

# Designing Sideways. Inefficient Publishing as Mode of Refusal

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This article is written from the perspective of someone who studied graphic design following design curricula that built upon mostly European and North-American legitimised knowledge – a canon of individualised graphic design icons who determine conceptual, aesthetic, and technical tools for *good design* (Scotford, 1991: 226). Design studies tend to be the context in which students establish fundamental dependencies on media design software, mostly the proprietary software package Adobe Creative Suite – the ‘swiss army knife’ of desktop publishing.

Only after my studies, through my involvement in different interdisciplinary collectives, I started exploring a wide range of alternative non-commercial design tools and workflows. With workflow I mean a designed process, a sequel of prefigured tasks and steps, that typically unfolds in a linear fashion: from the phase of sketching, over creating a layout grid, to type-setting and preparing the files towards final publishing. In getting involved in self-initiated collective work, I discovered other-than-linear possibilities for such a process which I will further allude to in this text.

In 2013, I co-founded the collective Hackers & Designers (H&D) – a self-organised group of practitioners from different backgrounds who organise hands-on workshops at the intersection of technology, design and art, produce experimental on- and offline publications, and build open source tools and platforms.<sup>1</sup> H&D's approach to designing publications differs from conventional design workflows taught in graphic design courses. For instance, the tools used to write, edit, and design publications are distributed under *free* software licences and their source code is *open* for anyone to copy,

manipulate, and redistribute. Free/libre open source design software allows for the tools themselves to be designed, studied, and altered.

The most common argument *against* using free and open source design tools is that they are supposedly difficult to use. They are regarded as less intuitive than their commercial counterparts. That is, the customary way in which designers interact with (commercial) software allows for fast and frictionless translation of ideas into visual outcomes. Productivity is increased through predefined functionalities programmed into the design software, allowing for tasks to be completed in an efficient linear fashion, one step at a time.

In this article, I will discuss some of these alternative design tools and processes. I will argue that – through the collective workflows they enable – they are shifting the common understanding of design tools as discrete objects towards a view of such tools as taking part in a ‘network of working relations’ (Suchman, 2002: 98). According to the anthropologist of science and technology Lucy Suchman, these working relations can be understood as ‘sociomaterial connections that sustain the visible and invisible work required to construct coherent technologies and put them into use’ (Suchman, 2002: 91). This shift in the understanding of design tools also reframes the debate around design as a capitalist endeavour – primarily focused on product creation, efficiency, and growth – towards viewing design as a ‘dynamic process of knowing and acting’ (Suchman, 2002: 92), with an emphasis on critically examining sociomaterial connections.

Moreover, this article aims to make a counter proposition to the prevailing mode of frictionless designing by discussing two collective publishing workflows. These, as I will argue, shift approaches to software use from narratives of productivity and ‘software as a service’ towards an understanding of free/libre open source designing as a collective and consciously ‘inefficient’ process of mutual entanglements. The notion of *inefficiency* is here not used in a derogatory manner. It is proposed as a generative and defiant mode of designing that challenges passive forms of interacting with off-the-shelf commercial software. By embracing contingency and unexpected outcomes, inefficient designing makes space for critically conscious and discursive engagements with design tools and processes. These engagements also include a problematisation of concepts such as the scalability and expansion of design software: the ‘ability to expand – and expand, and expand – without rethinking basic elements’ (Lowenhaupt Tsing, 2012: 505). That is, the experimental publishing tools that have evolved in the context of

H&D are not meant to simulate or replace the seamless Graphical User Interfaces of monopolised design software. Neither is a growing user base a suitable measure for their success. Rather, the purpose of such collective experiments in publishing and designing is to resist and readjust efficiency-laden conception of software usage.

The publishing experiments of H&D are also exemplary for the ways self-organised groups succeed in resourcefully and thoughtfully connecting different people, environments, tools, and technical infrastructures – despite the at times precarious working conditions in the cultural sector. Designing as part of a collective practice such as H&D's is therefore not about designing better or designing faster. It is an unconventional approach to designing that, in this text, will be explored as a form of *designing sideways*. Designing sideways relates to what Lauren Berlant described as creating 'an imaginary for managing the meanwhile within damaged life's perdurance, a meanwhile that is less an end [but] allows for ambivalence, distraction, antagonism and inattention not to destroy collective existence' (Berlant, 2016: 394).

By resisting linear and progress-based understandings of a design process, the publishing experiments showcased in this article make space for other socio-technical scenarios for designing and working together that are not merely utilitarian or solution-driven. Designing sideways, as it will be discussed here, challenges individual usership and authorship, artificial separations between disciplines, between product and process. Outcomes of a process of designing sideways – i.e. publications, tools, technical infrastructure – might look different from what is commonly considered 'good design' and therefore require unconventional criteria to determine their purpose.

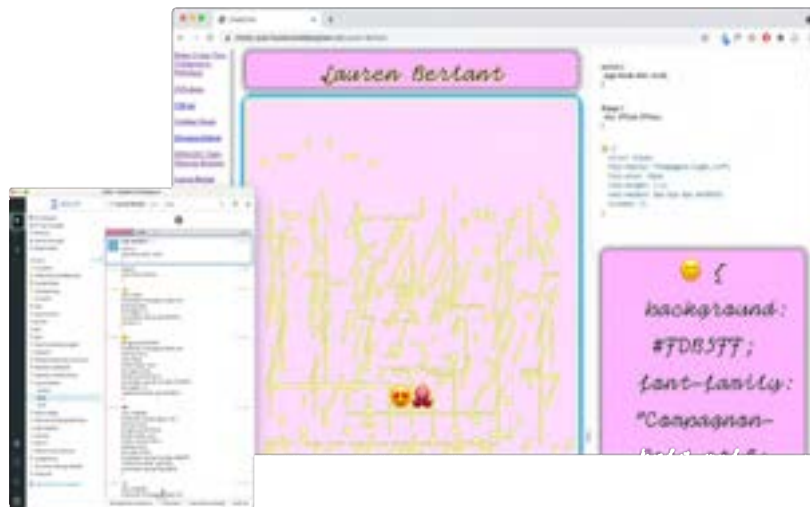
## **Designing with ChattyPub**

In the following section, I will discuss an example of an experimental publishing project referred to as ChattyPub. The idea for ChattyPub first emerged during a workshop developed and led by the two design educators XinXin and Lark VCR during the 2020 edition of the H&D Summer Academy (HDSA).<sup>ii</sup> The workshop was titled 'Experimental Chat Rooms'. Due to the global pandemic, H&D decided to host the annual workshop program online for the first time. The program included fifteen workshops, led by different designers, artists, and programmers from around the world.

Workshop facilitators participating in the H&D Summer Academy were asked to submit a 'workshop script' – a document describing

the course of a workshop in detail, including exercises, relevant bibliographies, and lists of resources, as well as technical documentation and how-to manuals. The ‘Experimental Chatrooms’ workshop particularly stood out to H&D members because of its meticulous attention to detail and the facilitators’ dedication to addressing the diverse needs and levels of knowledge among participants who were scattered across the globe and situated in different time zones. XinXin and Lark VCR’s workshop script was later referred to as a ‘perfect workshop’ by H&D members, and often referred back to for guidance.<sup>iii</sup>

The workshop’s premise – to design and construct experimental chat rooms – planted the seed within H&D to develop a new publishing workflow. This workflow would repurpose interactive chat environments to enable collaborative writing and designing of web-to-print publications. We imagined a design process where multiple people could participate simultaneously, adopting a dialogical approach. This process would blur the boundaries between different tasks and roles in a traditional publishing workflow.



Left: Screenshot of the Zulip chat environment ‘rule channel’ in which CSS styles are declared, right: CSS styles rendered in the browser.

Right: Design of Lauren Berlant’s paper ‘The commons: Infrastructures for troubling times’ by H&D Summer Academy participant Lulu van Dijk, 2021.

As it is often the case during workshops, time constraints prevented us from immediately putting the idea into action. However, the shared enthusiasm surrounding ChattyPub reemerged as we prepared for the next annual H&D Summer Academy in 2021.<sup>iv</sup> Around the same time, H&D member André Fincato installed the open source chat platform Zulip on H&D’s server to ease communication amongst organisers and workshop participants.<sup>v</sup> The Zulip software offers a combination of real-time chat with a

topic-based ‘threading model’ which, in online communication and discussion forums, describes a way to group messages under topics or keywords. It helped us to structure the communication and organisation around the Summer Academy. With H&D’s installation and introduction of a central chat platform, the concept of a collaborative publishing workflow that utilises a chat interface became tangible.



Left: Screenshot of the Zulip chat environment.

Right: CSS styles rendered in the browser. Editing and design by H&D Summer Academy participants Loes Bogers, Deniz Ezgi Kurt, Jordi de Vetten, Petra Eros, and Selby Gildemacher, 2021.

ChattyPub builds upon the chat interface of Zulip, utilising the text input field for writing, editing, and styling contributions. CSS styles<sup>vi</sup> such as font types, sizes, styles, margins, text alignment, and colours can be defined in a dedicated ‘rules’ channel and applied to messages using Emoji reactions. The publication can be previewed real-time in a browser window. ChattyPub was first tested in the form of a workshop at the H&D Summer Academy in 2021 and has since further evolved through various workshop iterations in different settings.<sup>vii</sup>

In autumn 2021, H&D self-published the book *Network Imaginaries* which was designed with ChattyPub. The book featured contributions from various authors, including Lark VCR and XinXin.<sup>viii</sup> They used the chat rooms that were created by workshop participants during their ‘Experimental Chat Room’ workshop to go into conversation and reflect about their experience as workshop facilitators.



Left: Screenshot of the Zulip chat environment in which content of the publication *Network Imaginaries* is being edited.  
Right: CSS styles rendered in the browser. Editing and design by Juliette Lizotte and Anja Groten, 2021.





Example pages and covers of the publication *Network Imaginaries*, designed with ChattyPub and self-published by H&D in 2021.

ChattyPub, alongside the installation of Zulip on H&D's server and various workshop occasions, thrived on shared, energising moments and the unexpected convergence of diverse individual and collective curiosities. As a publishing tool and workflow, ChattyPub has developed and continues to operate despite, and perhaps even because of, the fragmented and chaotic character of H&D. It reflects an approach to designing together that counters conceptions of predefining tasks and roles, as well as mono-directionality of a design process.

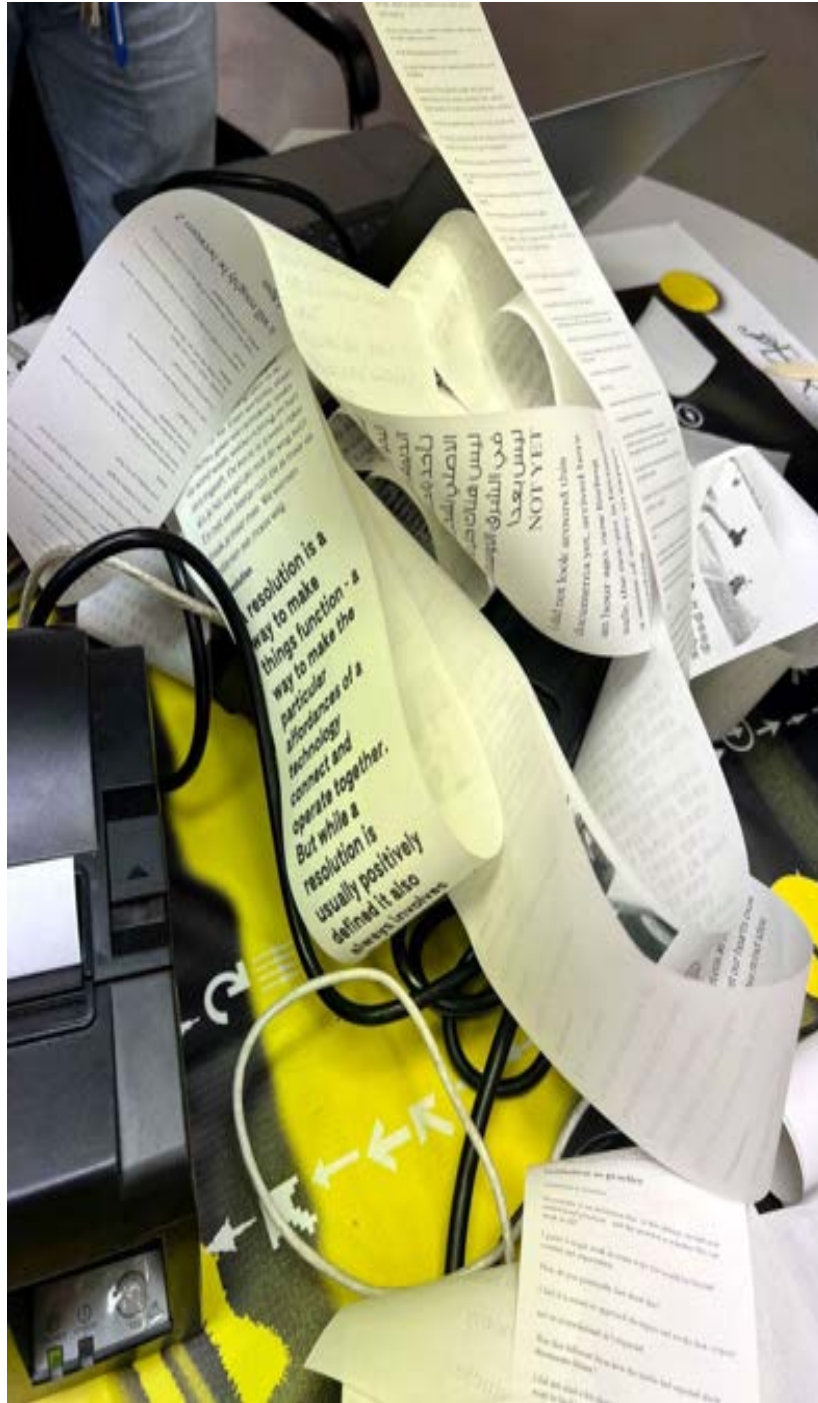
ChattyPub has been activated on various occasions since its inception during the H&D Summer Academy 2021. For example, it was installed during *documenta fifteen* as a walk-in workshop upon the invitation of Jatiwangi art Factory.<sup>ix</sup> ChattyPub facilitated the creation of a collective lexicon related to 'Collective Arts' where visitors could contribute terms and definitions. After each contribution, the growing publication was printed on a receipt printer for visitors to take home.<sup>x</sup> Not one copy of the publication was like the other. Some participants took their time to engage deeply with ChattyPub, studying the documentation and writing CSS declarations (used to specify style properties and create rules that are applied to elements of HTML documents) to define the layout, font sizes and styles, width, and borders of their text-image contributions. Others took a more spontaneous approach. Some focused on styling their contributions, while others prioritised the writing and left the design to others. Overall, ChattyPub enabled a site-specific, distributed discussion about the implications of the particularities of *documenta fifteen* which, as a collective of collectives, grew out of hand in many ways (Cramer & Kentgens, 2023).<sup>xi</sup>

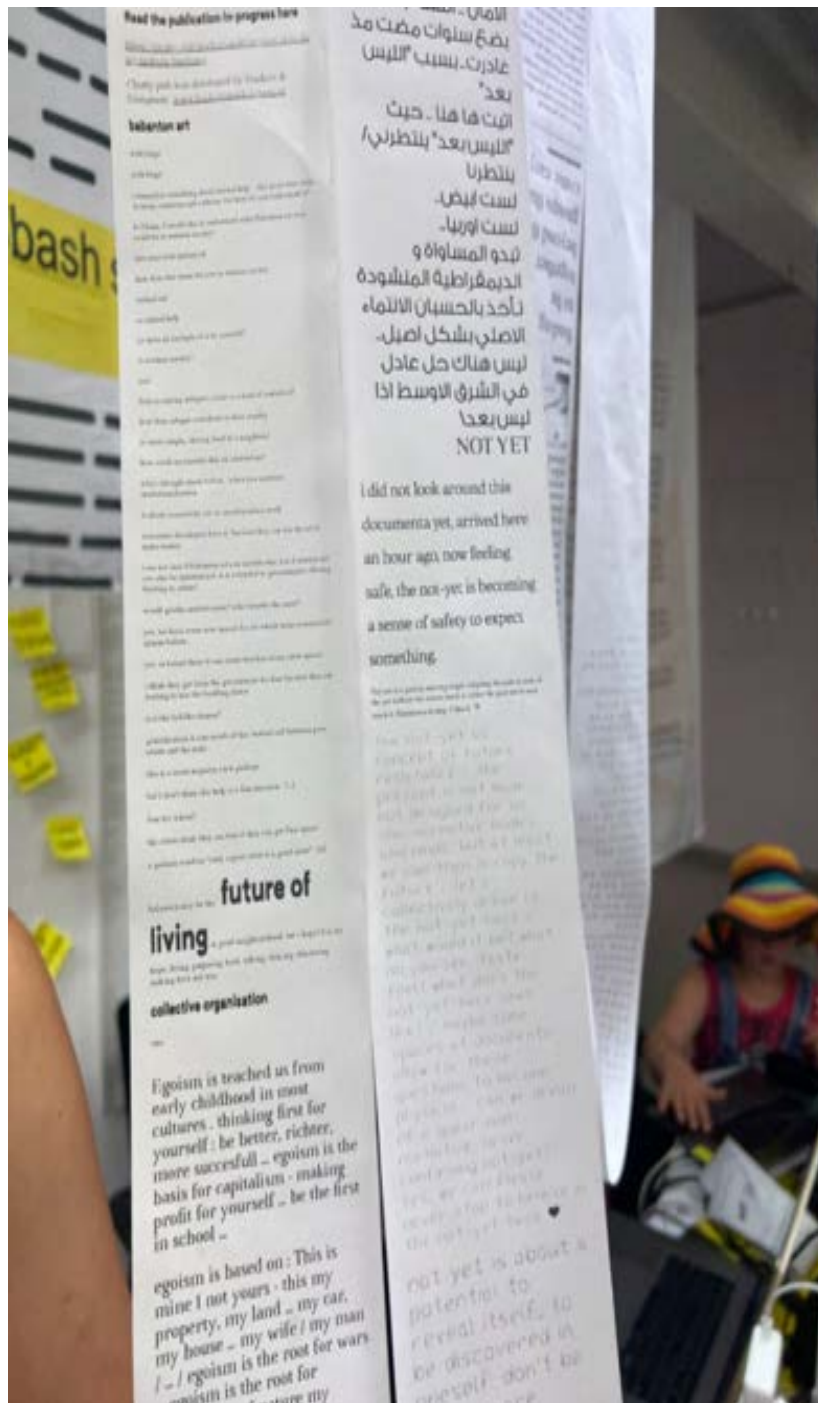












Images from the *documenta fifteen* ChattyPub walk-in workshop at the exhibition ground Hübner Areal in Kassel on the occasion of the book launch for *Making Matters. A Vocabulary of Collective Arts* (Valiz, 2022).

ChattyPub was also activated at independent book and zine fairs, as well as art and design schools: for instance, at the *École Nationale Supérieure des Arts Visuels de La Cambre* and the *École de recherche graphique (ERG)* in Brussels. Graphic design students find ChattyPub exciting because of the ways in which it accommodates learning about the stylesheet language CSS and the hypertext markup language HTML.<sup>xiii</sup> Approaching the designing of

page layouts by declaring CSS styles and assigning them to emojis resonated especially well with the students. The immediacy of the ChattyPub interface, enabling the students to instantly witness in the browser how the writing of CSS affects the design, seems to lower the threshold for engaging with code in a design process.

The Graphic User Interfaces (GUIs) of design software usually simulate ‘real’ physical tools such as brushes, erasers, and rulers. These so-called tools are predefined and represented through visual icons that can be selected and give the user the impression of directly manipulating the screen and, by extension, the page layout. It is possible to use one tool at a time and work on a layout file individually. Designing page layouts by writing code usually means to engage with a text editor such as Sublime<sup>xiii</sup> or Atom<sup>xiv</sup> instead of a GUI. To view the visual representation of one’s code usually requires an additional step of opening the file in the browser.

As ChattyPub is built upon the discussion forum software Zulip, which is created to facilitate many people interacting with each other in real-time, it opens up other possibilities than the usually individualised and linear design process. The chaos emerging from the attempt of designing a publication with 30 people simultaneously, defies the expectation of an outcome that a single person could have predicted. This turbulence of the collective design process, where participants accidentally overwrite each other’s styles or break the code all together by adding glyphs that Zulip cannot interpret, removes the pressure of designing something perfect. Instead, it directs attention towards a process of designing together that is contingent. Witnessing how others navigate the lack of control over the final output can have a liberating effect. Participants expressed their excitement through shrieks and laughter as they experimented with browser animations, seeing their contributions spin in front of them. The PDF’s generated and zines printed at the end of the workshop, held meaning for those who participated, serving as a souvenir of this joyful collective and chaotic moment.

In collaboration with a group of media, performance, and live art scholars and educators, ChattyPub was used to facilitate a documentation process and book sprint at the end of a collective research project exploring individual and collective learning experiences (Egert, 2023). During a one-day intensive work session, participants collaborated to produce a booklet about ‘informal learning spaces such as gardens, parties, kitchens, parks, and how they influence what we learn, how we learn, and how we want to learn’ (Egert, 2023: 4). In alignment with the research objective of

the participants who were interested in experimenting with educational formats, engaging with ChattyPub provided yet another informal learning situation, as none of the participants were familiar with CSS or had experience designing publications before. However, at the time of the session, ChattyPub already had been used numerous times in various contexts. Each publication designed with ChattyPub is automatically indexed on the ChattyPub website, along with the CSS declarations. Thus, participants no longer need to write CSS from scratch. They can access and copy plenty of examples and use them as a starting point for designing their publications.

Every time someone uses ChattyPub (be it someone at H&D or unrelated), different aspects of ChattyPub are being explored. At times, the focus is on the (im)possibilities of layouting printable matter with ChattyPub, while another time the focus is on the immediacy of collective writing and content production utilising the chat interface for collective authorship.<sup>xv</sup>

Informal workshops serve as occasions for members of the collective and the wider H&D community to reconnect and share their knowledge and enthusiasm for the workflow. Communication threads are called ‘streams’ in Zulip and sub-threads are called ‘topics’. By giving names to streams and topics communication threads can be organised. Working on a publication in ChattyPub usually begins with creating a new stream. ChattyPub is programmed so that when the dedicated tag ‘\_PUB\_’ is added to a stream’s description, the Zulip stream will appear in the ChattyPub browser interface as one of the publications. Stream names become publication titles and topic names become chapter titles within a publication. Any chat message written or image uploaded to a stream becomes part of the content of a publication with the exception of the topic titled ‘rules’. This topic is used to declare the CSS styles, thus defining the visual appearance of the publication.

In repurposing the functionalities of H&D’s main communication and organising tool Zulip, ChattyPub brings together and energises different facets of collective organising, editing, and designing publications. ChattyPub has emerged from, and is deeply intertwined with, H&D’s collective practice as well as with learning together across diverse contexts and practices. It is used for producing quick workshop materials, manuals, and hand-outs such as the H&D ‘Code of Conduct’.<sup>xvi</sup> Facilitating workshops in various locations, ChattyPub finds resonance with new communities of experimental publishers and leads to unforeseen usages such as the

‘ChattyLarp’ workshop, which used ChattyPub for a Live Action Role Play (LARP).

What is held in common by different communities of ChattyPub users is the curiosity about writing, designing, editing, and printing publications together differently than it would be done in a ‘professional’ editorial design and publishing workflow.



Left: Screenshot of the Zulip chat environment in which content of the H&D ‘Code of Conduct’ is being edited.

Right: Layout for the ‘Code of Conduct’ rendered in the browser.  
Design by Karl Moubarak, 2024.

Through various workshops, logins to H&D’s Zulip instance have been distributed and, occasionally, unknown visitors are joining the platform. This raises the question about the ability for ChattyPub to grow and be used outside of the context of H&D. As ChattyPub is usually activated in workshop situations in which H&D members are present, people who have joined Zulip unexpectedly could be identified so far. Yet, due to its entanglements with specific socio-technical configurations, ChattyPub resists scalability. The accessibility of ChattyPub is interlinked with server infrastructures that are run by H&D members. Those servers themselves are considered sites of learning and knowledge sharing, for instance about non-extractive relationships to technologies and those who build and maintain them. Unexpected errors, and temporary unavailability of servers and the tools hosted on them, are

considered occasions to reach out, start a conversation, and engage in a collective learning process.

ChattyPub is the result of a convergence of interests, skills, and availability of H&D's members who care for it enough to keep it running. Thus, ChattyPub is inherently relational in the way it depends on the social reality and competences of its community. As a situated technology, ChattyPub builds upon the 'Feminist Server Manifesto' (2014; 2018) and 'A Wishlist for Trans\*feminist Servers' (Cell for Digital Discomfort et al., 2022), in which other, relational, imaginaries and conditions for collectively run digital infrastructures are articulated.<sup>xvii</sup> The 'Manifesto' and the 'Wishlist' radically question the conditions for serving and service of technological production. Additionally, the problematics of scalability plays an important part in the articulation of a trans\*feminist lens for conceptualising and holding accountable technology production. According to the 2022 version of the 'Wishlist', trans\*feminist servers 'carefully scale up or down, and alternate processing speeds whenever conditions require' (Cell for Digital Discomfort et al., 2022).

At time of publication of this article, the H&D's server is run and maintained by H&D member vo ezn with support of Karl Moubarak and Heerko van der Kooij, who all engage with server maintenance from a perspective of collective learning and collective care. The limited capacity of H&D's servers and the individuals who maintain them, prevents ChattyPub from expanding indefinitely. ChattyPub too is an extension of H&D's techno-social ecology. As such, it rejects 'generalized definitions of efficiency, efficacy, ease-of-use, transparency, scalability, accessibility, inclusion, optimisation, and immediacy because they are often traps' (Cell for Digital Discomfort et al., 2022). Questions such as how to establish non-extractive human and technical relationships or who is being served and at what costs, are continuously negotiated by H&D members who develop, maintain, and use ChattyPub for designing publications.

In theory, anyone could install and use ChattyPub without H&D's involvement since it is documented and published under a free licence. However, ChattyPub, as a convergence of people, circumstances, and relationships – and through its various use cases – exemplifies how the purpose and meaning of a collective publishing process are continually questioned and redefined, transcending traditional notions of efficiency and scalability. The value of ChattyPub cannot be generalised or confined to one final outcome, a single tool, or a specific situation. If regarded solely as design software, ChattyPub might seem inefficient and convoluted.



That is, as a publishing infrastructure, ChattyPub cannot be solely categorised as a chat application, an archive, a workshop tool, a design and publishing tool. ChattyPub embodies aspects of all these categories and has become an integral part of H&D's collective functioning.

Despite often sparse resources (i.e., little time, money and space) and diverging socio-economic realities, H&D's core organising group thrives on technical and social spaces for experimentation and learning, such as ChattyPub. Zulip has become essential to H&D's communication and ChattyPub, built onto Zulip, forged new and strengthened existing collective ties and energised technical experimentation around self-organisation and publishing. Through its multiple modalities, evolving meanings, and different implementations, it serves as a socio-technical object to learn from and with.

### **Growing up and sideways as a designer**

The discussion of ChattyPub exemplifies an unusual design and publishing workflow and a potential site for collective learning about web languages such as CSS and HTML through trial and error. The tool breaks with some of the leading conventions a graphic designer usually is introduced to when learning about book design and page layouts at art and design school.

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

[A]s 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 (Kaiser, Stephany, 2021).

The most significant distinction in the workflow that ChattyPub engenders is its collective approach to design, allowing for simultaneous use and interaction and removing the ability for an individual designer to completely control the process or the final outcome.

As Kaiser and Stephany allude to, design schools are reproducing an archetypal image of a successful graphic design student whose trajectory is marked by their growth as *individual* practitioner who is expected to demonstrate confident design attitudes and cultivate unique, consistent signatures that stand out and are recognisable among competitors in the field.<sup>xviii</sup> A designer who is recognised as skilled and knowledgeable in the professional design field, is someone who holds authority in a specific field of knowledge (i.e. book design or web design) and is accordingly comfortable in using the respective ‘professional’ design software. This involves gaining familiarity and comfort with essential tools like Adobe's Creative Suite/Cloud. Design students are usually not exposed to alternative options when it comes to deciding which design tools they prefer to work with, invest in, develop long term relationships with, and come to depend on.<sup>xix</sup>

Trained as a graphic designer myself, I experienced a shift after graduating when it became harder to access pirated copies of design software like Adobe InDesign and Photoshop. Renting commercial software felt like joining an expensive membership club. While Adobe software is often available at discounted rates or even for free in art schools, it is positioned as the only viable option and becomes increasingly difficult to avoid. Once a student graduates, it becomes a costly service that may be unaffordable for small businesses and independent designers.

In theory, it should be possible to replace proprietary software with open source alternatives – for example replacing Photoshop with Gimp, Illustrator with Inkscape, InDesign with Scribus. When discussing alternative open source tool options with design colleagues and students, they tend to judge those alternative options based on the same criteria as the tools they aim to replace: that is, design software ought to turn a designer into a user, who enjoys an intuitive, seamless creative process, ensuring a return of investment by getting from idea to result as fast as possible.

In ‘Adobe. Le créatif au pouvoir?’ (2011), designer Anthony Masure cautions against what he calls the *Adobe Octopus* and the culture of productivity ingrained in the software. This culture privileges efficiency and leads to working environments focused on speed and seamless user experience. *Growing up* as a designer, literally means *growing upwards*. For designers maturing in their careers, there is a pressure to continually strive for faster and more efficient processes, ultimately prioritising productivity above all else. The emphasis on efficiency and growth programmed into such design tools leads

design students to perceive design as a process of selecting actions from predefined menus. The design tool turns the designer-maker into a designer-user – perfectly conditioned to carry out precise and predefined actions without writing code. Masur calls this accident-free production a form of dispossession – a loss of know-how. This is, designers are unable to fully explore, adapt, or study their software in the same way as they could using open source design tools.

As a ‘serious’ designer, it can become challenging to establish alternative tool ecosystems when the entire design community (including collaborating designers, photographers, illustrators, post-production firms, and printing presses) relies heavily on Adobe Creative Cloud. The choice of tools is not solely upon individual designers. Rather, it is influenced by a complex network of socio-technical relationships that shape how designers learn and work. These relationships inevitably solidify ties with certain tools, making alternative tool usage seem inconceivable.

In ‘Blind maps and blue dots’ (2021), Joost Grootens, who is an information and book designer, proposes an alternative graphic design history by focusing on tools, rather than on people in or products of graphic design. By shifting the focus, the graphic designer who uses expert tools moves away from the centre of attention. Instead, Grootens invites us to consider design practices that may not be recognised as legitimate but also do not depend on disciplinary approval or professional tools. According to Grootens, what ‘amateur tools’ produce (he is specifically looking at amateur map making), is more truthful in the sense that amateur maps display more openly the very process that brings them into being. The making process becomes increasingly visible and therefore their design becomes more discursive.

While dichotomies such as the *amateur* and *specialist* need to be considered with caution, the attitude of a dilettante designer resonates with the at times convoluted and inefficient manner in which H&D tend to design publications. A dilettante, or ever-learning designer, encounters every new, and perhaps odd, design workflow with curiosity and an openness to practise, this is, a readiness to put work into a process of trial and error. The purpose is to learn through discovery, to learn what is not-yet known, more than to finish what one has started as fast as possible.

In the context of H&D, the attitude of the dilettante is inhabited consciously. In fact, most members of H&D know how to design ‘professional’ publications and how to use ‘expert’ layouting

software. However, H&D provide another environment in which other-than-efficient criteria for a design process are valued. For instance, some publishing tools developed in the context of H&D require an extraordinary amount of manual labour. These tools and the publications they engender *grow sideways* along with the course of a dispersed collective process. It is a contingent process that destabilises grand narratives of upward growth. Designing sideways – with ChattyPub, for instance – is not about determining who does what. The intention is not to become better or faster at using this tool, but to lean into its awkwardness and let it tell us something about our (mis)conceptions of how things ought to be done. As such, ChattyPub, as an experimental publishing tool and workflow, circumnavigates efficiency-laden design conventions as established under the guise of professionalism.

Rather than imposing predefined roles, tasks, and expectations, a collective process of designing sideways with ChattyPub redraws boundaries with flexibility and according to the limits and possibilities of the present. ChattyPub produces publications that might fail to meet the criteria for acceptable book design. Designs of the publications produced with ChattyPub are usually rather rough. They might not have page numbers and or ignore the baseline grid – the ‘evenly spaced horizontal lines to which the bottom of text is aligned, [as] commonly found in book and magazine publishing’.<sup>xx</sup> However, through their unresolvedness, publications designed with ChattyPub tell something about their coming-into-being.

In her article ‘Located accountabilities in technology production’, Lucy Suchman proposed to draw new types 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’ (Suchman, 2002: 97).

Suchman’s proposition resonates with how ChattyPub is enmeshed with various socio-material relations and therefore requires an awareness that expands its functionality as a mere layouting tool. Prior to using the tool in a workshop, there will be an announcement in Zulip, informing members of the collective that unknown visitors may join soon. There might also be a conversation about the capacity of the collectively run server. Furthermore, at the beginning of a ChattyPub workshop, facilitators usually contextualise ChattyPub’s connection to H&D’s organisational and technical systems, fostering an understanding amongst participants that they

are not just using a tool. In engaging with ChattyPub, participants are entering Zulip, which is the social and organisational space of H&D and their broader network, and needs to be dealt with responsibly, with care, and attention.

### **Situating collective tool-making**

The H&D collective frequently receives requests for design commissions, for instance for designing on- and offline publications, developing experimental publishing tools, or designing custom platforms for online collaboration. Occasionally, external parties inquire about using tools previously developed by H&D in different contexts. We often find ourselves responding to inquiries for commissioned work in an apologetic manner: ‘Sorry, our tool is not reliable enough. It does not work *plug and play*. It may require convoluted workflows, lengthy installation processes or a particular server infrastructure to be preconfigured’. In fact, there may not be one single person who understands the tool in its entirety. Our apologetic tone reflects an underlying insecurity about the value of these publishing experiments. If a publishing tool or platform cannot easily adapt to, or be replicated in other contexts, it may be perceived as lacking purpose. Operating in the context of the creative industries, an experimental publishing tool such as ChattyPub may not be deemed impactful.

One request was brought to us about the possibility of using either ChattyPub or the ‘Momentary Zine’<sup>xxi</sup> at a cultural event in the Netherlands. In response to this inquiry, H&D member Loes Bogers wondered during a H&D assembly: ‘How come our tools are invited but we (the tool makers) are not?’. I understood the notion of *our* not as a proclamation of ownership but rather as an attempt to articulate the intimate relationships that evolve with peculiar tools and technical infrastructure throughout the collective process of imagining and building them. Furthermore, H&D are able to research and develop experimental publishing tools and workflows (and compensate members of the collective for their work) partially through invitations for facilitating workshops. There is a tension between the accessibility and openness of the tools developed and the contextualisation and support required to achieve a meaningful tool encounter. A publishing tool such as ChattyPub is part of an ongoing collective actualisation process and therefore always in flux and never fully finished. It is therefore challenging to imagine H&D’s publishing tools outside of the context of a H&D workshop, where participants collectively navigate unconventional methods and articulate the value of such processes according to the shared experiences.

Using experimental tools in this manner, H&D's publishing experiments are driven by a resistance to viewing tools as merely practical and discrete instruments. There is a shared understanding that, as tool-users and makers, we are implicated in them, in ways that extend beyond their immediate utility or the outcomes they produce.

### **Not 'Our' tools**

H&D prioritise the use of free and open source tools. The collective principles of free and open source software are expressed through a shared understanding that nothing is truly created from scratch and that the software and hardware we are working with were created by many people before us, thus were never ours to begin with.<sup>xxii</sup> Documentation, code repositories, as well as contextualising texts and reflections are made available under free licences when published. The use of free licences is furthermore a way to communicate intentions and to setting conditions for reuse. For instance, in publishing code and documentation, H&D have referred to the Non-Violent Public Licence or the CC4r licence and articulated accepted and unacceptable behaviour for our activities, which include the building and use of free and open source technologies, in H&D's 'Code of Conduct'.<sup>xxiii</sup>

In experimenting with design and publishing tools, H&D build upon the work of peers who bring together critical technology principles of copyleft, free/libre and open source software, and design and art making and embrace interdisciplinary collective learning. For instance, the Brussels-based collectives Open Source Publishing and Constant Association for Art & Media, the Rotterdam-based technology collective Varia, the Amsterdam-based design and research collective fanfare, the publishing practice of artist Eva Weinmayr,<sup>xxiv</sup> and the embodied publishing practices of Rotterdam-based designers Amy Suo Wu and Clara Balaguer.<sup>xxv</sup> In addition, H&D are inspired by the knowledge and practices evolving from educational environments such as the student-led interdepartmental initiative PUB at the Sandberg Instituut Amsterdam, the experimental publishing program XPUB at Piet Zwart Institute in Rotterdam, and the digital and hybrid publishing research groups of the Institute of Network Cultures.<sup>xxvi</sup>

In turn, H&D contribute to the sustainment and growth of the free/libre open source design community through organising hands-on workshops in which peers can come together to discuss current developments and work together on concrete projects.

Furthermore, through thorough documentation of publishing tools and workflows, of code repositories, as well as conversations and reflections in which certain tools and their histories are traced and discussed, H&D offer possibilities for reuse and continuation of such tools and the discussions they incite.

Following the collective understanding of 'tool', a self-made publishing tool cannot be confined in a manner that 'officially sanctioned tool-items [are confined] such as picks, drills and chains' (Harman, 2002: 36). In his book *Tool-being*, the philosopher Graham Harman refuses a conceptualisation of the tool as a merely pragmatic entity and instead proposes the tool as a relational thing that 'exists in a network of forces and meanings that determine its reality' (36). The relational characteristics of tools become evident in the work of H&D, especially when tools that were initially introduced for a specific purpose evolve in unexpected ways as they travel through different contexts, changing their functions and meanings along the way.

The role and function of a publishing tool may shift over time, influencing how it is spoken about and how it is utilised. Collaborative writing tools such as MediaWiki, Etherpad, or Ethercalc may initially serve a certain organisational purpose.<sup>xxvii</sup> They help us keeping track of budgets, plannings, and assemblies, but they are frequently repurposed to become a content management system<sup>xxviii</sup> or editing and design interfaces to produce PDFs collaboratively and spontaneously.<sup>xxix</sup> Considering tools as part of a 'network of forces and meanings' (Harman, 2002: 39) makes it challenging to delineate where a tool begins and where it ends. In an effort to trace this genealogy, H&D met with the befriended collective Varia on an Etherpad, sharing experiences with a particular web-to-print workflow.<sup>xxx</sup>

### **Tool conversation: 'Publishing along the trails'**

In 2015, Constant published a book with a question as a title: *Conversations. The best, biggest thing that Free Software has to offer?* (Snelting, 2014). The proposition derived from a conversation between Constant member, artist, and designer Femke Snelting with Asheesh Laroia, who is a developer of the free computer operating system Debian. The conversation pointed 'at the difference that Free Software can make when users are invited to consider, interrogate and discuss not only the technical details of software, but its concepts and histories as well' (Laroia & Snelting, 2014: 3).



Along similar lines, H&D reached out to Varia in spring 2023 to have a conversation about a publishing workflow that H&D had been exploring in recent years. Building upon code repositories created by designer and developer Manetta Berends and artist and developer Martino Morandi, H&D had been developing several cross-media publications using a web-to-print workflow also known as Wiki-to-print, Wiki2print, or Wiki-to-pdf. However, the documentation trail for this workflow was patchy, making it difficult to troubleshoot issues encountered along the way. With each bug that occurred and every odd workaround we invented in response, we found ourselves questioning if there was a better solution or if others had encountered similar problems in the past. The conversation took place in writing and included Varia members Simon Browne and Manetta Berends along with H&D members sivi.e, Heerko van der Kooij, Karl Moubarak, and myself. The conversation's aim was to exchange experiences between both collectives regarding their work with wiki-to-print workflows, and to trace the ways different wiki-to-print/PDF workflows evolved over time and across different communities of practice, in and outside of the immediate proximity of Varia and H&D. We updated each other about new discoveries within the wiki-to-print cosmos, shared the advantages and disadvantages of different workflows, and attempted to recollect the history of the web-to-print workflow as it has been developed in different collective contexts: for instance Constant and the Open Source Publishing (OSP) group's work on the *Diversions* publication; TITiPI's work on the *Infrastructural Interactions* publication; or Alexia de Visscher and André Castro's work on the *Mondothèque* publication.<sup>xxxi</sup>

Varia and H&D share a curiosity about transitioning 'from assembling a publication using a graphic user interface to compiling a publication through code' as well as for exploring the possibilities for non-linear workflows in creating publications (Hackers & Designers & Varia, 2023). The value of continuous processes in which designing and writing can occur simultaneously is diverging from the approach of a linear 'production chain', as it would be the case using a graphic user interface such as InDesign.

The first publication H&D designed using the workflow expanding on Manetta Berends' and Martino Morandi's code repositories was a design commission. The publication was titled *Making Matters. A Vocabulary of Collective Arts* and was published by an Amsterdam-based publisher (Cramer & Wesseling, 2022). The publishing infrastructure included a MediaWiki instance that functions as a collective editing environment, JavaScript libraries Paged.js that paginates content in the browser to create PDF output from HTML

content, and p5.js for a navigation that functions as an animation when flipping through the book.<sup>xxxii</sup>

The design process of *Making Matters* created some unique challenges. The non-linear and sometimes unpredictable collective process, typically cherished during processes of making self-published books or zines, proved difficult to navigate within the structure and operational norms of a professional publisher. H&D were explicitly invited to design the book because the book should reflect collective experimentation. However, the linear workflows typically associated with academic publishing were deemed non-negotiable, creating a tension between the desired collaborative process and the established norms of the publishing industry.



Exemplary book spreads of the publication *Making Matters. A Vocabulary of Collective Arts* (Valiz, 2022), 2022.



Rendering of the book spread in the browser, 2022; MediaWiki editing environment, 2022.

Working side-by-side as designers, editors, writers, and publishers was not feasible due to tight deadlines and limited budgets provided by the academic research institution that issued the book commission. The wiki-to-print workflow became difficult to manage as we had to align with the criteria and standards of proprietary software packages and adhere to what is generally considered a productive and efficient workflow. In our conversation, Manetta Berends referred to this tension as working ‘against the grain’ rather than embracing the particular characteristics of a web-to-print workflow.

While H&D had been open about our intentions to work in an unusual way – that is, wanting to challenge the arbitrariness of what is considered *professional* book design – there were moments in which our expertise as designers was being questioned. Nevertheless, *Making Matters* has gained significant traction and it seems that the book also reached the open source design community. It came to our attention that it is being used as a ‘good example’ for what can be achieved with web-to-print and free/libre open source software in graphic design. While appreciating the widespread recognition of this work, it also brings some discomfort.

As a designed artefact, the *Making Matters* book, on its own, lacks contextualisation about its origins as a materialisation of a collective process that challenges traditional publication design methods. Its final design perhaps too closely resembles books made with ‘professional’ software and it misses a space to reflect on the incompatibilities between different publishing worlds and the varying values and notions of proficiency they entail.

Viewing the book solely as a finished product, divorced from its journey to creation, overlooks another narrative – the ways MediaWiki became an integral part of H&D’s collective infrastructure, how it has been introduced to us by peers from befriended collectives, how wikis have shaped the ways the group works together since H&D’s first website launched in 2015, and that H&D utilise MediaWiki as a back-end system since.

Tracing this longer trajectory in the conversation with Varia and foregrounding how a book like *Making Matters* is intertwined with other collective endeavours has been an effort to ‘correct’ what a single product, the printed book, fails to convey: a messy process of installing and repurposing software, piecing together documentation, and leaning into the friction that arises along the way. Attempting to articulate the value of these bumpy design processes across two collectives also highlights that groups can develop a certain resilience over time that is much needed – as *publishing along the grain* of open source web-to-print tools always also means publishing *against the grain* of mainstream and proprietary publishing economy.

### **Tool aches: Designing with broken tools**

Experimental publishing tools such as ChattyPub and wiki-to-print are exemplary for how self-organised collective practices recalibrate the ways design processes are conceived of, prioritising access to code, collective learning, and self-discovery over familiarity of Graphic User Interfaces (GUIs) that are designed to ‘reduce sources of friction, making the “user experience” seamless’ (Masure, 2019: 67).

GUIs have evolved into universalised cultural objects that build upon specific kinds of psychologies of perception, visualisation, and liveness on demand (Manovich, 2001). Wendy Hui Kyong Chun (2011), a scholar in media studies and cultural theory, suggests that the conception of usability in interfaces is tied to an individual’s sense of control – a feeling of ‘mastery’ over their computer programs. She argues that the idea of interfaces conveying a sense of

empowerment stems from a human desire for direct personal manipulation of the screen which extends to a sense of control over the system it represents. Masure additionally specifies that '[by] providing users with a "familiar" and "friendly" environment, the interface thus developed is intended to increase their productivity by developing "human-machine synergism' (Masure, 2019: 68). The premise of effortless interactions follows a neoliberal understanding of designing, as it removes the rupture from the process in favour of efficiency and productivity: 'No resistance, no unforeseen event should interrupt the creative process' (Masure, 2011).

The conversation between H&D and Varia highlighted unexpected ruptures and issues that surprised us while creating publications using wiki-to-print or ChattyPub, this is, using code instead of graphic interfaces. Both collectives shared experiences of encountering errors and bugs that led to unexpected design directions. Stories about eaten sentences, disappearing columns, ghostly empty pages, alongside invented hacks and workarounds indicate the skill of designing collectively and inefficiently – a way of designing that resists solutionism and requires openness and attunement to uncertain outcomes.

The publishing tools we use, build, and maintain as collectives challenge the prevailing paradigms of easy-to use, ready-at-hand, and reliability. As such, they can cause discomfort. Alongside an unfolding design process that is not streamlined but emerges in unexpected ways, collectives develop socio-technical conducts that help navigate the possibility for failure of such self-built 'seamful' tools (Chalmers, 2003; Chalmers & MacColl, 2003).

The discussion between H&D and Varia members and the collective environments and infrastructures that the wiki-to-print workflow evolved from, demonstrate that the inefficiency of a publishing workflow can be generative and inventive in and of itself. This discussion and the resulting environments and infrastructures also foreground how collectives develop other-than-utilitarian relationships to tools, as well as various context-specific criteria and articulations for usefulness or usability of such tools.

'Self made' design and publishing tools can estrange design processes, break with the routines we may have already established as designers, and foreground a greater sense of our interdependence. When a designer's relation to their tools 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’ (2019: 12). Furthermore, Graham Harman described such ‘tools-in-action’ as ‘operat[ing] in an inconspicuous usefulness, doing their work without our noticing it’ (2002: 45).

When a tool is not functioning in a seamless manner, it may be perceived as broken, failing, or unusable. This is what Harman (2002) 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 that a tool-in-action, as Harman understands it, describes a kind of routine that does not require explanation. It goes without saying, so to speak. As the aforementioned examples ChattyPub and wiki-to-print illustrate, the tool becomes quite present as a participant in a design process, as it does not function intuitively or smoothly. Such tools and the process they instigate refuse to become routines. Working with wiki-to-print or ChattyPub is an edgy design experience. Through their ruptures and unreliabilities such ‘broken-tools-in-action’ allow the designers involved to continuously question them, and, alongside, alter their meanings and inscribed values (such as the possibility for a tool to become a site for collective designing and learning, for opening up a design process that is usually taking place in solitude, or for learning about designing with CSS by taking a dialogical approach).

In a process of designing sideways, the so-called brokenness of a design tool becomes its purpose. It does not appear as neutral and affords problematisation. It becomes questionable and discursive.

### **Problematisation as experimentation**

In her article ‘Putting Problematization to the Test of Our Present’, the philosopher Isabel Stengers described problematisation as ‘the creation of problems and the activity of learning required by them’ (2021: 77). Problematisation is ‘a form of experimentation, which implicates ourselves in our present, requiring that one allows oneself to be touched by what the present presents in the form of a test’. Thus, problems can be understood not as obstacles to overcome or as errors in need of fixing. Rather, as the sociologist and cultural theorist Celia Lury posits, problems set ‘thinking, knowing and feeling into motion’ (2021: 14).

Experimental publishing tools – as they are imagined and materialised in and through H&D – are somewhat unreliable, unresolved, and may even create discomfort. Simultaneously, they

put into practice alternative scenarios for designing collectively. For instance, the possibility of conflation of usually distinct roles and tasks in a publishing workflow can make space for letting processes of writing, editing, and designing influence each other dynamically and simultaneously.

Drawing on Stengers and Lury, such collective publishing experiments are remarkable in the way they sustain a collective awareness of design software as relational and as potentially problematic. For example, the latter might emerge when a tool's limits become apparent, when it acts up, or is temporarily unavailable. In these instances, questions occur such as where and how is the tool actually hosted? Who maintains the server on which the tool is hosted?. As a result, presuppositions of individual ownership and alleged control of one's tool can be problematised, and their socio-material entanglements can be openly negotiated.

Experimental tools and workflows are not replacements for easy-to-use commercial design tools. They are also not merely speculative or illustrative. Those who are imagining, building, and using such tools develop a critical consciousness of their potential failures and learn together how to lean into these tools' frictions. Such a design approach does not aim at improving products and processes for the sake of efficiency. The publishing examples discussed in this text set into motion other possible ways of designing and working together with and through technical objects that are not utilitarian/solution-driven but aim at self-determined collective learning and the possibility of sustaining a critical discourse.

To circumvent fetishisation and generalisation of 'inefficient' designing, it is crucial to shift the focus from the more general understanding of a design process as a discipline-based and mere instrumental matter towards designing as a dispersed practice that derives from specific contexts and peculiar socio-technical conducts that evolve over a longer time, sometimes in an unpredictable manner. Thus, one cannot circumnavigate the mundane administrative aspects and the reproductive labour inherent to the work of self-organising as well as the at times murky social dynamics. In that light, designing publications collectively with self-built experimental tools does not align with the premise of design to deliberately impose meaningful order (Papanek, 1973). Such a collective workflow, in fact, works against the idea that a design process is linear and forward moving – progressing. In contrast, this collective process moves sideways, as it cuts across different timelines, geographies and subjectivities.



The activity of designing experimental publications with self-made tools for H&D is interlinked with organising temporal get-togethers in which technologies and practices are shared in an informal and hands-on manner, without the pressure to produce anything precious or meaningful at the end. Resorting to short-lived workshops is, on the one hand, sustaining spaces for experimentation in a productivity-oriented sector; on the other hand, short workshops are all that precarious cultural workers can afford in terms of their participation. To accommodate various levels of involvement and the different timelines of the collaborators, a process designing sideways requires articulations and approaches that resist linearity and progress-oriented understandings of a design process to prevent normalisation of such unstable working conditions.

With reference to feminist theorist and physicist Karen Barad, what is needed in such a process 'is a method attuned to its entanglements' (2007: 29). Collectively imagined and built tools are relational things and time is needed to attune to them. The same applies to the systems and contexts they evolve in and interact with, which also require attunement. In that regard, designing sideways refuses a type of design that tends to be justified through capitalist means, through efficiency-driven paradigms, that position designers as service providers who ought to move from prefigured idea to product as fast as possible ensuring a return of investment.

Learning to lean into the contingencies that come with involving others (other tools, other people) into a design process, comes with the realisation that designing sideways is not precisely a method or a goal in itself. Instead, it can be an 'excuse' to imagine what it means to do things differently from how it might be conventionally done. The unpredictability and inefficiency of designing sideways – its emergent and transformative character – follows the 'pace and pathways of change that are nonlinear and iterative' (Brown, 2017: 50). In her book *Emergent Strategies*, Adrienne Maree Brown describes that '[t]ransformation doesn't happen in a linear way, at least not one we can always stack. It happens in cycles, convergences, explorations. If we release the framework of failure, we can realize that we are in iterative cycles, and we can keep asking ourselves – how do we learn from this?' (Brown, 2017: 51).

### **To conclude...**

By putting forward the proposition of designing sideways, this text discussed a potential shift of conceptual, technical, and aesthetic design frameworks away from paradigms such as seamless

interaction and productivity. Instead, it emphasised consciously 'inefficient' processes in which design tools are considered part of a network of relations. Self-made and (re-)appropriated design tools estrange design processes, engendering learning through discovery and producing unforeseen outcomes.

The publishing examples discussed in this text evolved within the context of H&D, a self-organised group of cultural practitioners who resort to formats such as short-lived workshops in order to sustain spaces for experimentation within a productivity-oriented design sector. Such publishing projects therefore need to be understood in relation to the socio-material realities, the uncertainties such collectives learn to negotiate. While catering to varying levels of involvement and the diverse timelines of collaborators, the methods and approaches developed in such a context consequently circumnavigate linear and progress-focused understandings of a design process.

Drawing on Harman (2002), Ahmed (2019), Chun (2011), and Stengers (2021), I argued that publishing tools and workflows such as ChattyPub and Wiki-to print are technically and conceptually enmeshed in the functioning of the H&D collective and are remarkable in the way they sustain a critical awareness of a design software's implications. As the accessibility of ChattyPub is interlinked with server infrastructures that are run by H&D members who prioritise collective learning and collective care, it resists limitless expansion. ChattyPub, wiki-to-print, and the publications they generate, develop sideways along with a dispersed self-organised collective. This contingent design process destabilises grand narratives of upward growth. The continuation of collective designing with ChattyPub is not about improving speed or efficiency with the tool but to embrace its ruptures and let it reveal (mis)conceptions about design as an individualised, linear, and frictionless process, as it is taught and practised within the field of design and publishing. Breaking with the habitual design model of intuitive and seamless software use, these inefficient tools refuse to become routines and are generative and inventive as they develop other-than-utilitarian relationships between designers and their tools, along with context-specific criteria and articulations for usefulness or usability of such tools.

By discussing tools and workflows that evolved in H&D workshops, as well as in written conversations, and by reconstructing their timelines, I hope to have contributed to a growing community of critical designers and developers that consider it relevant to question

and rethink their tool-ecologies, favouring situated collective learning and discourse.

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## End Notes

<sup>i</sup> H&D started as a workshop-based meetup series in Amsterdam in 2013 and was initially organised by James Bryan Graves (software developer), Selby Gildemacher (visual artist) and Anja Groten (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), sl.vie (2023), and vo e.zn (2023). James Bryan Graves left the collective in 2018, Margarita Osipian in 2021, and André Fincato in 2023.

<sup>ii</sup> See workshop announcement on the H&D website: <https://hackersanddesigners.nl/experimental-chatroom.html>

<sup>iii</sup> The 'Experimental Chatroom' workshop script developed by Xin Xin and Lark VCR: <https://experimental-chatroom-workshop.glitch.me/script.html>

iv Program of the H&D Summer Academy 2021:  
<https://hackersanddesigners.nl/activities?type=hdsa2021>

v <https://zulip.com/>

vi 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>

vii For instance, in 2021 at Galerie für Zeitgenössische Kunst (GfZK) Leipzig’s *Digit – Digitale Prototypen im Museum* project (<https://digit.gfzk.de/de>) and at the self-organised H&D symposium *Open\* tools for collective organizing* in Amsterdam ([https://hackersanddesigners.nl/s/Activities/p/Open%2A\\_tools\\_for\\_collective\\_organizing](https://hackersanddesigners.nl/s/Activities/p/Open%2A_tools_for_collective_organizing)); and, in 2023, with the Nocturne platform in Berlin (<https://nocturne-plattform.de/publikation/spectres-of-learning>).

viii The publication *Network Imaginaries* was self-published by H&D in an edition of 250 in 2021 in Amsterdam.  
<https://hackersanddesigners.nl/network-imaginaries-publication.html>

ix <https://documenta-fifteen.de/kalender/new-rural-school-activation-making-matters-1-2/>; <https://research.wdka.nl/index.php/news-activities/making-matters-workshop-documenta-fifteen/>

x On the occasion of the book launch of *Making Matters. A Vocabulary of Collective Arts* (Valiz, 2022), H&D (Loes Bogers, Anja Groten, Karl Moubarak), together with Elaine W. Ho (Display Distribute collective) and Florian Cramer, facilitated a 2-day walk-in workshop at *documenta fifteen* in Kassel by invitation of Jatiwangi art Factory. All three collectives also contributed to the book.

<https://hackersanddesigners.nl/making-matters-workshop-documenta-15.html>

xi ‘The distribution of curatorial control, its multidisciplinary, collectivity, and shared ownership made *documenta fifteen* a radical, large-scale, real-life commoning experiment: by actually running and living a commons, rather than just imagining it’ (Cramer & Kentgens, 2023: 5).

<sup>xii</sup> HTML stands for Hypertext Markup Language. It is a standard markup language for Web pages and ‘the most basic building block of the Web. It defines the meaning and structure of web content’.

<https://developer.mozilla.org/en-US/docs/Web/HTML>

<sup>xiii</sup> Sublime Text is an open source text editor for code and markup.

<https://www.sublimetext.com/>

<sup>xiv</sup> Atom is an open source editor developed by GitHub.

<sup>xv</sup> ChattyPub was activated during a Live Action Role Play (LARP) in a workshop at the H&D Summer Camp 2024.

<https://hackersanddesigners.nl/chattylarp.html>

<sup>xvi</sup> The H&D ‘Code of Conduct’ was initiated in 2020 and is irregularly updated. The last update took place in May 2024. Contributors are: Loes Bogers, André Fincato, Anja Groten, Juliette Lizotte, Karl Moubarak, Margarita Osipian, Sylvie van Wijk.

<https://hackersanddesigners.nl/code-of-conduct>

<sup>xvii</sup> A version of the ‘Feminist Server Manifesto’ was included in the publication *Are You Being Served* (Brussels: Constant, 2014):

[https://areyoubeingserved.constantvzw.org/Summit\\_afterlife.xhtml](https://areyoubeingserved.constantvzw.org/Summit_afterlife.xhtml) 1). A version published on Etherpad has been regularly changed and annotated until 2018:

<https://pad.constantvzw.org/p/feministserver>.

<sup>xviii</sup> In contexts other than the Netherlands, graphic design is also referred to as communication design or visual communication.

<sup>xix</sup> Adobe absorbed its main competitor Marcomedia in 2005 and sustained monopoly since, releasing new versions regularly. See also Flynn, 2005.

<sup>xx</sup> For example, see Gianordoli, G. (2019) ‘How We Implemented a Baseline Grid Using CSS’, *NYT Open*.

<https://open.nytimes.com/how-we-implemented-a-baseline-grid-using-css-cb13cac45201>

<sup>xxi</sup> The ‘Momentary Zine’ has been described as a publishing-karaoke machine. It uses speech input to instantly produce printed output. By speaking into a microphone, a printed zine can be produced – containing image and text. ‘Momentary Zine’ documentation can be found at:

[https://hackersanddesigners.nl/s/Tools/p/Momentary\\_Zine](https://hackersanddesigners.nl/s/Tools/p/Momentary_Zine)

<sup>xxii</sup> H&D have been publishing code, workshop documentation, and publications under the Collective Conditions for Re-Use (CC4r) licence. The first sentences of the licence read: ‘The authored work released under the CC4r was never yours to begin with. The CC4r considers authorship to be part of a collective cultural effort and rejects authorship as ownership derived from individual genius. This means to recognize that it is situated in social and historical conditions and that there may be reasons to refrain from release and re-use’.

<https://constantvzw.org/wefts/cc4r.en.html>

<sup>xxiii</sup> The Nonviolent Public License Family:

<https://thufie.lain.haus/NPL.html>;

CC4r: <https://constantvzw.org/wefts/cc4r.en.html>;

H&D ‘Code of Conduct’:

<https://hackersanddesigners.nl/code-of-conduct>

<sup>xxiv</sup> Open Source Publishing: <http://osp.kitchen/>;

Constant Association for Art and Media:

<https://constantvzw.org/site/>; Varia – Center of Everyday

Technology: <https://varia.zone/>; fanfare:

<https://fanfarefanfare.nl/>, <http://fanfareinc.world/colophon>;

Eva Weinmayr:

<http://evaweinmayr.com/work-categories/publishing/>,

<http://andpublishing.org/>

<sup>xxv</sup> 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>.

<sup>xxvi</sup> PUB student initiative of the Sandberg Instituut:

<https://pub.sandberg.nl/>; Piet Zwart Experimental Publishing

Master: <https://www.pzwart.nl/experimental-publishing>; Institute

of Network Cultures: <https://networkcultures.org>



<sup>xxvii</sup> According to Wikipedia ‘the MediaWiki software is used by tens of thousands of websites and thousands of companies and organisations. It powers Wikipedia and also this website’ (<https://www.mediawiki.org/wiki/MediaWiki>); Etherpad is an open source software that allows editing documents collaboratively in real-time (<https://etherpad.org/>); Ethercalc is an open source online spreadsheet software ([hackersanddesigners.nl/s/Tools/p/H%26D\\_Ethercalc](https://hackersanddesigners.nl/s/Tools/p/H%26D_Ethercalc)).

<sup>xxviii</sup> The H&D website uses MediaWiki as a content management system:  
[hackersanddesigners.nl/s/Publishing/p/The\\_making\\_of\\_hackersanddesigners.nl](https://hackersanddesigners.nl/s/Publishing/p/The_making_of_hackersanddesigners.nl)

<sup>xxix</sup> An example is the 2nd edition of the occasional publication *H&D Bulletin*, which H&D designed using Octomode. Octomode was developed by Varia. It is a collective editing space for PDF making, using Etherpad, Paged.js, and Flask. Varia write about Octomode: ‘Inspired by the non-centralized, tentacular cognition capabilities of the octopus, we imagined a space in which the artificial boundaries of writing and designing can be crossed; where writing, editing, and designing can be done in one environment simultaneously, allowing the format to influence the matter and vice-versa’ (<https://cc.vvvvvvaria.org/wiki/Octomode> <https://hackersanddesigners.nl/hd-bulletin-2.html>).

<sup>xxx</sup> <https://varia.zone/>

<sup>xxxi</sup> Constant (Mugrefya, E., & Snelting, F.) (eds) (2020) *Diversions*, <https://diversions.constantvzw.org/>; Pritchard, H. V. & Snelting, F. (2022) *Infrastructural Interactions*, [https://titipi.org/wiki-to-pdf/unfold/Infrastructural\\_Interactions](https://titipi.org/wiki-to-pdf/unfold/Infrastructural_Interactions); Constant (2020) *Mondothèque*, [https://www.mondothèque.be/wiki/index.php?title=Main\\_Page](https://www.mondothèque.be/wiki/index.php?title=Main_Page)

<sup>xxxii</sup> <https://pagedjs.org/>; <https://p5js.org/>