, over a certain amount of time and did not take the different needs and levels of expertise of the participants into consideration. This observation led me to submit a workshop proposal with Shailoh Phillips, who was at the time my colleague at the



Anja Groten and Shailoh Phillips behind a glass window observing how the workshop executes ‘itself’, *Work the Workshop*, H&D Summer Academy 2018.

research consortium ‘Bridging Art, Design and Technology through Critical Making’.⁸⁷ Our workshop would take place at the beginning of the HDSA and would focus on the format of the workshop itself. The title was *Work the Workshop*.⁸⁸

87 My PhD research project was made possible due to a full-time research position at the NWO funded research project ‘Bridging Art, Design and Technology through Critical Making’. The consortium was later renamed ‘Making Matters work group’ and has organized two symposia and one publication in the period of 2017-2022. <http://making-matters.nl/about/consortium>, last accessed May 2022.

88 https://hackersanddesigners.nl/s/Summer_Academy_2018/p/Work_the_Workshop, last accessed March 2022.
Workshop script of later workshop iterations: <https://etherpad.hackersanddesigners.nl/p/hdsa2020-how-to-workshop>, last accessed March 2022.
<https://etherpad.hackersanddesigners.nl/p/student-workshops>, last accessed March 2022.

A Workshop about Workshops

I remember arriving on the first day and I think it was you Anja together with Shailoh that led the 'Work the Workshop' workshop. I remember being so excited about the possibility of throwing out everything that I had prepared before, and creating something entirely new that was particularly built on the relations that were performed in that initial encounter with everyone.

Quote from a conversation with H&D summer academy participant Lucas LaRochele, published in *Hackers & Designers—Network Imaginaries*, self-published in October 2021.

We formulated exercises that were meant to offer different perspectives on everyone's workshop plans. The exercises were intended as an invitation to view the workshop itself as a medium, something that could be externalized, tweaked and reiterated. The first exercise was to imagine the workshop as a set of instructions, almost like an algorithm or script that could be executed without the workshop facilitators being present. We also presented this exercise as a script—delivered without us workshop facilitators being present in the space. We prepared the script and workshop kit in such a way that it would explain itself. This exercise was inspired by THE THING,⁸⁹ an automatic workshop. Writing up a complete workshop script that can be executed without a facilitator present is a tedious process.

Workshop toolkit from *Work the Workshop*, H&D Summer Academy 2022. Each prompt was clipped to a piece of paper. The prompts instructed participants on what to do with the piece of paper. The workshop was intended to be self-explaining—executable like a 'script' without a facilitator.

89 Participant description of her experience at "The Thing": to dwell in a space where there is not a clear cut answer", 'The Thing. An Automated Workshop', concept and creation by Ant Hampton & Christophe Meierhans. <http://www.anthampton.com/thething.html>, last accessed March 2022. http://www.contrepied.de/soon/portfolio_page/the-thing-an-automatic-workshop-in-everyday-disruption/, last accessed March 2022.

Aspects of the workshop that might usually be improvised, needed to be scripted and explained. Unexpected outcomes needed to be anticipated. However, it was also important to leave some space for interpretation and improvisation.

The second exercise asked participants to attend to what we called ‘workshop props’—materials and equipment that frequently appear in workshop settings, such as sticky notes, a white board, a projector, chairs and tables arranged in a circle, in addition to cookies and coffee. First, we asked the workshop facilitators to create an inventory of their workshop props and then replace them with other self-made props in order to play out the consequences. The last exercise invited participants to physically rehearse the workshop at a high speed. Workshop facilitators had to physically move their participants’ bodies around, in the way they imagined participants would be taking up space throughout their workshop.

This ‘meta’ workshop about workshops did not intend to provide a recipe or protocol for the perfect workshop. Rather than showcasing best practices, the intention behind facilitating a workshop about workshops, was to explore the format of the workshop itself as it has become a substantial ingredient for H&D’s activities but had remained mostly unquestioned and never clearly articulated. With every new group we are used to slightly adjusting the ways in which we approach the workshop. We wanted to attend to the ways the workshop format itself can be conceptualized and designed, including unforeseen aspects.

Furthermore, we wanted to facilitate exchange regarding past workshop experiences and expectations in order to find ways of articulating similar and different incentives for facilitating and participating in workshops. As we were all facilitators as well as participants, we

had a shared interest in having a discussion and exchange about how we wanted the workshops to play out, how we would support each other with feedback, and perhaps how we would take the opportunity to rethink the workshops within their specific context.

The way a workshop unfolds depends on many variables, which are conditioned by the environment the workshop takes place in. It was useful to hear about the various workshop experiences and expectations of participants, in addition to articulating collective desires but also insecurities that were specific to that particular temporary group—a first step in making individual and collective intentions explicit and in creating a workshop atmosphere before and along with embarking on the workshop program together.

Conclusion

In this chapter, I have paid attention to and questioned the implications of the ‘workshop’ format, which I have come to understand and appreciate most cogently in the context of H&D. Characteristics that I have brought to the fore in the context of H&D workshops are learning by doing in addition to learning and doing with others in a semi-committed manner, exploring topics, methods and technologies, without claiming authority over knowledge. In such workshops, the understanding of productivity shifts from focusing on producing finalized products to processes. The emphasis is on opening up such processes in a social environment.

I have explained that ways of doing and making things are, to some extent, exposed in such workshops. By partaking in each other’s ways of doing and making, diverging approaches become the subject of attention and potential questioning. By opening up making processes that are usually implicit or solitary, they can be

called into question when they fail to meet expectations of how 'things are done'. The process of determining what is considered (un)productive, (un)important or (un)acceptable becomes part of a dynamic presence of diverging practices and creates, in my view, an exceptional environment in which 'not-knowing' is what people have in common. Such workshops are therefore also occasions to experiment with making oneself understood across different practices and registers, i.e. through demonstrating, gesturing, discussing, peeking over one's shoulder or just through co-inhabiting in the same space for a while.

The value of workshops can be located in their semi-committed, contingent and non-conclusive characteristics. These characteristics also make them impossible to reproduce in the same way twice. Such workshops can offer opportunities for encountering and experimenting with *other* processes and manners of socio-technological interaction and articulation, testing and trying without the pressures of producing anything final or ultimately useful. Yet, as I have also addressed, a number of issues come to the fore when attending to the pervasiveness of the workshop, as it travels through various domains, often without clear articulation of intentions, expectations and long-term consequences.

As a flexible term, 'workshop' lends itself to adaptation across various contexts. However, workshops as temporary semi-committed collective environments, need to be considered also as a consequence of uncertain, contingent and fragmented work and social relations. While offering short-lived occasions for collective material experimentation, workshops also perpetuate a certain work and learning culture of self-reliance and a lack of care for long-term social and work relations. Furthermore, repeatedly organizing workshops in a

particular manner perpetuates an image of workshops that detracts from the reality that workshops are in fact a lot of work.

That is, by nourishing an informal egalitarian atmosphere, by removing the pressure of producing polished end products, and by organizing workshops outside of working hours (in the case of H&D, often in the evening or during holidays) workshops are moved out of the scope of 'work'.

Despite (or perhaps because of) its entanglements with neoliberal dynamics in the creative sector and the economization of education, I do not want to abandon the workshop as a format for collective practice. My proposition is to remain with the workshop as a format and a concept that crosses boundaries, and to work against its ambiguity. I hope to have contributed to its disambiguation to some extent in this chapter. What are the implications of remaining bound to the workshop format? For me, it means always taking into account the fact that the workshop is a fundamentally questionable format that requires critical attention. Organizing workshops responsibly requires context-specific interrogation of *how* and within which frameworks a workshop may be organized. This question cannot be answered in general terms. Thus, it must be revisited again and again and is perhaps most pertinently answered according to the terms of each particular workshop composition—of people, resources, tools, infrastructures and environments. Another important question relates to how to self-organize temporary collective learning environments, while also developing relationships that are committed and long-term, thus counterbalancing flexibilization and fragmentation of work and life. How to not perpetuate but rather work against the insecurities and disorientations that come with that reality?

Over the years, the H&D collective developed social and technical conduct that could be compared to the workshop instructors' who take care of maintaining their spaces, in terms of facilities, as well as hospitality. The workshops H&D organizes seem instantaneous but there are aspects of continuity and long-term commitments that evolve alongside. The continuously evolving technical infrastructure around collective organization includes collaborative online notepads and spreadsheets, the websites H&D uses to announce and document workshops, the server on which our websites and tools and our emails are hosted, as well as the H&D mailing list. Furthermore, there are certain expressions that evolve along with the organization of H&D workshops that enter into a collective vocabulary. They are mentioned once and are then picked up by others and repeated in different workshop contexts.

The notion of the 'workshop script' evolved from commitment towards the workshop but also to staying connected throughout the global COVID19 pandemic. The workshop script became another 'thing held in common', a boundary object, a concept and artifact, something that was shaped and reshaped collectively and could be referred to while members were distributed and trying to continue organizing, facilitating and participating in workshops remotely.

Collective utterances such as the workshop script express a particular (not universal) relationship to the workshop format and explicate collective efforts of staying connected, even while there are other forces at play that seem to work against that effort. Rhetoric such as rapid, sprint, agile, marathon, insinuate and reproduce a general perception of the workshop as a recipe for high-velocity or result-oriented production. By resisting one definition of 'workshop', for instance

by including participants, organizers and facilitators in questioning and redefining the particular conditions of workshops every time there is a new occasion, the workshop as such becomes less 'agile', less of a 'panacea', less adaptable to all and any context.

Bibliography

- Anderson, Walter A. "What Makes a Good Workshop." *The Journal of Educational Sociology* 24, no. 5 (January, 1951): 251–261.
- Barad, Karen. *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*. Durham, London: Duke University Press, 2007.
- Brand, Stewart, ed. *The Whole Earth Catalog. Access to Tools*, 1972.
- Cramer, Florian. "Does DIY mean anything? – a DIY attempt." 2019. http://cramer.pleintekst.nl/essays/does_diy_mean_anything/, last accessed May 2022.
- Dewey, John. "My Pedagogic Creed." *The School Journal* 54 (January 1897): 77–80.
- Días, Eva, *The Experimenters. Chance and Design at Black Mountain College*. Chicago, London: The University of Chicago Press, 2015.
- DiSalvo, Carl "Critical Making as Materializing the Politics of Design." *The Information Society*. 30, no. 2 (2014): 96–105.
- Draves, Bill. *The Free University: A Model for Lifelong Learning*, New York: Association Press, 1980.
- Eijnde, van den, Jeroen, ed. "A Hall of Mirrors of Art Production." In *Materialization in Art and Design*, edited by Herman Verkerk and Maurizio Montalti. Berlin, Amsterdam: Sternberg Press, Sandberg Instituut, 2019.
- Filliou, Robert. "La Fête est Permanente / The Eternal Network." Robert Filliou "La Fête est Permanente / The Eternal Network," *Teaching and Learning as Performing Arts*, first published in 1970.
- Groten, Anja. "The Workshop and Cultural Production." In *Open!*, 2019. <https://www.onlineopen.org/the-work-shop-and-cultural-production>, last accessed January 2022.
- Harren, Natilee. "La cédille qui ne finit pas: Robert Filliou, George Brecht, and Fluxus in Villefranche." *Getty Research Journal*, no. 4 (2012): 127–143.
- Horowitz, Frederick A. "What Josef Albers Taught at Black Mountain College, and What Black Mountain College Taught Albers by Frederick A. Horowitz" <http://www.blackmountainstudiesjournal.org/volume1/1-9-frederick-a-horowitz/>, last accessed May 2022.
- Kentgens-Craig, Margret. "Art and politics: no "new unity." In *The Dessau Bauhaus building 1926—1999* edited by Kentgens-Craig, Margret. Basel, Berlin, Boston: Birkhaeuser, 1998.
- Krauss, Annette. "Lifelong Learning and the Professionalized Learner." In *Unlearning Exercises. Art Organizations as Sites for Unlearning*. Amsterdam, Utrecht: Valiz, Amsterdam and Casco Art Institute Working for the Commons, 2018.
- Lerm Hayes, Christa-Maria "Beuys's Legacy in Artist-led University Projects." *Tate papers*, 31 (2019).
- Lodato, Thomas, James and Carl DiSalvo, "Issue-oriented hackathons as material participation", *New Media & Society* 18, no. 4 (April 2016).
- Lorusso, Silvio. *Entreprenariat. everyone is an entrepreneur nobody is safe*. Eindhoven: Onomatopee 170, 2019.
- Marres, Noortje "No issue, no public: democratic deficits after the displacement of politics", PhD diss. Amsterdam School for Cultural Analysis, 2005.
- Myers, Alonzo F. "Workshops." *The Journal of Educational Sociology* 24, no. 5 (January 1951): 249–250.
- Schön, Donald A. *Educating the Reflective Practitioner*. San Francisco: Jossey-Bass Publishers, 1988.
- Sennett, Richard. *The corrosion of character: the personal consequences of work in the new capitalism*. New York: W.W. Norton, 1999.

- Sennett, Richard. *Together: the rituals, pleasures, and politics of cooperation*. New Haven, CT: Yale University Press, 2012.
- Star, Susan Leigh and James R. Griesemer “‘Translations’ and Boundary Objects: Amateur and Professionals in Berkeley’s Museum of Vertebrate Zoology, 1907–39.” *Social Studies of Science* 19, no. 3 (1989).
- Star, Susan Leigh “This is Not a Boundary Object: Reflections on the Origin of a Concept.” *Science, Technology, & Human Values* 35, no. 5 (2010).
- Stengers, Isabelle. *In Catastrophic Times: Resisting the Coming Barbarism*. London: Open Humanities Press, 2015.
- Turner, Fred. *From counterculture to cyberculture: Stewart Brand, the Whole Earth Network, and the rise of digital utopianism*. Chicago: University of Chicago Press, 2006.
- Volkman, Christina. “Consuming the Bauhaus.” *Consumption Markets & Culture* 9, no. 2: Oppression, Art and Aesthetics (2006).
- Wall, Oisín. “Remembering 1968: The Campus of the Anti-University of London.” 2018, <https://www.history-workshop.org.uk/remembering-1968-the-campus-of-the-anti-university-of-london/>, last accessed May 2022.
- Waters, Kelly. “All about Agile. Step 4: Sprint Planning (Tasks).” October 2007. <http://www.allaboutagile.com/how-to-implement-scrum-in-10-easy-steps-step-4-sprint-planning-tasks/#sthash.jbSG5uIV.dpuf>, accessed October 14, 2018.
- Zer-Aviv, Mushon; Mandiberg, Michael; Linksvayer, Mike; Peirano, Marta; Toner, Alan; Erkalovic, Aleksandar; Hyde, Adam. “Anatomy of the First Book Sprint”. *Collaborative Futures*. Transmediale, Berlin: April, 2011.

Relevant links

- “The Workshop. Investigations Into an Artistic-Political Format.” ICI Berlin, international Conference organized by Kai van Eikels and Stefan Hölscher, (March 26-28, 2021) <https://www.ici-berlin.org/events/the-workshop/>
- <https://www.bordersessions.org/lab/building-a-vr-empathy-machine/>
- <https://maydayrooms.org/portfolio/antiuniversity-of-london/>
- <https://antihistory.org/>
- http://www.fiuamsterdam.com/html/f_i_u__history.html
- <https://web.archive.org/web/20110910110005/http://www.beuys.org/fiu.htm>
- <http://dewey.pragmatism.org/creed.htm>
- <http://www.anthampton.com/thething.html>
- http://www.contrepied.de/soon/portfolio_page/the-thing-an-automatic-workshop-in-everyday-disruption/
- <https://nextnature.net/story/2018/next-nature-academy-workshop>
- <https://www.openbsd.org/hackathons.html>
- <https://www.hackerearth.com/blog/developers/good-bad-overrated/>
- “Diedrich Diederichsen (Vienna): Free Jazz with Children” <https://vimeo.com/547117231>
- <https://libregraphicsmeeting.org/2016>
- <https://libregraphicsmeeting.org/lgm/public-documentation/code-of-conduct/>
- <http://making-matters.nl/about/consortium>
- https://hackersanddesigners.nl/s/Summer_Academy_2018/p/Work_the_Workshop
- <https://etherpad.hackersanddesigners.nl/p/hdsa2020-how-to-workshop>
- <https://etherpad.hackersanddesigners.nl/p/student-workshops>
- <http://www.anthampton.com/thething.html>

http://www.uni-lueneburg.de/personal_fuehrung/index.php/Workshop

<https://www.umsetzungsberatung.de/methoden/moderation.php>

<http://www.workshopproject.org>

Workshops in a box:

Next Nature: <https://www.nextnature.net/2018/06/next-nature-academy-workshop/>

Pipdecks Workshop tactics: <https://pipdecks.com/products/workshop-tactics?variant=39770920321113>

Forkshop: <https://2018.transmediale.de/content/fork-politics-in-post-consensus-cryptoeconomics>

‘Hackathon-like workshop’: ‘If then What Now’

<http://www.ifthenwhatnow.nl/>

“The Thing An Automatic Workshop”

<http://www.anthampton.com/thething.html>

Iowa’s Writers Workshop: (1936)

<https://writersworkshop.uiowa.edu/about/about-workshop/history>

Workshops: Designing and Facilitating Experiential

Learning: <http://web.a.ebscohost.com.ezproxy.leidenuniv.nl:2048/ehost/ebookviewer/ebook/bmxlYmtfXzQ2|NzA3M19fQU41?sid=07f63ba4-6326-4362-b33c-22e0e92b561f@sessionmgr4010&vid=0&format=EB&rid=1>

Workshops: Optimal vorbereiten, spannend inszenieren,

professionell nachbereiten: https://books.google.de/books?id=y9Eph3xdRlIC&printsec=frontcover&source=gbs_atb#v=onepage&q&f=false

Workshops, Seminare und Besprechungen: mit Kreativität

und Methode zum sicheren Erfolg: https://books.google.de/books?id=WENiPpEEenwAC&printsec=frontcover&source=gbs_atb#v=onepage&q&f=false

Video reports of H&D Summer Academy 2018, concept

and design by Juliette Lizotte, development by Heerko van der Kooij:

https://www.youtube.com/watch?v=uVqCS7wPUh4&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=YANEHZd-MbQ&ab_channel=Hackers%26Designers)

[https://www.youtube.com/watch?v=YANEHZd-MbQ&ab_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

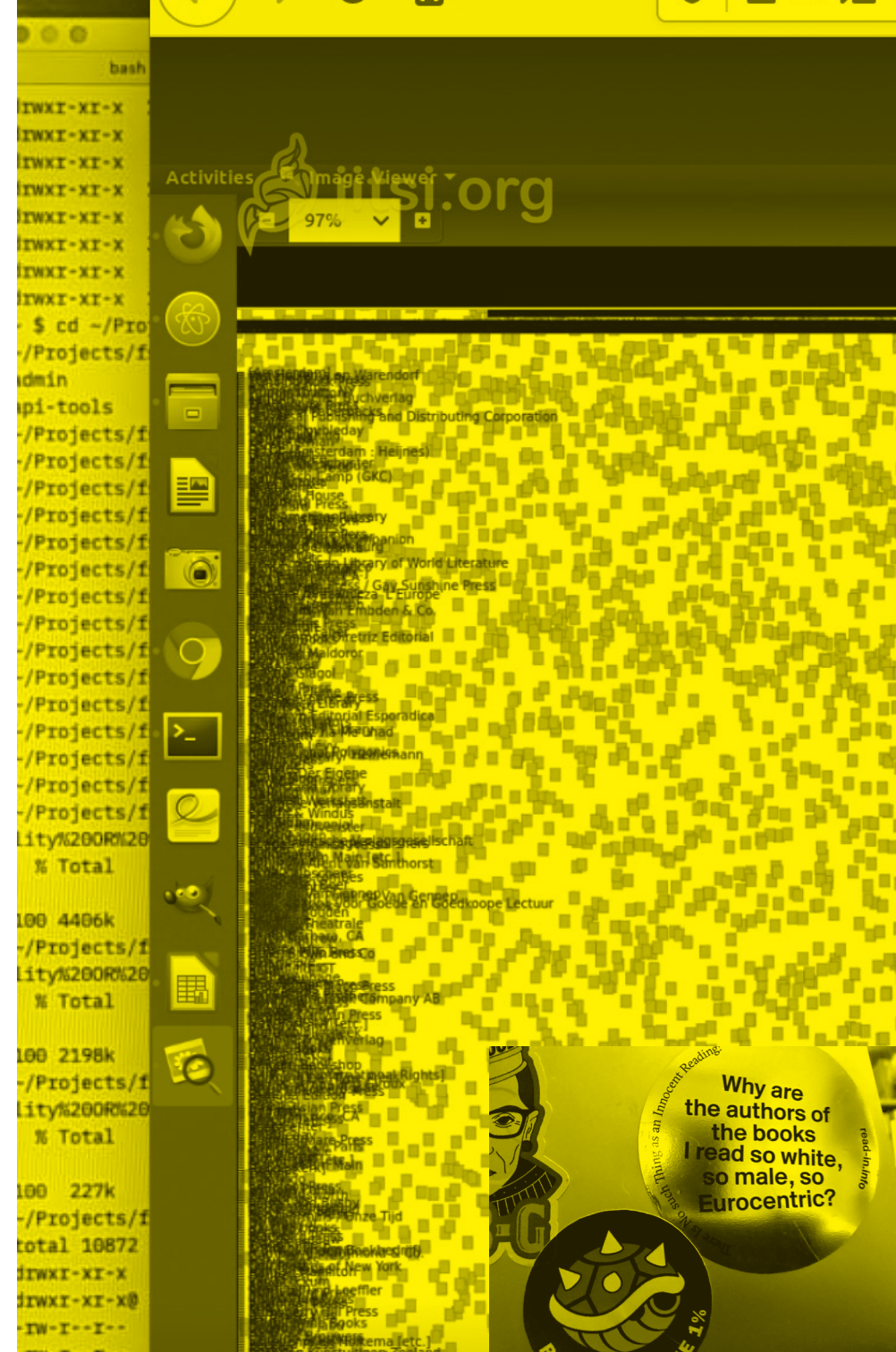
https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers

[_channel=Hackers%26Designers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)

[https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers](https://www.youtube.com/watch?v=5aD-H7Pqg9s&ab_channel=Hackers%26Designers)



Intersectionality

Ashgate 14

Palgrave Macmillan 10

Athena
Emerald 49

Stylus Publishing

Wiley

2000
"race" "dis"
max 150 bar
100

tsearchtool.nl

Edit this page | History | Admin | Log Out

B I U S [List Icons] [Undo] [Redo] [Eye]

Connected.

1 Thit :D

2

3 hey there!!

4 wohooo

5 hallo

6 Let's put notes here

7 amazinggggggg!

8

9

10 **10.October 2018, Reading Group/meeting Laura, Anja, Svenja, Annette**

11

12 question/preparation fro Atria meeting(Thesaurus)

13 Manual: Please feel free to add your own questions!

14 • what is the motivation of the individual participation (passion for the subject?, or else?)

15 • What's the role of head of collection?

16 • history of thesaurus... how would they organize back then?

17 • what are the skills that you need for a thesaurus?

18 • did they experiment with different models, how was the collaboration...? Workflow? External parties...

19 • talking about our processes...encounters...

20 • how and if it was updated...?

21 • analytics , on how they are using it now

22 • diagrammtic of the thesaurus: why that shape?

23 • digital heritage: what is done with the thesaurus now?

24 • why is there only a focus on gender, not race?

25 • data processing: Andre:

26 • what were the thesaurus that you looked at

27 • beta version, testings of user interface, and how they did, target group

28 • audience...who are our adressees?

29

30 new dates to prepare Atria meeting:

31 19.10, 5pm Annette, Svenja &?

32 22.10, 8.30pmAnja, Laura, Svenja &?

33

34

35

36 Friday, 19.Oct

37 Meeting Preparation Meeting Women's Thesaurus

38 Present: Annette, Svenja

39

40 Budget for speakers/participants from outside

41 Gusta Drenthe 100-150Euro

42 Maria van der Sommen 100-150Euro

43 IHLIA?

44 Book voucher for Noortje for organizing/support

45

46 Sending funding application to participants

47 'Concrete outcome':

48 Be strategic over audio during meeting

49 Gender Heritage Connection: How are you making this initiative intersectional?

50

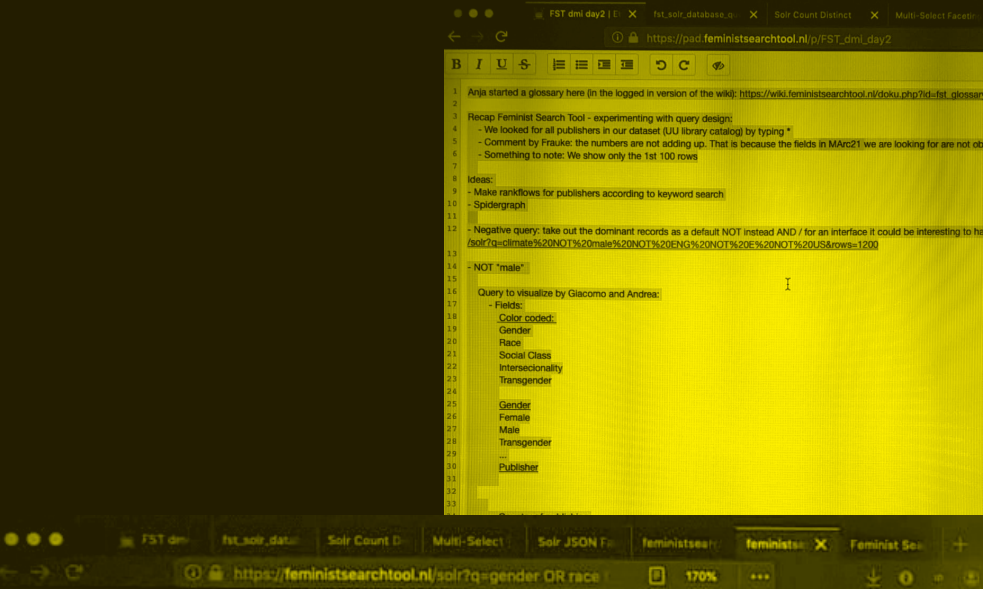
51 History of terms adopted--made visually

52 What are the 2200 words

53 How many words have been added/taken away?

54 Where is all the background information of the 2200 stored and made accessible?


55 (e.g.



```
{
  "responseHeader":{
    "status":0,
    "QTime":0,
    "params":{
      "q":"gender OR race OR intersectionality OR transgender OR
social class\"",
      "fl":"gender_s AND a_title_statement_t AND
b_title_statement_t AND title_statement_t AND imprint_s",
      "rows":"150"}},
  "response":{"numFound":2836,"start":0,"docs":[
    {
      "b_title_statement_t":["issues of gender, 'race',
sexuality, disability and social class /"],
      "a_title_statement_t":["Education, equality and human
rights :"],
      "imprint_s":["Abingdon [etc.] : Routledge, 2012.",
      "title_statement_t":["Education, equality and human rights
: issues of gender, 'race', sexuality, disability and social class
/ edited by Mike Cole."]],
      {
        "b_title_statement_t":["issues of gender, \"race\",
sexuality, disability and social class /"],
        "a_title_statement_t":["Education, equality and human
rights :"],
        "imprint_s":["London [etc.] : Routledge, 2006.",
        "title_statement_t":["Education, equality and human rights
: issues of gender, \"race\", sexuality, disability and social
class / edited by Mike Cole."]],
        {
          "gender_s":"unknown",
          "b_title_statement_t":["Race, Social Class, and
Masculinity."],
          "a_title_statement_t":["Intimate Partner Violence :"],
          "imprint_s":["El Paso : LFB Scholarly Pub. LLC, 2009."],
          "title_statement_t":["Intimate Partner Violence : Race,
```

type your keyword

Default:

 Feminism*

Terms retrieved from Atria Women Thesaurus:
<https://institute-genderequality.org/library-archive/collection/thesaurus/5287/>



anarcha feminism*



Black Feminism*



Christian feminism*



cultural feminism*



cyber-feminism*



ecofeminism*



equal rights feminism*



first feminist wave*



global feminism (eng)*



Marxist feminism*



Muslim feminism*



new feminism*



radical feminism*



second feminist wave*



socialist feminism*



third wave feminism*

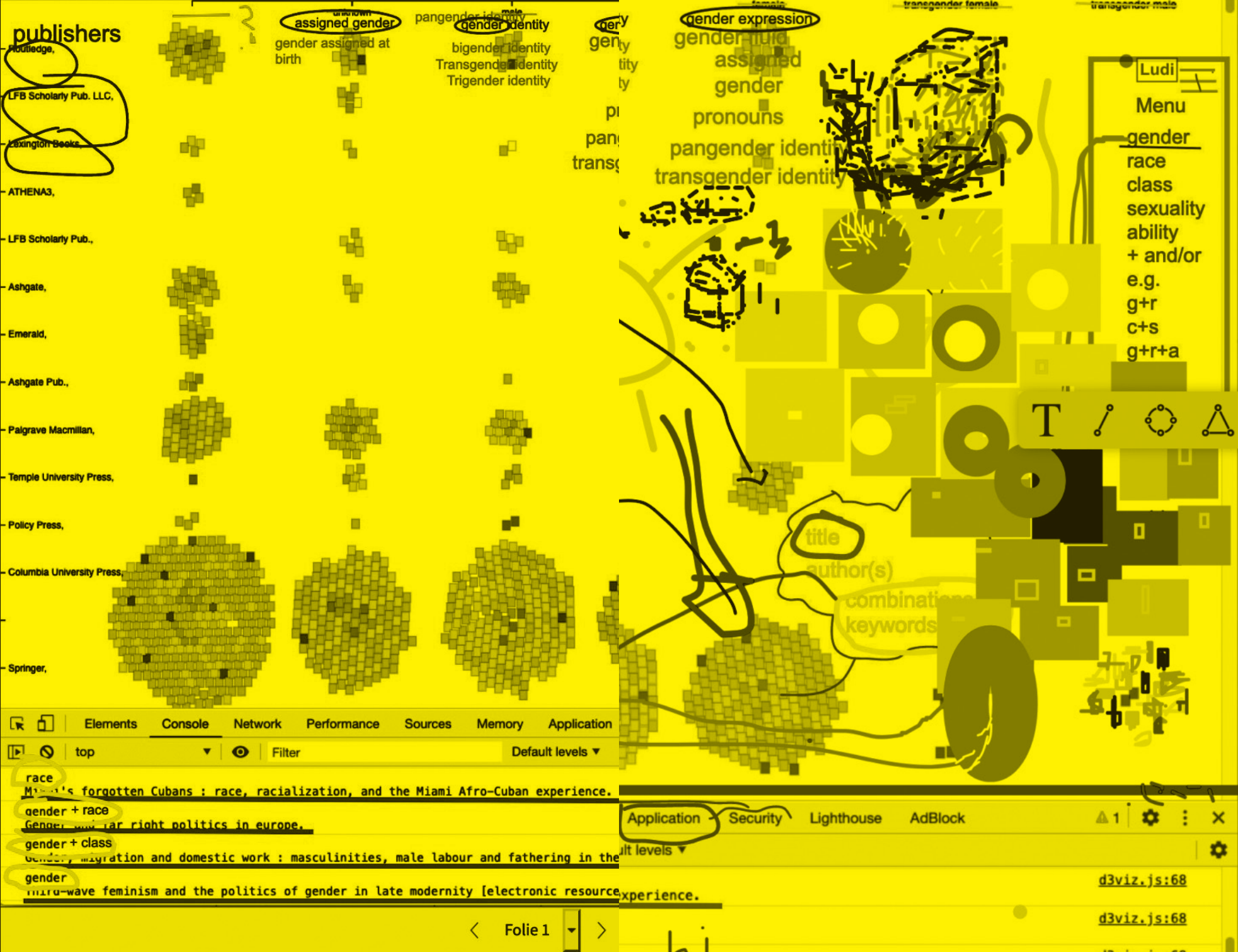


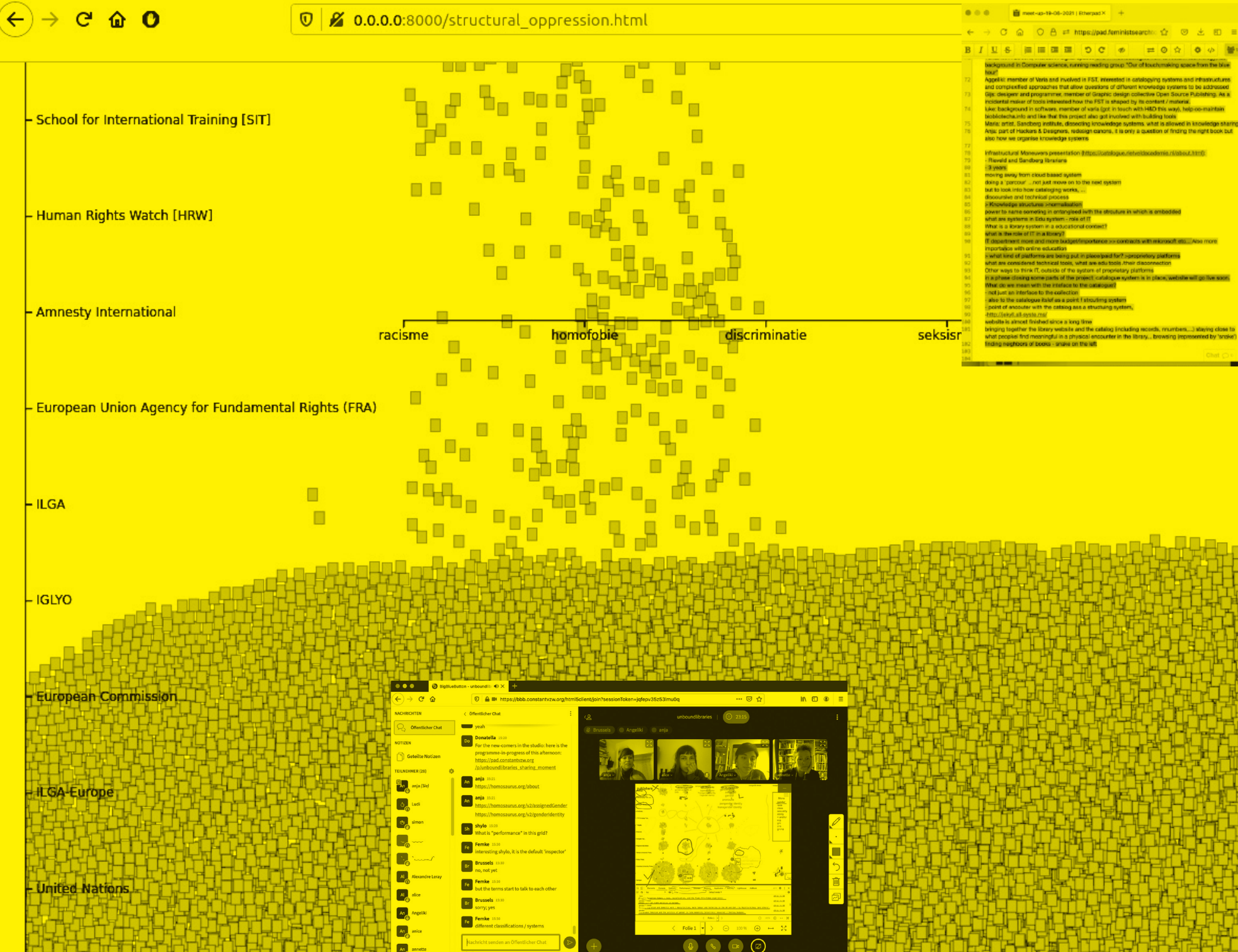
add category*



add category*

rch





Chapter 3: Tool Building

This chapter discusses the ways in which tools (in the context of self-organized collective work) may or may not be perceived and actualized as purposeful objects that can be used, or are designed to be used. More specifically, I will discuss an ongoing, non-conclusive process of collectively imagining, building, and modifying a set of digital tools entitled 'Feminist Search Tools'.

Drawing on Sara Ahmed's exploration of the concept of 'use', and on the metaphysical meaning of 'tool' and 'broken-tool' as discussed by Karen Barad, Bruno Latour and Graham Harman, the inefficiency of a collective tool building process brings to the fore other-than-utilitarian articulations of tools. That is, the processes of collective tool building, through their distributed and fragmented character, can create conditions in which tools are not presumed as an inevitable outcome but as ongoing and discursive.

Introduction: Situating tools within the H&D collective

In the context of Hackers & Designers, ‘tools’ usually refer to digital tools, software or hardware that we, as designers, artists, technologists and organizers interact with, on a daily basis. H&D tends toward free and open-source tools. In H&D workshops, the accessibility of source code offers possibilities for using, copying, studying and changing, thus learning from and with technical objects. In contrast to the restrictions of using, sharing and modifying proprietary software, free and open-source principles derive from software development practices where technical objects “are made publicly and freely available.”¹ According to the Free Software Foundation, ‘free’ is defined as liberty, as “free from restriction, not as ‘free of charge.’”² The collective aspects of free and open-source software are expressed through particular modes of licensing and the practice of documentation and publication of source code on platforms for distributed version control and source code management such as Github and Gitlab. In the context of H&D, these principles are explored in and outside of

the domain of computer programming.³ Such principles are nurtured through a shared understanding that nothing is really made from scratch, and that the software and hardware we are working with, have been passed through many hands

There are certain open-source tools that H&D accumulated around organizational activities, such as the web spreadsheet tool Ethercalc⁴ to create overviews for budgets and plans or the real-time collaborative note taking tool Etherpad.⁵ As free and open-source projects, these tools are used by many collectives and individuals who put them into practice across various contexts. For H&D, such tools are enmeshed with organizational routines, with other technical systems and are also connected to other communities of toolmakers and users.

Furthermore, H&D builds and works with digital tools that are situated in the realm of experimental publishing and graphic design. These include self-made publishing tools such as ChattyPub,⁶ Momentary Zine,⁷

3 In his dissertation “Sandbox Culture: A Study of the Application of Free and Open Source Software Licensing Ideas to Art and Cultural Production” Aymeric Mansoux wrote about the ways in which principles of free and open-source have been interpreted and actualized in free and open-source software on art and culture since the late nineties.

Aymeric Mansoux, “Sandbox Culture: A Study of the Application of Free and Open Source Software Licensing Ideas to Art and Cultural Production” (PhD diss., Centre for Cultural Studies, Goldsmiths, University of London, 2017).

4 Documentation of the Ethercalc instance hosted by H&D: https://hackersanddesigners.nl/s/Tools/p/H%26D_Ethercalc, last accessed May 2022.

5 Documentation of the Etherpad instance hosted by H&D: https://hackersanddesigners.nl/s/Tools/p/H%26D_Etherpad, last accessed May 2022.

6 ChattyPub documentation can be found at: <https://hackersanddesigners.nl/s/Tools/p/Chattypub> <https://chatty-pub.hackersanddesigners.nl/>, last accessed March 2022.

7 Momentary Zine documentation can be found at: https://hackersanddesigners.nl/s/Tools/p/Momentary_Zine, last accessed March 2022.

1 Christopher Kelty, *Two Bits: The Cultural Significance of Free Software* (Durham: Duke University Press, 2008), xi.

2 ‘Free Software’ was defined and written by Richard Stallment and published by the Free Software Foundation. “The Free Software Foundation is dedicated to eliminating restrictions on copying, redistribution, understanding and modification of software. The word “free” in our name does not refer to price; it refers to freedom. First, the freedom to copy a program and redistribute it to your neighbors, so that they can use it as well as you. Second, the freedom to change a program, so that you can control it instead of it controlling you; for this, the source code must be made available to you.”

GNU Bulletin 1, no. 1, (1986), <https://www.gnu.org/bulletins/bull1.txt>, last accessed May 2022.

and the Heartbeat-to-print tool.⁸ In experimenting with design and publishing tools, H&D draws inspiration from other collectives and individuals, such as the Brussels-based collective Open Source Publishing⁹ and ‘Constant Association for Art & Media’,¹⁰ the Rotterdam-based collective Varia,¹¹ the Amsterdam-based collective fanfare,¹² the publishing practice of Vienna-based artist Eva Weinmayr,¹³ or the embodied publishing practices of Rotterdam-based designers Amy Suo Wu and Clara Balaguer.¹⁴ In addition, the knowledge and practices evolving from educational environments are encapsulated by the student-led interdepartmental initiative PUB at the Sandberg Instituut Amsterdam¹⁵ or the experimental publishing program XPUB at Piet

Zwart Institute in Rotterdam,¹⁶ as well as the digital and hybrid publishing research groups of the Institute of Network Cultures.¹⁷

At H&D, such tools are often activated through workshops and are used to design small edition self-published printed matter. H&D’s experiments with design tools have challenged my design routines, more specifically the relationships I have built with design software, the tools I have become used to since my design education. In the context of H&D, publishing tools are not replacements but function in parallel to proprietary tools. They are indicative of an attempt to envision a process of designing a publication differently than it would be conventionally done. The practical and experimental approach to conceptualizing and building design and organizational tools differently has allowed me to test out other scenarios for tool-designer relationships and interactions.

Furthermore, H&D’s hands-on workshops bring together people and tools, in a temporary, focused environment. Such workshops feed off and nurture communities of tool users and makers who consider it relevant to expand the conception of tools and tool-building processes, to learn about the ways in which tools are constructed in a hands-on, practical and often playful manner. In all instances it seems to me that people involved with H&D ascribe a certain value to toolmaking. Yet, it also seems as if the shared enthusiasm for experimenting with tools cannot be located within the tool itself, nor in the products or outcomes these self-made

- 8 Documentation on the Heart-beat-to-print tool can be found at: <https://hackersanddesigners.nl/s/Tools/p/Heartbeat-to-print>, last accessed March 2022.
- 9 Website of Open Source Publishing: <http://osp.kitchen/>, last accessed March 2022.
- 10 Website of Constant Association for Art and Media <https://constantvzw.org/site/>, last accessed March 2022.
- 11 Website of Varia—Center of Everyday Technology: <https://varia.zone/>, last accessed March 2022.
- 12 Website of fanfare: <https://fanfarefanfare.nl/> <http://fanfareinc.world/colophon>, last accessed March 2022.
- 13 Website of Eva Weinmayr: <http://evaweinmayr.com/work-categories/publishing/> <http://andpublishing.org/>, last accessed March 2022.
- 14 Lecture and workshop by Clara Balaguer about “Publishing as Bloodletting,” <https://www.kabk.nl/agenda/studium-generale-lecture-clara-balaguer> <https://pub.sandberg.nl/sessions/pub-e-pub-4-session-3-publishing-as-bloodletting-w-clara-balaguer>.
Example of Amy Suo Wu’s ‘embodied publishing’ practice: “garments [that] are experiments in embodied publishing, spectral publishing, navel expanding, and ghostwriting” <https://amysuowu.net/content/dear-ursula> <https://amysuowu.net/content/shapeshifty-0>, last accessed March 2022.
- 15 Website of the student initiative of the Sandberg Instituut, PUB <https://pub.sandberg.nl/>, last accessed March 2022.

- 16 Website of the Piet Zwart Experimental Publishing Master: <https://www.pzwart.nl/experimental-publishing/>, last accessed March 2022.

- 17 Joe Monk, Miriam Rasch, Florian Cramer and Amy Wu, eds., *Hybrid Publishing Toolkit*: <https://networkcultures.org/blog/publication/from-print-to-ebooks-a-hybrid-publishing-toolkit-for-the-arts/>, last accessed March 2022.

tools produce. The appreciation for such self-made tools seems to lie in the *process* of building tools. In my experience of experimenting with tools in the context of H&D, there is a common understanding that tools are not mere instruments but that, as tool-users and makers, we are implicated in them, in ways that go beyond their immediately evident utility or the products they may produce.

In this chapter I will discuss the implications of tools in collective design practice. More precisely, I will attend to the ways in which tools (in the context of self-organized collective work) may or may not be perceived and actualized as ‘purposeful’ objects that can be used, or are made to be used. Through my work with H&D, I realized that the particularity of a collective environment contributes to the ways in which tools are used, produced and discussed. Conversely, tools and processes of toolmaking can also affect the ways in which a collective environment evolves. These processes influence how H&D is organized as a group, how activities and interests are pursued and how certain values are articulated and rearticulated. In my experience collective practices are constantly in flux and tend to lean into their entanglements with tools in ways that make it difficult to sustain the perception of tools as being for something. In fact, the articulation and actualization of ‘tools’ within the context of H&D is driven by a certain resistance towards the conception of tools as simply practical and discrete objects.

In his book *Tool-being* (2002), the philosopher Graham Harman refuses a conceptualization of the tool as a merely pragmatic entity. Harman discusses Martin Heidegger’s tool analysis, where the philosopher pays particular attention to tools as metaphysical objects. According to Harman, a tool is a relational thing that “does not merely have some neutral presence that could

be viewed from the outside, but actually exists in a network of forces and meanings that determine its reality.”¹⁸ Following this understanding of ‘tools’ they “cannot be confined to officially sanctioned tool-items such as picks, drills and chains.”¹⁹ Due to the ways in which tools take part in a network of forces and meanings, it can become rather difficult to determine where a particular tool begins and ends. This is evident in my work with H&D, where relational aspects of tools come to the fore. Tools are sometimes introduced with a certain purpose in mind, but then travel through different contexts and change their function and meaning along the way. The role and function of a tool within collective design practice may change over time and influence how it is spoken about and actualized. Collaborative writing tools such as Etherpad or Ethercalc serve a certain organizational purpose, such as keeping track of budgets, plans and assemblies. However, such collaborative tools may also become the subject of a workshop or are conceptualized as a site/place/space in which workshops take place. An example is the *Temporary Riparian Zone*²⁰ workshop that was hosted by two members of the Varia collective, Cristina Cochior and Angeliki Diakrousi, during the Hackers & Designers Summer Academy of 2020. Another example is the short workshop sequel *Ethercalc routines* hosted by H&D member Karl Moubarak and myself, during the Hackers & Designers Summer Academy of 2021. In both workshops, participants joined remotely and spent time navigating through timed prompts and exercises on Ethercalc and Etherpad.

18 Graham Harman, *Tool-being: Heidegger and the metaphysics of objects* (Chicago: Open Court, 2002), 39.

19 *ibid.* 36.

20 Documentation of the ‘Temporary Riparian Zone’ workshop: https://hackersanddesigners.nl/s/Summer_Academy_2020/p/Temporary_Riparian_Zone, last accessed March 2022.

At H&D we sometimes speak about how ‘self-made’ tools (self-made not in the sense of made-from-scratch but rather as participants become involved in their making process) can estrange design processes, break with the routines we may have already established and instill in us a greater sense of our interdependence. When my relation to the tools I use has reached a point of routine, when a process ‘goes without saying,’ so to speak, the use of the tool becomes subconscious and unquestionable. In her book *What’s the use?* feminist writer and scholar Sara Ahmed stated, “When mechanisms work to enable or to ease a passage they become harder to notice.”²¹ Furthermore, Graham Harman described such ‘tools-in-action’ as “operat[ing] in an inconspicuous usefulness, doing their work without our noticing it.”²² When a tool is not functioning in a seamless manner, it may be perceived as broken, failing or unusable. This is what Harman refers to as the ‘broken tool’, which does not mean literally broken. Rather, it describes the moment in which a tool is considered directly. It comes to the fore, is rendered noticeable. There is thus, a double life in tools, *tool-in-action* and *tool-out-of-order*.

It seems a ‘tool-in-action’, as Harman describes it, or a ‘tool-routine’ as I would describe it, does not require explanation and therefore goes without saying. Yet I have come to question the refusal of tool-routines, particularly when it becomes inherently part of the functioning of a collective to continuously question, alter and change the meaning of tools. Can the so-called ‘brokenness’ of a tool become a tool’s purpose? Is there such a thing as a broken-tool-in-action?

21 Sara Ahmed, *What’s the use? On the uses of use* (Durham: Duke University Press, 2019), 12.

22 Graham Harman, *Tool-being: Heidegger and the metaphysics of objects* (Chicago: Open Court, 2002), 45.

Or to formulate this idea more broadly, are other-than-utilitarian relationships to tools possible? If so, how could such relationships be articulated?

In the following section, I attend to these questions by drawing on a collaborative project Feminist Search Tools (FST). The FST project encompassed a set of tools-in-the-making and is an ongoing self-organized collective process crossing various collective environments and breaching different discourses and fields of knowledge. I will begin by contextualizing the project and discussing my personal involvement in it. My personal perspective and motivations form one amongst many different viewpoints and incentives that were involved and evolved as part of this toolmaking process. I pay attention to the fragmented and contingent character of the process, its interwovenness with various collective environments and timelines, as well as the significance of such a fragmented process for the ways in which the ‘tool’ is conceptualized and materialized. Additionally, I will focus on the (re)articulation of a tool’s ‘usefulness’—when determining what is considered a useful or usable tool is not about defining a common goal for it. Instead, the question of what is a useful/usable tool may emphasize the differences of personal desires, expectations, frustrations and feelings of responsibility towards others.

I then discuss aspects of digital interface design as part of the process of imagining, articulating and making the FST. I examine interfaces’ relation to the systems they interact with, and the ways in which certain interface design conventions can be related to the concepts of ‘tool-in-action’ and ‘broken tool’. I also reflect on the concept of versioning and the notion of the 1st version, in particular how it has been used to negotiate the pressure of publishing a ‘functioning’ search tool on the one hand and the resistance to resolving, finishing or

releasing it on the other. I will go on by contextualizing the significance of the different environments, in which the tool versions have been brought and evolved within. More precisely, I will attend to the permeability of the collective toolmaking process, and its receptiveness to context-specific terminologies, cultures and conducts. I will analyze how the context of the Amsterdam-based Digital Methods Summer School (DMI) has introduced specific divisions of roles and tasks, and specific understandings and actualization of design and visualization practices that had significant influence on the continuation of the toolmaking process.

Drawing on an example of an off-shoot tool that was also produced during DMI, I will elucidate how the particular contexts the collective toolmaking process passed through and brought together were not always in alignment. Such moments of incompatibility were occasions to express commonalities and discrepancies regarding values and ethical concerns. In the chapter's conclusion, I propose an approach that I call 'slow collective processing'—an approach to collective tool-building that is reflective of the diverging socio-economic realities of a collective on the one hand and, on the other, precipitates the constant questioning of the tool-in-the-making.

The Feminist Search Tools project

'Tool' in the context of the FST project describes a digital search interface in different iterations that allow for textual search queries within digital catalogs of libraries and archives. There have been various focal points within this project. One focus has been the context in which the tools have been developed and conceptualized, such as library catalogs, as well as the knowledge economies that libraries as institutions represent. This includes the

ways in which libraries and the knowledge they hold are made (in)accessible through search tools that build upon standardizations of search categories such as the Library of Congress subject headings.²³

As the title of the project suggests, the initiative is guided by feminist thinking, practices and principles. The FST project took as a starting point library search engines that are intertwined with underlying systems of categorization, which are a result of and reproduce structural discrimination based on gender, sexual orientation, age, race, class, (dis)ability. The question of the purpose or usefulness of the FST closely relates to the project's emphasis on such discriminatory effects and on rendering them tangible or even undoing them by building new/other tools.

The group that evolved around the FST project is composed of the two collectives Read-in²⁴ (Annette Krauss, Svenja Engels, Laura Pardo) and Hackers & Designers (Anja Groten, André Fincato, Heerko van der Kooij, and previous member James Bryan Graves). Members of the Varia collective (Angeliki Diakrousi and Alice Strete) and frequent collaborator Ola Hassanain are also participants. The members involved in the FST have in common that they are not experienced in designing, conceptualizing or building search engines, including working with large datasets. They are artist researchers, gender studies scholars, designers (architectural, graphic and web design), educators, (self-taught) computer programmers, librarians and

23 Emily Drabinski, "Queering the Catalog: Queer Theory and the Politics of Correction," *The Library Quarterly: Information, Community, Policy* 83, no. 2 (April 2013): 94-111.

Hope Ohlson, "Mapping Beyond Dewey's Boundaries: Constructing Classificatory Space for Marginalized Knowledge Domains," *LIBRARY TRENDS* 47, no. 2, (Fall 1998): 253-254.

24 Website of the Read-in collective: <https://read-in.info/>, last accessed March 2022.

archivists. Throughout the project, the group met sporadically and consulted with librarians, information specialists and other artists and researchers working with and around subjects related to libraries and librarianship.

The FST project followed different incentives, timelines and levels of intensity in terms of involvement with various collaborators. I cannot speak on behalf of all members but I will try to describe how I became part of this initiative and how my connections and appreciation for it have developed and have been challenged. When I got involved in this collaboration, I was already working with the Read-in collective in the role of a graphic designer. I designed and built Read-in's website, and worked on some of their publications.²⁵ I became interested in their project *Bookshelf Research*²⁶ for which Read-in members looked closely at different libraries, such as their own private libraries or the library of the art institution Casco in Utrecht.²⁷ The group considered each library book closely and created a statistical breakdown based on self-chosen categories. Categories entailed 'gender of the author', 'place of origin' as well as 'material condition' of the books. I invited Read-in to join one of the H&D meetups²⁸ in 2015, during which we looked into ways of searching within the digital catalog of the public library in Amsterdam. In retrospect, this

marked the beginning of the collective exploration of digital search tools and the relation of such tools to library cataloging systems.

This particular project is prescient to this dissertation as it has challenged me in its resistance to finality. It has been ongoing since 2015, and yields a manifold of documentation such as workshop outlines, code repositories, collaboratively written texts, audio recordings and transcripts of interviews and conversations, photographs and videos, collective notes and annotations of interfaces. The challenge of determining where a tool begins and ends becomes, in my view, particularly stark in this project. Karen Barad argues that "what is needed is a method attuned to the entanglement"²⁹ of what she calls "apparatuses of production."³⁰ These require "genealogical analyses of how boundaries are produced rather than presuming sets of well-known binaries in advance."³¹ The purpose and meaning of the FST have been (re)articulated and actualized throughout and in a non-conclusive manner, and fostered a relational understanding of tools-in-the-making. That is, the characteristics, possibilities and limitations of the tool, and the way the members of the FST group related to it, were not known in advance but evolved through the coming-into-being of the different tool iterations within particular contexts. Collective and individual understandings of what constitutes a (useful) tool seem to have been (and still are) continuously in-the-making, as the feminist search tools are also continuously in the making (including the different understandings of feminism and

25 Some examples of my graphic design work for Read-in:
<https://read-in.info/example-1/>
https://read-in.info/wp-content/uploads/2015/06/no_innocent-reading_red.jpg
<https://read-in.info/wp-content/uploads/2018/10/Unlearning-My-Library-Forum1-Copyright-Coco-Duivenvoorde-38-768x512.jpg>,
 last accessed May 2022.

26 Bookshelf Research is a project initiated by Read-in:
<https://read-in.info/bookshelf-research/>, last accessed May 2022.

27 Casco Art Institute Working for the Commons
<https://casco.art/>

28 H&D Meetup "Scraping, counting and sorting", 2015
https://hackersanddesigners.nl/s/Activities/p/Scraping%2C_counting_and_sorting, last accessed May 2022.

29 Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007).

30 *ibid.*

31 *ibid.*

intersectionality that are also continuously in the making). Materializations that evolved from this collective toolmaking process cannot be understood in terms of finality. Yet there also seems to be relationships evolving from toolmaking and tool-imagining processes, which bind those involved—people and (imagined) tools—to each other over a long period of time. The question is, what precisely motivates and connects the tool-collective, if the final destiny of the tool(s) is uncertain or perhaps not even the goal?

A challenge in discussing this particular tool project as a case study is its connection to a manifold of people, as well as various critical discourses, such as feminist and decolonial theory, critical librarianship, critical studies of web search engines and algorithmic bias. At the same time, the project's distributed character is indicative of its potential, as it brings tool-discussions into a variety of contexts.³² However, discussing the multiple implica-

tions of this project is beyond the scope of this dissertation. I will therefore relate the project more specifically to the subject matter of this chapter and focus on the evolving understandings, articulations and purposes of self-made tools (or lack thereof). In addition, I will examine the implication of such tools-in-the-making within self-organized collective practices.

By elucidating the project's composition and purpose, I explore how my perception of 'use' or 'usefulness' of evolving tools relates to the collective toolmaking process. For instance, the activity of organizing workshops and meetups has been significant throughout the FST project, and was precisely what allowed this 'new' FST collective to evolve. Such short-lived gatherings energized the process and contributed to its continuation and at the same time to its non-conclusiveness. In approaching the question of what is considered a useful tool, this workshop-based approach needs to be taken into account, as it hints at both a fragmentation of the process and a fragmentation of the tool and its envisioned purpose. Reflecting back on the initial meetup with H&D and Read-in in 2015, the emphasis was on 'scraping'³³ datasets from the internet. We used the digital library catalog of the public library in Amsterdam as an example.³⁴ The interest in datasets was not entirely connected to the project FST. In fact, the FST project, as it is referred to today (with the recurring project title and a committed group of collaborators) was not perceived as a project/tool/collective at the time of the initial meetup. Rather, it is only in retrospect that this meetup is understood as a significant moment in the

32 Selection of different contexts in which the FST has been presented: 'Teaching the radical syllabus' in collaboration with Lucie Kolb and Eva Weinmeyr <https://constantvzw.org/site/Constant-in-Teaching-the-Radical-Catalogue-Een-syllabus.html>, last accessed May 2022. 'Feminist Search Tools. "Intersectional Search: addressing own complicities" https://vimeo.com/660599698?embedded=true&source=vimeo_logo&owner=45925538, last accessed May 2022. 'Feminist Search Tools Meetup', 2021 https://hackersanddesigners.nl/s/Events/p/H%26D_Meetup_2%3A_Feminist_Search_Tools, last accessed May 2022. 'Feminist Search Tools talk and mini workshop with Alice Strete, Sven Engels and Anja Groten', at 'Post-digital archiving and publishing', organized by Maria van der Togt, Sandberg Instituut, 2020 "Intersectional Search in Queer and Trans Archives", IHLIA Amsterdam <https://ihlia.nl/events/intersectional-search-in-queer-and-trans-archives/>, last accessed May 2022. Feminist Search API Workshop https://hackersanddesigners.nl/s/Activities/p/Feminist_Search_API_Workshop, last accessed May 2022. 'Unbound Libraries Worksession' organized by Constant in 2020 <https://constantvzw.org/site/-Unbound-Libraries,224-.html>, last accessed May 2022. 'Repository of Feminist Search Strategies', 2020 https://hackersanddesigners.nl/s/Events/p/Workshop%3A_Repository_of_Feminist_Search_Strategies, last accessed May 2022.

33 'Scraping' refers to Web scraping, or web data extraction and is used for extracting data from websites.

34 The title of the meetup was "Scraping, counting and sorting" https://hackersanddesigners.nl/s/Activities/p/Scraping%2C_counting_and_sorting, last accessed May 2022.

FST's genealogy. The group evolving around the FST continued to focus on working with datasets, on trying to make sense of them and (re)organizing them, on finding other ways of searching in them. In my view, this emphasis on datasets may be partially related to this initial meetup, to the people that happened to be there, and hence my perception of it as the retrospective beginning of the FST collective.

To summarize, a collective toolmaking project such as the FST project needs to be understood as distributed and fragmented—contingent in the ways it evolved. Its unfolding journey was not always deliberate, which, as I will explore in the following section of this text, may have also affected the perception of the (im)possibility of the FST to become a useful/usable tool. Therefore, a toolmaking process such as the FST requires articulation that resists linearity and progress-based understandings of the design process.

Distributed articulation of use

Collective design processes such as the FST, could also be described as continuously changing socio-technical configurations. Short-lived group gatherings, such as H&D workshops, as well as various configurations of people that continued working together for longer and shorter periods of time and across different contexts took part in the FST's different iterations. The process has been dispersed and contingent and, as such, puts into perspective collective conditions in which the purpose of the FST can neither be predefined nor concluded. In fact, the question of what the FST is for remains unresolved. Nevertheless, the FST materialized into several digital interfaces along the way, which were referred to as prototypes, as iterations or as versions. At first, the tool was understood as a search interface

for digital catalogs of libraries and archives. Throughout the process the tool also evolved into a shadow search engine and an interactive visualization of a library catalog. To clarify, when I refer to 'tool versions', my intention is not to suggest that one tool version is an 'improvement' of the previous one. While the different tools relate to each other, they are also materializations of specific moments in a tool-building process that influenced perceptions and expectations of what constitutes a tool, in addition to the usability or usefulness of a tool.

The question of what the tools are or will be for remains pending. The desire for the FST to be useful has been one of its underpinnings. However, throughout its process, it became clear that the notion of usefulness and usability cannot be taken for granted. As a socio-technical object-in-the-making, the FST posed more questions than it resolved. For instance, in what context should it exist? How does it relate to existing search engines, including the people who built, maintain and use them? What and who should the tool be useful for? The definition of use or use-value depends on who you ask. In a conversation, one of the members of the FST group, Sven, articulated their personal criteria for the purpose of the tool:

Sven:

[...]

I do have to admit there is also a desire around usability of the tool, which for me simply stems from, really wanting to find queer literature. I want to be able to find that identification in the material I am looking for and I still find it very frustrating not being able to find that within mainstream media outlets

or libraries. So I think we should also not do away so easily with these hopes and desires that come with the use value of a tool. [...] we need to understand where that desire is coming from—wanting the tool to function and being able to provide something valuable to the person who is engaging with the tool.

(excerpt from 'Tool conversation', 17 February 2021)

Sven's hopes for the tool-in-the-making seems to derive from a frustration with a gap in mainstream media outlets and libraries. In articulating their hope for the tool to be *for* something (*for* finding queer literature), they ascribe a personal desire towards its use, which informs their expectation of the tool (finding identification). In my interpretation, this also implicitly suggests responsibility towards someone who may be using the tool in the future. In my understanding, Sven's articulation of all of these aspects form their conception of a tool and its potential use-value. It seems these characteristics of a potentially useful tool are distributed across people, objects and time, which relates to Ahmed's concept of 'use' as "an intimate as well as a social sphere."³⁵

In "A Collective of Humans and Nonhumans" Bruno Latour (building upon Heidegger), proposes conceiving of the relationship between tools and people as constituted by what he calls a symmetry between a materialist and a sociologist perspective. With reference to the materialist perspective, he describes a tool as an autonomous entity with a 'script'. The script determines its destiny and has a significant influence on the person

who uses it. Considering the sociological perspective, he maintains that a person sustains full control over a tool's action, the tool plays "the role of the passive conductor."³⁶ By proposing a symmetry between the materialist and sociologist perspectives, Latour argues that a person changes with the tool in their hand and that the tool changes when a person holds it. This reciprocal tool-person relation, brings about a condition in which the outcome of such a relation is neither determinable by tool or person entirely. This contingent 'outcome' could constitute an ephemeral characteristic such as an attitude towards tools. Rather than explicitly articulated, an attitude towards tools may evolve latently, through certain gestures or the use of specific vocabulary. This vocabulary may be established through repetitive use or resistance to using specific kinds of tools.

Sven's manner of articulating the tool-in-the-making is imaginative, reflective, but also concrete and consequential,—all attributes that resonate with what Barad referred to as 'Gedankenexperiment'. According to Barad, "Gedanken experiments are pedagogical devices. They are tools for isolating and bringing into focus conceptual issues."³⁷ For Barad, while thought experiments are non-material eventualities, they do matter in material ways. 'Real' experiments on the other hand, which incorporate real apparatuses and measurement devices, can be flawed as we cannot presume "independently existing objects—separate from the measuring agencies."³⁸ According to Barad, apparatuses are entangled

36 Bruno Latour, "A Collective of Humans and Nonhumans: Following Daedalus's Labyrinth." in *Pandora's hope: essays on the reality of science studies* (Cambridge, Massachusetts: Harvard University Press, 1999), 174–215.

37 Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007), 100.

38 *ibid.* 107.

35 Sara Ahmed, *What's the use? On the uses of use* (Durham: Duke University Press, 2019).

in ways that make them not “passive observing instruments. On the contrary, they are productive of (and part of) phenomena. [...] [A]n “‘apparatus’ emerges within a specific observational practice”³⁹ and it is unclear where the apparatus ‘ends’. Barad’s ideas on entangled, (im) material apparatuses can be related to the evolution of the FST and the difficulty of determining where the FST may ‘end up’. The FST’s resistance to absolute determination, in my view, requires articulation that accounts for a tool-in-the-making, a tool that is imaginative as well as concrete and material, including different scenarios for future use. At the same time, its relation to past experiences and personal frustrations have also shaped expectations, hopes and desires for another kind of tool and other tool articulations.

To recap, in the attempt to determine criteria for usefulness of a collectively made tool, the notion of a tool-in-the-making (determining its meaning and purpose through the process of making it) is intertwined with the notion of tool-imagining. With reference to Barad’s proposition *Gedankenexperiments* and their significance to the material world, the process of collective tool-imagining in the FST project distributes the task of determining and articulating criteria for usefulness of the tool across different people, objects and temporalities.

Interfaces as tool simulations

The first version of the FST⁴⁰ [see image 1] was developed in the context of the Utrecht University Library, more specifically their digital library catalog. The FST group has referred to it as ‘1st version’, even though there was initially no other version planned. The formu-

lation ‘1st version’ became part of a shared vocabulary and was adopted even by collaborators who joined the project after this ‘1st version’ was built. This expression conveys that this ‘1st attempt’ at designing a search tool should not be perceived as a final product. I would also relate the notion of the 1st version to the rushed manner in which this particular search interface was implemented, to how ‘1st version’ became an apologetic phrase for publishing something that I was not convinced was, or perhaps ever would be ready for release.

The Read-in collective was invited to participate in the project ‘Zero Footprint Campus’ organized by ‘Department of Search’, which took place at the Utrecht University in 2016.⁴¹ This research project was supposed to result in new work and to be presented at the Science Park campus public areas in Utrecht, at the end of the research trajectory in June 2017.⁴² I recall a lot of our time being spent on negotiating time schedules of everyone involved, on attuning the ethos of the two collectives working together and on understanding what it is we wanted and could achieve together. Perhaps, the expression ‘1st version’, suggests that the tool is still under development, that it is not completed (yet).

Nevertheless, the 1st version of the FST materialized into a web interface with a search function.

41 “Zero Footprint Campus was an art program in the public area of the Utrecht Science Park, the area formerly known as De Uithof in Utrecht. Twelve artists selected from the Netherlands and abroad have been commissioned to conduct a one-year artistic study into the possibilities and impossibilities of Zero Footprint Campus.” <http://www.zerofootprintcampus.nl/en/participants/read-in/>, last accessed March 2022.

“The initiative of the Department of Search was taken by the Aardschap Foundation and the municipality of Utrecht in collaboration with the Utrecht Science Park Foundation and University Utrecht.” <http://www.zerofootprintcampus.nl/en/about-zero-footprint-campus/>, last accessed March 2022.

42 <http://www.zerofootprintcampus.nl/en/about-zero-footprint-campus/>, last accessed March 2022.

39 *ibid.* 199.

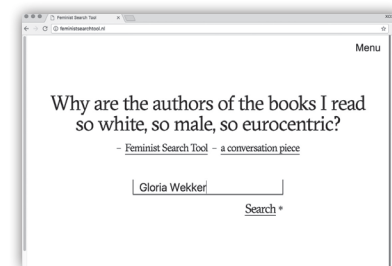
40 Website of the 1st version of the FST: <https://feministsearchtool.nl/>, last accessed February 2022.

The search takes place within a dataset of library records.⁴³ The dataset of records we worked with were based on a number of so-called MARC21 fields, which one of our collaborators Sven carefully selected in conversation with a librarian.⁴⁴ When conducting a search in this tool, a page opens and displays the search result in the form of a numerical breakdown of library records found under each category.

To anyone who has used a search engine before, the interface will look somewhat familiar. It is approximate to the many search interfaces we have learned to recognize due to the ubiquity of major web search engine monopolies such as Google Search, Bing or Baidu. A border around the search field suggests the possibility of clicking inside the box. If you do so, the cursor blinks and invites the user to type something. The search interface of this first tool version, could be considered *usable* as a search tool, through its recognizable aesthetic and interactive properties.

Graphic User Interfaces (GUI) play a significant role in the ways digital tools are conceived. They influence

the perception of usability of computers and software by adding a visual layer between its user and its code and hardware. The interface design of the 1st version of the FST to some extent relies on the recognizability of its elements such as the search input field and the search button. However, the expectation of usability may be disrupted once the tool is actually in use. The first disruption in the flow of interaction arises from the appearance of the question on top of the search field:



"1st version" of the Feminist Search Tool.

https://feministsearchtools.nl/wp-content/uploads/2020/10/Presentation_H_D_fst.014.jpeg

"Why are the authors of the books I read so white so male so eurocentric?" The question causes confusion. Who is the "I"? People who encountered the tool on their own told me later that they weren't sure if they were supposed to use the search field to respond to the question. They assumed the tool was 'speaking' to them. Others embodied the question, typed in a keyword, an author or book title and expected to receive some sort of answer to the question. Some people expected to receive suggestions for books 'other' than those written by 'white, male, or eurocentric' authors. This created another rupture in the search flow, as the search result does not show books (as some expected), but a barebone list of subject headings. Underneath each heading, library records are listed. A graphic lay-

- 43 The search takes place specifically within works published in the period of 2006 till 2016. This version of the 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 of fields was composed mostly by Sven Engels in collaboration with information specialists from the UU library and in conversation with other members of the FST project about the relevance of the fields for our inquiry. The selection consisted of 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=adw&utm_medium=cpc&utm_campaign=ga3&gclid=CjwKCAjw36DpBRAYEiwAmVVDMCdx8cQDbNKlyoR0p_nJjxS3JwVd26ac2_Lklob-VeAboDtiZov2yBoCEk0QAvD_BwE)
- 44 MARC21 (abbreviation for Machine-Readable Cataloging) is an international standard administered by the Library of Congress; it is a set of digital formats used to describe items that are cataloged.

over functions as a legend to the subject headings and contextualizes the system of categorization.

I recently revisited the discomfort I experienced at the moment of uploading the 1st version of the FST onto its domain, the moment when it became accessible to anyone on the internet. At first, I thought I was uncomfortable with losing control over the moment of encounter between the user and the FST. Perhaps, I was discomforted by the possibility of it being misunderstood. However, I later realized I had not understood the meaning and functioning of the tool myself. The process of figuring the tool out was (and still is) ongoing. Rather than weariness about exposure and potential judgment, the issue may be that, on its own, the tool is missing the articulation work necessary to turn it from 'broken-tool' to 'broken-tool-in-action'. While users can interact with the tool, click buttons, open pages, read and navigate, the interactive features of the interface seem metaphorical and are missing the context they emerged from. Distilled from its collective activation moments, the tool seemed to me only half-actualized. In the way I relate to it, despite its interactive features, the 1st version is a still image of a collective process, a capture of a tool-in-the-making, a figure, like a figure of speech that, if someone does not speak the language, needs some figuring out.

In their introduction to *Reflect and Act! Introduction to the Society of the Query Reader* (2014), researchers Miriam Rasch and René König write: "While most users feel confident with search engines (simply because they use them every day), they usually don't know much about how they actually function and how to operate

them efficiently."⁴⁵ This confidence seems necessary for a search tool to be perceived as operational.

The appearance of the 1st FST version, through its recognizable features caters to such confidence of a user, who is used to using search engines every day without having to deal with the ways it actually works. Yet, through producing an expectation of operability the confidence of a user is also frustrated once actually using the FST.

Rosie Graham, lecturer in contemporary literature and digital culture, wrote that

*"[u]sers do not need to know how search engines work to find out the year Barack Obama was born, or the date he became president. When our tools work, specific language or specialized knowledge may seem unimportant. When our expectations, intentions, and results are in line with one another, a deeper understanding of a technology and the vocabulary with which to discuss it, recedes into the background."*⁴⁶

Thus, in the case of the 1st version of the FST, the functioning of the search tool could perhaps be described in the opposite manner. In my estimation, the tool 'worked' when it was involved in figuring out specific language that springs from specific constellations of people and technical objects, collective configurations that converged different domains and experiences. Digital user interfaces

45 René König and Miriam Rasch, "Reflect and Act! Introduction to the Society of the Query Reader," *Society of the Query Reader*. Amsterdam: Institute of Network Cultures, 2014): 14.

46 Rosie (Richard) Graham, "A 'History' of Search Engines: Mapping Technologies of Memory, Learning and Discovery," *Society of the Query Reader*, René König and Miriam Rasch, eds. (Amsterdam: Institute of Network Cultures, 2014): 107.

(not only search engines) are usually perceived as usable if they work intuitively and if interaction works somewhat subconsciously. For digital tools to function effectively, their user interfaces need to be unquestionable. Brian Rosenblum, a librarian at the University of Kansas Libraries, warns of incontestability in the context of digital library search engines as ‘affordances of ignorance’ that are reproduced through certain conventions of ‘usable’ ‘interfaces that may obscure their biases.

The usability of digital interfaces may be connected to an individual’s feeling of being in control. As part of a long history of human computer interaction, interfaces were conceptualized within the context of military projects.⁴⁷ Contemporaneously, they have evolved into universalized cultural objects that build upon specific kinds of psychologies of perception, visualization, and ‘liveness on demand’.⁴⁸ Digital interfaces ought to give a ‘user’ the feeling of ‘mastery’ over their computer programs.⁴⁹ According to Wendy Hui Kyong Chun, scholar in media studies and cultural theory, “[t]he notion of interfaces as empowering is driven by a dream of individual control: of direct personal manipulation of the screen, and thus, by extension, of the system it indexes or represents.”⁵⁰

Digital search engines make library catalogs (in) accessible through their interfaces, which are perceived as useful if they sustain a certain incontestability. While this version of the FST introduced some ruptures—such as questionable moments in user-tool interaction—it also reproduced a common image of what a search tool

should look like and how information should be delivered (the answer being only one click away). The aesthetic choices may obscure the processes the tool is involved in and gets its ‘user’ involved in.

The function of the first version of the FST is that of a collective study object that, through its evolution into what resembles a search interface, created occasions to concretely and imaginatively reflect and disentangle the ways people and tools are involved in making items (in)accessible in digital cataloging systems. Certain rhetorical tricks, such as the notion of the 1st version, are a collective attempt to articulate a tools’ unresolved issues, preparing someone for the experience of the ‘broken-tool’. However, the rushed process of designing what could be conceived as a ‘functioning’ website also contributed to the FST’s conceptualization and materialization as a digital search interface that can work ‘on its own’.

This also led to the digital interface being actualized—to some extent in the most obvious manner. The recognizable image of a search interface may not fully satisfy the expectations it creates, but simultaneously conveys a certain ambition. If there wasn’t the pressure to produce and present what would be regarded as a ‘tangible’ end result (which we interpreted as a search interface), the notion of the ‘1st version’ of the tool would perhaps have not emerged, along with the implied promise to continue and to produce a 2nd or 3rd version of the digital interface.

Contextualizing visualization

The FST collective was introduced to different cultures and conditions of working together. These included different terminology and social conduct and diverging ways of understanding and speaking about ‘tools’,

47 Wendy Hui Kyong Chun, *Programmed visions: software and memory* (Cambridge, London: MIT Press, 2011), 60.

48 Lev Manovich, *The language of new media* (Cambridge, Massachusetts, London, England: MIT Press, 2001).

49 Wendy Hui Kyong Chun, *Programmed visions: software and memory* (Cambridge, London: MIT Press, 2011), 66.

50 *ibid.* 62.

‘design’ and ‘collectivity’. One context, which has been significant for the continuation of the FST collective, was the ‘Digital Methods Summer School’ (DMI), a two-week program organized by the Digital Methods Initiative (DMI) at the University of Amsterdam.⁵¹ DMI is an Internet Studies research group, directed by Richard Rogers, professor of New Media and Digital Culture since 2007. DMI’s objective is to design methods and tools for doing research with internet platforms such as Twitter, Facebook and Google but also with digital applications and devices. Rogers describes Digital Methods as: “redoing online methods for different purposes to those intended.”⁵²

In July 2019, I signed up to participate in DMI. The program was explained as a collaborative, interdisciplinary and explorative research environment, bringing together practical and theoretical knowledge. It seemed to have common ground with the H&D approach and with the characteristics of the FST collective. Yet, DMI turned out to be a rather different work environment, in which separations between tasks, roles, subjects and approaches were quite distinct, compared to what I was familiar with. The understanding that a tool-building process could be experimental, open-ended and discursive, which were possibilities I had become used to in the context of the FST project were not applicable in the same manner within the working environment of the DMI.

It was striking how much of the terminology used in the context of DMI seemed familiar. Yet, the way in which certain terms and concepts were understood and put into practice was quite different from what I knew

from the H&D Summer Academy, from H&D workshops and from working with the FST group. The notion of ‘design’ seemed to be dedicated to the fields of ‘user experience’, ‘data visualization’ and ‘information design’ and was impersonated by a distinct group of designers from DensityLAB, based in Milan.⁵³ The people from DensityLab were introduced and referred to as ‘the designers’, who could be consulted and had the authority to translate the researchers’ ideas and spreadsheets into data visualizations. Furthermore, the notion of ‘tool’⁵⁴ occurred in the context of tutorials and referred to code repositories, also described as ‘scrapers’, and ‘crawlers’, that could be used to extract data from the internet and to accommodate processing of such data for further analysis. Participants could sign up for tutorials in which they would familiarize themselves with those tools.

The DMI took place at the University of Amsterdam, during the summer break. Participants were able to receive ECTS credits. Thus, there were other incentives at play for participation than in the context of H&D, where collaborative learning environments mostly evolve outside of accredited educational institutions. Participation was possible only through full commitment to the two week long program. In addition, the participation fee was high (EUR 995,00). This financial commitment did not align with the fiscal realities of the FST collective. Fortunately, through my research position I was able to get my own participation fee reimbursed. I participated in the full program and negotiated on the part of my collaborators to join free of charge for the second part of the program. The FST group got to work together in

51 Wiki of the Digital Methods Summer School of 2019: <https://wiki.digitalmethods.net/Dmi/SummerSchool2019>, last accessed March 2022.

52 Interview with Richard Rogers published on the website of the DensityLab: <http://densitydesign.org/2014/05/an-interview-with-richard-rogers-repurposing-the-web-for-social-and-cultural-research/>, last accessed March 2022.

53 Website of DensityLab: <http://densitydesign.org/>, last accessed March 2022.

54 Tools documented on the DMI Wiki: <https://wiki.digitalmethods.net/Dmi/ToolDatabase>, last accessed March 2022.

this environment for a full week, which in comparison to previous work rhythms, was an extraordinarily commitment from the group members.

I participated in tutorials in the first week of the program and sat in, with another research group, trying to grasp the dynamic and terminology of the environment. In the second week of the program, I ‘pitched’ the FST project with three of my peers from the FST group. A project pitch at DMI refers to a five minute presentation during which participants try to convince other participants to work on their research project for one week. Our proposition was to explore with researchers from other fields and contexts (im)possibilities of incorporating feminist approaches into discovery tool development.

During the week the group spent together, we had the chance to revisit the 1st version of the FST, which we had not considered with much attention for about one and a half years. Having to explain the tool to the other participants, we were reminded of the choices we made in terms of its interface design. We benefited from those participants who were familiar with methods of ‘query design’⁵⁵ and helped us consider different search

methods.⁵⁶ We tested out the method of ‘negative query’ to intervene with search results by consciously excluding items or categories that are usually most visible. Taking the time to actively and intensively ‘use’ the 1st version of the FST as a group, while speaking about it and trying to make sense of it, created momentum in the collective process. It felt to me as if we had become more familiar with it and felt increasingly connected to the tool and to each other.

One of the outcomes of DMI was another 2nd tool version. The so-called ‘visualization tool’⁵⁷ refers to an interactive browser animation that shows little colored squares, each of which represents a book in the catalog. The squares are organized in groups within two axes. The X-axes represented gender categories as they were applied in the first version of the tool, the Y-axes listed all publishers represented in the library catalog. Thus, the books were organized ‘spatially’ according to (assumed) gender of an author of a book and the publisher. This second version of the tool was supposed to ‘visu-

56 We queried the feminist search tool (feministsearchtool.nl) for different terms and did some initial comparisons for publishers and the gender of authors. For a dataset to visualize, we queried the tool with the search string [gender OR race OR intersectionality OR transgender OR “social class”]. In order to get data on each individual record in the query results, this was done through the Solr search interface that is part of the feminist search tool with the following URL:

https://feministsearchtool.nl/solr?q=gender%20OR%20race%20OR%20intersectionality%20OR%20transgender%20OR%20%22social%20class%22&rows=3000&fl=gender_s%20AND%20a_title_statement_t%20AND%20b_title_statement_t%20AND%20title_statement_t%20AND%20imprint_s

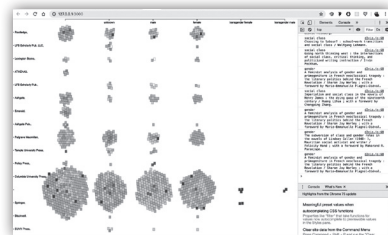
The results were extracted into a json file and each record was annotated with the search terms that occur in the record (gender, race, intersectionality, transgender, social class).

Using the javascript library D3.js, the records were color-coded by search terms and spatialized according to gender (horizontal) and publisher (vertical).

57 Documentation of the visualization tool:
<https://github.com/hackersanddesigners/fst-viz-tool> in collaboration with DMI and Density Lab. Last accessed March 2022.

55 Richard Rogers, “Foundations of Digital Methods: Query Design” *The Datafied Society: Studying Culture through Data*, Mirko Tobias Schäfer, Karin van Es, eds. (Amsterdam: Amsterdam University Press 2017): 75-94.

alize' which publishers represent more or less female/male/transgender authors. The way the books are organized around the axes is animated in an entertaining and lively manner. I recall the moment when we first saw the



Screenshot of the 'visualization tool'

animation on a screen, some of us (including me) burst out with an excited "Ohhh". This moment was referred to and critically reflected upon repeatedly throughout the continuation of the project:

Sven:

I still find it a bit funny that you are so excited about the visualization tool Anja, since you were the one at the beginning of this project who was cautioning us not to expect too much, or like you put it, don't trust the 'magic,' of a visualization. You said, the visualization will only give you what you're asking for, which really stayed with me. And yet, when we get to the visualization and everybody gets excited. [laughs]

Annette:

I agree that we should not project too much on visualizations. But for me the visualization tool has finally been the

moment that allowed us to investigate our own tool, the first prototype of the Feminist Search Tools.

Anja:

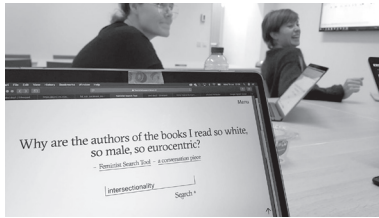
In my view the big difference the visualization tool made, is that we see books and not only records. [...] you can click on a square that represents the actual book and see more information about the book. This was not possible before. It was just numbers and records, which was an abstract idea and difficult to relate to, for me. Being able to check and see some of the flaws of our initial tool, by checking the actual books was an important moment for me.

(excerpt from 'Tool conversation' recorded and collectively edited conversation between the FST group, 17 February 2021)

According to Wendy Hui Kyong Chun, "interfaces seem to concretize our relation to invisible (or barely visible) 'sources' and substructures."⁵⁸ Being able to 'see' books (represented through colored squares) that were spatially organized on our screen, produced the impression of a more concrete relation to the invisible sub-structure of the library catalog and its system of categorization. In my recollection of the situation, my enthusiasm for witnessing visual squares moving around on a screen stems from not having to conceptualize a library catalog as an abstract system of categorization, or a large intangible knowledge institution. Rather, I could conceptualize and visualize the library catalog as some kind of container that holds distinct, countable

58 Wendy Hui Kyong Chun, *Programmed visions: software and memory* (Cambridge, London: MIT Press, 2011), 59.

items. The recognizability of ‘books’ as distinct objects created a sense of comfort. The impression of seeing books represented in this way made me feel that I knew what I was looking at—books. The concept of a ‘library record’, a textual representation of a system that groups, moves and fixes books based on classification standards, felt rather abstract. When I saw colored clickable squares, I *felt* as if I could finally ‘see’ the books. The emphasis here is on feeling, and the excitement caused by encountering something that seemed familiar.



Digital Methods Summer School 2019.

Digital interfaces and the ways they work as simulations, rely on emotional responses. Perhaps, subconsciously, I felt as if I could ‘manage’ such books. In the case of the FST, it meant that by visualizing books as squares and ordering them in certain ways, I was under the impression that I could gain a better understanding about which books are represented and which books were missing from the digital library catalog. This moment of enthusiasm also made me feel more connected to the tool and it’s coming into being.

Returning to the aforementioned diverging culture and terminology of the DMI context, it seems significant to mention the way the visualization was presented to us. We approached the designers of DenesityLab to support our group halfway through the week by suggestion of one of the facilitators of DMI. We tried to explain to

them what we were trying to do with the tool and asked them if they could think with us about ways to visualize the library cataloging system. Where the previous tool showed search results in a textual way and as a list, we were curious how a more visual approach could provide new insights. The designers left the room and worked on the visualization somewhere else before returning the next day to show us the result. The translation of a textual representation into a visualization of the search results in my expectation would bring new insights, perhaps more clarity about the functioning of the tool and its underlying system of categorization. While aiming to see rather than read search results, the process of making the visualization happened out of sight. That is, the FST group was not present during its making process.

In “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” (1988), Donna Haraway wrote, “Vision is always a question of power to see.”⁵⁹ She asked: “How to see? Where to see from? What limits to vision? What to see for? Whom to see with? Who gets to have more than one point of view? Who gets blinded? What other sensory powers do we wish to cultivate besides vision?”⁶⁰ I relate this quote by Haraway to the visualization the designers produced. More precisely, I question what we saw in the visualization and our responses to it; how it created a certain comfort and also joy to look at and perhaps made me feel more connected to the tool and the collective.

The fact that the designers left the room to work somewhere else is worth noting. Their leaving the room signifies the division of labor conceptualized and put

59 Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies*, 14, no. 3. (Autumn, 1988): 575–599.

60 *ibid.*

into practice in the context of DMI, and which also had implications for the way in which the FST further evolved in that particular context. When we saw the visualization for the first time, we were looking *at* it and not *with* it. There was labor implied in the visualization that was not visible to us at that moment. There was a certain distance to the making process of the visualization, which created the surprise effect. We were impressed because we had not observed the process of its production, the sweat and struggles. As I understood later from reading back through time stamps of messages sent by the designers, they worked late and long hours, material conditions that had not been visible to us.

To recap, the participation in the 2-week at DMI was significant for the way in which the FST has been conceptualized and actualized as a tool, as well as the ways in which our understanding and problematization of it as a 'useful' tool has unfolded along the way. Through our participation concepts and questions of visualization were introduced and developed, but also made apparent how specific contexts can produce tools, tool concepts and conditions for toolmaking. The condition of an (for the FST collective) exceptionally committed working environment made it significant and distinct. It is referred to often with fondness and criticality equal measure. In my view, it contributed to people feeling enthusiastic and connected to the FST, but it also shows how permeable collective projects such as FST are; how they are receptive to the contexts in which they evolve.

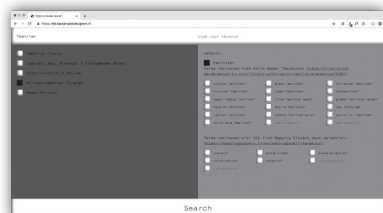
Discontinuation and reorientation

The Feminist Search Assistant⁶¹ is a shadow search website, which was developed during the Digital Methods Summer School as a parallel project to the visualization tool. It was developed in collaboration with two DMI researchers Emile den Tex and Lonneke van der Velden. This tool version intended to provide a more gender sensitive search experience on Amazon. The Feminist Search Assistant consists of a search bar that builds on Amazon's algorithmic recommendation system, which suggests books that are oriented towards topics related to feminism and intersectionality. This tool version was built to rethink how algorithmic recommendations work, as they are known to personalize search results in an opaque manner. It addressed matters of search engine development that we had not explored before, although these questions had been raised as a concern by the librarians of the UU library. Their concerns were that people who search in a library catalog most likely have already searched on Google or Amazon search engines before. Thus, they already know what they are looking for and use library search tools for so-called 'known-item search', rather than a 'discovery search'. The amount of so-called discovery searches in library search engines has decreased tremendously since the invention of Google Search. The basic principles of the Feminist Search Assistant, was to provide a search bar and a set of specific interests to choose from, of which the term 'feminism' was added by default. The queries were then sent to amazon.com. This set of interests were embedded in the link sent to Amazon in the initial search page and

61 The 'Feminist Search Assistant' was a collaboration with Emile den Tex, at Digital Methods Summer School 2019.
<https://fst.hackersanddesigners.nl/>
<https://github.com/hackersanddesigners/fst-amz-shadow-search>,
 last accessed May 2022.

prompted Amazon's advanced search feature to configure around those interests (called 'departments' in amazon.com). This was supposed to make it more likely to find results by feminism-filtered sources.

I decided to include this short off-shoot project, even though it concluded with a shared agreement not to continue and not to publish it. It is a good example of how the evolving FST collective was not always in alignment with its different contexts. These



Interface of the 'Feminist Search Assistance'
<https://feministsearchtools.nl/wp-content/uploads/2020/10/Screenshot-2019-07-12-at-12.08.05.png>

instances of incompatibility and disagreement were important moments in which to express commonalities and discrepancies. Expression of disagreement is essential for the preservation of values and the ethical concerns around collective tool-building.⁶²

The Feminist Search Assistant included and built upon book selections, which were carefully curated by different grassroots libraries and archives such as Mapping Slavery,⁶³ The Black Archives⁶⁴ and Atria Kennisinstituut voor Emancipatie en Vrouwen-

geschiedenis.⁶⁵ Similar to the 1st version of the FST, this tool version also functioned as a simulation of a search tool. It produced very specific search queries and, as expected, most of the time the search result showed '0 found items'. The fact that books were hard to locate with this tool seems indicative of the heteronormativity of mainstream media outlets. Yet, on its own, the tool seemed to have missed crucial reflection on the context and conditions in which the references were initially sourced. At the beginning of the FST project in 2017, when we were still working in the context of the Utrecht University Library, Annette and Sven contacted various grassroots communities and libraries with an invitation to curate book selections. We printed out covers of selected books and glued them onto bok-sized wood panels. These 'book dummies' were placed in book-trolleys outside the Utrecht University library, "drawing attention to silenced and marginalized voices excluded from our current knowledge economies."⁶⁶ The Feminist Search Assistant was missing crucial contextualization of these book selections, which the search queries were based upon. This made the tool ignorant of the work and efforts libraries and archives did to curate the book selections to create visibility for marginalized communities who are excluded from mainstream media outlets and current knowledge economies. It seemed irresponsible to use these book selections to 'feed' online platforms that run personalization algorithms, which we will never understand and don't trust.

65 Vrouwenthesaurus of Atria Kennisinstituut voor Emancipatie en Vrouwengeschiedenis <https://atria.nl/bibliotheek-archief/collectie/thesaurus/459>, last accessed March 2022.

66 Bookshelf Trolleys: https://read-in.info/bookshelf_research-2/, last accessed March 2022. https://read-in.info/wp-content/uploads/2017/08/teppich-install_uithof1.jpg, last accessed March 2022.

62 There were many more moments such as these, moments that were less distinct and seeped through different timelines, tool versions and group constellations. For clarity's sake, I decided to make this point by focusing on this specific tool version.

63 Website of Mapping Slavery: <https://mappingslavery.nl/educatie/publicaties/>, last accessed March 2022.

64 Website of The Black Archives: <https://www.theblackarchives.nl/>, last accessed March 2022.

The installation of bookshelf trolleys by Read-in in 2017 included another crucial gesture that was missing in this digital tool—the gesture of reciprocity. The invitation for proposing book selections was extended to visitors who could “select books of their choice, responding to and intervening into the question: Why are the authors of the books I read, so white, so male, so Eurocentric?”⁶⁷ While this tool version was discontinued, the trajectory of the FST seems incomplete without mentioning it. Creating this particular tool version was significant to our continuation. It made apparent ethical aspects inherent in our work, as well as aspects of labor, time and effort. We became more aware of our own investment in the project and simultaneously more critical and selective about the contexts and collaborations we chose to engage with. We decided not to continue spending time investigating large search engines such as Amazon and Google and connect more actively to smaller initiatives such as ATRIA and IHLIA, two archives based in Amsterdam.

This short experiment was a crucial moment in the process and evolution of FST. It raised important ethical concerns but also posed new ideas for future tool versions. The possibility for a search tool and its underlying categorization system to sustain some form of mutability sparked excitement. In addition, incorporating recommendations for books and search categories which could be curated by grassroots initiatives and communities holding specialized collections was invigorating. Such grassroots libraries, of which ATRIA and IHLIA are two examples, develop specialized vocabularies according to which they organize books.

Intersecting and complexifying

Throughout the collective process of making the FST, I frequently asked myself if I (and perhaps others in the group) had fallen into the trap of a linear, progress-oriented understanding of collective toolmaking. Features were implemented at certain moments with the idea of being replaced or improved upon at a later stage, which the collective toolmaking process, due to its fragmented nature, could not live up to. I felt there were many weak spots within various implementations of the tools that were a result of rushed processes, lack of understanding in terms of computer programming and working with datasets. At times, technical terminology dominated the ‘tool’ narrative, which seemed to reduce important socio-political debates around feminist, queer, anti-racist, intersectional, decolonial discourses to overly utilitarian and simplistic reasoning. For the first version of the FST, Sven had looked at all MARC21 fields and made a selection of search categories that seemed most relevant to us. In conversation with the librarians of the UU library, Sven and Annette formulated a question as a guideline for this selection: How many female, non-Western authors and authors of color are represented in the library? Examples of fields that Sven selected were ‘place of publication’ and ‘language’. They also inquired about the possibility of retrieving information about the gender and nationality of an author.

Yet, as we discovered through conversations with the librarians, information about authors is generally not retrievable in European library cataloging standards, while information about books is retrievable. James, who worked on the development of the tool, explored other ‘tactics’ to find information about authors. James did this by linking the library dataset to Wikidata. Wikidata gender entries encompass more than the usual binary

67 “Bookshelf Research”: https://read-in.info/bookshelf_research-2/, last accessed March 2022.

gender categories (female, male, transgender-male, transgender-female, unknown). However, these extended categories still did not represent the wide spectrum of gender identification. James also introduced other data-sets as a ‘fall back’. In the case that no gender category could be found in the Wikidataset, the tool would resort to the so-called Gender API, a commercial closed source application that assigns the normative binary gender categories ‘female’ and ‘male’ based on names. The Gender API is usually implemented in commercial websites in order to optimize customer experiences (i.e. people identified as female get to see search results that are considered relevant for their gender category from a marketing standpoint). The Gender API does not address non-binary gender categories at all. Due to its closed source, it was also not possible to reconstruct how the program determined and applied gender categories.

Another issue that arose from trying to categorize authors according to gender, is that it does not allow for ambiguity or mutability. For example, what is not addressed when attributing gender categories (on the basis of the name) is self-narration. Mutability of gender categories and names as well as gender fluidity is particularly important when it comes to trans* and non-binary identities. In the way gender was attributed to authors in the 1st and 2nd version of the FST stabilized such categories in ways that risk misrepresentation.

The workshop at DMI led to the realization that we had focused on one problem for too long; the problem of not being able to search by means of gender categories. In 1989 Kimberle Crenshaw⁶⁸ stated: “When feminism and anti-racism are non intersectional, when

feminism does not contest the logic of racism, when anti-racism refuses to take up questions of patriarchy they often wind up reinforcing each other.”⁶⁹ By taking a rather pragmatic, and linear approach at first, taking one step at a time we, the FST group, had separated the topic of gender discrimination and prioritized it over other forms of discrimination. While it was known quite soon in the process of conceptualizing and building the FST, it would not be possible to retrieve information about the author, the process continued as if we could find out eventually. We also knew the information we retrieved through Wikidata or the GenderAPI could not be representative of the gender of authors. Yet, gender categories were applied using these approaches as ‘a first step’. Rehashing the chain of choices that led to the technical implementations of the first and second version of the FST the utilitarian approach to addressing questions of systemic discrimination is difficult to reason with. I came to wonder if the desire for a tool to ‘function’, to show any result at all, attracted approaches and technologies such as the Gender API into the process. These may deliver quick results but are also unethical implementations, especially considering the subject matter of the FST project.

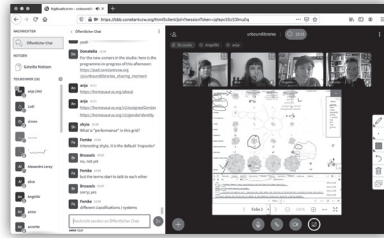
The 3rd version focused on implementing an intersectional approach by offering the possibility of selecting different clusters of intersecting search categories, on the bases of which books were displayed. The subject categories such as ‘race’, ‘gender’, ‘class’, were selected by Sven and Annette and were highlighted through specific color-coding.⁷⁰ Instead of searching for information

69 https://www.youtube.com/watch?v=-DW4HLgYPIA&ab_channel=SouthbankCentre Kimberlé Crenshaw, “On Intersectionality” keynote, 2016.

70 Green: gender, Light-green: race, Blue: Social class, Light Yellow: Social class, race, Light purple: Transgender, Pink: Intersectionality, Orange: gender, race

68 Kimberle Crenshaw, “Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics.” *University of Chicago Legal Forum* 1, no. 8 (1989).

on the identity of an author, the new method of categorization was applied based on the descriptions of books and the descriptions of authors as they were inserted by the librarians. Thus, the tool catered to searching about the content of the book rather than based upon the identity of an author.



'Unbound Libraries' hosted by Constant Association for Art and Media, on the open-source video conferencing software BigBlueButton, May / June 2020.

An important moment for this version of the FST was the 'Unbound Library' work session⁷¹ organized by Constant in 2020.⁷² The one-week session took place online and brought together artists, technologists and researchers who were given a space to exchange and work together on the subject of digital libraries. The starting point of the session was that "tools cannot be separated from the knowledge systems in which they have been

imagined and in which they were made."⁷³ For the FST group the session provided another committed environment for working together and an occasion to introduce two collaborators to the project. Alice Strete and Angeliki Diakrousi had met the Read-in collective during a studio visit by students of the experimental publishing Master XPUB at Piet Zwart Institute.⁷⁴ As part of their studies, Alice and Angeliki had worked on a collective pirate library XPPL,⁷⁵ which is described on their project documentation wiki as "a space for potential pirate librarianship aimed at people who are studying the field of media culture."⁷⁶ The various initiatives connected through their shared interest in rethinking the manner in which libraries and library catalogs can be made (in)accessible through tools.

The context of the work session motivated us to reconnect to the IHLIA LGBTI Heritage collection, an archive that is located in the public library of Amsterdam and specializes in literature (and other materials) about and by lesbian, gay, bisexual, transgender, intersex people. Similar to the participation at DMI, this session also offered a concrete context for the otherwise fragmented working process; a context that was facilitated, committed and focused. Yet the atmosphere and collaborative conditions were entirely different to DMI. There were less participants. Most people participating

73 <https://constantvzw.org/site/-Unbound-Libraries,224-.html?lang=en> Cited: Martha Nell Smith, "Frozen Social Relations and Time for a Thaw: Visibility, Exclusions, and Considerations for Postcolonial Digital Archives." *Journal of Victorian Culture*, 19, no. 3 (July 2014): 403-410. Last accessed March 2022.

74 Wiki of the experimental publishing Master XPUB at Piet Zwart Institute: <https://www.pzwart.nl/experimental-publishing/wiki/>, last accessed March 2022.

75 Student project 'XPPL,'— a collective pirate library <https://git.xpub.nl/XPUB/XPPL> https://pzwiki.wdka.nl/mediadesign/XPPL_Documentation, last accessed March 2022.

76 Documentation of 'XPPL,' <https://pzwiki.wdka.nl/mediadesign/XPPL>, last accessed March 2022.

71 "Constant organises a worksession every six months. They function as temporary research labs, collective working environments where different types of expertise come into contact with each other. Worksessions are intensive otherwise-disciplined situations to which artists, software developers, theorists, activists and others contribute. During worksessions we develop ideas and prototypes that in the long-term lead to publications, projects and new proposals." <https://constantvzw.org/site/Unbound-Libraries-Worksession.html?lang=en>, last accessed March 2022.

72 Information on the worksession "Unbound Libraries" <https://constantvzw.org/site/-Unbound-Libraries,224-.html?lang=en>, last accessed March 2022.

were also working in various self-organized collective constellations. The session was organized bottom-up. The structure and approach were determined together, through getting to know the other participants by way of a centralized check-in meeting each morning in which plans were shared and in which a time table was composed together. A modest compensation for our participation was distributed amongst those of us who did not receive any grants for our participation. The wish to connect to smaller self-organized groups, as it evolved during DMI, was revitalized. With IHLIA as a potential collaborator, we hoped for more frequent exchanges with people who worked with library cataloging on a daily basis and who were thematically aligned with the issues the project was investigating.

In the first meeting with IHLIA, I tried to explain what we were trying to do with the FST to the head of collections and to someone who was knowledgeable about the technical aspects of the cataloging system. IHLIA provided us with access to the digital catalog of their collection. This allowed us to start developing a new version of the tool. We also started looking closer into the *Homosaurus*, a research tool and controlled vocabulary of lesbian, gay, bi, transgender and intersex index terms that are applied in IHLIA's cataloging system. The *Homosaurus* can also be found on IHLIA website as a search enhancement tool that offers broader, narrower or related search terms. The *Homosaurus* also exists as a text document. We started reading this vocabulary more closely and became interested in its structuring mechanisms.

Connections and relations in the *Homosaurus* vocabulary are established through a long process of labor (on the part of librarians). This involves careful and critical consideration, in addition to a general commitment and dedication to this tool. As we learned from the

librarians and staff of IHLIA, it was mostly due to the personal investment of the by now retired head of collection Jack van der Wel and his collaboration with the international *Homosaurus* committee that the English version of the *Homosaurus* was updated frequently and is functioning well (in comparison to the Dutch version of the *Homosaurus* or the *Vrouwenthesaurus*, another similar project implemented by Atria which is less well maintained.)⁷⁷

The 3rd tool version of the FST converged IHLIA's digital catalog, the visualization tool as developed with DensityLab at DMI and the *Homosaurus*. The integration required Angeliki and Alice to restructure the dataset that we had received from IHLIA.

Angeliki :

Having to find solutions for the axes was an interesting process. I was wondering how the code could actually also become part of this dialogue. [...] creating

⁷⁷ In October 2018 we introduced the Feminist Search Tools project to Atria Kennisinstituut voor Emancipatie en Vrouwengeschiedenis and IHLIA LGBTI Heritage collection. There were short presentations of the Women's Thesaurus by the initiators of the Women's Thesaurus (Maria van der Sommen & Gusta Drenthe) and the *Homosaurus* by the initiator, current board member of the *Homosaurus* and head of collection in 2018 of IHLIA (Jack van der Wel). The session brought these different projects into dialogue with each other and reflected on the first prototype of FST. 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 FST. For Atria and IHLIA, their distinct thesauri functioned as a form of self-empowerment by not trusting the mainstream method 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 catalogs. Audio fragments of the roundtable are made available on the project's website of the new iteration: <https://feministsearchtools.nl/>. Furthermore, the event was the starting point for our collaboration with IHLIA LGBTI Heritage Collection and more in-depth conversations about the cataloging system used for their collection, CardBox and the *Homosaurus*.

'intersectional' axes meant that we had to bring everything into the same place. Everything had to become one script.

(excerpt from 'Tool conversation', 17 February 2021)

In conversation with IHLIA information specialist Thea Sibbels, Sven and Annette rethought the X-axes through clustering terms⁷⁸ that derived from the Dutch *Homosaurus*. Clusters were incorporated into the design of the interface and were being sketched collectively in an open-source video calling software called Big Blue Button,⁷⁹ which provided us with a collaborative drawing option. During the 'Unbound Library' workshop, we started sketching on top of a screenshot of the latest version of the visualization tool and included the feedback and input from other participants who joined us for the sessions.

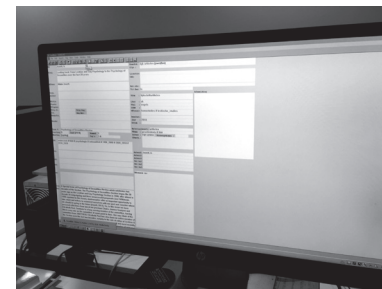
We had been thinking of the concept of the 'red link', as it is also known from Wikipedia, for a while.⁸⁰ A red link on Wikipedia/MediaWiki is the highlighting of terms that are 'missing' and need to be added. The red link seemed an interesting concept to consider—an approach that would not only aim at correction or improvement of the tool, but also point at what can be improved in the classification system itself. Another

78 The clusters are: Race, Gender, Sexuality, Disability and Structural Oppression and each contained terms that were selected by Sven and Annette from the *Homosaurus*, in conversation with Thea Sibbels.

79 Hosted by Constant's Big Blue Button instance.

80 "A red link, like this example, signifies that the linked-to page does not exist—it either never existed, or previously existed but has been deleted. It is useful while editing articles to add a red link to indicate that a page will be created soon or that an article should be created for the topic because the subject is notable and verifiable. Red links help Wikipedia grow. The creation of red links prevents new pages from being orphaned from the start. Good red links help Wikipedia—they encourage new contributors in useful directions, and remind us that Wikipedia is far from finished." https://en.wikipedia.org/wiki/Wikipedia:Red_link, last accessed March 2022.

inspiration for this approach is the project *Infrastructural Maneuvers*,⁸¹ initiated by the (self-taught) librarians at the Rietveld Academie and Sandberg Instituut in Amsterdam, who we had crossed paths with several times during the toolmaking process. They also joined the Unbound Library sessions. *Infrastructural Maneuvers* built a cataloging system that allows catalog users to



Looking over the shoulder of the information specialist Thea in the basement of the Public Library in Amsterdam, I saw her navigating a software called Cardbox—with care and attention. Apparently the Cardbox software only runs on this old Linux desktop computer. There were no windows in the office. Thea seemed surprised about the attention. Why would anyone be interested in this old cataloging system?

The Dutch version of the *Homosaurus* was lying next to her keyboard, printed out and ring bound.

propose new search categories to the cataloging system. These categories can then be reviewed by the librarians who decide whether they would be implemented as part of the cataloging system.

In the third tool version, the idea of showing what is missing was translated in relation to search categories (not books). The concept of 'missing' was interpreted in different ways. 'Missing' was understood, not only as 'what is missing but should be there', but also as 'what is there but should be revisited or should perhaps not be used any longer'.

81 Development website of 'Infrastructural Maneuvers': <https://jekyll.all-syste.ms/>, last accessed March 2022.

- ~~Strike-through~~: Terms were crossed out when they should not be used anymore, for instance because they are discriminatory.⁸² Crossing out indicates that a term is still in usage (for now). For instance, terminology now considered offensive but not considered problematic at the time of authorship may appear in certain historical



Visualization Tool

<https://feministsearchtools.nl/wp-content/uploads/2020/11/Screenshot-from-2020-11-02-14-53-56.png>

texts and would be struck through. The strike-through signals a general disapproval of the existence and usage of this term.

- Red terms show when no book is found in the catalog under a certain category.
- USE: indicates when another term should be used.⁸³
- ADD: signals suggestions that were made by the FST group for adding certain terms.
- (Exclude): The term (exclude) signals terms that the FST group has excluded from the search, for instance to give space to other categories that are less represented in the catalog.

This version of the tool has been shown and tested on different occasions, usually in the context of workshops during which the tool could be contextualized, including

choices that led to certain functions as well as malfunctions and shortcomings. The tool requires a login, which was a condition for IHLIA to let us use their dataset. Every time we would be workshopping the tool in a new context, we would inform IHLIA and ask permission, with an explanation of the context and our motivation for bringing it into the context. We would provide short updates after workshops about how the tool was used, perceived and discussed in the respective context. I perceived IHLIA's request for a login as a gesture of care, rather than a restriction. This request sets a condition in which tool use requires a certain commitment to contextualization in order for it to be used. Without explicitly articulated as a required condition, this tool version has always been part of a workshop situation and has never 'taken off' on its own terms, meaning it was never used independently of the collective condition in which it was developed.

This version of the FST (in comparison to the other versions) and its conceptualization and actualization of tool and tool-use was rendered more complex in various ways. In terms of its interface design, the x-axes is more dynamic. It can be adjusted according to thematic clusters of search terms, which were curated on the basis of the Dutch version of the *Homosaurus*, by members of the FST collective and in sporadic collaboration with a librarian and information specialists.⁸⁴ The search for the gender or nationality of an author has not been further pursued in this tool version. Instead intersections of themes and categories have been combined. Through color coding, overlaps of different thematic clusters are made visible. This means that when a book is part of several thematic clusters, it will be visible, in addition to

⁸² An example of that is the term *blanken*, which is a Dutch term that refers to white people as superior.

⁸³ For example 'witte' instead of 'blanken'

⁸⁴ The clusters were curated by Sven Engels and Annette Krauss and were called: Race, Gender, Sexuality, Disability, Structural Oppression.

others it is a part of. The vocabulary of terms that was used for the X-axes derives from the context-specific vocabulary of the library itself—a text document which the librarians initiated, used and took care of for many years. Interventions by the FST group as well as interventions from the *Homosaurus* were differentiated in the tool.

This version of the tool shifted from searching and displaying results based on author's identities as the main organizing principle, to looking at other factors of categorization such as publishers, description of books, as well as applying a specialized situated vocabulary of searched terms. To clarify, the search categorization in the IHLIA catalog is based on a cataloging system called Cardbox, a system IHLIA uses, which is linked to the widely used MARC21 and Worldcat cataloging standards. However, it also exists independent of them. The *Homosaurus* is an integral part of the Cardbox system and the librarians use it every time a new item is added to the catalog.

This version of the FST still applied search categories in an accumulative way. Examples of search categories coming from the *Homosaurus* were 'racisme', 'discriminatie', 'homofobie', 'sexuele_minderheden', 'genderidentiteit', 'transfobie', 'klassisme', 'validisme'. Adding and combining categories and creating clusters of categories remains questionable. If a book description contains terms such as race, gender or social class it cannot be determined with certainty how these terms are used in the respective book. However, by sustaining a closer connection to the context within which the tool is developed and by implementing a categorization system based on vocabularies and tools developed within a particular context, this tool version seems to have followed a situated trajectory and creates separations and intersections in less crude ways than previous versions.

Conclusion: Slow collective processing

In this chapter, I discussed a distributed process of collectively imagining and building tools—more specifically different tool versions that are referred to as 'Feminist Search Tools'.

The FST project moved through and fed off short-lived formats for working together across different contexts. This included workshops (some of which self-organized and some were organized by like-minded initiatives), summer schools and events by universities, art academies, cultural institutions and meetings with librarians and archivists. Such contexts became significant for the tool-building process. Workshops, meetups and recorded conversations energized the collective tool imagining and making process and contributed to its continuation as well as occasional postponements.

In approaching the question of how the meaning and purpose of a tool is articulated through a collective process, the workshop-based approach to collective work needs to be taken into account. It signifies the manner in which fragmented, unconcluded definitions of the meaning and functioning of the 'tool' are also related to the fragmentation of its process of development. The distributed character of collective tool-building and tool-imagining also carries the potential to enter into and combine various contexts. The manner in which purpose and meaning are continuously rearticulated contributes to the possibility of context-specific and relational understandings, in addition to articulations of tools-in-the-making.

The answer to the question, 'what is the FST for?' will most certainly vary depending on who poses and who is asked the question. The distributed process of collective toolmaking also distributed the task of determining and articulating criteria for usefulness of the

tool-in-the-making across different people, contexts, and timelines. This makes it difficult to sustain a generalized conception of what the tool may be for. Yet, I would argue there is also a common ground, which is a refusal of 'tool-routines' (when tools become unquestionable). The process of continuous tool interrogation, collectively imagining tools *differently*, as well as actually altering them, became inherent to the collaborative processes adopted by the FST group; how we worked together and established relationships with the tools-in-the-making. Thus, to some extent, the so-called 'brokenness' (the moment in which a tool becomes noticeable) of the FST tool became its purpose.

The pressure to produce something that can be considered 'functioning' (a tool-in-action) combined with rushed processes can result in approaches and technologies that may deliver quick results but may also contradict values and ethics that evolve as part of the longer trajectory of collective toolmaking. Yet, notions such as '1st version' are a way to articulate and uphold their unresolvedness and, at the same time, lay the path for continuation, for future (unresolved) versions. On their own, such unresolved tools miss the articulation work necessary to turn them into meaningful discursive objects. However, by drawing boundaries that are responsive to specific contexts and conditions (i.e. including context-specific vocabularies, limiting full access through a login or activating the tool within workshop contexts), collective tool-building can incite critical conversations, in addition to the questionability and mutability of the 'tool'.

One of the challenges of the FST project has been to accommodate various levels of involvement, states of precarity and the different timelines of the collaborators. As a collective toolmaking project, the FST required articulations and approaches that resist linearity and

progress-oriented understandings of a design process. With reference to Barad, what is needed in such a process "is a method attuned to its entanglements."⁸⁵ Collectively imagined and built tools are relational things and time is needed to get used to them. The same applies to the systems and contexts they evolve within and interact with, which also require attunement. These environments seem to render separations between tasks, roles, subjects and approaches, bringing about their own vocabularies and social-technical conducts. Such conditions have implications for the tool-building process and those who are involved in it. Collective tool-building processes are receptive to influences that come with the contexts they move through.

This chapter discussed the manner in which a tool can 'emerge' from particular configurations of short-term as well as longer-lasting collectives, socio-technical configurations. The 'inefficiency' of the process constituted the way relationships to the tool and those involved with it developed. Such processes may confront expectations of a productive and rewarding process as they resist linearity and progress-oriented understandings of a design or development process. Yet, I argue it is precisely through the slowness of process that the tool can be questioned conceptually, technically, ethically and not necessarily conclusively. Observations and issues that emerge can be repeated and rehearsed across different contexts and at an inclusive pace, regardless of whether participants are able to attend each workshop and meeting.

Moments of demonstrating collective tool-in-the-making, explaining intentions and negotiating terms of publishing are important moments in which to reflect on

85 Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007), 29.

the context and imagine the various ways in which the tool could live on. These meetings, workshops, presentations and demonstrations create a culture in which the tool is not presumed as an inevitable outcome. By repeatedly explaining and demonstrating the tool, by reconstructing its timeline, imagining its future use and hearing others explain it, the tool develops relationships in other-than-utilitarian ways. Narrating such a tool in the context of more and less public moments, revisiting



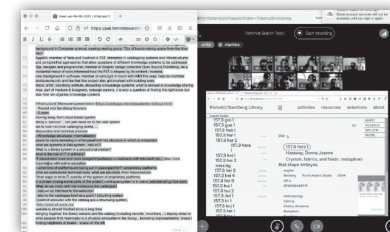
Workshop: Repository of Feminist SeAarch Strategies, February 2020
https://hackersanddesigners.nl/s/Activities/p/Workshop%3ARepository_of_Feminist_Search_Strategies

the same issues over and over again is a generative, inventive process in and of itself—sometimes a rehearsal, sometimes a ritual, sometimes a practice.

The collective slow processing of potential meaning and functioning of the tool in these moments, occurred with the digital interface(s) as a central reference point. We gave so-called ‘tool tours’. However, throughout its various phases and contexts, the FST has also produced a series of non-tool artifacts that took center stage at certain moments as well: stickers and book-marks, paper prototypes, wooden book dummies, recordings and transcriptions of conversations. Reintroducing the tool over and over again meant that every time our perception of the tool had a slightly different

emphasis. In addition, our interpersonal relationships emerged and changed through these different ‘tool-encounters’.

I argue that this consciously ‘inefficient’ approach to toolmaking is indicative of the manner in which collective toolmaking practices attempt to, and sometimes succeed in upholding critical, ethical, and sustainable ways of working and being together. Such an approach is certainly not suitable for any context. It will not pro-



‘Unbound Libraries’ hosted online, May / June 2020.

duce search tools that take the place of existing library search engines. However, such processes bring about *other* formats, methods and articulations for tool-relationships that are contextual and self-critical, with the purpose of readjusting general perceptions of what is inevitable and what is useful in conceptualizing and actualizing tools.

Bibliography

- Ahmed, Sara. *What's the use? On the uses of use*. Durham: Duke University Press, 2019.
- Barad, Karen. *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*. Durham, London: Duke University Press, 2007.
- Barad, Karen. "On Touching—The Inhuman That Therefore I Am." *differences* 23, no. 3 (2012): 206–223.
- Barad, Karen. "Intra-Actions." *Mousse* 34 (Summer 2012): 76–81.
- Bardzell, Shaowen. "Feminist HCI: Taking stock and outlining an agenda for design." *HCI For All* (April, 2010).
- Chun, Wendy Hui Kyong. "Daemonic Interfaces, Empowering Obfuscations." *Programmed Visions. Software and Memory*. Cambridge, Massachusetts: MIT Press, 2011.
- Crenshaw, Kimberle. "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics." *University of Chicago Legal Forum* 1, no. 8 (1989).
- Drabinski, Emily. "Queering the Catalog: Queer Theory and the Politics of Correction." *The Library Quarterly: Information, Community, Policy* 83, no. 2 (April 2013): 94–111. The University of Chicago Press.
- Drenthe, Gusta and Maria van der Sommen. "Vrouwenthesaurus: lijst van gecontroleerde termen voor het ontsluiten van informatie over de positie van vrouwen en vrouwenstudies." *Internationaal Informatiecentrum en Archief voor de Vrouwenbeweging* (1992).
- Ferreira da Silva, Denise. "On Difference without Separability." Catalog of the 32a São Paulo Art Biennial, *Incerteza viva (Living Uncertainty)*, 2016.
- Ferreira da Silva, Denise. "How." *e-flux Journal* 105 (December, 2019). <https://www.e-flux.com/journal/105/305515/how/>
- Graham, Rosie (Richard). "A 'History' of Search Engines: Mapping Technologies of Memory, Learning and Discovery." In *Society of the Query Reader*, edited by René König and Miriam Rasch. Amsterdam: Institute of Network Cultures, 2014.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3. (Fall, 1988). Ann Arbor: Michigan Publishing.
- Halberstam, Jack. *Vertiginous Capital, Or The Master's Toolkit*. https://www.dropbox.com/s/sal72piqxqpo58g/QUEER.ARCHIVE.WORK_1.zip?dl=0&file_subpath=%2FQUEER.ARCHIVE.WORK_1_Jack_Halberstam.pdf
- Halberstam, Jack. *Queer Art of Failure*. Durham: Duke University Press, 2011.
- Harman, Graham. *Tool-being: Heidegger and the metaphysics of objects*. Chicago: Open Court, 2002.
- Henry, Ray. "Moving from Theory to Practice: Incorporating Feminist Approaches into Search and Discovery Tool Development." *Journal of academic librarianship* 41, no. 4 (July 2015): 514–516.
- Kelty, Christopher. *Two Bits: The Cultural Significance of Free Software*. Durham: Duke University Press, 2008.
- Knowlton, Steven A. "Three Decades Since Prejudices and Antipathies: A Study of Changes in the Library of Congress Subject Headings." *Cataloging & Classification Quarterly* 40, no. 2 (2005).
- Latour, Bruno. "A Collective of Humans and Nonhumans: Following Daedalus's Labyrinth." *Pandora's hope: essays on the reality of science studies*, 174–215, Cambridge, Massachusetts: Harvard University Press, 1999.
- Laurel, Brenda. *Computers as theatre. Reading*, Massachusetts: Addison-Wesley Pub. Co., 1993.
- Mansoux, Aymeric. "Sandbox Culture: A Study of the Application of Free and Open Source Software Licensing Ideas to Art and Cultural Production." PhD diss.,

- Centre for Cultural Studies, Goldsmiths, University of London, 2017.
- Le Guin, Ursula K. "She unnames them." *The New Yorker*, 1985.
- Manovich. Lev "The Language of Cultural Interfaces," *The Language of New Media*. Cambridge, Massachusetts: MIT, 1999.
- Noble, Safiya Umoja. *Algorithms of oppression: how search engines reinforce racism*. New York: New York University Press, 2018.
- Olson, Hope A. "The Power to Name: Representation in Library Catalogs." *Signs* 26, no. 3 (Spring, 2001): 639–668. The University of Chicago Press.
- Olson, Hope A. "Mapping Beyond Dewey's Boundaries: Constructing Classificatory Space for Marginalized Knowledge Domains." *LIBRARY TRENDS* 47, no. 2 (Fall 1998): 253–254.
- Miriam Rasch and René König, eds., *Society of the Query Reader*. Amsterdam: Institute of Network Cultures, 2014.
- Rogers, Richard. "Foundations of Digital Methods: Query Design." In *The Datafied Society: Studying Culture through Data*, edited by Mirko Tobias Schäfer, Karin van Es. Amsterdam: Amsterdam University Press (2017): 75–94.
- Rosenblum, Brian. "Decolonizing Libraries" (extended abstract): http://brianrosenblum.net/2015/02/01/decolonizing_libraries/
- Schmitt, Richard. "Heidegger's Analysis of 'Tool'." *The Monist* 49, no. 1 (January 1965): 70–86.
- Smith, Martha Nell. "Frozen Social Relations and Time for a Thaw: Visibility, Exclusions, and Considerations for Postcolonial Digital Archives." *Journal of Victorian Culture* 19, no. 3 (July 2014): 403–410.
- Snelting, Femke. "I think that conversations are the best, biggest thing that free software has to offer its user." *Conversations*, 2015. <https://conversations.tools/>

- Suchman, Lucy. "Located accountabilities in technology production." *Scandinavian Journal of Information Systems* 14, no. 12 (2002).
- Suchman, Lucy. "Agencies in Technology Design: Feminist Reconfigurations." In *Machine Ethics and Robot Ethics*. Routledge (2001).
- Wright, Stephen. "Towards a lexicon of usership." Van Abbemuseum, 2013.

Relevant Links:

- <https://feministsearchtools.nl/>
- <https://feministsearchtool.nl/>
- <https://github.com/hackersanddesigners/fst-viz-tool>
- <https://fst.hackersanddesigners.nl/>
- <https://github.com/hackersanddesigners/fst-amz-shadow-search>
- GNU Bulletin, 1, no. 1, 1986,
<https://www.gnu.org/bulletins/bull1.txt>
- Homosaurus IHLIA: <https://www.ihlia.nl/van-schoenendoos-tot-homosaurus/>
- Women's Thesaurus Atria: <https://institute-genderequality.org/library-archive/collection/thesaurus/5710/>
- <https://womensbios.lib.virginia.edu/about.html>
- <https://feministinternet.com/>
- https://www.youtube.com/watch?v=-DW4HLgYPIA&ab_channel=SouthbankCentre (Kimberlé Crenshaw - On Intersectionality - keynote, 2016)
- 'Teaching the radical syllabus' in collaboration with Lucie Kolb and Eva Weinmeyr <https://constantvzw.org/site/Constant-in-Teaching-the-Radical-Catalogue-Een-syllabus.html>
- "Feminist Search Tools. "Intersectional Search: addressing own complicities"
- https://vimeo.com/660599698?embedded=true&source=vimeo_logo&owner=45925538

Feminist Search Tools Meetup, 2021

https://hackersanddesigners.nl/s/Events/p/H%26D_Meetup_2%3A_Feminist_Search_Tools

“Intersectional Search in Queer and Trans Archives”,

IHLIA Amsterdam

[“https://ihlia.nl/events/intersectional-search-in-queer-and-trans-archives/](https://ihlia.nl/events/intersectional-search-in-queer-and-trans-archives/)

Feminist Search API Workshop

https://hackersanddesigners.nl/s/Activities/p/Feminist_Search_API_Workshop

‘Unbound Library Worksession’ organized by Constant in 2020

<https://constantvzw.org/site/-Unbound-Libraries,224-.html>

‘Repository of Feminist Search Strategies’, 2020

https://hackersanddesigners.nl/s/Events/p/Workshop%3A_Repository_of_Feminist_Search_Strategies

<https://read-in.info/>

<https://read-in.info/bookshelf-research/>

https://read-in.info/wp-content/uploads/2015/06/no_innocent-reading_red.jpg

<https://read-in.info/wp-content/uploads/2018/10/Unlearning-My-Library-Forum1-Copyright-Coco-Duivenvoorde-38-768x512.jpg>

H&D Meetup “Scraping, counting and sorting”, 2015

https://hackersanddesigners.nl/s/Activities/p/Scraping%2C_counting_and_sorting

<http://www.zerofootprintcampus.nl/en/participants/read-in/>

<https://wiki.digitalmethods.net/Dmi/SummerSchool2019>

<http://densitydesign.org/2014/05/an-interview-with-richard-rogers-repurposing-the-web-for-social-and-cultural-research/>

<http://densitydesign.org/>

<https://wiki.digitalmethods.net/Dmi/ToolDatabase>

<https://mappingslavery.nl/educatie/publicaties/>

<https://atria.nl/bibliotheek-archief/collectie/thesaurus/459/>

<https://www.theblackarchives.nl/>

https://read-in.info/bookshelf_research-2/

<https://constantvzw.org/site/-Unbound-Libraries,224-.html?lang=en>

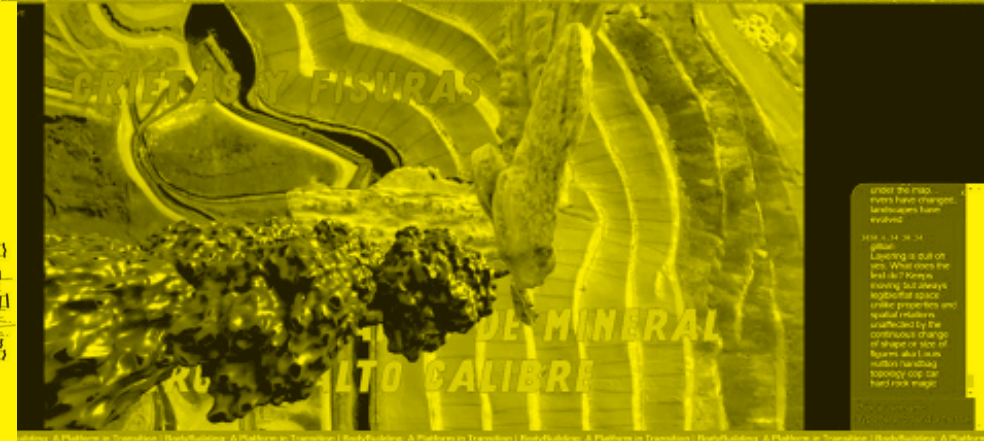
<https://git.xpub.nl/XPUB/XPPL>

https://pzwiki.wdka.nl/mediadesign/XPPL_Documentation

http://wiki.evaweinmayr.com/index.php/Project_2*_Library_of_Inclusions_and_Omissions

Workshop space





H&D Summer Academy 2018

<https://wiki.hackersanddesigners.nl/index.php>

[/HDSA2018_budget#DEVELOPMENT_28MAINLY_PRIOR_TO_THE_SU](#)

€ 4000.00 / 5300.00

General affairs - Selby

https://wiki.hackersanddesigners.nl/index.php/General_Affairs_Jan-

[Aug_2018_-_Selby](#)

€ 2559.96 / 2560.00

Server Maintenance (2018-09)

<https://wiki.hackersanddesigners.nl/index.php>

[/Hackers_and_Designers_Server_Maintenance](#)

€ 160.00 / 160.00

Basic Communication 2018 part 2

<https://wiki.hackersanddesigners.nl/index.php>

[/Basic_Communication_2018_part_2](#)

€ 3000.00 / 3000.00

Administration

<https://wiki.hackersanddesigners.nl/index.php>

[/Financial_management](#)

€ 10560.00 / 10560.00

Create activity

Add member

Logout

```
coinbase: 0x4e858efead
at block: 6185000 (Wed
datadir: /home/ubuntu
modules: admin:1.0 cl
c:1.0 txpool:1.0 web3:
```

```
> eth.getBlock("latest")
{
  difficulty: 2,
  extraData: "0xd88301
9ce8d6574baf7d87fb85a3
5e9a788c2e511543ddc542
gasLimit: 4735434,
gasUsed: 0,
hash: "0xd1f8899faf5
logsBloom: "0x000000
000000000000000000000000
000000000000000000000000
000000000000000000000000
000000000000000000000000
000000000000000000000000
000000000000000000000000
000000000000000000000000
000000000000000000000000
000000000000000000000000",
  miner: "0x0000000000
mixHash: "0x00000000
nonce: "0x0000000000
number: 6185004,
parentHash: "0xcd457
```


#general

in Brussels time?

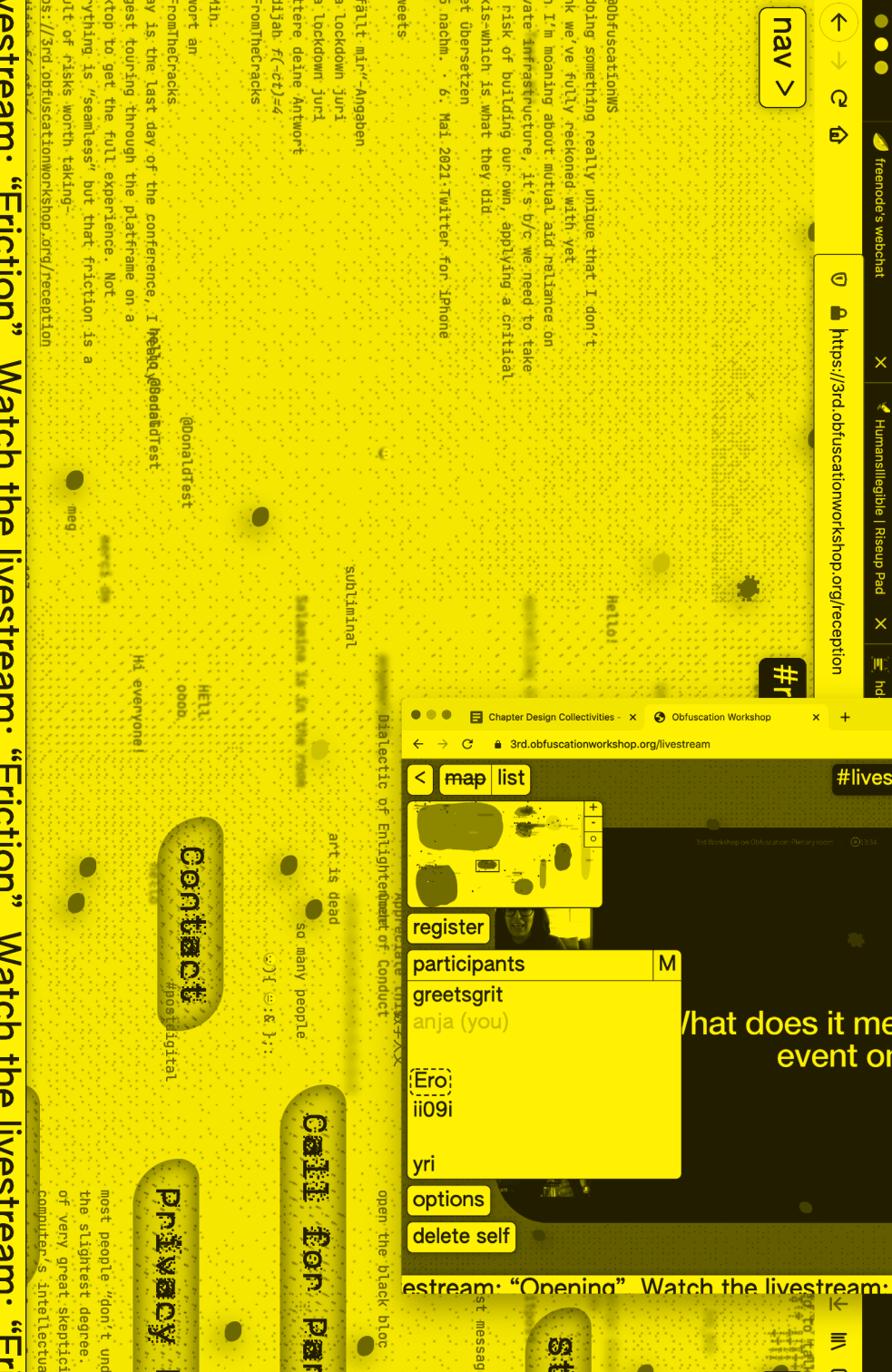
wasn't a panel supposed to start at 14:30?

i clicked and was alone in the room?

??

ok i thought it was over.i was
the email. so it will be the s
brussels time?

ok, thank



[Edit this page](#) | [Rename Page](#) | [History](#) | [Admin](#) | [Log Out](#)

How can new and radical pathways be carved in design education, while still providing the structure and guidance that many students are specifically looking for? Questioning the admissions process, what does it mean to “have potential”?



Prep talk 19 July, 18:00 @Otis, Galef building.

pilar
Hector
Tina test
Mandy
dameon
MJ :)

- Walk through the schedule:
https://workshopproject.wiki/free_schedule

Introduction

Chat 0

[Edit this page](#) | [Rename Page](#) | [History](#) | [Admin](#) | [Log Out](#)

*WPW
→ FREE,
A Design
Educators
Workshop
Contact*

wpw → *free_a_design_educators_workshop* → **free_lexicon**

FREE Lexicon

A

- Academic Artifact
- Agonistic
- Alterity
- Anti-authoritarianism
- Anti-disciplinary
- Authentic
- Automation

B

Body

TOC +

[illegible]

142 LINKS:
143 The Story of OJ by Jay-Z*
144 <https://youtu.be/RM7lw0Oyzq0>
145
146 Lemonade / Beyonce*
147
148 Trendlist
149 <http://trendlist.org/>

151 "There are these two young fish swimming along, and they happen to meet an older fish swimming the other way, who nods at them and says, 'Morning, boys, how's the water?' And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes, 'What the hell is water?'"

<https://en.wikipedia.org/wiki/Historiography>
design a historiography,
To design methods of recording and transmission
Historiography is the study of the methods of historians in
developing history as an academic discipline, and by extension is
any body of historical work on a particular subject.

The shape of time,
Kubler

"A carefully reasoned and brilliantly suggestive essay in defense of the view that the history of art can be the study of formal relationships, as against the view that it should concentrate

Chapter 4:

Platform-design issues

The evolving monoculture of platforms for online gathering demonstrates the fast pace at which socio-technical conducts for online interaction emerge, are normalized, and create conditions in which it is difficult to imagine online collaboration otherwise. Such fast-paced socio-technical developments are invasive and impact ways of working, learning and being together with and through digital tools and technical infrastructure.

Drawing on Isabelle Stengers work on “problematization” and Celia Lury’s concept of “problem spaces,” this chapter investigates whether collective platform-design experiments can develop and sustain *other* possible ways of designing and working together with and through technical objects that are neither utilitarian/solution-driven nor antagonizing.

Introduction

Situating ‘platform’ in the context of the H&D collective

In the previous chapters, I discussed the concepts of the ‘workshop’ and the ‘tool’ and the ways in which they are understood and put into practice in and around the H&D collective. In this chapter, I will investigate the concept of the ‘platform’ by means of various case stories. I will analyze the circulation of the platform and posit it as a means of articulating and actualizing technical and non-technical, social and economic aspects of working and being together.

With these platform stories, I offer yet another angle on collective practice—that of designing, using and maintaining technical infrastructures that cater to on-line collaboration, self-organization and self-publishing. Such self-made platforms combine tools in a manner that caters to the particular needs of a given collective. They involve (combinations of) content management systems,¹ chat applications,² collaborative writing tools,³ online spreadsheets⁴ and file-sharing systems.⁵ The difference between ‘tool’ and ‘platform’ is subtle.

- 1 The H&D website uses MediaWiki as a content management system: hackersanddesigners.nl/s/Publishing/p/The_making_of_hackersanddesigners.nl, last accessed March 2022.
- 2 ChatterPub is a publishing tool that utilizes the open-source collaboration and chat application Zulip hackersanddesigners.nl/s/Tools/p/Chatterpub, last accessed March 2022.
- 3 The Free Wiki converges Wiki software with the open-source collaborative note taking software Etherpad hackersanddesigners.nl/s/Tools/p/Free_Wiki, last accessed March 2022.
- 4 Ethercalc is an open-source online spreadsheet software: hackersanddesigners.nl/s/Tools/p/H%26D_Ethercalc, last accessed March 2022.
- 5 Hyperdrive is a peer-to-peer file sharing tool developed by H&D member Karl Moubarak: hackersanddesigners.nl/s/Summer_Academy_2020/p/Becoming_a_Server, last accessed March 2022.

However, drawing a distinction is useful. Other than tools, platforms bring into focus the manner in which self-made, appropriated or hacked tools are composed together and, as such, are deeply intertwined with a collective’s evolving socio-technical characteristics and functioning. H&D’s technical infrastructure continuously evolves, and at times fails, or acts unexpectedly. H&D shapes and reshapes its modes of working together around the possibilities and limitations of these self-made platforms.

Relevance

The process of collective platform-making is pertinent as it points towards *other* possible socio-technical scenarios of designing and working together that are neither utilitarian, solution-driven or antagonizing. During the period of writing this dissertation, dependencies on easy-to-use digital tools increased. For example, due to the global COVID-19 pandemic the importance of staying connected and sustaining social and work relations while physically distancing intensified. The evolving monoculture and monopolization of platforms for online gatherings such as Zoom,⁶ Google Meet⁷ and

- 6 Zoom is a company providing “videotelephony and online chat services through a cloud-based peer-to-peer software platform used for video communications (Meetings), messaging (Chat), voice calls (Phone), conference rooms for video meetings (Rooms), virtual events (Events) and contact centers (Contact Center), and offers an open platform allowing third-party developers to build custom applications on its unified communications platform (Developer Platform). Zoom software was first launched in 2013” https://en.wikipedia.org/wiki/Zoom_Video_Communications Zoom has been widely critiqued for its privacy and corporate data sharing policies: <https://www.consumerreports.org/video-conferencing-services/zoom-teleconferencing-privacy-concerns-a2125181189/>
- 7 Google Meet (formerly known as Hangouts Meet) was launched in 2017 as a video-communication service developed by Google. https://en.wikipedia.org/wiki/Google_Meet, last accessed March 2022.

Microsoft Teams,⁸ demonstrates the fast pace at which socio-technical conducts for online collaboration emerge and how quickly they are normalized, creating conditions in which it is difficult to imagine online collaboration otherwise. Such rapid developments are invasive and leave impressions on ways of working, learning and being together with and through digital tools, in addition to the ways technical infrastructure is perceived and practiced. Therefore, it seems urgent to pay attention to in-practice inquiries into different, contextual ways of articulating and materializing ‘platforms’ differently.

Problem

In recent years the H&D collective has been frequently approached by organizations and initiatives that work at the intersection of art, design, technology and academia with the question: “Do you want to design our platform?” This recurring design request became the starting point for this chapter and a central issue underlying this dissertation.

Similar to the concepts of ‘tool’ and ‘workshop’, ‘platform’ is a term that signifies different meanings, practices and materializations and it is used in various contexts. ‘Platform’ may refer to technical infrastructure, environments in which software applications are designed, deployed or used, in addition to computer hardware, operating systems, gaming devices and mobile devices. The word ‘platform’ is often used metaphorically. For instance, an organization may be referred to as a platform if it supports individuals or groups in addressing an audience. The original meaning of the

term ‘platform’ refers to it in an architectural sense, “human-built or naturally formed physical structures whether generic or dedicated to a specific use: subway and train platforms, Olympic diving platforms, deep-sea oil rig platforms, platform shoes.”⁹

The ambiguity of the term ‘platform’ seems particularly amplified when articulated as part of a design brief.¹⁰ Resistance to responding with a straightforward answer to a request for platform design lies in platform’s ambiguity, but also in the hesitance around the distinctive role of the designer and the platform can or should be presumed. Platforms seem to expand the realm of designed things—there is no fixedness, no beginning or end to a platform and no certainty in foreseeing a platform’s trajectory. This leads me to the central question of this chapter: If the ways in which platforms take shape is enmeshed with a collective’s functioning, including their characteristic of constant emergence, spontaneity, and unreliability—can platforms be designed at all?

Structure

I will approach this question by analyzing how platforms are articulated and actualized in the context of collective design practice. I begin with the examples of two platform design requests that were posed to the H&D collective. These requests were interpreted, materialized and put into action in the context of art and design education. Both platform projects were intended as online collabora-

9 Tarleton Gillespie, “The politics of ‘platforms’”, *new media & society* 12, no. 3 (2010): 349.

10 Jane Guyer: “According to Gillespie (2010), the Oxford English Dictionary lists fifteen different referents for “platform,” and the Wikipedia “disambiguation” page directs us to twenty-two different entries.” Guyer, Jane I., “From Market to Platform: Shifting Analytics for the Study of Current Capitalism” *Legacies, Logics, Logistic* (Chicago, London: The University of Chicago Press, 2016): 115.

8 Microsoft Teams is a proprietary business communication platform initially released in 2017 by Microsoft, “offering workspace chat and videoconferencing, file storage, and application integration”. https://en.wikipedia.org/wiki/Microsoft_Teams, last accessed March 2022.

tive learning environments and developed different kinds of affiliations amongst the people engaging with them and each other. The Englishes MOOC was initiated by Dutch artist Nicoline van Harskamp, who asked the H&D collective to collaborate on developing an interactive online learning environment on the bases of existing course material. The *Workshop Project Wiki* was a collaboration between H&D and a collective of design educators called Workshop Projects. It converged different digital tools, into what I refer to as a self-made platform, for the occasion of an annual workshop series for design educators as well as a growing repository of syllabi, course material and workshop documentation. In both cases, the platform became a central reference point for collective learning and collaboration with groups that were not always present at the same physical location. I put forward these two digital environments to question the various implications of collective platform making and their functioning as a tactic to combine and permeate different, usually separate, contexts.

I will continue with ChattyPub, a platform evolving from self-organized activities that are at the core of H&D, such as organizing workshops and experimenting with self-publishing. ChattyPub is difficult to define as either a design software, a workshop or a tool for collective organization, yet it encompasses all these characteristics and has continued to play an important role in the way the H&D's collective has evolved. I will then continue with tracing different yet intersecting meanings of the concept 'platform', including a physical platform structure, the platform as a metaphor for collective organization and an online live stream platform. More specifically, I will pay attention to the ways in which different platform materializations and articulations respond to changing conditions and environments and how they carry material-discursive potential.

The example of the H&D COOP platform intersects technical and organizational aspects of the H&D's collective with the longer-term effects (at times indeterminate) that such experimental platforms have on the way a collective evolves. Therefore, I cast doubt on the way the practice of collective platform making can establish 'unquestionability' towards socio-technical incompatibilities. In the last section of this chapter, I discuss an experiment in collective platform-making referred to as 'platframe'. The example addresses collective platform-making as a means to build and work with platforms, while simultaneously problematizing relationships that evolve and are hindered by and through the emerging platform. The question that will be discussed is; how to consider platforms as problematic, unresolved and uncomfortable from the outset?

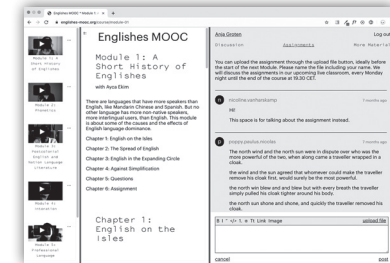
Plat-formatted learning: Englishes MOOC and Workshop Project Wiki

In the following section, I will discuss two platform projects. In both cases, H&D (more specifically André Fincato and myself) were invited to collaborate on developing a digital environment, which would accommodate online collaboration and learning. While there are many aspects of these projects that could be discussed, in the interests of remaining within the scope of this dissertation, I will focus on the way in which the two different approaches to conceptualizing and materializing 'platform' established their own ways of connecting people with each other and the platform. In the first example, H&D worked with preexisting course materials that were translated into the context of an online learning environment. Roles and tasks were clearly divided throughout the process. In the second example,

the divides were not demarcated as clearly. Materials evolved along with the platform. I am drawing a distinction between these two projects to problematize H&D's involvement in 'external' design and web development projects, arguing that they are indicative of the thresholds of collective design practice. That is, boundaries are drawn anew with every new context and collaboration. The first example was a more conventional design commission, 'executed' by two H&D members. It did not feed back into the collective in the same manner as is evident in the second example, where technical aspects and excitement about them derived from and fed back into H&D's collective practice. To clarify, I do not intend to exemplify these two projects as good or bad platform-design examples but rather to distill aspects of their processes in order to question the ways in which collectives implicate themselves in the environments we pass through with our work and the boundaries we draw or fail to draw in the process.

Englises MOOC

In 2018, H&D was approached by Dutch artist Nicoline van Harskamp to collaborate on developing an online learning environment, which she referred to as a 'MOOC' (Massive Online Open Course). At the time of this inquiry (before the COVID19 pandemic), I had not familiarized myself much with online learning platforms, such as webinars or MOOCs. Besides remote seminar-style university education, online learning was not yet a common



Screenshot of the interface of the Englises MOOC (logged in)

practice in art education. During our first meeting, Nicoline brought a large folder with physical course materials that she wanted to have translated into what I will refer to in the following as a 'platform'¹¹—a website that allowed a committed group of participants—mostly students and educators within an international art school context, to access and engage with learning materials and interact with the course material,

¹¹ The project description by Nicoline van Harskamp contextualizes 'platform' slightly differently. It refers to one specific feature of the website and infrastructure as a platform—the discussion feature "[The MOOC] also features a platform for live discussion between its participants." <https://www.englises-mooc.org>, last accessed April 2022.

with Nicoline and each other.¹² In our initial meeting, Nicoline explained that she had been recurrently invited by various organizations and educational institutions to teach this workshop sequel and she wondered how she could respond to the increasing demand. In her motivational statement on the website, she described how she had “discussed the topic so often as an educator, that she decided to develop a curriculum and choose an online teaching format that maintains the qualities of a multilingual classroom environment: the Massive Open Online Course. [...] Actresses from different language backgrounds perform Van Harskamp’s classes [...]. Students and alumni from the institutions affiliated with the project, perform the process of learning.”¹³

It may not be intended as such, however my reading of the motivation for developing an online learning environment is as follows. It reflects a common narrative around platforms’ capacities to enhance processes of human interaction, to make such processes—here processes of learning and teaching—more efficient in an economical sense (reaching more people, avoiding repetitive labor). In reality, there was still a large amount of human labor involved in developing the platform, and perhaps even more so in pursuing the course once the platform was supposedly completed. In particular, there was labor involved in sustaining a committed group of participants and keeping them involved and engaged over a longer period of time. For instance, the live chat feature was initially one of the most important technical features that the ‘Englishes MOOC’ platform was developed

around.¹⁴ It was designed to accommodate exchange between participants. In the event that they had questions, participants could post these in the chat. Yet many participants preferred to use email to ask questions and to send in their assignments. The upload feature and the discussion forum were barely used, generating the considerable work of communicating with participants and helping them orient themselves on the platform.

Whether or not actualized in the way we had anticipated, the MOOC platform traveled widely, propelled by the narrative of it as a stable, online learning environment that accommodates large numbers of people. The project was featured on websites, newsletters, exhibitions and in public talks at various educational and cultural institutions and attracted many participants. In the guise of a ‘MOOC’, the platform attracted many people and, just before the COVID19 pandemic, it was perceived as a unique way to present an artistic practice and as an unusual format for art education. Through its aesthetics, teaser videos, the description texts, the institutions and networks that announced it, the project had potential. Perhaps it did not fulfill its promises in a technical sense. However, by piggybacking on certain platform analogies (aesthetically, through features and through the narrative that evolved around it), the project managed to cut across disciplinary and institutional boundaries. Through its perception of an innovative project (involving the development of ‘self-made’ tech-

14 The platform was built upon an open-source forum software called Discourse, that allowed for the creation of different channels, which we repurposed to differentiate the course modules within the structure of the website. The functionalities of the forum software allowed us to create more and less public areas of the website, some of which could be accessed by anyone with a link, and some only with user logins and once modules were released. Eventually, when the course took place, the chat function was barely used by the participants. Neither was the upload button (to submit assignments and exercises). <https://www.discourse.org/>, last accessed April 2022.

12 The platform became an enclosed environment that participants could access after receiving a login. The course was divided into different blocks and course materials (videos, preparatory readings, schedules, assignments) would be released one block at a time, over the course of six weeks. The platform offered the possibility for discussions in a live chat room and participants could upload their assignments.

13 <https://www.englishes-mooc.org/>, last accessed April 2022.

nology), it also tapped into funding sources that would usually not be available for projects evolving in educational institutions.¹⁵

The conceptual framework of the ‘platform’ was an essential part of the narrative evolving around the project and contributed to its mobility and actualization. It became an effective tactic for connecting the different realms of art, education, research and web development.

Yet it seemed to me the Englishes MOOC’s implications as a technical project actualized within the specific context of the H&D collective were not questioned sufficiently. That is, the project could have been challenged more in terms of its technical ambitions and the platform-image it (re)produced.

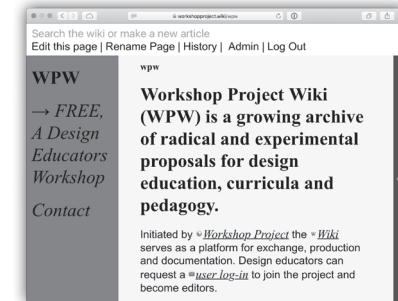
In retrospect, it seems the manner in which tasks and roles were divided in its development is indicative of how the platform ‘as such’ became inevitable (the artist as platform-commissioner, H&D as designers and developers realizing the platform, and participants as ‘users’ of the platform). The short timeline of the project caused pressure to finish the platform. Leading up to the launch of the first course cycle, pressure increased, over-hours were worked. On the one hand, the intention for the platform was to function as a way to make processes easier and more efficient. On the other hand, it required an immense amount of labor to keep up the platform image as a technical infrastructure that reduces human involvement. Throughout the process, there was not much space for problematizing the evolving technical infrastructure and preparing ourselves and others for the expectations and demands it may produce. For instance, we did not question if the envisioned digital

¹⁵ The Englishes MOOC was funded by the Creative Industries Fund NL and supported by Sandberg Instituut Amsterdam and Vrije Universiteit Amsterdam. Creative Industries Fund usually does not fund projects evolving in educational institutions.

platform, in terms of aesthetics, features and the manner in which it was contextualized through certain platform-analogies (liveness, reliability, efficiency, user-friendliness), misaligned with the conditions of its development.

Workshop Project Wiki

The Workshop Project Wiki (WPW)¹⁶ is another platform-project, developed with André Fincato (H&D) who I have also been working with on the Englishes MOOC. The WPW builds upon different open-source software tools that H&D had been working with since 2014.

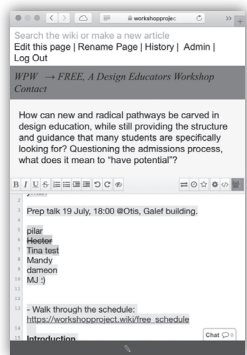


Screenshot of the interface of the Workshop Project Wiki.

The WPW converges DokuWiki software¹⁷ and the online collaborative real-time editor Etherpad.¹⁸ Similar to the MOOC the WPW bridged various institutional boundaries and brought together different learning communities.

- ¹⁶ The Workshop Project Wiki converges DokuWiki—an open source wiki software that doesn’t require a database, and Etherpad, a real-time collaborative note taking tool. I developed this Wiki-Pad mesh together with H&D member André Fincato. Editors can read, edit and create articles. A new Etherpad is automatically generated along with and bound to every new Wiki article. The pads other than the Wiki articles are only accessible with a user account.
- ¹⁷ “Designed for collaboration while maintaining a history of every change” <https://www.dokuwiki.org/dokuwiki>, last accessed March 2022.
- ¹⁸ Etherpad allows editing documents collaboratively in real-time <https://etherpad.org/>, last accessed March 2022.

It became a central digital workspace for developing and pursuing a workshop series organized for and by design educators. Reflecting on the development of the two platform-design processes (Englisches MOOC and the WPW), there were subtle differences in articulation of roles, responsibilities and expectations, all of which are pertinent. In comparison to the collaboration on the Englisches MOOC, the role of H&D in the process of developing the WPW was less distinctive. For instance in the case of the WPW, the technical aspects introduced were already tightly interwoven within the collective of H&D.



Left: Screenshot of the interface of the Workshop Project Wiki
Right: Participants at the workshop working in the Wiki

The proposition for combining certain tools that were already part of our tool ecosystem, in particular bringing them together in different ways seemed natural and exciting. Another point of contrast with Englisches MOOC, was that I had been in contact with one of the initiators of the Workshop Project collective before on different occasions. Yasmin Khan was one of my teachers in an exchange semester in Los Angeles and we have since sustained contact.¹⁹ Her approach to

teaching resonated with me and inspired me in my own evolving practice as a design educator. Therefore, I did not consider working on the WPW as a new project or a commissioned work, but rather, as an occasion to reconnect and continue our ongoing exchange. Furthermore, the WPW was an occasion to combine resources and energy for imagining and building a growing repository of experimental teaching methods and materials across and beyond institutional boundaries. Together, we filled and edited the WPW and got used to the syntax together.²⁰

Rather than *plat-formatting* pre-existing content, workshop materials, pedagogical resources, prompts and syllabi evolved together with the evolving digital environment. By writing and publishing an elaborate note addressing our choice to work with certain tools, documenting and publishing the source code, the WPW was contextualized as a technical project. As such, it did not only display content and offer features, but was an evolving technical object that took active part in the exchange between the two collective practices of Workshop Project and H&D. Both collectives aspired to consider practices of using and building self-made tools and platforms as an inherent part of design education. During the first edition of the workshop in Los Angeles, I was able to join as a co-host and participant, and was therefore able to introduce and contextualize the WPW. I introduced the practice of H&D, demonstrated how the WPW came into being, how it worked and was present for questions.

In the article “From Market to Platform” (2012), Jane Guyer described platforms as “made up of built components and applications, from which actions are

¹⁹ I was invited to Otis College of Art and Design, as a visiting student in the summer of 2010, and as a visiting lecturer in 2012 and 2014.

²⁰ With syntax I refer to the hypertext markup language used to format Wiki articles.

performed outward into a world that is not itself depicted.”²¹ I relate this quote to the two platform projects, in the ways they became active in the world in different ways. The Englishes MOOC, in the way that it was imagined and actualized, depended on a certain resolved appearance, on unquestionability. It became active in the world through the stable image around its existence. At the same time, its unquestionability also caused a misalignment with the actual experience of building it, working with it and using it. In my view, its unquestionability also hindered its duration as a technical object that could live on, beyond the framework of the artistic project Englishes MOOC. Similar to the WPW, the Englishes MOOC was also built with open-source software. Thus, in theory, it could be repurposed across various contexts. However, due to its ‘resolved’ forms of expression, it is difficult to imagine how it might be used differently than its initial purpose. For instance, some visual elements, such as the elementary colors, were drawn from the colors of the whiteboard markers that were also featured in some of the videos portraying the artists’ workshop reenactments. Thus, there was a close resemblance between the appearance of the ‘platformed’ materials and the structure and appearance of the different elements of the interface. For instance the background of the website is an image of a whiteboard, which derived from one of the artist’s videos, as well as the colors of the lines that structure and divide content into different columns.

21 Jane I. Guyer “From Market to Platform” (first published in 2012)
Jane I. Guyer, *Legacies, Logics, Logistics* (The University of Chicago, 2016): 110–127.

In studies and discussions about the so-called ‘platform economy’,²² platforms are often described as designed for emulating and enhancing interaction. Theorists such as Guyer, Gillespie, Srnicek, Star and Lury discussed how platforms have fundamentally changed how work is perceived.²³ They seep into a collective vocabulary and imaginary. It is perhaps far-fetched to connect theories on the platform economy to self-made artist projects, such as the Englishes MOOC. However, I wonder whether there has been a rise of platform economy semantics and models within the creative sector (perhaps more intensely since the COVID19 pandemic). On the one hand, the increasing interest in self-made platforms is indicative of a necessity to self-organize; to take matters into ‘one’s own hands’, making our ‘own’ self-made, artist-run platforms. On the other hand, such a tendency perpetuates expectations around professionalism, efficiency and reliability that people are used to confronting in the guise of those platforms we

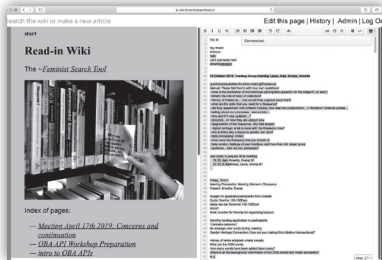
22 Social and cultural anthropologist Jane Guyer proposes the term ‘platform’ as an alternative to the term ‘market’ and ‘platform economy’ as an alternative to ‘market economy’. Guyer, Jane I., “From Market to Platform: Shifting Analytics for the Study of Current Capitalism,” *Legacies, Logics, Logistic* (Chicago, London: The University of Chicago Press, 2016).

23 Platforms are widely discussed, particularly their implications in the global economy and society at large. In *Platform Capitalism* Nick Srnicek, writer and lecturer in the fields of political philosophy and digital economy, differentiates the sphere of platform capitalism. Most ubiquitous is the category of advertising platforms such as Google and Facebook that extract and analyze the information of platform users, in order to sell space for advertisement. There are cloud platforms such as Amazon Web Services that own and rent out server infrastructure to digital-dependent businesses, and product platforms such as Spotify that collect subscription fees. Lean platforms like Uber, Airbnb and Taskrabbit position themselves as platforms upon which users, customers, and workers can meet and take part in the ‘gig economy’. Their platform model is profitable through hyper-outsourcing and keeping costs as low as possible. Nick Srnicek, *Platform Capitalism*, Cambridge; Malden: Polity, 2017.
“Bowker and Star say, ‘infrastructure does more than make work easier, faster or more efficient; it changes the very nature of what is understood by work.’” Celia Lury “Platforms and the Epistemic Infrastructure,” *Problem Spaces. How and Why Methodology Matters* (Cambridge: Polity Press, 2021).

aim to replace and build alternatives for. In my experience, demands for efficiency are usually articulated in a subtle manner, yet they lead to high expectations of self-made, technical artist projects that are in reality developed under meager socio-economic conditions. These expectations tend to reproduce and normalize such precarious conditions.

By juxtaposing these two platform projects, I ask whether there are other ways of making experimental platforms that do not fall into the efficiency trap, but are inventive in the ways in which they reflect on and respond to the particular contexts they evolve within.

In comparison to the MOOC, the visual design of the Workshop Project Wiki was rather rough. This roughness was demonstrated for instance by its use



Screenshot of the interface of the Feminist Search Tools Wiki

of system fonts,²⁴ or by disclosing signatures of the various software and practices it combined. These small instances of unresolvedness make it, in my view, possible to imagine the WPW being used differently, in different contexts, repurposed and continued. In fact, in the context of the Feminist Search Tools project, the WPW took on another, parallel life as an online collaborative

workspace and process archive.²⁵ The wiki-etherpad convergence introduced a culture of documenting and note taking to an otherwise chaotic and fragmented collective process. It helped those who could not attend every meeting to catch up and follow the conversations asynchronously.

In her article “Located accountabilities in technology production” (2002) professor of Anthropology of Science and Technology Lucy Suchman proposed drawing new kinds of boundaries within processes and roles of technology-design. According to Suchman, accounting for technology production means being able to locate oneself in socio-material relations, but also to surrender control. Furthermore, foregoing control does not mean acting irresponsibly. It means seeing oneself “as entering into an extended set of working relations.”²⁶ Suchman’s proposition resonates with how some platform design processes, such as the WPW, seem to better reflect the manner in which they are part of various socio-material relations. Rather than imposing predefined roles, tasks and expectations, such a collective design process redraws boundaries with flexibility and according to the limits and possibilities of the present.

To summarize, self-made platforms and the processes of conceptualizing and actualizing the ‘platform’ can become an effective tactic for connecting different disciplines, practices and (institutional) contexts. By means of two examples, I have shown how experimental platform projects that involved the H&D collective dealt with the specific socio-economic / socio-technical con-

25 The FST Wiki is used to take notes during meetings, to write and edit outlines for conversations and interviews, to accumulate resource lists, to write workshop outlines and to structure the clusters of library categorization. <https://wiki.feministsearchtool.nl>, last accessed February 2022.

26 Suchman, Lucy (2002) “Located accountabilities in technology production,” *Scandinavian Journal of Information Systems* 14, no. 2 (2002): 7.

24 System fonts are the typefaces already installed on a computer through its operating system. These typefaces do not require licenses and are usually considered inelegant.

ditions they were evolved within. A question that arose from these projects is how collective platform making can critically and reflexively negotiate the particular contexts they evolve within in order to avoid the ‘efficiency trap’. That is, upholding an image of self-made platforms to be efficient, reliable and functioning, while the opposite may be the case.

In the context of WPW, sustaining a certain unresolvedness, led to new openings and continuations in other contexts. While it derived from a specific context, the platform did not remain a singular technical object but emerged from and fed back into long-term collaborations between two collectives and expanded into other collective practices as well. The design and development process of the WPW included many exchanges, as well as co-editing and co-hosting workshops that included the platform as a central component, a technical object to learn from and with. In this sense, the WPW is not solely a platform for collaboration or a workshop accessory, but an ongoing collective process that converges, supports and challenges different socio-technical practices.

Rethinking platform boundaries: ChattyPub

In their text “Platform Seeing” (2019) McKenzie and Munster describe the mode of operation of platforms as “transversal, thus its boundaries are not clearly distinct, or to be observed or discussed from one single vantage point.”²⁷ The evolving (individual and collective) habits around the use and construction of certain tools and tool combinations and their resonance in collective organizations can be difficult to trace, precisely because

they cut across different registers of collective work and social relations.

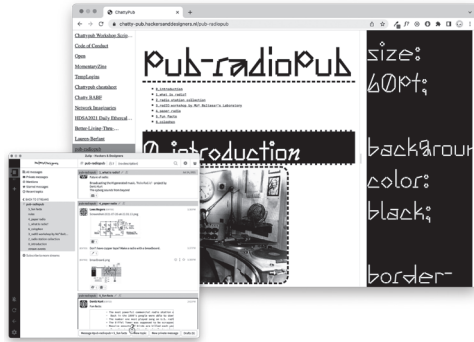
‘Platforms’ usually presuppose the existence of a community, or the potential of the forming of a community—a group of people who share some kind of common ground, who agree to be part of the platform, work with the platform and who accept to do the work the platform asks of them. Within a collective design process, there can be less of a distinct or causal understanding of platforms in which the characteristics of certain platforms, such as those facilitating collaboration, are not being inscribed into a technical artifact, i.e. a website or content management system. Socio-technical relations evolve *with* a platform, rather than *on* or *because* of a platform.

In the following section, I will draw on an example of a project referred to as ‘ChattyPub’. ChattyPub evolved from various workshop situations, as well as the need for a central online workspace for the H&D collective. In my view, ChattyPub as a platform operates as, what McKenzie and Munster’s described as, transversal. Its boundaries are not clearly distinct. In terms of its purpose, it cannot be solely defined as, for instance, a chat application, a workshop, a design and publishing tool or an archive. Yet ChattyPub inherits all of these characteristics and has become an essential component of H&D’s collective practice. Through its multiple modes of operation, its changing meanings and different materializations it developed and strengthened ties through and with the H&D collective. ChattyPub could be discussed from various vantage points. As a starting point, I consider a workshop that was facilitated by two design educators XinXin and Lark VCR during the 2020 of the H&D Summer Academy (HDSA). 2020 was an exceptional year for H&D. Due to the global pandemic, we decided to host the intensive workshop program for the HDSA online for the

²⁷ Adrian MacKenzie and Anna Munster “Platform Seeing: Image Ensembles and Their Invisibilities,” *Theory, Culture & Society* 36, no. 5 (2019): 3–22.

first time. The program consisted of fifteen workshops, which were hosted by different designers, artists and programmers from various geographic locations.

The Experimental Chatroom workshop particularly resonated with H&D members due to its attention to detail and the commitment on the part of the workshop hosts to respond to the different needs and levels of



Left: Zulip interface / book stream + chapter topics,
Right: ChattyPub CSS preview and book spread.

knowledge of a diverse participant group who were distributed across the globe and across time zones.²⁸ The workshop impacted H&D in various ways. We referred to XinXin and Lark VCR's workshop script many times as an example of a 'perfect workshop'.²⁹ The subject of the workshop, designing and building experimental chat rooms, sparked the idea amongst H&D for co-designing a publication utilizing a chat environment. This would allow for several people to participate in the design process at the same time.

28 Workshop outline of the Experimental Chatroom workshop on the H&D website: https://hackersanddesigners.nl/s/Summer_Academy_2020/p/Experimental_Chatroom, last accessed March 2022.

29 Experimental Chatroom workshop script developed by Xin Xin and Lark VCR: <https://experimental-chatroom-workshop.glitch.me/script.html>, last accessed March 2022.

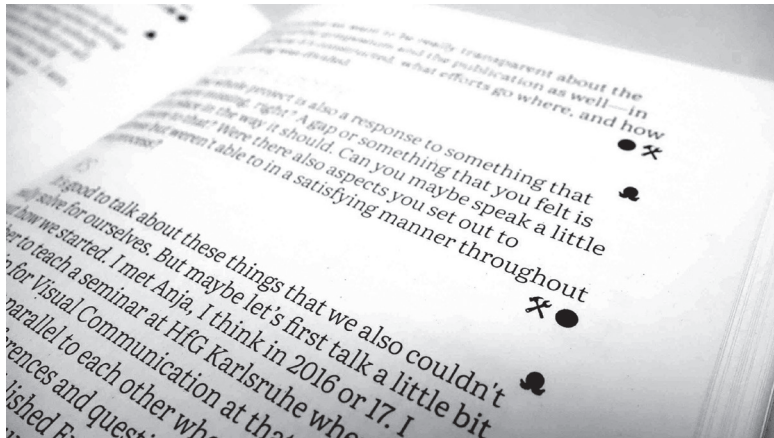
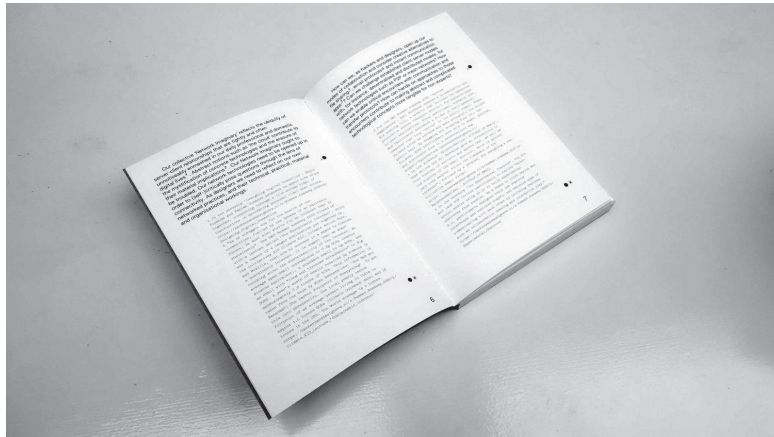
In the next iteration of the H&D Summer Academy in 2021, which was organized as a hybrid format on and offline and in four different locations, we started using an open-source chat platform called Zulip³⁰ to streamline communication with workshop participants and co-hosts. The Zulip software combines real-time chat functions with an email threading model. Along with the practical desire for a central community chat platform, the idea of co-designing a publication using a chat interface was revived. ChattyPub became the name of a self-made publishing platform that builds upon the chat interface of Zulip. The text input fields for posting chat messages were used to edit and layout the contributions to our publication—some were text-based and some visual contributions. Different CSS styles³¹ (font-families, font-sizes, font-styles, margins, text alignment and colors) were applied through Emoji reactions.

ChattyPub was developed in preparation to a workshop taking place during the H&D Summer Academy 2021, and was further developed in different workshops hosted in other contexts afterwards.³² In autumn of 2021, H&D self-published the book *Network Imaginaries*, which was designed with ChattyPub. Among others, contributors included Lark VCR and XinXin, who wrote

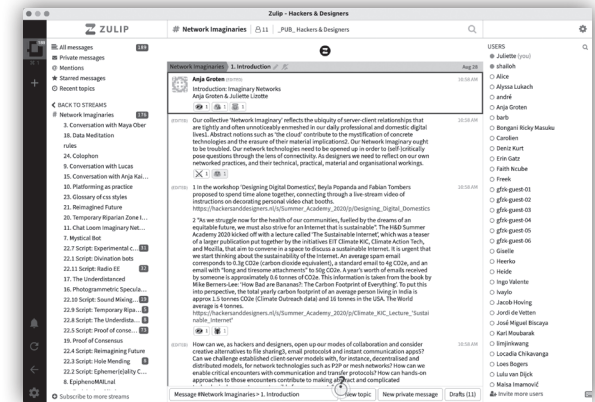
30 Zulip is an open-source software application that combines the immediacy of real-time chat with an email threading model. <https://zulip.com/>, last accessed March 2022.

31 CSS stands for Cascading Style Sheets. It is "a stylesheet language used to describe the presentation of a document written in HTML or XML. CSS describes how elements should be rendered on screen, on paper, in speech, or on other media." <https://developer.mozilla.org/en-US/docs/Web/CSS>, last accessed March 2022.

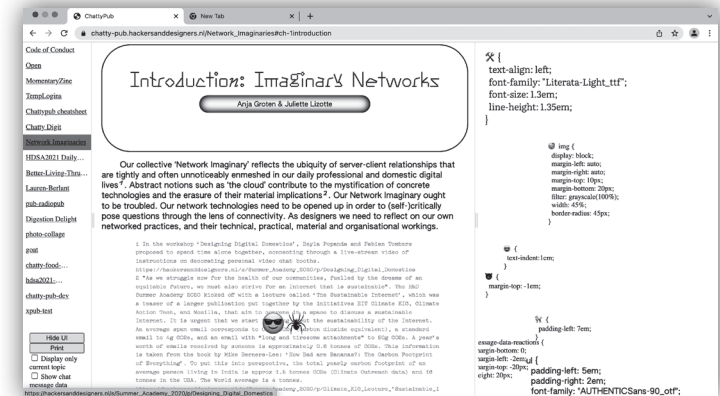
32 For instance, in 2021 at GFZK Leipzig 'Digit' <https://digit.gfzk.de/de> and the self-organized H&D symposium 'Open* tools for collective organizing' in 2021 https://hackersanddesigners.nl/s/Activities/p/Open%2A_tools_for_collective_organizing and at Bergen Art book fair in 2022 <https://babf.no/program/workshop-chattypub-hackers-designers>, last accessed April 2022.



Example of page spread of the printed book with visible emoji reactions



Zulip interface / book stream + chapter topics



ChattyPub CSS preview

a contribution about their ‘Experimental Chat Room’ workshop, within the various chat rooms that were built in their workshop.

To sum up, ChattyPub functionalities were/are manifold. As a platform it congregates and activates various aspects of collective practice transversally. It is a socio-technical object, emerging from and intertwined with collective organization; it traveled through and connected various contexts and practices; it served as a technical object to learn from and with. It has been the subject, tool and context for workshops and through its different instantiations, affords continuation of various collective design processes. ChattyPub, along with the installation of Zulip on H&D’s server and the different workshop occasions, thrived off shared, energizing moments and a contingent collision of diverse individual and collective curiosities. As a platform ChattyPub evolved and functions despite, and because of the fragmented and chaotic character of H&D’s collective design practice.

The figure of the platform

Referring to the example of ChattyPub, I demonstrated how platform characteristics, as they are defined and actualized as part of a collective design process, cannot be inscribed into one distinct technical artifact, one distinct moment or one distinct group of people. Instead, different platform meanings and materializations are indistinctly intertwined in (distributed) collective work and shape what may be perceived or articulated from the outside as a solid and functioning technical object that serves a predefined purpose. Such inscriptions of purpose and intentions are often detached from collectivity-in-action; for instance they are articulated after time has passed or by people who were perhaps not directly involved in the process and interpret the socio-technical functioning of the H&D collective at a distance.

Tarleton Gillespie wrote that the term ‘platform’ “depends on a semantic richness that, though it may go unnoticed by the casual listener or even the speaker, gives the term discursive resonance.”³³ Semantic richness, in my reading of Gillespie, means that the term ‘platform’ is equally vague as it is specific and therefore can obtain meaning across various fields and multiple audiences. Gillespie delineates four distinct yet intersecting semantic territories for the meaning of the term platform (‘architectural’, ‘political’, ‘metaphorical’, ‘computational’) “‘Platform’ as a descriptive term for digital media intermediaries represents none of these, but depends on all four.”³⁴

Thinking with Gillespie’s observations on and theorization of the semantic rich ‘platform’, I will follow intersecting platform meanings and the ways in which they were and were not actualized as part of a collective

33 Gillespie, Tarleton “The Politics of ‘Platforms’.” *New Media & Society* 12, no. 3 (May 2010): 349.

34 *ibid.*

design process. The manner in which platforms materialize within and due to collectivity, seems to carry discursive potential. They are altered and produced by their various instantiations and contexts. In the following, I will trace the genealogy of the concept of ‘platform’, at first taking the shape of a physical platform structure, which was meant to facilitate workshops, yet was not actualized as such. Instead it became a metaphor for collective organization and then took yet another form, that of a kind of TV set accompanied by a live-stream platform. Furthermore, the H&D live-stream platform took on a life on its own.

Installing a platform

In 2018, H&D accepted an invitation to organize an exhibition. I hoped for new insights deriving from a process of putting together this exhibition and perhaps to find new ways to articulate in a cohesive manner what it really is we do. I asked a friend who is a scenographer, Thomas Rustemeyer, to work with us on the exhibition design. The involvement of Thomas—who was familiar with but not actively part of H&D—allowed us to reflect about H&D’s collective practice with some distance. Thomas patiently proposed many possible directions for the exhibition by means of different drawings. At one point, he proposed to showcase and demonstrate some of the tools H&D had developed in the past, outcomes of workshops, websites and publications. However, while we were always enthusiastic about creating publishing karaoke machines,³⁵ turning toy cars into self-driving cars,³⁶ and performing bodily interfaces,³⁷ the idea of

showing such objects in an exhibition context created discomfort. The resistance to exhibiting these objects may have derived from the fact that most of these objects/prototypes are developed in the context of workshops and have the status of idea sketches or tryouts.³⁸ They are not meant to be exhibited and are also often disposed and decomposed. Components are reused for other purposes.

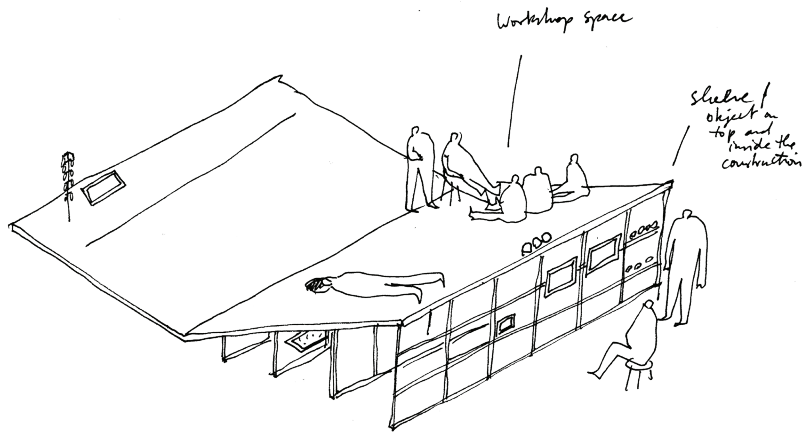
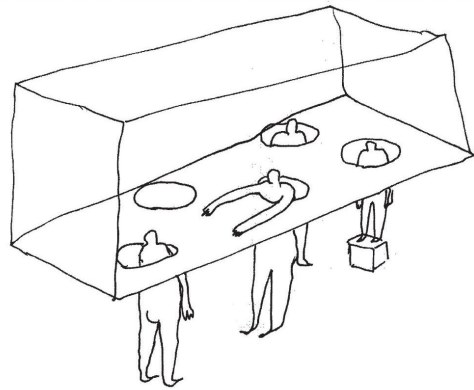
Another consideration was to exhibit works produced by individual members of the H&D collective. We entertained the idea for a brief moment, but soon acknowledged this would be a terrible exhibition, an incohesive, random potpourri. We started to discuss the core of H&D, our individual and collective values. Slowly we came to realize that H&D might consist of individual practitioners. However, H&D should be seen as a practice in its own right. H&D brings together people (including ourselves) to do the things we would usually not do in our individual practices. At H&D we get to experiment without the pressure of creating precious artifacts. Thus an exhibition seemed to counter what we do as part of H&D. Finally, we decided to use the exhibition as an occasion to collaborate with other artists and art collectives that inspire us and started imagining a spatial structure, a ‘platform’ that would function as a place and occasion to accommodate different kinds of encounters with makers, through workshops, performances and talks.

35 https://hackersanddesigners.nl/s/Publishing/p/Momentary_Zine

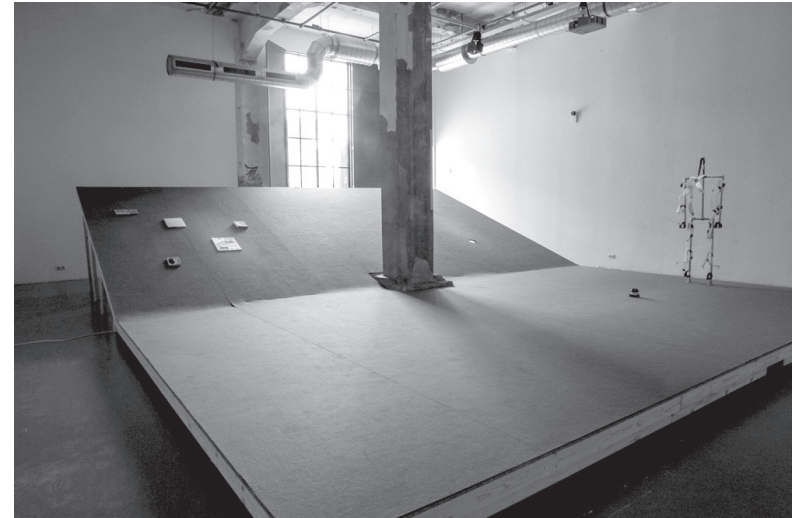
36 https://hackersanddesigners.nl/s/Activities/p/Self-Driving_Car_in_Basel

37 https://hackersanddesigners.nl/s/Activities/p/Interfacial_Workout
https://hackersanddesigners.nl/s/Activities/p/Body_Electric

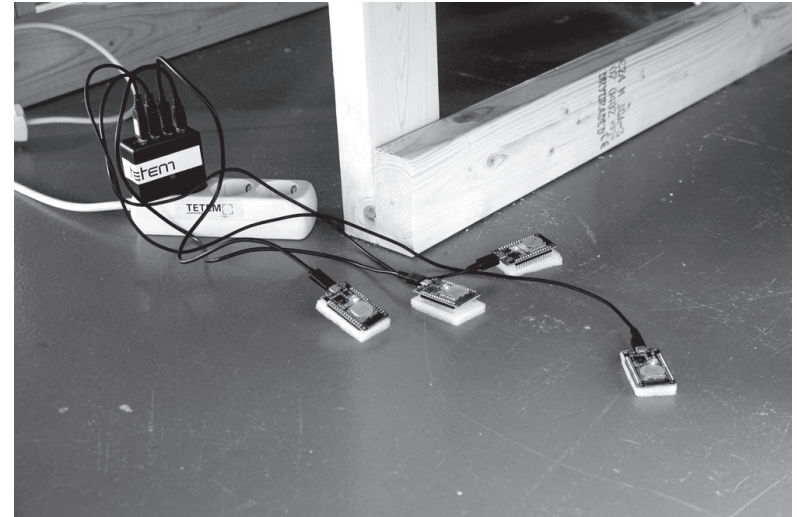
38 We tried to organized prototype exhibitions at Dublin Science Gallery in 2019 and H&D Summer Academy 2017 ‘On &/ Off the Grid at Mediamatic and De Ruimte in Amsterdam.



Drawings by Thomas Rustemeyer



Platform installed at Tetem, Enschede, 2020.



Platform metaphor

Although the platform was built, it was not put into action as we had initially envisioned it—as a physical site that could be activated through workshops and in-person events. Shortly after the exhibition opening, the Netherlands went into its first lock-down and physical gathering became impossible for the duration of the exhibition. Nevertheless, the image of the platform circulated and became an image representing the H&D collective. The physical platform intended to serve the purpose of gathering also became a metaphor—as the term ‘platform’ is often used to refer to organizations and tends to imply an assumed value to the ‘platform-organization’ as supportive and enabling.³⁹

Without the activation of the physical platform, the image of the platform seemed to flatten the socio-material particularities and unresolvedness of the H&D’s collective. As an image, a shape and a figure, it seemed too finite. Yet, the ‘platform’ as a metaphor and its coming-into-being as a physical structure also set into motion a reflexive articulation process about

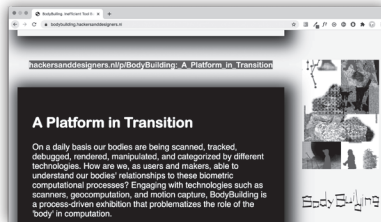
the at times intangible experience of a collective design process. Involving other artists and artist collectives in the process of developing the installation and having to readjust together to new emerging conditions, we had to (re)articulate the ways we understand and question the role and function of H&D in relation to other (collective) art and design practices, both in and outside of the Netherlands. Exhibition-making seemed an odd thing to do for H&D. At the same time, it also offered an occasion to find ways of expressing and questioning our resistance towards showing final results. There were points of friction in the process that challenged us in our ways of working, including our ways of financing what we do. The budget offered by the organizers of the exhibition space catered to one artist or artist collective to produce and present a new work. In the context of H&D, we felt the need to include more people, to be able to convey that H&D is not an art or design group, with the goal of producing art works together. It was important to us that we could convey the manner in which H&D brings together and mingles with *other* artists, designers and developers to do things we would not usually do. The collective practice of H&D, as we came to understand it through the process of making this exhibition, also became increasingly incompatible with the economies around the making of this exhibition as it was thought about by the organizers of the exhibition space that invited us. The intention to host workshops and events as an essential part of the exhibition was not only a conceptual choice, but also a way of co-financing a collective project that involved more people than were accounted for by the hosting organization. By organizing a workshop program, other financial sources could be accessed from H&D’s annually subsidized activity program that is funded by Dutch Creative Industries fund. Simultaneously, by introducing more and more activ-

39 An organization might profile itself as a platform when it gives stage to individuals or groups to address an audience or gain recognition. In that context, a platform is often seen as a support structure from which to speak or act.
<https://www.platformbk.nl/> (“Platform BK researches the role of art in society and takes action for a better art policy. We represent artists, curators, designers, critics and other cultural producers.”)
<https://thehmm.nl/> (“The Hmm is an inclusive platform for internet cultures.”)
<https://v2.nl/organization> (“V2_ offers a platform for artists, designers, scientists, researchers, theorists, and developers of software and hardware from various disciplines to discuss their work and share their findings.”)
<https://pub.sandberg.nl/information> (“PUB functions as a hub and a platform...”)
<https://www.li-ma.nl/lima/about> (“LIMA is the platform in the Netherlands for media art, new technologies and digital culture...”)

ities, we increased a sense of obligation towards the hosting institution.

Moving the platform online

Responding to the global pandemic's challenge to in-person exchange and collaboration (a promise made), H&D developed a different means for continuation. We built a website for showcasing the works of the contributing artists, which were initially installed on, under and inside the platform.⁴⁰ The works were shown and contextualized on the website along with accompanying



Translation of the exhibition into the digital realm, bodybuilding.hackersanddesigners.nl, June 2020

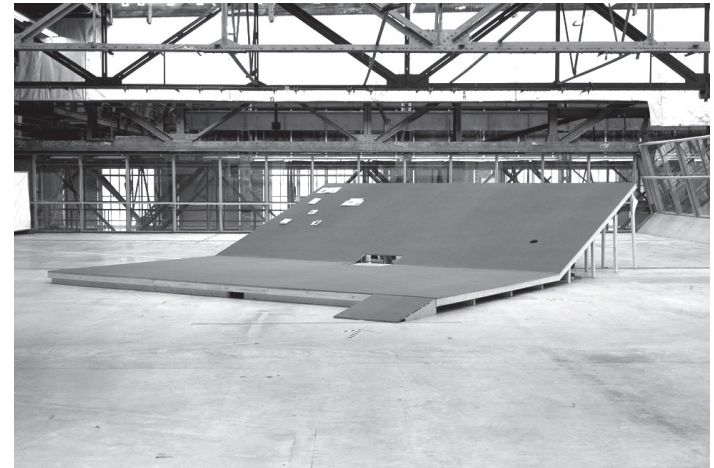
research and reading materials. Furthermore, we built a live stream platform, which converged a streaming service with a chat interface.⁴¹ The physical platform was moved and reactivated as a set from which we broadcasted events, and whenever possible also hosted smaller audiences to join us in real life.⁴²

As aforementioned, the desire for alternative, self-made, self-hosted platforms for online gathering increased during the pandemic. The H&D livestream

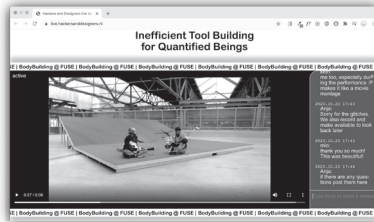
⁴⁰ <https://bodybuilding.hackersanddesigners.nl/>, last accessed May 2022.

⁴¹ <https://github.com/hackersanddesigners/the-hmm-livestream>, last accessed May 2022.

⁴² "Inefficient Tools for Quantified Beings", exhibition and public program at NDSM FUSE in Amsterdam: https://hackersanddesigners.nl/s/Activities/p/Inefficient_Tools_for_Quantified_Beings_Exhibition_and_Public_Program_at_FUSE, last accessed May 2022.



platform resulted in many new ‘opportunities’, including platform-requests by cultural organizations in the Netherlands.⁴³ Yet, when hosting larger events on the livestream platform, especially those events that included people who were less familiar with the way the H&D collective is organized, I noticed the ‘inefficiency’ and unreliability of our technical infrastructures were not always appreciated. These DIY platforms materialized within the context of H&D, are not easily disconnected



Left: H&D livestream platform

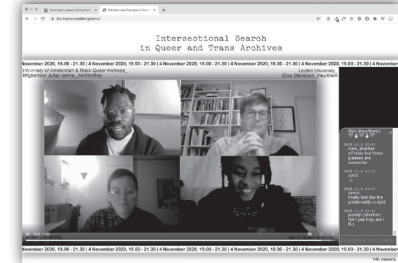
Right: 2nd iteration of the exhibition at FUSE NDSM, “Inefficient Tools for Quantified Beings,” Amsterdam, September-October 2020

from the socio-technical conducts developed alongside their emergence. I recall a particular event hosted by the FST group that attracted 180 viewers and hosted a number of speakers, some of which I had not met or spoken to before. Most of them were used to environments such as Zoom and Teams for live events, and did not interface with other, more experimental formats for live streaming. We tried to ‘prepare’ speakers before the event by offering an onboarding meeting though a few speakers did not attend.

The experience of the event was rather chaotic and stressful. One of the speakers wrote to us a day after the event took place, informing us that it took

43 The initial livestream platform was developed by André Fincato in collaboration with Karl Moubarak, both members of H&D. Karl also installed and developed the livestream for two Amsterdam-based organizations ‘The Hmm’ and ‘Sonic Acts’.

him a while to recover from this stressful experience. It became apparent that the kind of discomfort that accompanies self-built technical tools and infrastructure, requires special care and attention towards different experiences and expectations. I have been asking myself who is responsible for this kind of work? How can we—within the collective design process—interface with diverging experiences and expectations? How can



Feminist Search Tools livestream event, “Intersectional Search in Queer and Trans Archives,” November 2020

we create conditions in which technical projects such as the H&D livestream platform are not just assumed to be functioning in the same manner as platforms that are developed by large commercial companies such as Google, Zoom, Teams. The desire to articulate what H&D is about derives from a feeling of responsibility on the part of the H&D collective.

We cannot assume that our experimental platform projects are ‘harmless’. We had anticipated different experiences and abilities to deal with discomfort that comes with the digital space, and tried to address the experimental character of the platform in the introduction text of the event, in the welcome speech and by offering an onboarding meeting to try out and contextualize the platform. Yet it seemed like these attempts did not sufficiently account for the platform experience and did not prepare people to approach the platform with

curiosity and openness. The pressure of being watched by a rather large amount of (anonymous) people viewing, paired with a lack of familiarity on the part of the speakers and viewers with the context and conditions they would encounter, turned this event into an overwhelming experience.

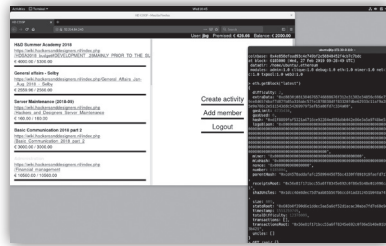
To summarize, the platform, first envisioned as an installation and physical workshop space, took on different meanings, materializations and scales. Due to the changing conditions and different relationships, responsibilities and obligations, the platform was defined and redefined (as metaphor, as workshop space, as technical infrastructure) while trying to hold together a multiplicity of activities, people and objects. Furthermore, the development of the livestream platform showed how different proximities and scales of groups are rather significant for the ways such unconventional platforms are put into practice, and are experienced. On the one hand, the H&D livestream platform was easily accessible from any location, through an open link to anyone. Yet the particularities of the different contexts it combined, required particular contextualization, care and attention. I question the capacity on the part of a self-organized collective such as H&D to handle this, especially if the contexts are not familiar or exceed the size of a workshop situation.

Platformed organization

A platform can also be understood as a plan or articulation of organizational principles on the basis of which a group operates. In the context of H&D, such principles can be expressed rather implicitly. From my own perspective, I would describe H&D's organizing principles as non-hierarchical. For example, the organization of activities is up for discussion while the intention is to accommodate as many voices as possible. This accommodation is made possible through the distribution of efforts and resources amongst the group. H&D's modes of organizing have developed over the years and are performed through subtle gestures rather than declarations. Yet, there were moments in which attempts were made to enforce more explicit organizational rules and conducts.

At the beginning of 2018 one of the core members of H&D at the time, James Bryan Graves, proposed formalizing organizational aspects of H&D, including the distribution of finances. At that point, the H&D collective was organized informally and ad hoc, which led to frustration at times. Some people took on too many tasks, others felt left out. The lack of structure led to unbalanced involvements and divergence of expectations on what H&D as a collective necessitated. James' proposal was to build a website that would help to decentralize organizational efforts and would make decision-making more transparent. The platform was inspired by 'cooperative' models for organizing groups and administering financial aspects of working together.

The H&D COOP Platform divides available funds equally amongst the members of the coop.⁴⁴ In its initial realization by James, the platform built upon smart contracts deployed on a self-hosted private Ethereum blockchain.⁴⁵ James chose this implementation because of the transparency of distributed ledgers as well as the immutability of blockchain technology, both of which, he believed, would be potentially valuable features for



Screenshot of the interface of the H&D COOP platform

https://wiki.hackersanddesigners.nl/index.php?title=Hackers_%26_Designers_Coop

collective organization. The immutability of transactions but also the high maintenance required by the platform proved not to suit the organizational culture of H&D. The platform was a technical as well as organizational experiment of which the technical aspect was discontinued after about one year because it required too much technical maintenance. Yet, the cooperative model

continued as an organizational principle and in the form of an elaborate spreadsheet.

The H&D COOP platform served as a concrete occasion to bring to the fore concerns and observations about how we worked together as a group and set into motion new collective imaginaries and plans for collective self-organization. Discussions became more active amongst members of the H&D. Around the time of implementing the H&D COOP platform, in 2018, H&D also opened up to welcome more members. People seemed more informed about and involved in each other's activities. Yet the organizational change did not resonate with all H&D members equally. Some became less active. Subscribing to an ad hoc working style, they seemed unable to, or were perhaps uninterested in formulating their tasks clearly and regularly. Perhaps, they had difficulties with the workload that comes with constant formalization and quantification of activities.

The H&D COOP Platform evolved from the desire to open up organizational work and decision-making to all members equally by offering an interface and process that is comprehensible to all. However, the attempt to formalize the rather disorganized collective working mode by introducing a more intentional and explicit structure, also introduced new obligations. All activities had to be distinctively described. The fact that everything had to be formulated as a 'project', solidified the collective into a structure that was inclusive to all members in theory but not in practice. Aspects that were not describable within the H&D COOP platform logic, were left aside. For instance, how would one describe and quantify someone's contribution to the general atmosphere or the mood of a collective? Another question is how activities can be quantified within the H&D COOP platform if they simultaneously involve many other practices and economies?

44 Explanation about the functioning of the H&D COOP platform: Projects could be proposed to the coop by one or more members. Other coop members review the project proposal, which they can either fund, reject or, they can suggest how the project should improve. Within this workflow anything the cooperative does, any activity or purchase, needs to be described as a project, including structural activities such as administration, server maintenance, communication and writing funding applications. A project cannot be funded by the members who initiate it. That means H&D COOP members cannot fund their own projects but only contribute to others.

45 Ethereum is a decentralized, open-source blockchain with smart contract functionality. <https://ethereum.org/en/>, last accessed May 2022.

A platform like the H&D COOP platform is designed in a manner that takes for granted that involvements are determinable and comparable. The platform, in more and less concrete ways, went on shaping the ways members of H&D interacted with it and with each other, including the indeterminable effect of refusal and exclusion of some. I relate this relational aspect of H&D to Jane Guyer's misgivings about the ways platforms establish relationships. She wrote, "bursts of rule-making [...] are beginning to establish protections and obligations."⁴⁶ Those participating "must carve out a role and a set of expectations that is acceptable to each and also serves their own interests, while resolving or at least eliding the contradictions between them."⁴⁷

The continuously evolving relationships between a collective, its members and its technical companions produces advantages as well as disadvantages, and it depends on who you ask as to how such socio-technical relationships are experienced and expressed. If we consider platforms as 'infrastructural things', then it is often in their glitches that they become tangible. Lauren Berlant (referring to sociologist Susan Leigh Star) used the term 'glitchfrastructure', which describes the moment "when infrastructural things stop converging [...] they become a topic and a problem rather than automata of procedure. [...] When things stop converging they also threaten the conditions and the sense of belonging, but more than that, of assembling."⁴⁸ I relate Berlant's delineation of glitchfrastructure to the aforementioned moment of slow, gradual disengagement on the part of some H&D members with the H&D COOP platform

and the H&D collective. The glitch that occurred in that moment is not solely a technical *or* organizational malfunction, but a result of socio-technical re-configuration that might be expressed subtly and unnoticeably. Such a glitch may not even be perceivable as a problem that needs fixing.

Sociologist and cultural theorist Celia Lury proposed that "platforms are mediators in the composition of problem spaces; and as such, they 'transform, translate, distort, and modify the meaning of the elements they are supposed to carry.'"⁴⁹ According to Lury, a problem space does not 'contain' problems but is a steadily changing composition of problems.

The composition of a problem space is an ongoing, forming and transforming activity and therefore cannot be presumed in advance. As a socio-technical mediator in the composition of problem spaces—a platform such as the H&D COOP platform, cannot be assumed to be a discrete or self-contained object but is rather interconnected and co-dependent in the various ways members of a collective organize themselves through the platform, relate to, and resist it.

The H&D COOP platform, despite its discontinuation as a technical object, had a lasting impact as an organizational principle. It marked an attempt to formalize what had been only talked about before in implicit ways. For example, organizing ourselves in an egalitarian manner. It introduced a new discursive culture into the collective ethos. And yet, to some extent, it also illuminated another angle on collective platform making. Such platforms, as they gradually evolve, do not always work in our favor, especially not if the conception and definition of 'working' is left to us. If such DIY platforms,

46 Guyer, Jane I., "From Market to Platform: Shifting Analytics for the Study of Current Capitalism," *Legacies, Logics, Logistic* (Chicago, London: The University of Chicago Press, 2016): 125.

47 *ibid.*

48 Lauren Berlant "Infrastructures for Troubling Times," *Environment and Planning D: Society and Space* 34, no. 3, (2016): 393–419.

49 Celia Lury "Platforms and the Epistemic Infrastructure," *Problem Spaces. How and Why Methodology Matters* (Cambridge: Polity Press, 2021).

themselves shaping socio-technical relations in collective practices, stop converging while their incompatibilities also become increasingly inextricable from new collective routines, their exclusions may not be perceived anymore as problematic but rather become an unquestionable part of their development and functioning.

Platform contours

In my readings on digital platforms and the platform economy, I came across many boundary concepts. Terms such as 'edges', 'contours', 'separations', or 'confinements' seem significant in comprehending and articulating platforms and their effects on technical, social and economic spheres. They are expressed through, for instance, intellectual property law, the licensing of source code, restricted access, or technical dependencies. Such boundaries determine the threshold of who or what is in or out. They can also be conceived as encompassing a specific way of perceiving and experiencing technical infrastructure.

In the following section, I will analyze a platform-design project, which points at the manners in which collective platform making can be articulated and pursued as a process that is simultaneously generative and problematic. At the beginning of 2020w1 I worked with one of my H&D peers, Karl Moubarak, on an online environment that has also been referred to as 'platform'. Jara Rocha, who was one of the collaborating artists of the aforementioned exhibition project, had seen and experienced the H&D livestream platform. Jara approached us with the proposal to develop an online environment together, which she explained to us as a convergence of online tools (a phrasing that has become very useful in the context of this research). The occasion was an upcoming online workshop, which she

developed with a group of researchers, some independent and some affiliated with academic institutions, from different fields of studies.⁵⁰

The request was to develop a technical infrastructure and interface that would accommodate the presentation of diverse media content such as videos, text, images and pdfs and would facilitate about 150 participants to watch and listen to live as well as prerecorded



H&D livestream platform. The online event was co-hosted with The Hmm and was an occasion to present and speak about the works of the exhibition that could not be opened due to the global COVID19 pandemic, April 2020..

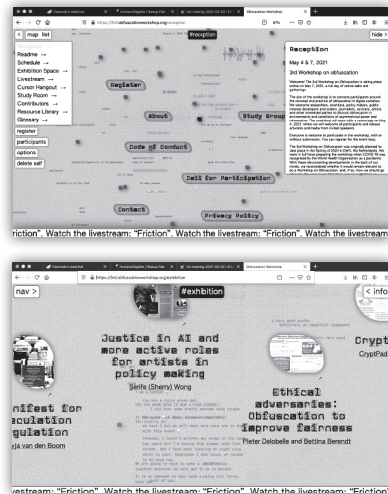
live.hackersanddesigners.nl, April 2020,

https://hackersanddesigners.nl/s/Events/p/The_Hmm_%40Hackers_%26_Designers
<https://thehmm.nl/event/the-hmm-hackers-designers-2020/>

presentations and interact with each other in real time. Next to accommodating presentations, and live chats, the goal was to facilitate more informal encounters between participants and speakers, that would usually occur during coffee breaks in a hallway had meeting in person been possible. While negotiating what might be achievable in a limited timeframe and within the limitations of our technical skills, the website became an increasingly complex and large canvas, consisting of various so-called 'regions' that could be navigated either as a map or as a list view. The different regions encoded different functions that referred to physical

50 The 3rd Workshop on obfuscation was organized by Ero Balsa (Cornell Tech), Seda Gürses (TU Delft), Helen Nissenbaum (Cornell Tech) and Jara Rocha (independent researcher).

spaces one might find at a symposium or conference, such as a reception, an exhibition space, a library and a study room. The large canvas, which could be explored by scrolling or moving and dragging the mouse cursor, also functioned as a ‘spatially’ distributed chat on which the many cursors of other website visitors were visible in real time. Messages could be left and live discussions



Screenshots of the interface of the ‘platframe’ for the “3rd obfuscation workshop”, May 2021.

could be held anywhere on the large canvas. Seeing the cursors of other visitors move around the canvas created a lively image and reminded visitors that they were not ‘alone’ on the website.

It is often when platforms act up, that they stop converging. One becomes aware of them through problems that occur. However, as I have discussed in previous sections, it cannot be guaranteed that such ‘platform issues’ can be anticipated, nor are they always explicit when they occur or perceived in a similar manner. A question that reoccurred to me during the process of working on this project was; what does it mean to build

and work with platforms? Simultaneously, how can one problematize the way relationships evolve and are hindered with and through the emerging platform? How to consider platforms as problematic from the get-go? Or in Lury’s words, what are “vocabularies by which to understand the form of problems emerging in relations of continuity and transformation across a problem space.”⁵¹

The rephrasing of ‘platform’ to ‘platframe’ effectively illustrates how the process of developing a digital environment can, to some extent, sustain a question around its emerging ‘edges’—it brings to attention the limits of the ‘platframe’ but also its possibilities. Throughout the process of imagining, building and activating the digital infrastructure, the edgy term ‘platframe’ reminded me that this online environment we are building together consists of many parts, which do not necessarily blend together nor are they experienced as seamless.

The notion of the ‘platframe’ underlines an evolved collective understanding and vocabulary that enabled us to approach and express to others, this technical object can be conceived of as unresolved, ‘framing’ it as an experiment with the potential to fail. Leading up to the most active moments of the platframe (the day of the online exhibition opening, the workshop and conference days), many (not always easy) exchanges prepared us—along with the potential conference participants—for a bumpy collective online experience accommodating 150 people moving through streams, channels, chats, and maps of this self-made, self-hosted technical infrastructure.

I produced a ‘copy’ of the website in the form of a PDF that could have been sent to participants via

51 Celia Lury “Platforms and the Epistemic Infrastructure,” *Problem Spaces. How and Why Methodology Matters*, (Cambridge: Polity Press, 2021), 47.

email, in case they weren't able to access the platframe anymore. Furthermore, we collectively wrote a Readme section that was published on the platframe, which incorporated reflection on the making process, instructions on how-to use the distributed chat and a list of potential soft and hardware (in)compatibilities. Karl created a guided platframe tour and Jara Rocha edited an elaborate document that incorporates different ways of dealing with the experience of 'digital discomfort'.⁵² Below is an excerpt of the Readme section:

*"This platform might challenge participants more than the by now habitual experience of meeting on Zoom, Teams or Google Meet. As the conference on obfuscation raises questions about inner workings, the ethics, and the socio-technological entanglements, this platform too, aims to trouble our expectations towards the platform. At times, the platform will therefore ask a bit more patience and endurance than you may be used to."*⁵³

In her article "Putting Problematization to the Test of Our Present", Stengers described problematization as "the creation of problems and the activity of learning required by them."⁵⁴ Problems can thus be understood, not as hurdles to overcome, or in need of fixing, but as setting "thinking, knowing and feeling into motion."⁵⁵ Problematization is thus "a form of experimentation, which implicates ourselves in our present, requiring that

52 <http://titipi.org/projects/discomfort/CatalogOFFDigitalDiscomfort.pdf>

53 <https://3rd.obfuscationworkshop.org/readme>

54 Isabelle Stengers "Putting Problematization to the Test of Our Present", *Theory, Culture & Society* 38, no. 2 (2021): 71–92.

55 Celia Lury "Platforms and the Epistemic Infrastructure," *Problem Spaces. How and Why Methodology Matters* (Cambridge: Polity Press, 2021), 14.

one allows oneself to be touched by what the present presents in the form of a test."⁵⁶

To summarize, the unresolved and experimental character of the platframe has been interwoven and written into its narrative from the beginning within the context of the group of collaborators, but also as part of announcements on social media, newsletters and websites of the various partner institutions and in the introduction speeches during the workshop and on conference days. Along with the evolving technical object, a collective vocabulary evolved that allowed those involved to prepare themselves and others for an unusual, perhaps slightly uncomfortable platform experience.

Conclusion: Platforming as a practice

The term platform—in its manifold meanings—has become general vernacular. It is widely discussed across disciplines and fields of knowledge and has also seeped into the everyday habits, economies and social conducts of collective practices, affecting their various spheres of life and work. Instead of offering another universalizing definition, or coining an alternative term, I argue for the material-discursive potential of collective platform-design processes that evolve from their changing meanings and materializations, attuned to the manner in which platform-design processes intersect different spheres, how they change and are changed through varying contexts and conditions.

I propose that collective platform-design processes foreground the manner in which platform characteristics can be articulated and put into practice in a contextual and distributed manner. Thus, platform-design should not be located in either the technical object, or an orga-

56 Isabelle Stengers "Putting Problematization to the Test of Our Present," *Theory, Culture & Society* 38, no. 2 (2021): 71–92.

nizational model, or a group of people. Such platforms emerge along with specific quirks, requirements and curiosities of collectives, including those that are indeterminable and perhaps even undesired.

As a starting point, I asked whether platforms as unresolved and unreliable technical companions, and as inherently part of a collective, can be designed at all. The different platform-cases touched upon in this chapter focus on the possible approaches in dealing with 'external' platform-design requests, as well as platform-design processes that evolved in a less distinctive manner. The two platform projects (Englishes MOOC, WPW) both combine various contexts, such as different educational and cultural institutions. Yet, both platform-design processes developed various kinds of affiliation between those involved, to the technical object in-the-making and to each other. While creating the Englishes MOOC platform, the roles of designer / developer, commissioner / end-users were rather distinct and similar to a traditional design commission, the Workshop Project Wiki shows other kinds of affiliations. The process of collectively imagining and actualizing a platform, brought together the two collectives and highlighted what they have in common.

These collective design processes evolve, operate and develop connections in a transversal manner, and therefore, cannot be articulated or 'designed' from just one vantage point. A certain unresolvedness in the manner in which platforms are conceptualized and put into practice can offer openings for them to be carried into other contexts. The characteristics and purpose of platforms then, can be considered through various registers and timelines, which also require them to be defined and designed in a relational manner. For instance, Chatty-Pub is a publishing platform *and* a design tool *and* a workshop *and* a central organizational tool. Chatty-

Pub evolved along with the H&D collective by way of an accidental collision involving an energizing workshop that was harbored in the collective's memory. ChattyPub was also informed by H&D's curiosities about unusual publishing tools and formats, as well as the collective's desire to establish a central communication tool.

Collective platform-design processes are put into practice by challenging distinct boundaries and established design notions, even those that incorporate and consider collaborative processes, chance, contingency and interdisciplinary approaches. In my view, designing such platforms requires an expanded understanding and articulation of design, one that locates what it is to be designed (whether an object, a process or a context) across different spheres: different people, objects, contexts and timelines. Collective platform-design also requires taking into account several distributed 'platform' meanings and materializations and their material-discursive potential. The various intersecting platform meanings and their material-discursive potential is here demonstrated through the transition of a physical platform installation, which was intended to function as an exhibition and workshop space and evolved into a DIY livestream platform necessitated by the global Covid19 pandemic. Platform metaphors can hold together people and objects throughout turbulent times and throughout the struggle to find the right words, as well as the appropriate visual, material, and technical means to articulate collective design. The material-semantic transitions of 'platform' are also indicative of the manner in which collectives pass through and engage with different contexts, their limits and possibilities to respond to such different (on and offline) environments. For instance, H&D's resistance to fixed definitions and finite products makes it, on the one hand, malleable and receptive to diverse contexts. On the other hand, the

mutability of collectives can also create situations in which the diverging organizational, social and economic conditions generate increasing obligations and responsibilities. The example of the H&D livestream platform is demonstrative of the limitations of H&D's adaptability. Collective platform-design, as it has been discussed in this chapter, cannot accommodate anyone in any context, but requires specific attention and commitment to collectively developing context-specific, socio-technical conduct along with a design process.

Platforms, as they are discussed here—conceived as actively involved in collective design practice—cannot be described in either spatial, figurative, organizational or technical terms. There is neither a blueprint for designing such platforms, nor a recipe for a fruitful process of collectively working on and with platforms. Rather, they take shape and change shape in action and through interaction, which, in my view, also makes it impossible to uphold a user-versus-designer distinction. The analysis of the H&D COOP platform—even though it was discontinued as a technical project—had long lasting effects on the organizing principles of H&D. Its making process served as a concrete occasion to reflect on concerns, desires and new imaginaries for the manner in which members of H&D wanted to work together and introduced a new discursive culture within the collective. Yet the H&D COOP also enforced new administrative obligations and new necessities of articulating involvements in a determinable, comparable manner. These forms of articulation became gradually part of new collective routines and stimulated active exchange and discussion of some members on the one hand, while simultaneously resulting in disengagement of others. The question that arises from the case of the H&D COOP platform as well as the discomforts caused by the H&D live stream, is whether it is conceivable that

such experimental platforms-in-the-making, along with their evolving socio-technical conducts, can be designed in a manner that takes their potential for being potentially problematic, exclusionary and alienating into account. It is my view that an expanded design vocabulary is necessary in order to approach such a question in a manner that does not center the figure of the platform-designer or the self-contained object 'platform' as an entity that can be controlled and managed. Building on my analysis of the platframe, I propose *other* possible articulations that offshoot from the notion of designing one singular technical object into various forms of expressions. Such formats and practices may be unresolved and distributed, but stable enough to hold together people and objects. They are utterances indicative of a shared commitment and responsibility towards the articulation work required to prepare ourselves and others for the platform-issues potentially awaiting us.

To summarize, 'platform' is a capacious concept that holds the potential for collective design processes to trespass and connect a manifold of contexts, practices, economies and timelines. Along with different interpretations and materializations, such platforms can challenge pre-established design conventions that assume roles as distinct, processes as successive and determinable and outcomes as purposeful in a generalizing sense. Collective platform-design processes, as they are interwoven with multiple contexts and conditions, can foreground, in a concrete and material manner, other possible scenarios of working, learning and being together with and through digital tools and technical infrastructure. If such processes are taken as an occasion to learn *from* and *with*, and to collectively articulate context-specific vocabulary and socio-technical conduct, such collective platform-design projects can uphold a critical collective awareness about the relationships they may enable, or disrupt.

Bibliography

- Adam, Taskeen. "Digital neocolonialism and massive open online courses (MOOCs): colonial pasts and neoliberal futures." *Learning, Media and Technology* (2019).
- Berlant, Lauren "Infrastructures for Troubling Times." *Environment and Planning D: Society and Space* 34, no. 3 (2016): 393–419.
- Gillespie, Tarleton. "Platforms intervene." *Social Media + Society* (April–June 2015).
- Gillespie, Tarleton, "The politics of 'platforms'," *new media & society* 12, no. 3 (2010).
- Guyer, Jane I., "From Market to Platform: Shifting Analytics for the Study of Current Capitalism." In *Legacies, Logics, Logistics*, Chicago, London: The University of Chicago Press, 2016.
- Freeman, Jo. "The Tyranny of Structurelessness." *WSQ: Women's Studies Quarterly* 41, no. 3 (2013): 231–246.
- Halberstam, Jack. *The queer art of failure*. Durham: Duke University Press, 2011.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3. (Fall, 1988). Ann Arbor, Michigan: Michigan Publishing.
- Kelty, Christopher M. "Hacking the Social." In *Inventing the Social*, edited by Noortje Marres, Michael Guggenheim, Alex Wilkie (Manchester: Mattering Press, 2018).
- MacKenzie, Adrian and Anna Munster "Platform Seeing: Image Ensembles and Their Invisualities," *Theory, Culture & Society* 36, no. 5, (2019): 3–22.
- Latour, Bruno. "What's the Story?" Organising as a mode of existence." In *Agency without Actors? New Approaches to Collective Action*, edited by Jan-Hendrik Passoth, Birgit Peuker and Michael Schillmeier (London: Routledge, 2012): 164–177.
- Lovink, Geert *Sad by Design. On Platform Nihilism*. London: Pluto Press, 2019.
- Lury, Celia. *Problem Spaces. How and Why Methodology Matters*. Cambridge: Polity Press, 2021.
- Marres, Noortje and Gerlitz, Carolin, *Social media as experiments in sociality. Inventing the Social*, edited by Marres, Noortje and Guggenheim, M. and Wilkie, A. (Manchester: Mattering Press, 2018): 253–286.
- Rival Strategy Rival Strategy, "Platform design, introduction," (2019). <https://medium.com/rival-strategy/platform-design-part-i-db26d08a947d>, last accessed May 2022.
- Scholz, Trebor, and Nathan Schneider. *Ours to hack and to own: the rise of platform cooperativism, a new vision for the future of work and a fairer internet*. New York, London: OR Books, 2016.
- Srnicek, Nick. *Platform Capitalism*. Cambridge, Malden: Polity, 2017.
- Stengers, Isabelle. "Introductory Notes on an Ecology of Practices." *Cultural Studies Review* 11, no. 1 (2005): 183–196.
- Stengers, Isabelle. "Putting Problematization to the Test of Our Present." *Theory, Culture & Society* 38, no. 2 (2021): 71–92.
- Suchman, Lucy "Located accountabilities in technology production," *Scandinavian Journal of Information Systems* 14, no. 2, 7, (2002). <http://aisel.aisnet.org/sjis/vol14/iss2/7>
- Suchman, Lucy "Configuration." In *Inventive Methods* edited by Celia Lury; Nina Wakeford. London; New York: Routledge, Taylor & Francis Group, 2014.
- Tsing, Anna Lowenhaupt. *Friction: an ethnography of global connection*. Princeton, N.J.: Princeton University Press: 2005.
- Tsoukas, Haridimos. "Organization as Chaosmos." *Organization and Organizing Materiality, Agency, and Discourse*, edited by Daniel Robichaud and François Cooren. New York: Routledge, 2013.

Vallas, Steven and Juliet B. Schor “What Do Platforms Do? Understanding the Gig Economy.” *Annual Review of Sociology* 46 (July 2020): 273–294.

Relevant links

<https://hackersanddesigners.nl/s/Tools/p/Chattypub>
<https://www.englishes-mooc.org/>
https://hackersanddesigners.nl/s/Tools/p/Englishes_MOOC
https://hackersanddesigners.nl/s/Tools/p/Free_Wiki
[https://hackersanddesigners.nl/s/Tools/p/Obfuscation
_platframe](https://hackersanddesigners.nl/s/Tools/p/Obfuscation_platframe)
https://hackersanddesigners.nl/s/Tools/p/H%26D_livestream
 “A catalog of formats for digital discomfort” edited
 by Jara Rocha [http://titipi.org/projects/discomfort
/CatalogOFFDigitalDiscomfort.pdf](http://titipi.org/projects/discomfort/CatalogOFFDigitalDiscomfort.pdf)
[https://hackersanddesigners.nl/s/Publishing/p/Hackers_%26
_Designers_Coop%2C_2018_Retrospective_by_James
_Bryan_Graves](https://hackersanddesigners.nl/s/Publishing/p/Hackers_%26_Designers_Coop%2C_2018_Retrospective_by_James_Bryan_Graves)
<https://www.discourse.org/>
<http://www.workshopproject.org/>
<https://www.dokuwiki.org/dokuwiki>
<https://etherpad.org/>
[https://feministsearchtools.nl/wp-content/uploads/2020/10
/Presentation_H_Dfst.017.jpeg](https://feministsearchtools.nl/wp-content/uploads/2020/10/Presentation_H_Dfst.017.jpeg)
[https://babf.no/program/workshop-chattypub-hackers
-designers](https://babf.no/program/workshop-chattypub-hackers-designers)
[https://hackersanddesigners.nl/s/Activities/p/Open%2A
_tools_for_collective_organizing](https://hackersanddesigners.nl/s/Activities/p/Open%2A_tools_for_collective_organizing)
[https://platformlabor.net/output/criticizing-disruption
-platformization-discontent](https://platformlabor.net/output/criticizing-disruption-platformization-discontent)

Conclusion

I began this dissertation by claiming that many design theories are still too attached to, and therefore insufficiently question, the notion of a ‘purposeful’ relation between design and collectivity. As I have explained in the first chapter ‘Design & Collectivity’, it is often during moments of crisis and disorientation when desires for collectivity are articulated. Designers and design theorists are calling for collective approaches as a form of disciplinary disobedience,¹ to counteract permanent insecurity,² and to redesign economies and interdependencies.³ Collectivity is proposed an organizing principle that embraces care⁴ and resists exploitative forms of life.⁵

However, these ongoing calls for collectivity within the field of design do not so often address how exactly this structure shift might occur? *How* precisely is collective

- 1 “I propose the decolonial concept of border-thinking within design as a method of disciplinary disobedience for moving design towards more collective approaches.” Danah Abdullah, “Disciplinary Disobedience. A Border-Thinking Approach to Design,” in *Design Struggles*, Nina Paim and Claudia Mareis, eds. (Amsterdam: Valiz, 2020), 228.
- 2 “Yet, despite all the flexibility and ever-changing styles and modes of production, what lacks is the collective design of a subjectivity that would overcome permanent insecurity” Geert Lovink, *Foreword*, in Silvio Lorusso. *everyone is an entrepreneur. nobody is safe*. (Eindhoven: Onomatopee, 2019), 12.
- 3 “It becomes possible to collectively redesign economies and interdependencies in ways that defy, resist and/or exit precarising ways of organising and designing.” Brave New Alps, “Precarity Pilot”, 2015, <https://modesofcriticism.org/precarity-pilot/>, last accessed May 2022.
- 4 “To embrace care as an organizing principle in every part of life, we must do so collectively.” Complaint Collective, “Does Design Care?” Cherry-Ann Davis and Nina Paim, 2021, <https://futuress.org/magazine/does-design-care/>, last accessed May 2022.
- 5 “The collective determination toward transitions, broadly understood, may be seen as a response to the urge for innovation and the creation of new, nonexploitative forms of life, out of the dreams, desires, and struggles of so many groups and peoples worldwide.” Arturo Escobar, *Design for the Pluriverse* (Durham and London: Duke University Press, 2018), 7.

design put into practice? My thesis has focused throughout on the 'how' of collective design, and to some extent, this dissertation is a counter-proposition to the notion of a 'purposeful' relationship between design and collectivity. In this concluding chapter I will summarize and reflect on the findings of my thesis, which were initiated and directed by my central question: How to design *for* and *with* collectivity? To gain a deeper understanding of the relationship between design and collective practice, I have discussed the various ways in which collectivity and design are understood, articulated and practiced in the context of the Hackers & Designers collective. My analysis of different in-practice examples demonstrates how collective design processes can be conceived of and put into practice in a manner that is distributed over people, objects, conditions and timelines.

The desire for collectivity may occur during moments of uncertainty, frustration or (dis)orientation, I argue that collectives are not and should not be framed as a panacea to the issues at stake. Collectives are often (rhetorically) used as stand-ins for what is not functioning or cannot be immediately addressed. My argument is that collective design should also be considered a result of and a reason for, unstable, unreliable social, technical, and economic conditions. Collectives may be fragile ecosystems that operate on the basis of a semi-committed engagement on the part of practitioners who are all, individually and collectively, trying to uphold a balance between their diverging socio-material conditions. Thus, collective design, in the way it is problematized in this thesis, is not fully deliberate, at least not in the same way as for instance 'teamwork', 'the commons', or 'cooperativism', are purposeful organizational frameworks for living, working or being together. Collective design processes, as discussed here, take part in and are a result of particular (often fragile) socio-economic,

socio-technical conditions that pervade and shape the ways collectives function. They also signify the formats and conducts they resort to, such as short-lived workshops and chaotic ways of working and being together. The fragmentation of social and work relations is as much a characteristic of collective design as the effort to sustain long-term relationships. As fragmented and permeable configurations, collectives are not enclosed entities. They take shape in response to the various contexts within which they travel, and in turn are implicated in such contexts.

To clarify, I am not proposing a turn away from collective practice, nor am I disregarding the efforts and accomplishments of the many collectives that have inspired me to engage with and write about the relationship between design and collectivity. The ubiquity of collectives are indicative of our times. They can be incredibly inventive, critical and reflective in the ways they manage to organize themselves and others, despite their often sparse resources (i.e., little time, money and space) while dealing with unstable, unclear and uncertain conditions. On the one hand, this inventiveness plays into the unstable condition of diverging socio-economic realities, while on the other hand, collectives simultaneously develop formats and practices that resist fragmentation and sustain continuity. A workshop's instantiation is not simply a single instance of gathering, but is rather a component of an expansive, distributed and iterative process of building a tool or making a publication.

Nonetheless, the double bind of collectivity requires critical attention and articulation that moves beyond general, positive and container definitions. This dissertation has examined this double-bind throughout. I propose (and have put into practice throughout my thesis) actively working against the stable and fetishizing image

of collectives, instead paying critical attention to the inefficient and convoluted ways of organizing, designing and programming. The refusal of efficiency, usefulness and finality also carries potential for subtle but effective forms of resistance against a general acceptance and normalization of such unstable, precarious times and working conditions.

I have proposed and contextualized several subtle tactics throughout this thesis; ways that collective design processes critically negotiate socio-material conditions, which point towards a (desirable) future for collective practice. Such tactics are not necessarily deliberate. They evolve within and are responsive to specific collisions of people, tools, contexts and should therefore not be read as recipes but as an invitation to others to consider their meaning within the site/context-specificity of their respective collective environments, perhaps inventing their own maneuvers.

Making oneself understood through collective design

Throughout the various chapters of this dissertation, I have paid sustained attention to the different manners in which collective design processes assemble people, tools, infrastructure and offer occasions for those involved to make themselves understood—for instance in workshop situations or through the collective process of imagining and making a Feminist Search Tool.

Workshops, as peculiar temporary spaces, require a certain openness and flexibility in order to attune to their contingent socio-material dynamics. The divergence between practitioner's ways of doing and making becomes itself a condition that requires attention and explication of what usually goes without saying (i.e.

skilled practice).⁶ These workshops are occasions for trying and testing articulations of other practices, experimenting with making oneself understood and understanding the *other* through different registers; verbal, aesthetic, technical, methodical utterances.

I have also proposed the format of the 'workshop script' as well as a 'workshop about workshops.' Both explicate and interrogate the otherwise ambiguous format of the workshop as it has become unquestionably accepted in a manifold of contexts, crossing boundaries between art and activism, between different disciplines and institutions, between commercial and educational contexts. A 'meta' workshop about workshops opened up the workshop as a format to be questioned and unleashed a process of collectively reimagining and reiterating workshop propositions and methods within the very context the workshops would take place. Participants were workshop hosts and vice versa and could together articulate and put into practice a desirable, context-sensitive workshop atmosphere that worked against fashionable workshop rhetoric (rapid, sprint, agile, marathon), which insinuate high-velocity, hyper-efficient and result-oriented production.

The chapter 'Tool-building' discusses the collective tool-making project 'Feminist Search Tools' (FST), a fragmented and non-conclusive process, marked by the different (some rather precarious) socio-economic realities of those participating. As such, it required *other* ways of working together that resist linearity and teleological understandings of the design process. Through the slow and fragmented making process, the 'tool'

6 Isabelle Stengers wrote: "It should be unnecessary to emphasize that making divergences present and important has nothing to do with respect for differences of opinion, it must be said. It is the situation that, via the divergent knowledges it activates, gains the power to cause those who gather around it to think and hesitate together." Isabelle Stengers, *In Catastrophic Times* (London: Open Humanities Press, 2015), 143.

along with its meaning and actualization, was questioned constantly, conceptually, technically, ethically, though not necessarily conclusively. Personal desires, frustrations, observations and issues were expressed throughout the process of imagining and making a tool. Various aspects of the tool-in-the-making, including technical problems, discomforts, personal hopes and desires for it to become 'useful', were repeated and rehearsed in the different contexts and at a pace that included all participants, regardless of whether they would be able to attend every workshop and meeting.

Conscious inefficiency

'Slow collective processing' is what I call the process of narrating and testing the FST through various workshops, meetups, in various contexts and different constellations. Within this non-conclusive process, the same issues were revisited repeatedly. Drawing on Sara Ahmed's exploration of the concept of 'use' and the metaphysical meaning of 'tool' as developed by Graham Harman, Bruno Latour and Karen Barad, I argue that the inefficiency of such a process can be generative and inventive in and of itself. It can emphasize other-than-utilitarian relationships to tools, as well as various context-specific criteria and articulations for usefulness or usability of such tools, which I have summarized with the phrase 'broken-tool-in-action'. This approach which I call 'conscious inefficiency' is explored throughout the various chapters and is distilled here in this concluding chapter as yet another subtle tactic for collective design practices to critically and inventively negotiate their specific socio-material conditions. For instance, the lens of 'conscious inefficiency' highlights the resourceful and thoughtful manner in which collective design connects different people, environments, tools and technical infrastructure.

The chapter 'Platform-design issues' discusses different collective experiments in 'platform-making'. For instance *ChattPub*, (an experimental publishing platform) could be regarded as inefficient and convoluted if considered a mere design software. Yet as I have argued, such self-made platforms can become inherently part of a collective's functioning. As part of ongoing collective actualization, collective platform-design processes bring about contextual and critical socio-technical conducts and articulations, which in turn are significant for their 'functioning'. As such, collective platform-design experiments resist and readjust generalizing perceptions of what is inevitable and what is useful.

Leaning into friction: Problematization as experimentation

Throughout the various chapters I have recurrently referred to the writing of feminist scholar and physicist Karen Barad. Barad wrote in *Meeting the Universe Halfway*: "the point is not merely that knowledge practices have material consequences but that practices of knowing are specific material engagements that participate in (re)configuring the world. Which practices we enact matter—in both senses of the word."⁷ Technical objects, as they are conceptualized and materialized in and through collective design, *matter*. They are not alternatives for 'seamless' proprietary tools, or 'easy-to-use' commercial platforms. They are also not merely speculative or illustrative. The practical and experimental approach to conceptualizing and designing tools and platforms *differently* matters in material ways. Such

7 Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning* (Durham, London: Duke University Press, 2007), 91.

experiments enable collectives to concretely and imaginatively test out and put into practice other socio-technical relationships.

I have argued that self-made platforms, as they are imagined and materialized in and through collective design processes, are somewhat unreliable, unresolved and may create discomfort. Simultaneously, they put into practice *other* possible platform-design scenarios. Drawing on Celia Lury and Isabelle Stengers work on problematization⁸ and problem spaces⁹ I argued that such platform-design experiments are remarkable in the way they can sustain a collective awareness of platforms as potentially ‘problematic’ from the get-go. Those who are imagining, building and using such platforms, can develop a critical consciousness of their potential failures, and together learn to lean into their frictions. In my view, such an approach differentiates a collective design processes as theorized in this dissertation from, for instance, participatory design, adversarial,¹⁰ or contestational design¹¹ or from critical/speculative design.¹² I argue that collective platform-design processes imagine and put into practice *other* possible ways of designing and working together with and through technical objects that are neither utilitarian/solution-driven nor antagonizing.

Collective vocabularies:
Invented words and ambiguous concepts

Made-up terminology

In the chapter “Platform-design issues” I refer to the word ‘platframe’, a term made-up during a collective process of designing and building a digital environment for collaboration, and how its recurrent use contributed to sustaining a collective awareness and questionability of the limits and possibilities of the platform-in-the-making. Such word inventions underline how collectives are able to express socio-technical relationships as problematic on the one hand, and on the other, build and sustain a somewhat supportive relationship with the evolving technical object and with each other.

Collective practices often develop their own vocabulary. The invented term ‘nautonomy’ by Raqs Media Collective¹³ is a good example, which they define as

“more than autonomy. It is nautical, voyaging and mobile. Nautonomy re-articulates and re-founds the ‘self-organizing’ principle inherent in what is generally understood when considering the idea of autonomy, while recognizing that the entity mistakenly called ‘self’ is actually more precisely an unbounded constellation of persons, organisms and energies that is defined by its capacity to be a voyager in contact with a moving world.”¹⁴

8 Isabelle Stengers “Putting Problematization to the Test of Our Present,” *Theory, Culture & Society* 38, no. 2 (2021): 71–92.

9 Celia Lury “Platforms and the Epistemic Infrastructure,” *Problem Spaces. How and Why Methodology Matters* (Cambridge: Polity Press, 2021), 14.

10 Carl DiSalvo, *Adversarial Design* (Cambridge, Massachusetts: MIT Press, 2012).

11 Tad Hirsch, ‘Contestational Design: Innovation for Political Activism,’ (PhD diss., Media Art and Sciences, MIT, 2008), 23.

12 Anthony Dunne & Fiona Raby, “CRITICAL DESIGN FAQ” <http://dunneandraby.co.uk/content/bydandr/13/0>, last accessed May 2022.

13 Raqs Media Collective, “Nautonomat Operating Manual. A Draft Design for A Collective Space of ‘Nautonomy’ for Artists and their Friends,” *Mobile Autonomy. Exercises in Artists’ Self-organization*, Nico Dockx, Pascal Gielen, eds. (Amsterdam: Valiz, 2015), 100.

14 *ibid.*

Constant Association for Art and Media¹⁵ also work with invented terminology.¹⁶ Words such as ‘ex-titutions’, ‘DiVersions’ and ‘cqrrelations’, are reminiscent of and relate to familiar terms.¹⁷ Yet, they are invented when familiar terminology does not fully suffice or encompass all the attributes and idiosyncrasies of continuously evolving collective practices. Alternative dictionaries, lexicons, ‘contradictionaries’¹⁸ attend to these invented collective vocabularies. The book *Making Matters—A Vocabulary of Collective Arts* is an example of such a repository, which this research has contributed to and benefited from.¹⁹

Piggybacking on ambiguous concepts

In the chapter ‘workshop production’ I propose that concepts such as ‘workshop’, ‘tool’ and ‘platform’ blend seamlessly into the trajectories of contemporary precarious cultural workers and have also become part of a common vocabulary around collective practices. Yet there is a risk of obscuring the implications of collective practices that come with ambiguous terminology and

flexible definitions. Nevertheless, I persist with ‘workshop’, ‘tool’ and ‘platform’ and throughout the various chapters, I disentangle and disambiguate their meaning and functioning for collective design processes. I argue that these ambiguous concepts and formats are indicative of the inventiveness of collectives. As boundary objects (Star Giessemer) they are equally loose and stable enough for collectives to interact with different contexts and to keep those involved connected, while simultaneously defining and redefining what that means. Persisting with ‘workshop’, ‘tool’ and ‘platform’ to articulate and practice collectivity means to always take into account the fact that such concepts and formats require critical attention. For instance, it is my view that organizing workshops responsibly requires context-specific interrogation of how a workshop should be actualized and its implications for the specific context in the long-term. This question cannot be answered in general terms. Thus, it must be revisited again and again and should be answered in accordance with the particular composition of people, resources, tools, infrastructures and environments involved.

Designing for and with collectivity

As I have argued, the relationships between design and collectivity cannot be presupposed as relationships of utility. Therefore, it requires relational approaches for articulating collective design practice. Designing *with* collectivity proposes a relationship between design and collective practice that is reciprocal and mutually entangled, and differentiates collective design from other modes of working and designing together.

15 The activities and practices of Constant “depart from feminisms, copyleft, Free/Libre + Open Source” and encompass for instance programming, organizing exchanges and learning environments, making performances, writing, publishing, making installations <https://constantvzw.org/site/>, last accessed May 2022.

16 Femke Snelting, “Undisciplined,” in *Making Matters. A Vocabulary of Collective Arts*, Florian Cramer, Janneke Wesseling, eds. (Amsterdam: Valiz, 2022), 300.

17 “With the neologism “DiVersions” we wanted to allude to the possibility that technologies of “versioning” might foreground divergent histories,” Élodie Mugrefya, Femke Snelting, “DiVersions. An Introduction,” DIVERSIONS / DIVERSIONS / DIVERSIONS <https://diversions.constantvzw.org/wiki/index.php?title=Introduction#introduction>, last accessed May 2022.

18 Lucy Suchman, “Configuration,” in *Inventive Methods*, Celia Lury; Nina Wakeford, eds. (London; New York : Routledge, Taylor & Francis Group, 2014), 48–60.

19 Florian Cramer, Janneke Wesseling, eds., *Making Matters. A Vocabulary for Collective Arts* (Amsterdam: Valiz, 2022).

Designing with others

Designing *with* collectivity means to be involved in design processes that are distributed over various people, objects, diverging timelines and conditions. It is a process, not a method or a goal, in the sense that a participatory design process would follow a goal by involving others, i.e., to improve design processes or outcomes. Designing with collectivity is not about designing better. It is an imaginative as well as concrete material process of being and doing things together differently from how it would be usually done. It is about imagining and putting into practice ‘terms of transition’, forging collective imaginaries for “managing the meanwhile within damaged life’s perdurance.”²⁰

Designing for continuity

Gaining a deeper understanding of the relationship between design and collectivity goes hand in hand with learning to design *with* collectivity—that is, attuning to collectives’ unpredictabilities. As fragile and unreliable ecosystems, collectives are reflective of our unstable times, and as such, also offer possibilities for those involved to develop subtle tactics to address and counteract technical and economic uncertainties, flexibilization and fragmentation of work and life. Designing *for* collectivity is indicative of the effort to keep those involved connected, while upholding critical, ethical and sustainable ways of working and being together.

Collective design practices develop context-specific social and technical conduct, which I have also compared to the manner in which workshop instructors take care to maintain their workshop spaces, in terms of both

facilities and hospitality. While formats and utterances of collective design seem dispersed and never resolved, they are significant for their continuity and long-term commitments. As I have demonstrated throughout with reference to various examples, designing for and with collectivity is an artful balancing act, which cannot be prescribed as a design method but contributes to the larger field and discourse of design, precisely through its requirement of continuous practice and problematization. In persisting with this sustained effort, collective design practices offer the opportunity to readjust and rearticulate generalizing perspectives to relational, context-sensitive and iterative approaches to designing with others.

²⁰ Lauren Berlant “Infrastructures for Troubling Times,” *Environment and Planning D: Society and Space* 34, no. 3 (2016): 393–419.

Bibliography

- Abdullah, Danah, "Disciplinary Disobedience. A Border-Thinking Approach to Design." In *Design Struggles* edited by Nina Paim and Claudia Mareis. Amsterdam: Valiz, 2020, 227–238.
- Barad, Karen. *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*. Durham, London: Duke University Press, 2007.
- Brave New Alps, "Precarity Pilot," 2015, <https://modesofcriticism.org/precarity-pilot/>.
- Cramer, Florian and Janneke Wesseling, eds. *Making Matters. A Vocabulary for Collective Arts*. Amsterdam: Valiz, 2022.
- Davis, Cherry-Ann and Nina Paim (Complaint Collective). "Does Design Care?" 2021, <https://futuress.org/magazine/does-design-care/>.
- DiSalvo, Carl. *Adversarial Design*. Cambridge, Massachusetts: MIT Press, 2012.
- Escobar, Arturo. *Design for the Pluriverse*. Durham, London: Duke University Press, 2018.
- Hirsch, Tad. "Contestational Design: Innovation for Political Activism." PhD diss., MIT, 2008.
- Lovink, Geert. "Precariety by Design." In Silvio Lorusso. *everyone is an entrepreneur. nobody is safe*. Eindhoven: Onomatopoe, 2019.
- Lury, Celia. *Problem Spaces. How and Why Methodology Matters*. Cambridge: Polity Press, 2021.
- Mugrefya, Élodie and Femke Snelting. "DiVersions. An Introduction." *DIVERSIONS / DIVERSIONS / DIVERSIES*, (2020), <https://diversions.constantvzw.org/wiki/index.php?title=Introduction#introduction>
- Raqs Media Collective. "Nautonomat Operating Manual. A Draft Design for A Collective Space of 'Nautonomy' for Artists and their Friends." In *Mobile Autonomy*.

- Exercises in Artists' Self-organization*, edited by Nico Dockx & Pascal Gielen, Amsterdam: Valiz, 2015.
- Snelting, Femke. "Undisciplined." In *Making Matters. A Vocabulary of Collective Arts*, edited by Florian Crame and Janneke Wesseling, Amsterdam: Valiz, 2022.
- Stengers, Isabelle. *In Catastrophic Times*. London: Open Humanities Press, 2015.
- Stengers, Isabelle. "Putting Problematization to the Test of Our Present." *Theory, Culture & Society* 38, no. 2 (2021): 71–92.
- Suchman, Lucy "Configuration." In *Inventive Methods* edited by Celia Lury; Nina Wakeford. London; New York: Routledge, Taylor & Francis Group, 2014.

Summary

This dissertation explores matters of collectivity, drawing from the experience of working with the Amsterdam-based collective Hackers & Designers (H&D). H&D self-organizes educational activities at the intersection of technology, design, art, and education with a focus on hands-on learning and collaboration between practitioners from the different fields. Along with organizing workshops people involved with H&D produce on and offline publications and build open source tools and platforms.

The main thesis of this research is that conventional design vocabularies are not capable of sufficiently expressing and accounting for collectivities' resistance to fixation and stabilization. Collective design as it is discussed here challenges notions of individual authorship, differentiations between disciplines, between product and process or between the user and maker. While collectives shape particular affiliations and commitments, design approaches and aesthetics, they also require perspectives on working and designing together that resist linearity, and a progress-based understanding of a design process.

Thus, collective practice is not to be misunderstood as a design method, or an antidote to an individualistic design approach. By means of several case studies, it is argued that the fragmentation of social and work relations is as much a characteristic of collective practice as the effort to sustain long-term relationships. As fragmented and permeable configurations, collectives take shape in response to the various contexts within which they travel, and in turn are implicated in such contexts. Thus, collective practice is not fully deliberate, at least not in the same way as for instance 'teamwork', 'the commons', or 'cooperativism', are purposeful organizational frameworks for living, working or being together. Collective design processes take part in

and are a result of particular (often fragile) socio-economic, socio-technical conditions that pervade and shape the ways collectives function.

Taking H&D as a central study case, the relationship of design and collective practice is discussed through the three main concepts ‘workshop’, ‘tool’, ‘platform’—all ubiquitous terms that travel through and change meaning in manifold contexts.

The workshop is examined as a site for specialized material production, in addition to its meaning as a format for bringing together groups of like-minded people; to meet, spend time together, work on a specific topic, and explore new techniques or tools. Paying critical attention to the tension between, on the one hand workshops as egalitarian learning formats, and on the other hand workshops’ role in reinforcing neoliberal conditions, it is argued that the workshop is a format that is implied in the economization of education and the learning economy, and perpetuates a culture in which self-employment, self-improvement, and self-reliance is normalized. Drawing on different workshop situations it is exemplified how possibilities and pitfalls of the workshop as a format for cultural production are being dealt with within collective practice.

An ‘inefficient’ collective tool building process brings to the fore other-than-utilitarian articulations of tools. The concept ‘tool’ here refers to digital tools, software or hardware that are discussed through a distributed process of collectively imagining and building different tool versions that are referred to as ‘Feminist Search Tools’. The FST project moved through and fed off short-lived formats for working together across different contexts. The manner in which purpose and meaning are continuously rearticulated contributes to the possibility of context-specific and relational understandings, and articulations of tools-in-the-making.

I argue it is through a certain slowness and fragmentation of the collective process that the tool can be questioned conceptually, technically, ethically and not necessarily conclusively readjusting general perceptions of what is inevitable and what is useful in conceptualizing and actualizing tools.

Yet another angle of collective practice is discussed through the concept of the ‘platform’—that of designing, using and maintaining technical infrastructures that cater to online collaboration, self-organization and self-publishing. Several collective platform projects bring into focus the manner in which self-made, appropriated or hacked tools are composed together and are deeply intertwined with a collective’s evolving socio-technical characteristics and functioning. While evolving monocultures of platforms for online gathering created conditions in which it is difficult to imagine online collaboration otherwise, processes of collective platform-making point toward other possible socio-technical scenarios of designing and working together that are neither utilitarian, solution-driven or antagonizing.

Collective practices are situated. They are site, context, and time-specific, and so are their various expressions. This dissertation makes the thresholds of collective practice legible by discussing the ways collectivity weaves together a range of places, legacies, objects and people across practices and disciplines, and timelines.

Samenvatting

Dit proefschrift onderzoekt collectieve aangelegenheden; het put daarbij uit ervaringen van werken met Hackers & Designer (H&D), een collectief dat Amsterdam als haar thuisbasis heeft. Op het snijvlak van technologie, kunst en educatie organiseert H&D educatieve activiteiten waarbij makers vanuit hun verschillende praktijken en achtergronden samenwerken en al doende leren. Naast het organiseren van workshops maken mensen die bij H&D betrokken zijn online en offline publicaties en bouwen zij open source tools en platforms.

De belangrijkste stelling van dit onderzoek is dat het conventionele idioom waarmee over design wordt geschreven niet toereikend is wanneer het gaat om collectieven en de weerstand die zij bieden tegen fixatie en stabilisatie. Collectief design, zoals hier wordt besproken, daagt het idee van de individuele auteur uit; het tart het onderscheid tussen verschillende disciplines, tussen proces en product, tussen maker en gebruiker. Een collectief zal altijd invloed hebben op bepaalde voorkeuren en verantwoordelijkheden, het geeft kleur aan ontwerp-principes en esthetische vormtalen, maar een collectief verlangt ook visies op samenwerken en ontwerpen die voorbijgaan aan het lineaire, en een op vooruitgang gebaseerd begrip van het ontwerpproces.

Het zou verkeerd zijn om de collectieve praktijk als een methode te zien, of als de tegenhanger van de individualistische benadering van design. Met verschillende casussen, wordt beweerd dat de versnippering van sociale, vriendschappelijke en werkrelaties evengoed een kenmerk is van de collectieve praktijk als het streven naar duurzame relaties. Collectieven zijn open en fragmentarische configuraties; ze reizen binnen uiteenlopende contexten, vormen zich in reactie daarop en maken er tegelijkertijd onderdeel van uit. De collectieve praktijk is dus niet volledig opzettelijk en doordacht, althans niet op manier van bijvoorbeeld 'teamwerk', 'de commons' of 'coöperaties'.

wat doelgerichte organisatorische kaders zijn voor samenleven en -werken of voor simpelweg samenzijn. Collectieve ontwerpprocessen geven af op en zijn uitkomst van de specifieke (vaak fragiele) socio-economische en -technologische omstandigheden waarin collectieven opereren; hun functioneren wordt door deze omstandigheden gevormd en is hiervan doordrongen.

Met H&D als centrale onderzoekscasus wordt de relatie tussen het ontwerp en de collectieve praktijk besproken aan de hand van drie hoofdconcepten: 'workshop', 'tool' en 'platform'. Deze alomtegenwoordige termen komen in uiteenlopende contexten voor en veranderen telkens van betekenis.

De workshop wordt bestudeerd als een plek waar specialistisch werk kan worden geproduceerd, en is daarnaast een format om groepen gelijkgestemden samen te brengen; zodat zij elkaar ontmoeten, tijd met elkaar doorbrengen, op een specifiek thema samenwerken en nieuwe kennis en technieken vergaren. Met een kritische blik op de spanning tussen enerzijds de workshop als egalitaire leervorm en anderzijds de manier waarop workshops worden ingezet bij het versterken van de neoliberale conditie, wordt betoogd dat de workshop als format onder andere voortkomt uit de bezuinigingen op onderwijs en de leereconomie, en in die zin een cultuur waarin zelfstandig ondernemerschap, zelfverbetering en zelfredzaamheid worden genormaliseerd, in stand houdt. Aan de hand van verschillende praktijkvoorbeelden wordt geïllustreerd hoe binnen de collectieve praktijk wordt omgegaan met de mogelijkheden en valkuilen van de workshop als format voor culturele producties.

Een 'ineffectief' proces waarin tools collectief ontwikkeld worden, brengt aan het licht dat tools meer in zich hebben dan alleen zijn 'nuttige' gebruik. Het concept 'tool' verwijst hier naar digitale tools, software en hardware die in dit proefschrift worden besproken door

middel van een gedistribueerd proces van het collectief bedenken en bouwen van verschillende versies die worden aangeduid als 'feministische zoekmachines' (Feminist Search Tools). Het FST-project ontstond uit en werkte door meerdere kortstondige samenwerkingsverbanden in verschillende contexten. Het feit dat doel en betekenis voortdurend opnieuw worden geformuleerd, schept ruimte voor het ontstaan van context-specifieke en relationele inzichten, en voorbodes van tools die in ontwikkeling zijn. Ik beweer dat de zekere traagheid en versplintering die het collectieve proces kenmerken, het mogelijk maken om tools op conceptueel, technisch en ethisch niveau te blijven bevragen en, niet noodzakelijkerwijs voor altijd, de algemene perceptie van wat onvermijdelijk en wat nuttig is bij het conceptualiseren en ontwikkelen van tools bij te stellen.

Nog een andere kant van de collectieve praktijk wordt besproken via het concept 'platform' — het ontwerpen, gebruik en onderhoud van technische infrastructuur die online samenwerking mogelijk maken, en het uitgeven van publicaties in eigen beheer. Verschillende collectieve platformprojecten focussen op de manier waarop zelfgemaakte, toegeëigende of gehackte gereedschappen samen worden gemaakt en diep verweven zijn met het voortdurend (zichzelf) vernieuwende socio-technologische karakter' karakter van het collectief en haar functioneren. Terwijl de ontwikkeling van een monocultuur aan platforms voor online bijeenkomsten een staat heeft gecreëerd waarin het moeilijk is je een online samenwerking anders voor te stellen, wijzen collectieve processen van platformontwerp in de richting van andere socio-technologische scenario's van ontwerpen en samenwerken die pragmatisch maar niet utilistisch of oplossingsgericht zijn.

Collectieve praktijken zijn gesitueerd. Ze zijn plaats-, context- en tijdgebonden, en dat geldt ook voor hun

uiteenlopende uitingen. Dit proefschrift maakt de grenzen van de collectieve praktijk leesbaar door te bespreken hoe collectiviteit een verscheidenheid aan plaatsen, erfenissen, objecten en mensen met elkaar verweeft, dwars door praktijken, disciplines en tijden.

Bibliography

- Abel, Bas van, Klaassen, Roel, Evers, Lucas and Peter Troxler eds., *Open Design Now*. Amsterdam: BIS Publishers, 2011.
- Abdullah, Dana. "Disciplinary Disobedience: A Border-Thinking Approach to Design." *Design Struggles*, edited by Claudia Mareis, Nina Paim, Amsterdam: Valiz, 2021.
- Adam, Taskeen. "Digital neocolonialism and massive open online courses (MOOCs): colonial pasts and neoliberal futures." *Learning, Media and Technology* (2019).
- Ahmed, Sara. *Queer Phenomenology Orientations, Objects, Others*. Durham: Duke University Press, 2006.
- Ahmed, Sara. *What's the use? On the uses of use*. Durham: Duke University Press, 2019.
- Ahmed, Sara and Fortier, Anne-Marie. "Re-imagining communities." *International journal of cultural studies* 6, no. 3 (2003): 251–259. SAGE Publications.
- Anderson, Walter A. "What Makes a Good Workshop." *The Journal of Educational Sociology* 24, no. 5 (January, 1951): 251–261.
- Barad, Karen. *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*. Durham, London: Duke University Press, 2007.
- Barad, Karen. "On Touching—The Inhuman That Therefore I Am." *differences* 23, no. 3 (2012): 206–223.
- Barad, Karen. "Intra-Actions." *Mousse* 34 (Summer 2012): 76–81.
- Bardzell, Shaowen. "Feminist HCI: Taking stock and outlining an agenda for design." *HCI For All* (April, 2010).
- Berghuis, Thomas J. "Ruangrupa New Outlooks on Artist Collectives in Contemporary Art." In *Mix & Stir. New Outlooks on Contemporary Art from Global Perspectives*, edited by Helen Westgeest, Kitty Zijlmans, 81–87. Amsterdam: Valiz, 2021.
- Berlant, Lauren "Infrastructures for Troubling Times." *Environment and Planning D: Society and Space* 34, no. 3 (2016): 393–419.

- Bj gvinsson, Erling; Ehn, Pelle and Per-Anders Hillgren.
 “Design Things and Design Thinking: Contemporary Participatory Design Challenges.” *Design Issues* 28, no. 3 (Summer 2012).
- Bødker, Susanne, Grønabæk, Kaj and Morten Kyng.
 “Cooperative Design: Techniques and Experiences From the Scandinavian Scene.” In *Participatory Design: Principles and Practices*, edited by Aki Namioka and Doug Schuler. New Jersey, NY: Lawrence Erlbaum Associates (1995).
- Boelen, Jan Michael Kaethler, eds., *Social matter, social design*. Amsterdam: Valiz, 2020.
- Bradley, Will, Hannula, Mika and Cristina Ricupero,
Self-organisation/Counter-Economic Strategies. Berlin: Sternberg Press, 2006.
- Brand, Stewart, ed. *The Whole Earth Catalog*. Access to Tools, 1972.
- Brave New Alps, “Precarity Pilot,” 2015,
<https://modesofcriticism.org/precarity-pilot/>.
- Chun, Wendy Hui Kyong. “Daemonic Interfaces, Empowering Obfuscations.” In *Programmed Visions. Software and Memory*. Cambridge, Massachusetts: MIT Press, 2011.
- Cramer, Florian. “Does DIY mean anything? – a DIY attempt.” 2019. http://cramer.pleintekst.nl/essays/does_diy_mean_anything/, last accessed May 2022.
- Cramer, Florian and Elaine W. Ho. “Collective Organization.” In *Making Matters. A Vocabulary of Collective Arts* edited by Florian Cramer, Janneke Wesseling, 67–75. Amsterdam: Valiz, 2022.
- Cramer, Florian and Elaine W. Ho. “Distribution.” In *Making Matters. A Vocabulary of Collective Arts*, edited by Florian Cramer, Janneke Wesseling, 213–223, Amsterdam: Valiz, 2022.
- Crenshaw, Kimberle. “Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimi-
 nation Doctrine, Feminist Theory and Antiracist Politics.” *University of Chicago Legal Forum* 1, no. 8 (1989).
- Davis, Cherry-Ann and Nina Paim (Complaint Collective).
 “Does Design Care?” 2021, <https://futuress.org/magazine/does-design-care/>.
- Dewey, John. “My Pedagogic Creed.” *The School Journal* 54 (January 1897): 77–80.
- Dewey, John. *Democracy and Education: an introduction to the philosophy of education*. New York: Macmillan, 1916.
- Días, Eva, *The Experimenters. Chance and Design at Black Mountain College*. Chicago, London: The University of Chicago Press, 2015.
- DiSalvo, Carl. *Adversarial Design*. Cambridge, Massachusetts: MIT Press, 2012.
- DiSalvo, Carl “Critical Making as Materializing the Politics of Design.” *The Information Society*. 30, no. 2 (2014): 96–105.
- DiSalvo, Carl. “Community and Conflict.” *Interactions* 18, no. 6 (November-December 2011): 24–26.
- Dockx, Nico and Pascal Gielen, eds. *Mobile Autonomy. Exercises in Artist’ Self-organization*. Amsterdam: Valiz, 2015.
- Drabinski, Emily. “Queering the Catalog: Queer Theory and the Politics of Correction.” *The Library Quarterly: Information, Community, Policy* 83, no. 2 (April 2013): 94–111. The University of Chicago Press.
- Draves, Bill. *The Free University: A Model for Lifelong Learning*. New York: Association Press, 1980.
- Drenthe, Gusta and Maria van der Sommen. “Vrouwen-thesaurus: lijst van gecontroleerde termen voor het ontsluiten van informatie over de positie van vrouwen en vrouwenstudies.” Internationaal Informatiecentrum en Archief voor de Vrouwenbeweging (1992).
- Eijnde, van den, Jeroen, ed. “A Hall of Mirrors of Art Production.” In *Materialization in Art and Design*

- edited by Herman Verkerk and Maurizio Montalti. Berlin, Amsterdam: Sternberg Press, Sandberg Instituut, 2019.
- Escobar, Arturo. *Design for the Pluriverse*, Durham and London: Duke University Press, 2018.
- Ferreira da Silva, Denise. "On Difference without Separability." Catalog of the 32a São Paulo Art Biennial, Incerteza viva (Living Uncertainty) (2016).
- Ferreira da Silva, Denise. "How." *e-flux Journal* 105 (December, 2019). <https://www.e-flux.com/journal/105/305515/how/>
- Filliou, Robert. "La Fête est Permanente / The Eternal Network." Robert Filliou "La Fête est Permanente / The Eternal Network," *Teaching and Learning as Performing Arts*, first published in 1970.
- Freeman, Jo. "The Tyranny of Structurelessness." *WSQ: Women's Studies Quarterly* 41, no. 3 (2013): 231–246.
- Fry, Tony. *Becoming Human by Design*. London, New York: Berg, 2012.
- Gillespie, Tarleton. "Platforms intervene." *Social Media + Society* (April-June 2015).
- Gillespie, Tarleton, "The politics of 'platforms'," *new media & society* 12, no. 3 (2010).
- Graham, Rosie (Richard). "A 'History' of Search Engines: Mapping Technologies of Memory, Learning and Discovery." *Society of the Query Reader*, edited by René König and Miriam Rasch. Amsterdam: Institute of Network Cultures, 2014.
- Gras, Saskia. "Vrijplaats voor de kunsten: de Haagse Vrije Academie 1947-1982." PhD diss., Leiden University, The Hague, 2017.
- Groten, Anja. "The Workshop and Cultural Production." In *Open!*, 2019. <https://www.onlineopen.org/the-work-shop-and-cultural-production>, last accessed January 2022.
- Guyer, Jane I., "From Market to Platform: Shifting Analytics for the Study of Current Capitalism," In *Legacies, Logics, Logistics*, Chicago, London: The University of Chicago Press, 2016.
- Grootens, Joost. "Blind Maps and Blue Dots. The Blurring of the Producer-User Divide in the Production of Visual Information." PhD diss., Leiden University, 2021.
- Groten, Anja. "Towards critical collaborative practice." *Design Dedication*, edited by Annelys de Vet. Amsterdam: Valiz, 2020.
- Halberstam, Jack. *The queer art of failure*. Durham: Duke University Press, 2011.
- Halberstam, Jack. *Vertiginous Capital, Or The Master's Toolkit*. https://www.dropbox.com/s/sal72piqxqpo58g/QUEER.ARCHIVE.WORK_1.zip?dl=0&file_subpath=%2FQUEER.ARCHIVE.WORK_1_Jack_Halberstam.pdf
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3. (Fall, 1988). Ann Arbor, Michigan: Michigan Publishing.
- Harman, Graham. *Tool-being: Heidegger and the metaphysics of objects*. Chicago: Open Court, 2002.
- Harren, Natilee. "La cédille qui ne finit pas: Robert Filliou, George Brecht, and Fluxus in Villefranche." *Getty Research Journal*, no. 4 (2012): 127–143.
- Henry, Ray. "Moving from Theory to Practice: Incorporating Feminist Approaches into Search and Discovery Tool Development." *Journal of academic librarianship* 41, no. 4 (July 2015): 514–516.
- Herbert, Stine, ed. *Self-Organised*. London: Open Editions, 2013.
- Hirsch, Tad. "Contestational Design: Innovation for Political Activism." PhD diss., MIT, 2008.
- hooks, bell. *Teaching to Transgress*. New York, London: Routledge, 1994.
- Horowitz, Frederick A. "What Josef Albers Taught at Black Mountain College, and What Black Mountain College

- Taught Albers by Frederick A. Horowitz”
<http://www.blackmountainstudiesjournal.org/volume1/1-9-frederick-a-horowitz/>, last accessed May 2022.
- Kaiser, Anja and Rebecca Stephany. *Glossary for Undisciplined Design*, Leipzig: Spector Books, 2021.
- Kalantidou, Eleni and Tony Fry. *Design in the Borderlands*. London, New York: Routledge, 2014.
- Kelty, Christopher. *Two Bits: The Cultural Significance of Free Software*. Durham: Duke University Press, 2008.
- Kelty, Christopher M. “Hacking the Social.” In *Inventing the Social*, edited by Noortje Marres, Michael Guggenheim, Alex Wilkie (Manchester: Mattering Press, 2018).
- Kentgens-Craig, Margret. “Art and politics: no “new unity.” *The Dessau Bauhaus building 1926–1999*, edited by Kentgens-Craig, Margret. Basel, Berlin, Boston: Birkhaeuser, 1998.
- Keshavarz, Mahmoud and Ramia Mazé. “Design and Dissensus: Framing and Staging Participation.” In *Design Research*. *Design Philosophy Papers* 11, no. 1 (May 2013): 7–30.
- Knowlton, Steven A. “Three Decades Since Prejudices and Antipathies: A Study of Changes in the Library of Congress Subject Headings.” *Cataloging & Classification Quarterly* 40, no. 2 (2005).
- Krauss, Annette. “Lifelong Learning and the Professionalized Learner.” In *Unlearning Exercises. Art Organizations as Sites for Unlearning*. Amsterdam, Utrecht: Valiz, Amsterdam and Casco Art Institute Working for the Commons, 2018.
- Krish, Sivam “A practical generative design method.” *Computer-Aided Design* 43, no. 1 (January, 2011): 88–100.
- Lerm Hayes, Christa-Maria “Beuys’s Legacy in Artist-led University Projects.” *Tate papers* 31 (2019).
- Latour, Bruno. “A Collective of Humans and Nonhumans: Following Daedalus’s Labyrinth.” In *Pandora’s hope: essays on the reality of science studies*, 174–215, Cambridge, Massachusetts: Harvard University Press, 1999.
- Latour, Bruno. “What’s the Story?’ Organising as a mode of existence.” In *Agency without Actors? New Approaches to Collective Action*, edited by Jan-Hendrik Passoth, Birgit Peuker and Michael Schillmeier (London: Routledge, 2012): 164–177.
- Laurel, Brenda. *Computers as theatre*. Reading, Massachusetts: Addison-Wesley Pub. Co., 1993.
- Le Guin, Ursula K. “She unnames them.” *The New Yorker*, 1985.
- Lodato, Thomas, James and Carl DiSalvo, ‘Issue-oriented hackathons as material participation’, *New Media & Society* 18, no. 4 (April 2016).
- Lorusso, Silvio. *Entreprenariat. everyone is an entrepreneur nobody is safe*. Eindhoven: Onomatopée 170, 2019.
- Lovink, Geert *Sad by Design. On Platform Nihilism*. London: Pluto Press, 2019.
- Lovink, Geert. “Precarious by Design.” In Silvio Lorusso. *everyone is an entrepreneur. nobody is safe*. Eindhoven: Onomatopée, 2019.
- Lury, Celia. *Problem Spaces. How and Why Methodology Matters*. Cambridge: Polity Press, 2021.
- MacKenzie, Adrian and Anna Munster “Platform Seeing: Image Ensembles and Their Invisibilities,” *Theory, Culture & Society* 36, no. 5, (2019): 3–22.
- Mansoux, Aymeric. “Sandbox Culture: A Study of the Application of Free and Open Source Software Licensing Ideas to Art and Cultural Production.” PhD diss., Centre for Cultural Studies, Goldsmiths, University of London, 2017.
- Marres, Noortje and Gerlitz, Carolin. *Social media as experiments in sociality. Inventing the Social*, edited by Marres, Noortje and Guggenheim, M. and Wilkie, A. (Manchester: Mattering Press, 2018), 253–286.

- Marres, Noortje “No issue, no public: democratic deficits after the displacement of politics”, PhD diss. Amsterdam School for Cultural Analysis, 2005.
- Manovich. Lev “The Language of Cultural Interfaces,” *The Language of New Media*. Cambridge, Massachusetts: MIT, 1999.
- Miessen, Markus. *The Nightmare of Participation*. Berlin: Sternberg Press, 2011.
- Miriam Rasch and René König, eds. *Society of the Query Reader*. Amsterdam: Institute of Network Cultures, 2014.
- Mouffe, Chantal. “Deliberative Democracy or Agonistic Pluralism?” *Social Research* 66, no. 3 (Fall 1999).
- Mouffe, Chantal. “Democracy and Pluralism – A Critique of the Rationalist Approach.” Toronto: Faculty of Law, University of Toronto (1995).
- Mouffe, Chantal. “The radical center. A politics without adversary.” *Soundings*, no. 9 (Summer 1998).
- Mugrefya, Élodie and Femke Snelting. “DiVersions. An Introduction.” *DIVERSIONS / DIVERSIONS / DIVERSIES*, (2020), <https://diversions.constantvzw.org/wiki/index.php?title=Introduction#introduction>
- Myers, Alonzo F. “Workshops.” *The Journal of Educational Sociology* 24, no. 5 (January 1951): 249–250.
- Noble, Safiya Umoja. *Algorithms of oppression: how search engines reinforce racism*. New York: New York University Press, 2018.
- Noorda, Ruchama. “ReForm.” PhD diss., Leiden University, 2015.
- Olson, Hope A. “The Power to Name: Representation in Library Catalogs.” *Signs* 26, no. 3 (Spring, 2001): 639–668. The University of Chicago Press.
- Olson, Hope A. “Mapping Beyond Dewey’s Boundaries: Constructing Classificatory Space for Marginalized Knowledge Domains.” *LIBRARY TRENDS* 47, no. 2 (Fall 1998): 253–254.

- Pater, Pater. *CAPS LOCK*, Amsterdam: Valiz, 2021.
- Rancière, Jacques. *The Ignorant Schoolmaster: Five Lessons in Intellectual Emancipation*. Stanford, Calif: Stanford University Press, 1991.
- Rancière, Jacques. *Dissensus: on politics and aesthetics*. London and New York: Continuum, 2010.
- Raqs Media Collective. “Nautonomat Operating Manual. A Draft Design for a Collective Space of ‘Nautonomy’ for Artists and their Friends.” *Mobile Autonomy. Exercises in Artist’ Self-organization*, edited by Nico Dockx and Pascal Gielen. Amsterdam: Valiz: 2015
- Rich, Kate. “Feral.” *Making Matters. A Vocabulary of Collective Arts*, edited by Janneke Wesseling, Florian Cramer, 273–277. Amsterdam: Valiz, 2022.
- Rival Strategy Rival Strategy, “Platform design, introduction,” (2019). <https://medium.com/rival-strategy/platform-design-part-i-db26d08a947d>, last accessed May 2022.
- Rodgers, Paul A, “The Concept of the Design Discipline.” *Dialectic I*, no. 1 (2017).
- Rogers, Richard. “Foundations of Digital Methods: Query Design.” In *The Datafied Society: Studying Culture through Data*, edited by Mirko Tobias Schäfer, Karin van Es. Amsterdam: Amsterdam University Press (2017), 75–94.
- Rosenblum, Brian. “Decolonizing Libraries” (extended abstract): http://brianrosenblum.net/2015/02/01/decolonizing_libraries/
- Schmitt, Richard. “Heidegger’s Analysis of ‘Tool’.” *The Monist* 49, no. 1 (January 1965): 70–86.
- Scholz, Trebor, and Nathan Schneider. *Ours to hack and to own: the rise of platform cooperativism, a new vision for the future of work and a fairer internet*. New York, London: OR Books, 2016.
- Schön, Donald A. *Educating the Reflective Practitioner*. San Francisco: Jossey-Bass Publishers, 1988.
- Scotford, Martha (1991) “Is There a Canon of Graphic Design History?” *Graphic Design: History in the Writing* (1983–

- 2011), edited by De Bondt, S. and de Smet, C. London: Occasional Papers, 2012.
- Schmeer, Johanna. "Xenodesign—Towards Transversal Engagement in Design," PhD diss., Royal College of Art London, 2016–2020.
- Sennett, Richard. *The corrosion of character: the personal consequences of work in the new capitalism*. New York: W.W. Norton, 1999.
- Smith, Martha Nell. "Frozen Social Relations and Time for a Thaw: Visibility, Exclusions, and Considerations for Postcolonial Digital Archives." *Journal of Victorian Culture* 19, no. 3 (July 2014): 403–410.
- Snelting, Femke. "I think that conversations are the best, biggest thing that free software has to offer its user." *Conversations*, 2015. <https://conversations.tools/>
- Snelting, Femke. "Undisciplined." *Making Matters. A Vocabulary of Collective Arts*, edited by Janneke Wesseling & Florian Cramer, Amsterdam: Valiz, 2022.
- Srnicek, Nick. *Platform Capitalism*. Cambridge, Malden: Polity, 2017.
- Star, Susan Leigh and James R. Griesemer "'Translations' and Boundary Objects: Amateur and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39." *Social Studies of Science* 19, no. 3 (1989).
- Star, Susan Leigh "This is Not a Boundary Object: Reflections on the Origin of a Concept." *Science, Technology, & Human Values* 35, no. 5 (2010).
- Stengers, Isabelle. *In Catastrophic Times: Resisting the Coming Barbarism*. London: Open Humanities Press, 2015.
- Stengers, Isabelle. "Introductory Notes on an Ecology of Practices." *Cultural Studies Review* 11, no. 1 (2005): 183–196.
- Stengers, Isabelle. "Putting Problematization to the Test of Our Present." *Theory, Culture & Society* 38, no. 2 (2021): 71–92.
- Suchman, Lucy "Configuration." *Inventive Methods*, edited by Celia Lury; Nina Wakeford. London; New York: Routledge, Taylor & Francis Group, 2014.
- Suchman, Lucy. "Agencies in Technology Design: Feminist Reconfigurations." *Machine Ethics and Robot Ethics*. Routledge (2001).
- Suchman, Lucy "Located accountabilities in technology production," *Scandinavian Journal of Information Systems* 14, no. 2, 7 (2002). <http://aisel.aisnet.org/sjjs/vol14/iss2/7>
- Tsoukas, Haridimos "Organization as Chaosmos." In *Organization and Organizing: Materiality, Agency, and Discourse*, edited by Daniel Robichaud and François Cooren, New York: Routledge, 2013.
- Tsing, Anna Lowenhaupt. *Friction: an ethnography of global connection*. Princeton, N.J.: Princeton University Press: 2005.
- Turner, Fred. *From counterculture to cyberculture: Stewart Brand, the Whole Earth Network, and the rise of digital utopianism*. Chicago: University of Chicago Press, 2006.
- Vallas, Steven and Juliet B. Schor "What Do Platforms Do? Understanding the Gig Economy." *Annual Review of Sociology* 46 (July 2020): 273–294.
- Volkman, Christina. "Consuming the Bauhaus." *Consumption Markets & Culture* 9, no. 2: *Oppression, Art and Aesthetics* (2006).
- Wall, Oisín. "Remembering 1968: The Campus of the Anti-University of London." 2018, <https://www.history-workshop.org.uk/remembering-1968-the-campus-of-the-anti-university-of-london/>, last accessed May 2022.
- Waters, Kelly. "All about Agile. Step 4: Sprint Planning (Tasks)." October 2007. <http://www.allaboutagile.com/how-to-implement-scrum-in-10-easy-steps-step-4-sprint-planning-tasks/#sthash.jbSG5ulV.dpuf>, accessed October 14, 2018.

- Wesseling, Janneke. "Art is Going Underground." In *Mix & Stir. New Outlooks on Contemporary Art from Global Perspectives*, edited by Helen Westgeest, Kitty Zijlmans, 89–95. Amsterdam: Valiz, 2021.
- Willis, Anne-Marie. "Ontological Designing—laying the ground." *Design Philosophy Papers* 4, no. 2 (2006): 69–92.
- Wright, Stephen. "Towards a lexicon of usership." Van Abbemuseum, 2013.
- Zer-Aviv, Mushon; Mandiberg, Michael; Linksvayer, Mike; Peirano, Marta; Toner, Alan; Erkalovic, Aleksandar; Hyde, Adam. "Anatomy of the First Book Sprint". *Collaborative Futures*. Transmediale, Berlin: April, 2011.

Relevant weblinks Chapter 2: Workshop Production

- "The Workshop. Investigations Into an Artistic-Political Format." ICI Berlin, international Conference organized by Kai van Eikels and Stefan Hölscher, (March 26-28, 2021) <https://www.ici-berlin.org/events/the-workshop/>
<https://www.borderssessions.org/lab/building-a-vr-empathy-machine/>
<https://maydayrooms.org/portfolio/antiuniversity-of-london/>
<https://antihistory.org/>
http://www.fiuamsterdam.com/html/f_i_u__history.html
<https://web.archive.org/web/20110910110005/http://www.beuys.org/fiu.htm>
<http://dewey.pragmatism.org/creed.htm>
<http://www.anthampton.com/thething.html>
http://www.contrepied.de/soon/portfolio_page/the-thing-an-automatic-workshop-in-everyday-disruption/
<https://nextnature.net/story/2018/next-nature-academy-workshop>
<https://www.openbsd.org/hackathons.html>
<https://www.hackerearth.com/blog/developers/good-bad-overrated/>

- "Diedrich Diederichsen (Vienna): Free Jazz with Children"
<https://vimeo.com/547117231>
<https://libregraphicsmeeting.org/2016>
<https://libregraphicsmeeting.org/lgm/public-documentation/code-of-conduct/>
<http://making-matters.nl/about/consortium>
https://hackersanddesigners.nl/s/Summer_Academy_2018/p/Work_the_Workshop
<https://etherpad.hackersanddesigners.nl/p/hdsa2020-how-to-workshop>
<https://etherpad.hackersanddesigners.nl/p/student-workshops>
<http://www.anthampton.com/thething.html>
http://www.uni-lueneburg.de/personal_fuehrung/index.php/Workshop
<https://www.umsetzungsberatung.de/methoden/moderation.php>
<http://www.workshopproject.org>
 Workshops in a box:
 Next Nature: <https://www.nextnature.net/2018/06/next-nature-academy-workshop/>
 Pipdecks Workshop tactics: <https://pipdecks.com/products/workshop-tactics?variant=39770920321113>
 Forkshop: <https://2018.transmediale.de/content/fork-politics-in-post-consensus-cryptoeconomics>
 'Hackathon-like workshop': 'If then What Now'
<http://www.ifthenwhatnow.nl/>
 "The Thing An Automatic Workshop"
<http://www.anthampton.com/thething.html>
 Iowa's Writers Workshop: (1936)
<https://writersworkshop.uiowa.edu/about/about-workshop/history>
 Workshops: Designing and Facilitating Experiential Learning: <http://web.a.ebscohost.com.ezproxy.leidenuniv.nl:2048/ehost/ebookviewer/ebook/bmxlYmtfXzQ2>

NzA3M19fQU41?sid=07f63ba4-6326-4362-b33c-22e0e92b561f@sessionmgr4010&vid=0&format=EB&rid=1

Workshops: Optimal vorbereiten, spannend inszenieren, professionell nachbereiten: https://books.google.de/books?id=y9Eph3xdRlkC&printsec=frontcover&source=gb_s_atb#v=onepage&q&f=false

Workshops, Seminare und Besprechungen: mit Kreativität und Methode zum sicheren Erfolg: https://books.google.de/books?id=WENiPpEEenwAC&printsec=frontcover&source=gb_s_atb#v=onepage&q&f=false

Relevant weblinks Chapter 3: Tool Building

<https://feministsearchtools.nl/>
<https://feministsearchtool.nl/>
<https://github.com/hackersanddesigners/fst-viz-tool>
<https://fst.hackersanddesigners.nl/>
<https://github.com/hackersanddesigners/fst-amz-shadow-search>
 GNU Bulletin, 1, no. 1, 1986,
<https://www.gnu.org/bulletins/bull1.txt>
 Homosaurus IHLIA: <https://www.ihlia.nl/van-schoenendoos-tot-homosaurus/>
 Women's Thesaurus Atria: <https://institute-genderequality.org/library-archive/collection/thesaurus/5710/>
<https://womensbios.lib.virginia.edu/about.html>
<https://feministinternet.com/>
https://www.youtube.com/watch?v=-DW4HLgYPIA&ab_channel=SouthbankCentre (Kimberlé Crenshaw - On Intersectionality - keynote, 2016)
 'Teaching the radical syllabus' in collaboration with Lucie Kolb and Eva Weinmeyr <https://constantvzw.org/site/Constant-in-Teaching-the-Radical-Catalogue-Een-syllabus.html>
 "Feminist Search Tools. "Intersectional Search: addressing own complicities"

https://vimeo.com/660599698?embedded=true&source=vimeo_logo&owner=45925538
 Feminist Search Tools Meetup, 2021
https://hackersanddesigners.nl/s/Events/p/H%26D_Meetup_2%3A_Feminist_Search_Tools
 "Intersectional Search in Queer and Trans Archives", IHLIA Amsterdam
["https://ihlia.nl/events/intersectional-search-in-queer-and-trans-archives/](https://ihlia.nl/events/intersectional-search-in-queer-and-trans-archives/)
 Feminist Search API Workshop
https://hackersanddesigners.nl/s/Activities/p/Feminist_Search_API_Workshop
 Unbound Library Worksession organized by Constant in 2020
<https://constantvzw.org/site/-Unbound-Libraries,224-.html>
 'Repository of Feminist Search Strategies', 2020
https://hackersanddesigners.nl/s/Events/p/Workshop%3A_Repository_of_Feminist_Search_Strategies
<https://read-in.info/>
<https://read-in.info/bookshelf-research/>
https://read-in.info/wp-content/uploads/2015/06/no_innocent-reading_red.jpg
<https://read-in.info/wp-content/uploads/2018/10/Unlearning-My-Library-Forum1-Copyright-Coco-Duivenvoorde-38-768x512.jpg>
 H&D Meetup "Scraping, counting and sorting", 2015
https://hackersanddesigners.nl/s/Activities/p/Scraping%2C_counting_and_sorting
<http://www.zerofootprintcampus.nl/en/participants/read-in/>
<https://wiki.digitalmethods.net/Dmi/SummerSchool2019>
<http://densitydesign.org/2014/05/an-interview-with-richard-rogers-repurposing-the-web-for-social-and-cultural-research/>
<http://densitydesign.org/>
<https://wiki.digitalmethods.net/Dmi/ToolDatabase>

<https://mappingslavery.nl/educatie/publicaties/>
<https://atria.nl/bibliotheek-archief/collectie/thesaurus/459/>
<https://www.theblackarchives.nl/>
https://read-in.info/bookshelf_research-2/
<https://constantvzw.org/site/-Unbound-Libraries,224-.html?lang=en>
<https://git.xpub.nl/XPUB/XPPL>
https://pzwiki.wdka.nl/mediadesign/XPPL_Documentation
http://wiki.evaweinmayr.com/index.php/Project_2_*_Library_of_Inclusions_and_Omissions

Relevant weblinks Chapter 4: Platform-design issues

<https://hackersanddesigners.nl/s/Tools/p/Chattypub>
<https://www.englishes-mooc.org/>
https://hackersanddesigners.nl/s/Tools/p/Englishes_MOOC
https://hackersanddesigners.nl/s/Tools/p/Free_Wiki
https://hackersanddesigners.nl/s/Tools/p/Obfuscation_platframe
https://hackersanddesigners.nl/s/Tools/p/H%26D_livestream
 “A catalog of formats for digital discomfort” edited by Jara Rocha <http://titipi.org/projects/discomfort/CatalogOFFDigitalDiscomfort.pdf>
https://hackersanddesigners.nl/s/Publishing/p/Hackers_%26_Designers_Coop%2C_2018_Retrospective_by_James_Bryan_Graves
<https://www.discourse.org/>
<http://www.workshopproject.org/>
<https://www.dokuwiki.org/dokuwiki>
<https://etherpad.org/>
https://feministsearchtools.nl/wp-content/uploads/2020/10/Presentation_H_Dfst.017.jpeg
<https://babf.no/program/workshop-chattypub-hackers-designers>

https://hackersanddesigners.nl/s/Activities/p/Open%2A_tools_for_collective_organizing
<https://platformlabor.net/output/criticizing-disruption-platformization-discontent>

Acknowledgements

This dissertation is, in many ways, a collective effort. Throughout this research trajectory and writing this dissertation I have received guidance and support from many people who I would like to thank for helping me to articulate why and how collective practice matters.

I want to thank my friends and colleagues of the H&D collective who have been following and inspiring this process. Thank you to James Bryan Graves and Selby Gildemacher who started H&D with me in 2013. Much gratitude for the many energizing exchanges and experiences goes to Juliette Lizotte, André Fincato, Heerko van der Kooij, Loes Bogers, Margarita Osipian, Karl Moubarak, and Pernilla Manjula Philip who joined the collective in order of appearance since 2017. My gratitude further extends to my collaborators of the Feminist Search Tools project: Read-in (Annette Krauss, Sven Engels, Laura Pardo), Angeliki Diakrousi, Alice Strete and Ola Hassanain.

Being able to do this research in the context of the field of artistic research and more specifically the PhDArts program has been essential.

I want to express much gratitude to my supervisors Janneke Wesseling, Florian Cramer and Femke Snelting for the fruitful discussions, their guidance, trust, and generous critiques throughout this research trajectory.

I want to further thank my peers at PhDArts for the many inspirational moments we shared, the collegium presentations, feedback sessions, workshops, conferences and dinners. Thank you Eleni Kamma, Thalia Hoffman, Maya Rasker, Judith van IJken, Suzan Tunca, Joost Grootens, k.g. Guttman, Riccardo Giacconi, Jack Segbars, Andrea Stultiens, Alexander Cromer, Etienne Kallos, Irena Kukric, Jort van der Laan, Luiz Zanolello, Henrik Nieratschker, Lídia Pereira, Stephen Shropshire, Ilaria Biotti, Roosje Klap

and Donald Weber, and further Suzanne Knip-Mooij and Rosalien Van der Poel for their care and support. Thank you also to the inspiring lecturers and critics Erik Viskil, Alice Twemlow, Frans Willem Korsten, and Johnny Golding.

Further I want to thank the research consortium “Bridging Design, Art and Technology Through Critical Making” and the Dutch Research council (NWO) for generously financing my research for four years. Together with the consortium I was able to co-organize two “Making Matters” symposia as well as the publication “Making Matters. A Vocabulary of Collective Arts,” J. Wesseling, F. Cramer, eds. (Valiz, 2022). Thank you to Janneke Wesseling, Florian Cramer, Klaas Kuitenbrouwer (Het Nieuwe Instituut), Marie-José Sondeijker (West Den Haag), Lucas Evers (Waag), my fellow researchers Pia Louwerens, Shailoh Phillips and Dani Ploeger, as well as Lotte Betting and Emily Huurdeman for coordinating the process.

Much appreciation goes to my friends and colleagues at the Design Department of the Sandberg Instituut Amsterdam. Many thanks to Tina Bastajian, Flavia Dzodan, Daniel van der Velden, Annelys de Vet, Amy Suo Wu, Staci Bu Shea, Pernilla Manjula Philip, Salim Bayri, Taylor Le Melle, Amal Alhaag, Nirit Peled, Silvio Lorusso, Agata Bar, Zhenia Sveshchinskaya, Charlotte Corstanje and Jurgen Bey, with a special thanks to Leanne Wijnsma who took over my task as course director of the design department for one year, while I was finalizing this dissertation.

Thank you to the students of the design department, my co-workshoppers and co-learners who have witnessed and probed stages of the research with me between 2017 and 2021.

My gratitude goes to the manifold of institutions and organizations that have supported the work of

Hackers & Designers of the past five years such as Stimuleringsfonds Creatieve Industrie, Amsterdamse Fonds voor de Kunst, Fonds voor Cultuurparticipatie, Waag, Het Nieuwe Instituut, Tetem, MU, INC, Critical Media Lab, GFZK, Tetem, FUSE/NDMSM, IHLIA, DMI, the 3rd Obfuscation Workshop organizers (Jara Rocha, Seda Gürses, Ero Balsa), Framer Framed and Page Not Found.

Thank you to the extended network of collectives and grass-roots initiatives that have directly and indirectly contributed to the work of H&D and this research such as Mz* Baltazar’s Laboratory, Prototype Pittsburgh, Workshop Project, MELT, NEWS and Place for Local Making, DDDUG, Radio Echo and Hackitects, Jatiwangi art factory, Display Distribute / Light Logistics, Varia, Constant, The Hmm, The Underground Division, fanfare, Fabulous Future, PUB, Infrastructural Maneuvers, Constant Association for Art and Media.

Thank you to my family and friends for their support. Thank you James Bryan Graves, Nicole da Silveira, Jens Groten, Elisabeth Groten, Jeannette Weber, Meike Hardt, Yolande van der Heide, Simone Niquille, Klasien van der Zandschulp, Thomas Rustemeyer,

and the critical readers of my texts Chris Lee, Yin Aiwen, Stefanie Wuschitz, Gerko Egert, Patricia de Vries, Loes Bogers, Heike Roms, Francisco Laranjo, Moritz Greiner-Petter, Meike Hardt, Jeannette Weber.

Thank you to Samantha McCulloch for the careful copy editing of this dissertation and Maartje Smits for the Dutch translation of the summary.

Curriculum Vitae

Anja Groten (b. 1983, DE) is a designer, organiser and educator based in Amsterdam. Groten holds a degree in Communication Design from Niederrhein University of Applied Science, Krefeld (Diploma 2003-2008) and a Master degree in Design from Sandberg Instituut, Amsterdam (MDes 2009-2011).

Groten's work revolves around the cross-section of digital and physical media, design and art education and the involvement in different interdisciplinary groups. In 2013 Groten co-founded the initiative Hackers & Designers, attempting to break down the barriers between the two fields by enforcing a common vocabulary through education, hacks and collaboration.

Groten has taught, hosted workshops and lectured in international art and design institutions such as Sandberg Instituut Amsterdam, Willem de Kooning Academy Rotterdam, Design Academy Eindhoven, Otis College of Art and Design, Los Angeles, Hochschule für Gestaltung Offenbach and Karlsruhe, OCAD University Toronto, University at Buffalo, CAFA Beijing, Aalto University Helsinki, Royal Academy of Art The Hague, Sint Lukas Antwerp, KASK Ghent, Critical Media Lab Basel, AIGA Design Educators Conference at Herron School of Art and Design in Indianapolis, Society for Artistic Research in Plymouth.

Since 2019 Groten is the course director of the design department at the Sandberg Instituut Amsterdam, Master of the Rietveld Academie.

Book design: Anja Groten
Copy editing: Samantha McCulloch
Printing: Stencilzolder, Amsterdam
Binding: Hennik, Amsterdam
Fonts: Authentic Sans, NotCourierSans, Noto Serif

Generously financed by the Dutch Research
council (NWO).

