

# Design as Common Good

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## Digital Tools for Collaborative Design Processes

Moritz Greiner-Petter<sup>\*a</sup>, Merle Ibach<sup>b</sup>

<sup>a</sup>FHNW Academy of Art and Design, Institute of Experimental Design and Media Cultures

<sup>b</sup>FHNW Academy of Art and Design, Institute Integrative Design

\*moritz.greinerpetter@fhnw.ch

**Abstract** | Diverse practices of collaboration in design, research, teaching, or academia increasingly rely on digital online tools to facilitate processes of working and creating together. But a lot of the available digital platforms are not necessarily designed with the particular needs of these respective practices in mind. Rather, they might focus on commercial contexts, be built on limiting assumptions about work practices and collaboration, or simply lack capabilities for a substantial support of specific knowledge and creative practices within more diverse collaborative settings. In this paper, we take an exemplary look at three widely-used digital collaboration tools and their capacities and limitations to support collaborative design processes in particular. We aim to highlight a few of their embedded dispositions and built-in understandings of collaboration, creativity or productivity and suggest some aspirations for alternative designs.

**Keywords:** Digital Tools, Online Collaboration, Design Processes, Collaboration Design, Interface Critique

# 1. Introduction

Over the past year, many of us working in the various fields of design practice, education, research or academia were confronted with and, more than ever, relied on a plethora of online communication and collaboration tools. The maintenance of our professional and personal lives to an unprecedented degree where subject to an infrastructure of digitally-mediated services and applications. And for many, it might at once have made more apparent the social, spatial and technical conditions on which collaborative processes may depend.

This landscape of digital communication and collaboration tools to be encountered, for a large part, already existed before the emergency of a global pandemic deemed them essential. At least since the 1980s, the ideas, concepts and aspirations behind “groupware”, as this category of software was favourably labeled at the time, were clearly articulated (see for instance Bullen & Johansen, 1988). Many of these early groupware concepts we see realized as full-scale, affordable and readily available solutions in everyday online tools today. Like a lot of end-user developments in computing, the initial ideas around *collaborative software* stemmed for a large part from a world of business and office work practices as the primal scene for popularising personal computers. These contexts informed conceptual genealogies of and socio-technical imaginaries within computing that then become encoded in the design paradigms and metaphors behind specific implementations. As Nolwenn Maudet notes on the example of the desktop metaphor, still prevalent in many personal computers, “[i]t was not any kind of office that inspired this design, it was a executive secretary office, occupied with copy-editing, file organization and focusing on production and efficiency.” (Maudet, 2017, under “Tools’ Myths”) And she adds, “[a] type of work very different from what is generally considered design work.” (ibid.) Similarly, the collaborative digital media environments we find ourselves in today are not neutral facilitators for universal collaborative processes. They come with their own built-in dispositions, mentalities and understandings of work, communication and collaboration practices. As such, they inevitably structure and shape ways of working and organisation, modes of expression, creative processes, group dynamics and so on. Thus, the design of digital tools for collaboration has implications as an operationalised and infrastructural form of the *design of collaboration* itself.

During 2020, we conducted an exploratory teaching and development project called “Co-Lab” at the FHNW Academy of Art and Design (led by Dr. Christine Schranz at the Institute Integrative Design). Together with design students of diverse disciplinary backgrounds, we explored the role and potentials of digital tools for the support of collaborative design processes in particular. Based on

shared experiences and discussions, the aim of the project was to develop novel approaches for tools in that space. The initial motivation for the project came from our own frustrations as designers with the available software landscape as a lot of existing tools don't support the particular needs arising within our own design and research practices. Especially in the context of design teaching that *Co-Lab* was starting from, we missed tools that foster a deliberate experimentation with non-prescriptive forms of collaboration. As the majority of available mainstream tools in our view heavily focuses on commercial design business practices and workflows in professional teams, we see a lack of consideration for the wealth of practised design processes that don't necessarily perform within these logics.

Against this background and as an approach for a productive critique, we want to take a closer look at existing digital tools for design collaboration to examine their capabilities and limitations in supporting those processes. By pointing out some of their embedded conceptual and design paradigms, we aim to highlight their built-in dispositions of designing together. So what understandings of collaboration and creative practice are configured, imagined, and promoted through common digital collaboration tools? How are these notions prescribed, deliberately or unwittingly, in the features and (in)capabilities, design principles, modes of organisation, aesthetics, and rhetorics of these platforms? And how then, do these paradigms relate to the possible needs of a specific and diverse field like that of collaborative design?

## 2. An Analysis of Existing Collaboration Tools

In the following, we look closer at three widely-used commercial tools for the support of collaborative work practices, namely *Google Docs*, *Miro*, and *Figma*. These tools differ quite a bit in their specificity of use, features, target users, and their relation and positioning towards 'design'. In our perception though, they are commonly used or at least referred to by design practitioners and teams to various degrees and at various stages of design processes. *Google Docs* and the wider *Google Workspace* is an online office productivity and document management suite, that in our own experience has become a common default platform for organising collaborative work of all kinds, design projects included. *Miro* is an online visual whiteboard environment that heavily borrows from concepts and aesthetics popularly associated with design methods. Its visual working style might be a reason it appears as generally appealing to design practitioners. *Figma* is an online interface design tool, resembling software tools known to graphic designers and is most explicitly targeted to design professionals in this list.

## 2.1 *Google Docs*: Whose Defaults?

*Google Docs* and the related office applications of *Google Workspace* (formerly known as *G Suite*) are a set of closely integrated office productivity and document editing tools targeted at general purpose collaboration needs. Google's ecosystem of web-based office tools might be among the most widely-used online collaboration platforms, with at least the cloud storage service they are running on reportedly having one billion active users in 2018 (Lardinois, 2018). The suite of tools for word processing, spreadsheets, or slide presentations are for a large part straightforward functional replications of commonplace office tools most users are generally familiar with. This familiarity also might have helped Google's platform in becoming so well established (other factors might be a large amount of users already being in Google's ecosystem and an extensive functionality offered by the unpaid version of the service). These known single-user tools are then augmented by collaborative features that allow users to freely share documents, work on them simultaneously, or add comments, all within the browser on any device. This integration of elementary collaboration capabilities (user management, sharing, comments, version history) for elevating conventional single-user applications into collaborative domains appears as a general pattern often encountered. It also represents a somewhat technically-guided design paradigm, meaning that it is primarily a linear extrapolation from single-user behaviour to multi-user contexts. But this general approach might not necessarily embody a particularly elaborate vision of what it means to work together and how this qualitatively different context of collaborative use could be facilitated by digital tools more meaningfully.

The popularity of the platform and the supposed familiarity of the supported document types and functionalities has made *Google Docs* into a low-threshold standard choice for a wide range of collaboration endeavours. In our own experience within our personal working cultures, the beginning of most collaborative projects nowadays is often marked by a new *Google Doc*. But its office work heritage operating within a document metaphor also tends to preformat processes in various ways. For one, you start with a blank document prepared to hold a range of separate pages that digitally mimic white office paper formats. To some degree, you start with a clearly framed idea of the form of the result you are going to produce in such an environment. More crucial though, most document types in the Google platform are text-focussed. As such, they privilege textual modes of expression and contribution, not only for the actual content within the document but also for ways to react to and negotiate collaborative work, through comments for instance. This general tendency may subsequently also shift the attention to aspects of a project work that also can be best captured by writing. Which similarly privileges certain

competencies, characters and working styles in a group. Within design processes, more diverse knowledge and media practices that might be additionally favoured by design practitioners are at risk to be neglected, as they are not as straightforward and easily supported within conventional document formats. For instance, working with large amounts of visual media material in similarly discursive ways as you would with text is disproportionately harder in *word processing* environments.

Furthermore, as is the case with most document-based platforms of this kind, the shared files themselves are often the most tangible and perhaps only facility for where collaboration is carried out. Creating a shared document in many cases serves the primary purpose of creating a space and a referenceable representation for a collective task that otherwise would not exist. The in-built features and formatting capabilities of the document editing tools (comments, in-text annotations, color and formatting schemes etc.) then have to become the main site for organising, communicating, negotiating, or discussing within a project. Additionally, as collaborative digital practices are commonly distributed over several separate platforms (one for main communication, one for concept documents, one for file and research collection etc.), it is difficult to 'locate' the project in a way that would create a shared and more supporting representation of the project structure, process, and dynamics, beyond scattered folders and files.

Thus, the 'defaultness' of tools like *Google Docs* might be deceiving and obfuscate the need for more varied and flexible digital formats of expression. A collection of documents might also be limited in creating a more graspable understanding and representation of a collective process. It would be worthwhile to explore further, what a default document format for collective design work would look like. And whether the document is the most adequate and insightful metaphor after all.

## 2.2 *Miro*: Confined Creativity

*Miro* is a web-based whiteboard environment, where several users can work simultaneously on a seemingly boundless two-dimensional "canvas" that aims to replicate the functionality of physical whiteboards. The work space can be navigated and zoomed like on a digital map. Users can create drawings, graphical shapes, text, diagram and media elements anywhere on the canvas and arrange or scale them freely, while in co-presence with other users that see changes happening live. As such, the interface at first appears relatively open and unbiased towards any specific working style.

In contrast to the openness and creative freedom suggested by the whiteboard interface, *Miro* is assertively intended as a business productivity platform,

positioned as a complete collaboration hub for effective and efficient team work of not closer defined character. *Miro* is “Where ... teams get things done” and “Everything you need to do better work”, supporting an “ideal and agile workflow”, according to statements from the product’s website ([www.miro.com](http://www.miro.com)). Despite its name, which undoubtedly tries to evoke artistic aspirations, art production or experimental design practices are not among the featured use cases of *Miro*’s promotional material. Rather, *Miro* represents the cultural shift of a general diffusion and normalisation of creative practices, methods, aesthetics, and mentalities within all types of professional work contexts and within the productivity tools accordingly. The platform appears to be heavily committed to techniques and aesthetics associated with design thinking and related process methods or diagramming techniques. As a noticeable indication, *Miro* features a dedicated tool for creating sticky notes among the top three functions in its toolbar, which at least underlines a preference for certain styles and aesthetics of work, when considering all possible alternative choices for prioritising its core functionalities. Configuring and staging collaborative work and business practices as creative exercises per se we could read as a manifestation of a culturally imperative “creativity dispositif” (see Reckwitz, 2012). If participation in collaboration is constantly invoked as a ‘creative’ expression through the facilitating software environments, the sense of being and performing ‘creative’ becomes a perceived prerequisite demanded for partaking in collaboration.

As a core mechanism to contain its inherent potential for unregulated creative expression and to ensure its promised efficiency and productivity, *Miro* further employs templates. The use of templates is repeatedly suggested and recommended during the onboarding process, through in-tool reminders, or product update announcements. *Miro* templates are blank but prestructured visual configurations composed from the available text, graphic and diagram elements of the tool. The growing number of dozens of official templates are primarily based on various methods, diagramming techniques, or process models popular in business, ideation, product development, marketing, and similar contexts. The templates mostly contain a comprehensible and limited project task and often appear as complete and set structures, inviting to be filled out more than to be extended or reconfigured. One would expect the collaborative whiteboard capabilities of *Miro* to exhibit a tendency for messy and potentially unreadable arrangements, as users are able to place elements freely in space and scale without pre-given guidelines for organisation. To counter that, templates appear as a solution to fence in and regulate working styles and process formats, at the same time suggesting unordered project processes as highly unpreferred. From the productivity perspective of *Miro*, templates reduce the possible friction and burden of having to negotiate and coordinate a shared understanding of the conventions of collaboration within

the team in regards to procedures, formats of expression, the forms of contribution and so on. Instead, the templates ensure a general readability of the produced process documents compared to the idiosyncratic messiness the whiteboard logics would otherwise invite. They further aim to institute an instant compatibility between diverse team members by proposing established and popular process methods. Thus, *Miro's* templates promise readily available and proven methodologies that are guaranteed to reproduce successful project processes in systematic and predictable fashion by any kind of professional team.

Thus, *Miro* at first offers a sophisticated whiteboard environment that is potentially appealing to design practitioners as it allows visually-oriented working styles that go beyond linear document types. Though the offered functionalities might not support designerly media and knowledge practices particularly well, as for instance the arrangement and reorganisation of large amounts of visual material can become cumbersome. Moreover, the tool is clearly designed and communicated as a creativity-imbued productivity suite for business processes, while putting a lot of effort in containing its inherent creative potentials. The tool may thus feel both attractive and uninviting for many creative practitioners.

### 2.3 *Figma*: Flat Design

*Figma* is the collaboration tool most explicitly targeted towards design professionals in this list. It is probably one of the most prominent web-based design tools by now, as it features a quite sophisticated graphic design editor with functionalities that a lot of visual designers are familiar with from conventional mainstream design tools (like Illustrator or Sketch). The editor comes with a set of features specifically catered for interface design workflows. These design capabilities are augmented with the by now standard set of collaboration features (like sharing open design files live with other team members and invite them to comment or edit the designs for instance) as well as more context-specific collaboration features like sharing design assets across files and team members.

*Figma* is “Where teams design together”, according to the tagline on the product’s website ([www.figma.com](http://www.figma.com)). Although ‘design’ in the case of *Figma* explicitly refers to interface design. The web-based design tool offers various screen design and interface prototyping capabilities that are emphatically targeted towards design teams working on websites, apps and other first and foremost digital, screen-based products. As such, it is a specialised tool particularly fitted to interface design processes. With digital products already being *Figma's* targeted design output the tool captures a field of design that maybe more than others lends itself to being moved to a digital collaboration

space in the first place. Other design disciplines, practices, or aspects of design processes might need much more effort and attention to be translated into online tools as effectively. Especially disciplines dealing with spatial, object-based, material, tactile and other sensory design qualities may encounter limitations in developing and representing their design process adequately in an environment like *Figma*.

It is further worth noting that the type of design output *Figma* is intended for operates in a somewhat rigid and regulated design space itself. The design of interfaces for websites and software applications is highly conditioned by conventions and user expectations, established design patterns and interface design guidelines enforced by operating system manufacturers. As such, *Figma* readily supports certain standard solutions and design patterns (like default button behaviours or screen transitions). Compared to that, it takes noticeably more effort and creative investment to diverge from these suggested conventions to realize completely different understandings of how an app could behave otherwise. *Figma* as a specialized design tool is thus quite limited in its ability to support different design processes and disciplines that are not aiming at interface solutions, because those expanded practices may be inhibited by the overarching metaphors and workflows the platform privileges.

The suggested workflows in *Figma* also implicitly expect a separation of expertise domains within a collaborative team. On the value of its collaboration features the website states: "Invite folks into your design process – Enable others to add copy, grab specs, and give you feedback, so you ship better work." ([www.figma.com/collaboration](http://www.figma.com/collaboration)). For one, the statement noticeably addresses a single user, in that case an interface designer, and the value they could gain from basically opening up their design files to colleagues. It further details how each "trade" in the team interacts with the design files from the perspective of their respective "jobs" in a project (the copywriter adds copy, the coder grabs specifications, everyone gives feedback from their side). Although this might be perfectly suited for how projects are organised in professional design and development teams, it might pertain less to other design project constellations, co-design processes, or participatory projects for instance. Here, the roles, distribution of expertise and responsibilities of collaborators and participants might happen to be much more overlapping, less defined, or changing shape over the course of a project. Furthermore, *Figma* promises to remove "all the bad parts of collaboration" and to get "everyone on the same page-literally." (ibid.). Seamless cooperation is often presented as a question of just choosing the right tool. The visibility and transparency of shared working documents and design files is figured as the technically-deligated facilitator for creating commonality and consensus. But this notion might underestimate the dynamics, efforts and obstacles involved in developing a shared understanding within a collaborative design project. And it might similarly neglect the genuine



creative and social potentials of such collaborative frictions. Therefore, it seems at least worth to ask and explore further what more radical understandings of “inviting folks into your design process” and “getting everyone on the same page” could be.

Thus, *Figma* at first offers a sophisticated and familiar set of online tools catered to design professionals. But its environment is palpably streamlined towards a narrow field of design workflows and outcomes. Namely interface design practices that are also already versed in working through digital formats and design materials. *Figma* further exemplifies a somewhat transactional and frictionless collaborative paradigm that might be common in many existing collaboration tools.

### 3. Summary

All of the tools discussed above of course lend themselves to various creative appropriations and opportunistic uses beyond and despite their suggested target use cases, aesthetics, or marketing rhetorics. As such, they undoubtedly could be incorporated productively at different stages of collaborative design processes of any kind. The simple collaboration features of *Google Docs* already elevate something like basic document editing to a potent and unforeseen collaborative infrastructure. A specialized tool like *Figma* may find its way into practices and design processes completely unrelated to interface design, as it offers partial features that designers in general may find attractive and can, to a limited degree, make productive in their contexts. Similarly, the visual working style of *Miro* might be conceptually appealing to design practitioners. But the overly general whiteboard functionalities may fail at supporting more specific and advanced designerly media practices, while the templates may offer only limiting characterisations of processes that design practitioners might find inappropriate for their practice. But the fact that designers make those tools more or less work in their collaborative practices, in our view, rather signifies the lack of and the demand for tools with more versatile and context-specific configurations of these appealing capabilities. But in ways that would be able to facilitate quite different aspects and ideas of collaborative design processes, that are better suited to the knowledge and media practices involved, and that support open-ended, non-prescriptive ways of how collaboration and design processes are supposed to work and look like. From our own experiences, designers then are often left to retreat to prevailing, more “general purpose” platforms (like *Google Docs* or *Miro*) and try to make them work for and within their practices. But, as we tried to show, these tools don’t implement universally appropriate and applicable notions of collaboration, creative work or design processes, but come with predisposed tendencies for certain aesthetics,

working styles, modes of expression or forms of organisation. These shape the practices and dynamics of collaborative processes they are scaffolding in possibly unpreferable and often maybe unconscious ways. As users and designers of such tools, we thus should be attentive to the question whether they support the kinds of practices and modes of collaboration we desire.

From our survey of exemplary platforms as well as informed by our wider discussions within the project *Co-Lab*, we derive a preliminary list of conceptual requirements for the design of prospective tools that foster different notions of collaboration and better support particular needs within collective design processes:

- Tools that are built upon the diversity of practised design processes apart from professionally normative or specialised workflows and domains of designing. Tools that embrace less commercially dominant working styles and project constellations, in also possibly less lucrative contexts like design education.
- Tools that offer more inventive and appropriate sets of formats not based on metaphors of office documents and business workflows or the primacy of writing. Tools that are better tailored to the diverse forms of knowledge, modes of representation, and media techniques through which design processes operate. And that find new ways in conveying qualities of design processes that are not as easily translated into digital environments.
- Tools that give a sensible shape and a shared, manageable representation to a project beyond the fragmentation of distributed documents and activities across various platforms. Collaborative design processes can be fragile, messy, and open-ended and collaboration tools should be better able to scaffold that.
- Tools that don't figure collaboration as a technical 'feature' or something to be 'solved' through technical means alone. Tools that allow to open up and share design processes and design process knowledge in more radical ways to enable participation and involvement beyond supposed roles and expertise.
- Tools that create spaces and structures for negotiation, contestation, dissensus and friction within collaborative processes. Tools that don't understand their role merely as passive productivity instruments, but that also offer the means for procedures of collective group care and to encourage reflection on the collaborative process itself.

## 4. Conclusion

In this paper, we focussed on the context of collaborative design processes, assumed as both a specific and diverse field of practice. By way of reviewing three exemplary digital collaboration tools we tried to highlight some of their embedded metaphors, principles, and dispositions that in our view limit their suitability in supporting those practices fruitfully. The presented design patterns can be recognised more generally as paradigms to be found in other platforms as well. Thus, the broader argument is a plea for more inventive and reflective approaches towards the design of digital tools, that are able to scaffold collaborative design processes in their specific needs, procedures, and material-aesthetic practices. Novel tools that can productively facilitate a range of actually practiced modes of collaboration or even provoke advanced, experimental, or challenging notions of collaborative organisation and collective creativity. This also points towards the need for more empirical studies of the context-specific dynamics and requirements to be found in practised design processes. A closer praxeological reconstruction of collaborative creative and knowledge practices could accordingly inform more adequate tool designs. Lastly, the trajectories of critique drawn here through the lens of design processes could be applied to other specialised fields of practice as well, that might appear similarly marginalised by the common use cases that most collaboration tools stem from and are targeted at. As digital collaboration tools are increasingly relied on across various professional and everyday practices, it seems essential to scrutinise their conceptual heritages and implemented mindsets in order to develop both more critical and viable alternatives going forward.

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**About the Authors:**

**Moritz Greiner-Petter** is designer and junior researcher at IXDM, FHNW Academy of Art and Design Basel, Switzerland. His research interests are focussed on critical interface theories and the design of epistemic tools and formats.

**Merle Ibach** is junior researcher at IIG / CML, FHNW Academy of Art and Design Basel, Switzerland and a PhD candidate in the doctoral research group "Digital Media / Knowledge Cultures" at Leuphana University, Germany. Her research focus is on design cultures.

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