Chapter 8

Moments of Reading: Making Meaning Through Design and Philosophy

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Introduction

Philosophy often plays a contradictory role when addressing technological design. While it has the ambition to influence design processes and their outcomes, its role is often limited to an external auditor reduced to checklists to be considered after technological development (e.g., Wong et al. 2020; Nordtug and Haldar 2024). We use the term "design" to refer to an exploratory, generative, and reflective practice associated with the practical know-how, embodied ways of producing and/or envisioning a technological tool, process, or service (in line with Cross 1982; Hodges et al. 2017; Redström 2020; Valtonen 2020). In this chapter, this definition is employed via ready-made concepts and articulations of problematic situations, often provided by philosophers, to become somehow embedded in certain aspects of technology (e.g., Albrechtslund 2007; Alfrink et al. 2023). As a reference, let us take AI, a politically charged technology. In response to concerns such as bias, deception, and accountability, introducing philosophical and ethical reflection to the AI design practice is seen as a way to "democratically" or "responsibly" design AI systems. Philosophers and ethicists are thus given the task to define concepts and delimit the boundaries of design problems, while designers are tasked with materially embedding these ideals in the technology.

Using the problem of AI vis-a-vis democracy as a site of encounter between design and philosophy, in this chapter, we suggest that these fields have a productive overlap that has been hitherto underexplored. By taking advantage of the conceptual ambiguity of these three terms (i.e., AI, design, democracy), we do not aim to provide definitive or "correct" new terms or a range of solutions to the problems posed by the use of AI in democracies. We do intend, however, to show that developing and practicing design and philosophy in a nonhierarchical, nonsupplementary manner allows one not only to question the dominant conceptual assumptions and their normative and political implications but also to expand the space of diverse interventions. To explore this claim, our chapter

presents the *Moments of Reading* workshop as a practice of collective conceptual articulation, a thinking-through-doing exercise that explores the conceptual relationships between AI, democracy, and design and their surrounding lexicons through "designerly inquiry" (Schön 2013).

The workshop took place twice, in March and October 2023, in the Netherlands, at the Delft University Technology and at the University of Groningen, respectively, within the framework of the AI DeMoS Lab.[1] The lab's goal is to explore the relationship between AI and democracy through the prisms of philosophy and design, which gave impetus to the workshop. The title of the workshop reflects upon the intuition that conceptual definitions are not an expression of a stable identity but moments of reading in an iterative interpretative practice. It also follows the scholarship suggesting that the way we talk about technologies is productively related to how we operationalize the technological visions and conceptual definitions in developmental practices (Grunwald 2018). The initial goal of the *Moments of Reading* workshop was thus to open a conceptual complexity between the vocabulary around AI, democracy, and design through a card-based engagement with numerous participants. Using this workshop as a conceptual laboratory, in this paper, we will reflect on how it can serve as an approach to provide alternative conceptual articulations and be a model for doing philosophy through the generative practices of design.

In developing our version of the productive overlap between philosophy and design to address sociotechnical problems, we will show how the two often embed elements of each other in their workings, specifically when engaging in participatory research aimed at knowledge-production practices. Through our workshop approach, we will show how conceptual work in philosophy and practice-based research in design can reinvigorate each other in reframing conceptual exercises as collective knowledge-production practices. In doing so, we put forward a productive overlap between design and philosophy as a co-creation practice, contributing both to the procedural and substantive components of research. This practical approach to philosophy crafts thinking not as an isolated and finite theoretical exercise but as a (hermeneutic) practice, that is, a work of interpretation and thus relational, contingent, political, and only intermittently stable (Kudina 2024). We suggest that it is this kind of thinking and doing that is essential in approaching sociotechnical challenges, such as the relation between AI design and democracy. Consequently, our understanding of technology extends beyond the focus on material artifacts or use practices to also include reflection on how the conceptual, in its both philosophical and design senses, is expressed through collective material practices of (meaning-)making.

The chapter proceeds as follows. First, we identify productive similarities between design and philosophy in them both being material and collective practices, allowing them to benefit from the nonhierarchical, nonsubservient, and nonsupplementary relationship. Second, through reflecting on the *Moments of Reading* workshop, we show how working with concepts visually exposes implicit connections between philosophy and design, especially if conceptual clarity is not positioned as an end goal. Third, we posit that such epistemological rethinking

of the relationship between philosophy and design implies political distancing from the principle of pre-given identities, manifested in the oft-used approaches of stakeholder engagement, and valuing nonidentity as an organizing principle for conceptual articulation.

Design × Philosophy: Connecting Disciplines through Material and Collective Practices

In the opening of his seminal essay "Traditional and Critical Theory," Max Horkheimer addresses the question of what theory is:

> Theory for most researchers is the sum-total of propositions about a subject, the propositions being so linked with each other that a few are basic and the rest derive from these. The smaller the number of primary principles in comparison with the derivations, the more perfect the theory. […] If experience and theory contradict each other, one of the two must be reexamined.
>
> (Horkheimer 1982: 188)

In this text, Horkheimer provides a general sketch of how traditional theory implicitly conceives itself and proposes an agenda of what critical theory ought to be: interfering and changing the world through ideological critique rather than solely understanding it through conceptual representation.

Horkheimer then gives Henri Poincaré's metaphor of science as a library that must be continuously expanded as an example of traditional theory's self-image. Interestingly, Poincaré's metaphor for science and theory is a technologically mediated practice, that of the library. This library, however, remains ideal and immaterial. This is because Poincaré uses the library example only as a normative metaphor for knowledge production and not as a reference to an actual library. Even when real, material libraries are themselves a technique for producing, archiving, and distributing knowledge.

In this metaphor, knowledge is regarded as something obtained after a long analytic trajectory: dissecting general, vague, ungrounded, and superficial opinions to the specific, empirically grounded, and profound scientific assertion. This is a model of knowledge inherited from the long-standing inductive tradition that imagines it as observation and categorization through conceptual delimitation. That is, an analysis breaking down abstract generalities into concrete and "grounded" concepts that can refer back to the "real" world out there.[2]

In a similar spirit to Horkheimer, in this chapter, we argue for a reimagining of the ways in which knowledge is practiced. Instead of recurring to ideological critique, we propose an image of knowledge linked to questions and practices in design. If knowledge is a library or any other technologically mediated practice, then the relationship between design and knowledge production (call it science or philosophy) is not one in which philosophy remains an external theorization to design practice. It is not one in which design serves as decoration or creative

translation of "serious and abstract" conceptual work. Instead, we argue that philosophy, even when seemingly abstract and conceptual, always implies practice—a practice that is mediated by design.

Design has often been framed as a meta-discipline bridging diverse areas of expertise (Ozkaramanli et al. 2022). Instead of content, design provides practical know-how, offering methods and tools to escape the compartmentalization of expert knowledge and allow for transdisciplinarity (Ozkaramanli et al. 2022). We see design as enabling a practical and materialist approach to theoretical work at large. The idea that conceptual work is mediated by design practices also mirrors our position on technology that, like language, is determined by and simultaneously determines material, social, and symbolic practices.

Design research also has a strong focus on the materiality of research practices (Laurey, Soekijad, and Huysman 2022). Design practices often involve a blend of a thought process and hands-on implementation (Valtonen 2020). According to Nelson and Stolterman (2012), "design wisdom" encompasses not only reasoning, observation, and reflection but also imagination, action, and the tangible act of creation. Similarly, Manzini (2015) views design as a fusion of three human skills—critical thinking, creativity, and practicality–enabling the envisioning of possibilities and concrete ways to get there.

This generative quality of design dates back to Herbert Simon's seminal definition of design practice, which asserts that anyone who devises strategies to transform existing situations into preferred ones is engaging in design (Simon 1969). These practices not only involve crafting physical objects, systems, and experiences but also generating knowledge that contributes to the construction of potential future worlds (Hodges et al. 2017). Throughout the design process, this active knowledge generation facilitates the formation of new meanings and the establishment of previously undiscovered connections, associations, and concepts. Dedicated to *designing something*, practitioners are keenly aware of the manual work with objects needed to produce an artifact, system, service, or technology. Manual know-how, or the embodied routines for handling material objects, is the very knowledge generated through this material work that constitutes the substance of design. Our understanding of design thus relates to the "embodied turn" (Nevile 2015), whereby all design practices, whether material, linguistic, gestural, or conceptual, are "performed with and through situated, physical, social, bodily interactions, which are themselves constitutive of the meaning and consequentiality of those actions" (Matthews et al. 2021: 3).

The critical offshoots of design research, such as critical making (Ratto 2011; Kramer et al. 2015; Bogers and Chiappini 2019), critical design (Dunne 2008), material speculation (Wakkary, Oogjes, and Behzad 2022), and critical technical practice (Agre 1997), all share the ambition of expanding design from producing functioning devices toward practicing design as a process enabling reflection and critique of the conditions that create and provide sense to those very functioning devices. In many ways, critical design/making mirrors the ambitions of the philosophical critical project going back to Kant: exposing the conditions of possibility of thought and action. Wakkary et al. (2022) put this

aptly when describing material speculation: "potential reasoning would include not only 'what is this thing' but also 'what are the conditions for its existence' (e.g., including the systemic, infrastructural, behavioral, ideological, political, economic, and moral)?" (2022: 47).

These approaches parallel the ambitions of philosophy while expanding the available metaphors to describe reflective critique. Instead of imagining reflection as an introspective, meditative process, design focuses "on the constructive process as the site for analysis" (Ratto 2011: 253). Highlighting the figure of the maker and their constructive process as a site for knowledge, design embodies philosophical conceptual work. More precisely, it can ground philosophical reflection in material practice.

Framing the relationship between design and philosophy in a nonsupplementary way provides another implication: philosophy as a design practice is performed collectively. Practical know-how of tools cannot be described as the internalization of abstracted concepts obtained either from introspection or experimentation. It is rather the creation, establishment, transmission, and re-negotiation of shared practices within a material context. Ratto (2011) and Agre (1997) argue that technological design is never carried out alone but within communities of shared know-how. The knowledge produced through a philosophy inspired by design is in the practices bound to communities of knowledge, just as in the designed artifacts. Philosophy as design transforms the epistemological question of knowledge into a political one. And inversely, design as a reflexive practice centers the social relations on making (e.g., through deliberation) rather than on the artifact itself.

The *Moments of Reading* workshop became an attempt to intertwine philosophy and design through the idea that concepts are, in several ways, material operations.[3] Trying to imagine conceptual work as a design practice tied to material technologies makes our proposal different from earlier attempts to complement design with philosophy (e.g., Eggink and Dorrestijn 2018) by making the former "critical" or "ethical." Additionally, it constructs a different model of thinking where reflection implies (1) a practice of making, (2) a material medium, (3) a shared community of practice, and (4) a political framework to build and sustain this community. Next, we will explain how these ideas translated in the *Moments of Reading* workshop.

Moments of Reading *Workshop: Assembling Concepts through Visual Thinking and Collective Deliberation*

The *Moments of Reading* (MoR) workshop intended to illustrate the latent "investment in materiality" of philosophy (Panagia 2014: 544), involving the arrangement of ideas or concepts through a collaborative design practice. In this section, we will explain the development and reflect on our experiences of the two iterations of the workshop, which functioned as an experimental site to articulate our proposed materially bounded and collective model of thinking.

During the workshop, participants needed to connect concepts related to AI, design, and democracy. To this end, workshop facilitators designed eighteen triangular cards, each displaying one concept and its brief textual interpretation (please refer to figures 8.3 to 8.8 in the Appendix). For instance, AI-related concepts included, among others, "infrastructure," "agent," and "network," for democracy—"representation," "contention," and "human rights." To anchor the participants' thinking in AI-related issues and practices, we introduced two cases: synthetic media and algorithmic feeds. The participants were then divided into groups, each of which received a set of cards containing all the concepts belonging to two of the categories and one single card of the remaining one. The participants then needed to collectively decide which concepts would best fit with the given single card with no further instructions. For example, if the single concept a group got was from the AI category (e.g., "network"), they had to choose a card from the democracy set (e.g., "representation," "contention," "human rights," etc.) and a card from the design set (e.g., "speculative," "human-centered," "decolonial," etc.). Participants decided themselves how to connect the concepts and visualize their triadic arrangement. Depending on the initial single card, participants had to reflect on the implications of their conceptual triad for the development and use of AI in democratic design practices. While there were no correct answers, the point of the activity was for participants to visually articulate how they arrived at their proposed conceptual relations.

Inspired by the Hegelian online resource *www.hegel.net*, the cards were designed as triangles that could create larger triangles, while also using the negative space in between for thematizing how the concepts were connected. It was our intention that the participants design their own collective conceptualization process with the visual schema afforded by the cards.

The first iteration of the workshop took place at the Industrial Design Engineering Faculty in TU Delft, welcoming twenty researchers in the humanities and social sciences, designers, and computer scientists. The most interesting conceptual connections were those that creatively "hacked" the suggested rules, for instance, merging two cards to envision new meanings or questioning how we think about the distribution of agency when it comes to democracy and technology (Figure 8.1). In these cases, participants not only critically approached and expanded the given concepts but also imagined different forms of concepts relating to one another. They used visual tools to diagram and make explicit how meaning gets created by approximating or moving concepts away from each other. Instead of sticking to triangles, these groups imagined new ways to structure concepts, such as Celtic triquetras or octagonal honeycomb patterns, as seen in Figure 8.1.

Figure 8.1 shows how participants arranged the cards in configurations that went beyond the facilitators' expectations. On the left, participants deemed it important to note the nature of the relations between the terms: democracy does not relate to AI in the same way that AI relates to design. That is, linking AI to democracy will create different questions to those emerging when linking AI to design. On the diagram to the right, participants required two "design" cards instead of one. They made the point that more than one approach to design could

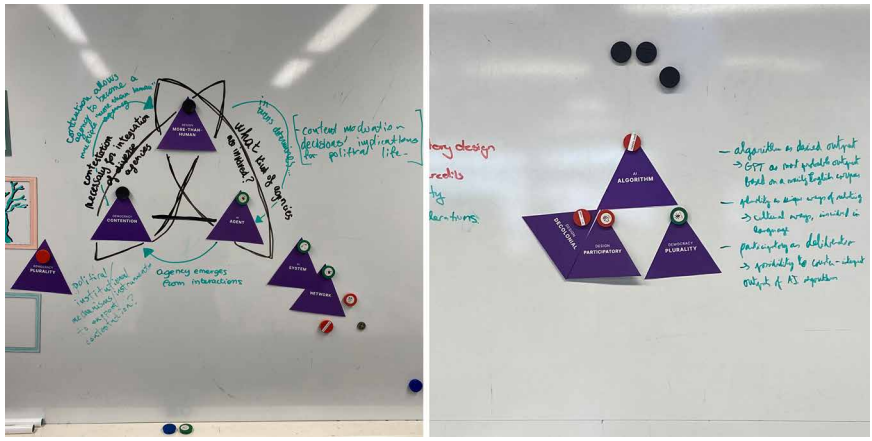

Figure 8.1 Participants' diagrams in the first iteration of the *Moments of Reading* workshop, 2023. Jordi Viader Guerrero.

be used to frame the democratic use of AI algorithms. Overall, the different arrangements show that the relations between AI, design, and democracy are not pre-given. They are rather particular constellations emerging from the aspects of these terms we wish to highlight.

These diagrams are a result of organizing a momentary community of practice in relation to a provided tool (i.e., a set of cards). Hermeneutically speaking, the cards and the activity around them trigger collective sense-making, "a moment of reading." Unlike conceptual closure, the triads were meant as tools for triggering, tracing, and future blueprinting of a communal moment of conceptual expansion. The cards then act as a highlighter when reading a text, a material aid to the supposedly mental activity of reading, rather than a way to capture a higher truth or message enclosed in it. Consequently, the workshop can be framed as an event of conceptual articulation. Indeed, after the participants organized the cards, each group presented their diagrams and explained the reasoning behind their schemes to the rest of the participants. Afterward, we held a general discussion about their experiences and difficulties to decide upon conceptual relations and their visual distribution. The entire activity can then be summarized as a mediated practice of sense-making leading to a group discussion on how AI, design, and democracy relate to one another and how orchestrating conjoint articulations can change the way we conceive of individual concepts.

While we do not want to underestimate the importance of this final communicative moment of deliberation, we also want to see conceptual and visual work not solely as a preamble to speech but as an option for political action. Our intention for this workshop was to reveal that deciding how concepts relate to one another is already a moment of (political) collective engagement that precedes any structured communicative procedure. Replacing an image of a solitary philosopher with one where she is always embedded in a communal (design)

practice reveals that there is a political and collective dimension in every moment of reading. Even if the fractal scheme is of Hegelian inspiration, the resulting diagrams are not meant to represent an upward movement of transcendental revelation of a new key concept (i.e., the movement of criticality) but a horizontal one to support the unfolding of a collective practice. We suggest thinking of these cards in terms of using a highlighter when reading a text, a material aid to the supposedly mental activity of reading, rather than a way to capture a higher truth or message enclosed in it.

As we showed above, conceptual articulation as design practice does not provide an unmediated description of the world but performs interventions. These interventions, however, might produce undesired consequences and trade-offs, an inalienable part of knowledge production. Regarding the MoR workshop, critique and confusion accompanied both of its iterations. Participants expressed that they were overwhelmed with the number of concepts and the sheer amount of text (see Appendix for a selection of cards from the workshop). The text accompanying the concepts appeared confusing: the participants did not know how to interpret its function since the texts themselves were deemed too long and too specialized. While the texts were meant to cause friction in alienating participants from preconceived conceptual understandings, they were also meant to aid them in grounding the concepts. Yet, they left participants with more questions than answers. Thus, the uncertainty created by the tension between written text, hands-on activity, and visual outcome set the tone for the participants' engagement with the cards. Ultimately, the crux of the workshop was about collectively dwelling in and negotiating with this uncertainty. When presented with a tool (i.e., the cards) with no clear rules of operation and yet still expecting an outcome, the problem of how to use the tool becomes a problem of deciding upon schemes for organizing the relations around them.

In the second iteration of the workshop, addressed to master students of the *Introduction to Voice Tech* course at the University of Groningen, the groups recurred to different strategies to overcome the conceptual uncertainty: some extensively read the text in the cards in pursuit of a "truthful" interpretation (as seen on the left image of Figure 8.2), some outsourced this task to *ChatGPT*, while others recurred to voting through a hand-raising procedure irrespective of whether students actually read the cards. Finally, some participants went for iterative trial and error, quickly skimming through all the provided cards and sticking to what felt right without any clear procedure (as seen in the right image of Figure 8.2). These groups are an example of either completely evading the uncertainty problem or, perhaps, of feeling comfortable with dwelling in it, unconcerned about getting the connections "right" but simply with producing an outcome.

This last strategy presents the card game as a localized tool to externalize thinking as a collectively practiced skill of ordering, notwithstanding the original semantic content (Rieder 2020: 87). The card game holds the possibility of transforming semantic concepts into "operative signs" that remove "the burden and complexities of interpretation" (Krämer and Bredekamp 2013: 26). This

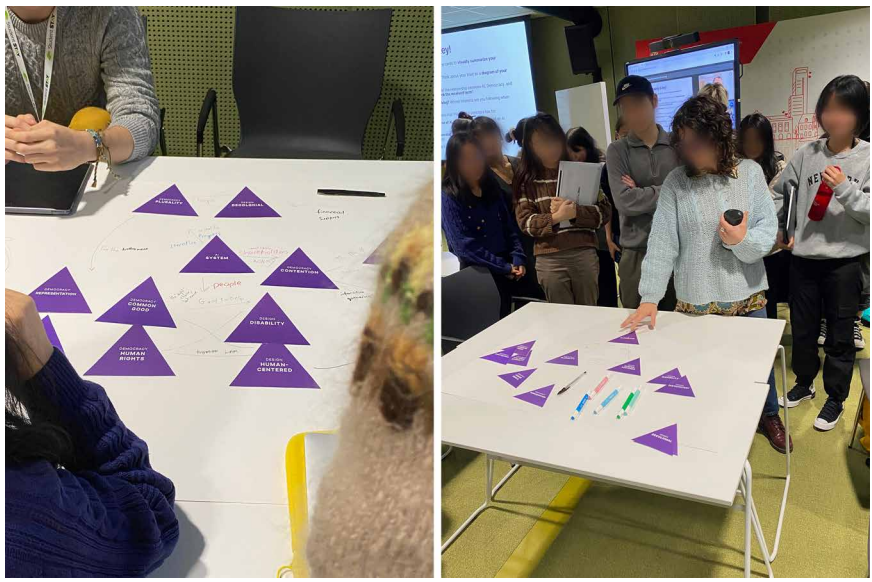

Figure 8.2 Master students assembling conceptual triads during the second iteration of the workshop, 2023. Jordi Viader Guerrero.

strategy also closely resembles our proposed model of philosophy-as-design-practice: it is (1) a practice of making with (2) a material/technical medium and performed by (3) a shared community of practice.

However, it is unclear if this strategy allows for politics to build and sustain the community of practice. While allowing for a description of conceptual work as "an external, distributed and collective practice" (Rieder 2020: 87), this use of cards does not tie well with the interpretative task needed to understand the practical and theoretical implications of that practice. Since participants engaged with the text in the cards differently, they possibly lacked a shared understanding underpinning their decision-making. Consequently, the conceptual triads do not per se present a "better" understanding of AI-design-democracy but a working one, a good-enough result of the activity.

Drawing on our workshops, participants in the first edition predominantly had some prior disciplinary knowledge, being designers, social scientists, philosophers, researchers, and engineers who willingly attended the workshop to discuss the AI-design-democracy relation. Meanwhile, the second iteration addressed students who had some knowledge of these topics and for whom this workshop was mandatory as a guest tutorial in their curriculum. This led to a more pragmatic engagement with the activity, resulting sometimes in a randomly decided conceptual distribution in triangles and sometimes presenting a visually convincing diagram following the triad structure while not being able to articulate the reasons for conceptual choices nor the drawn links between them.

Such a pragmatic use of cards is significant as it resembles the tensions between machine learning systems unconcerned with epistemic standards of truth and meaning (see Bueno 2017; Bender et al. 2021) and democratic practices often assumed to be deliberative and, therefore, semantically oriented. This raises the broader question: How can technological processes whose effectiveness relies on translating conceptual labor into trial-and-error operation of digital tools be implemented into democratic practices dependent on meaning-making?

The scheme we have sketched until now opposes mental (conceptual) labor to manual (designerly) labor—the opposition this paper set out to blur. As mentioned before, critical design dealt with this problem by framing design practice as a reflective hermeneutic practice (Sengers et al. 2005). As Agre (1997: 18) suggests, "A critical technical practice will, at least for the foreseeable future, require a split identity—one foot planted in the craft work of design and the other foot planted in the reflexive work of critique." In the case of the MoR workshop, it should have one foot planted in the visual disposition of the cards and another in the interpretative and communicative moment of discussing design procedures with the entire cohort. Neither of these moments is more important than the other.

Keshavarz and Mazé's (2013) notion of indisciplinarity in participatory design can help us understand the potential democratic value of iteratively operating with signs of limited meaning-making. Keshavarz and Mazé borrow from the ideas of philosopher Jacques Rancière who has extensively written about the political importance of dissensus (Rancière 1999; Rancière and Panagia 2000; Deranty et al. 2010: 69). For Keshavarz and Mazé (2013: 17), *indisciplinarity* is "an approach to framing collaborative activities in ways that avoid the hierarchy or domination of one discipline, one form of knowledge, or one person/group over another." Indisciplinarity is not exactly the rejection of expertise and specialization but the critical acknowledgment that not all knowledge is produced within the specific practices and spaces of intellectual labor (e.g., academia, private research centers, and governmental institutions). It is also a realization that knowledge production is not necessarily a tool for convergence and contradiction resolution. Indisciplinary knowledge can instead highlight contradictions and repurpose them to look with a new light on inherited assumptions in practices and social relations of specialized knowledge production.

In short, indisciplinarity can be a valuable nonhierarchical approach to organize the relations in participatory design aimed at diversifying and questioning conventional blueprints of knowledge production. Expanding on Keshavarz and Mazé's reading of Rancière (2013 ibid.), we argue that reframing a practice as another and thus reconsidering what skills, tools, and operations it engages with, redraws the boundaries of who and what is deemed of political relevance. Workshops such as MoR might be relevant for overcoming disciplinary boundaries, not by bridging one discipline to another but by creating a new context of practice that ends up doing different things than expected.

Admittedly, both iterations failed to stress the importance of the interpretive moment of discussion about how participants decided upon specific card arrangements. By the end of both sessions, there was not enough time for

participants to explain their design decisions or to reflect in situ on their implications on AI development and use, design methodologies, and democratic practices. Importantly, as facilitators, we did not have a clear idea of what the resulting diagrams were meant for. We were then not aware of the importance of the diagrams as representational tools not only to collectively think through practice but also to document and share this practice. Looking back, we consider the cards to hold a dual position as representational tools: they trigger a social procedure for arranging them while being a medium to visually record this procedure. The diagrams are meant to be read, interpreted, and shared with people outside the community that made them. In addition, they should be treated as arrangements to be continuously revisited.

In future iterations of the workshop, we want to highlight the importance of recording and sharing the participants' decisions to compel them to connect the cards thoroughly with marks and symbols to be explained at the end of the workshop. It would also be relevant to hold the workshop in two or more sessions in which participants could revisit and expand their diagrams or even use them to speculate about specific scenarios. The challenge is then to facilitate a critical distancing that questions the conditions of knowledge-producing actions, to create spaces where conceptual work is rooted in de-specialized, yet not de-skilled, collective practice, and encourages a reflection about the goals and meaning of that very practice.

Political Implications of Reconceptualizing the Relation between Design and Philosophy

The question of who and under what conditions can be a part of the design process also implies a politically salient conception of society with implications on how knowledge is organized and who can produce it. Instead of focusing on the content of concepts (i.e., epistemic representations), indisciplinarity helps us address critical design's ambitions of tackling the (material) conditions of representation (Agre 1997; Rancière, Panagia, and Bowlby 2001). It questions the idea that knowledge is something only academics produce, categorize, and guard, that criticality can only come from those who have a clear, holistic picture of a given discipline, and that it is them who are the preferred actors and receptors of knowledge. Joining Mazé and Keshavarz, we see design as an always already critical practice, producing knowledge through shared practices within specific material contexts. This epistemological critique of representation can also be translated politically into participatory design. Here, participants accept pre-given identities, most visible in stakeholder-centered approaches. Contrary to that, the lens of indisciplinarity mobilizes nonidentity as an alternative conception of how design processes can be organized. Working with already established identity categories may have its merits, but as Butler (1993) argued, "it may be that the persistence of disidentification is equally crucial to the rearticulation of democratic contestation." Rather than imagining the participants coming together to the table as a metaphor

of design politics, such an alternative approach centers on the process of setting the table itself without having the prior role distribution.

Since the problem of conceptual representation that we raised in the MoR workshop, engaging design and philosophy is both epistemic and political, so is our interpretation of the relationship between design and philosophy. Such an epistemic and political rearticulation of the relation between design and philosophy allows us to think differently about the political subject at the center of these knowledge-producing practices.

By emphasizing the intertwinement of procedural and material aspects in the knowledge-generative practices of design and philosophy, nonhierarchical and aiming at diverse conceptual representations, our MoR workshops acted as a hybrid forum for knowledge production (Callon, Lascoumes, and Barthe 2009). This hybrid forum was fruitful for generating new forms of participation identities, different from how citizens and experts have been traditionally conceived of: not only as sources of knowledge extraction but as disruption of procedural assumptions and questioning the pre-given conceptual tools. Politically, such hybrid forums extend the indisciplinary forms of knowledge production in a way that rearranges the relationship between citizens and experts, the social and the technical. Such a reconceived relationship between design and philosophy allows changing the logic of participation in knowledge-generative practices by creating space for people to intervene in the concepts that underlie design processes, thus allowing them to move beyond established identities and the division of expertise.

Importantly, it allows expanding the circle of identities in design and philosophy beyond a traditional idea of stakeholder engagement. Stakeholder engagement in both disciplines originated as a way to integrate the wider citizenry into the decision-making process regarding technological development, an attempt to broaden the epistemic practices and increase the democratic impact of academic knowledge practices (e.g., in constructive technology assessment, critical technology assessment, value-sensitive design; see Swierstra and Vermaas 2022: 248–50).

While the inclusion of citizens as stakeholders has its merits, it also has notable limitations, with epistemic and political dimensions. Centrally, by attempting to represent the world in coherent predefined stakeholder categories, this approach reproduces already existing subjectivities, striving to provide them in a pure form conducive to the democratic ethos. Here, the stakeholder approach negates accounting for conflictual dispositions that a citizen can have while inhabiting multiple roles in relation to technology. The possibility of inhabiting multiple roles complicates the idea that it is only through being one stakeholder that a citizen can have a sufficiently articulate position toward the politics and design of technology. Henceforth, accounting for conflictual dispositions may broaden the scope of subjectivities configured through public engagement with technology, such as design workshops.

Moreover, the stakeholder approach tends to put people in positions of power. While the extent of power that the stakeholders have in an actual technological development in a particular domain is a contingent and contextual matter, such

workshop exercises assume that it is only by virtue of being in power that one can shape the direction of the technological development. The proponents of the stakeholder approach may rightly object that it is precisely the purpose here to empower citizens by placing them into such positions, granting them possibilities to think about technology in a way they usually do not in their daily lives. However, such an idea of empowerment often does not question the actual distribution of power in a particular domain. As a rationale, the notion of empowerment does not challenge the hierarchical structure imposed on governance frameworks since the focus on stakeholder cooperation and consensus-building tends to assume that actors such as NGOs and tech corporations have equal political weight. Seen this way, framing citizen inclusion through being an empowered stakeholder risks reproducing a version of subjectivity, in which the delineated division of labor and civic responsibility occludes possibilities of relating to technology differently.

Additionally, the stakeholder approach privileges the consensus-based frameworks of discussing, designing, and governing technology, disregarding the importance of disagreement in enacting political subjectivities. Our *Moments of Reading* workshops demonstrate that any reached consensus on how to arrange concepts of AI, design, and democracy in a triangle is provisional and temporary, subject to new findings, new proposals for conceptual additions, or simply by participants not being happy with the final result, without or without clear reasons. We suggest that stakeholder consensus is not an endpoint after which the actual technological development or implementation can start; instead, it is an always-provisional result of a continuously unraveling political life, represented by moments of agreeing, just as much as disagreeing.

In the context of our workshop, we specifically did not provide participants with predefined roles that they should inhabit while working with concepts. Following Keshavarz and Mazé's notion of indisciplinarity, the participants were simultaneously both experts and laymen. By structuring deliberation as an open-ended design activity, the workshop imagined politics as something different than a harmonious administration of different segments of society. In this way, it opposes an implicit image of a rational consensus-based society traditionally presupposed in stakeholder methods (Swierstra and Vermaas 2022). Our reinterpretation of the relation between design and philosophy throughout the *Moments of Reading* workshops contradicts the idea that politics is what happens around the table of legitimate representatives with enough knowledge and credentials to take part in socially relevant debates. The workshop defies the idea that what philosophy and design offer to democracy is setting up tables.

Conclusion

In this chapter, we sketched the contours of a space where philosophy and design can meet as sets of collective practices. The type of space we hoped to articulate seeks to instantiate a relationship between the philosophy and design that is nonhierarchical, nonsubservient, and nonsupplementary.

As such, we turn to philosophy and design to problematize the distinction between making and knowing. This flattening maneuver of conceiving of philosophy and design as structurally similar proposes that conceptual work should not only be an equally shared burden between these two fields but also stipulate rethinking of entrenched disciplinary differences in making things and producing knowledge. Using iterations of the *Moments of Reading* workshops as cases through which to think about these issues anew, we showed how alterations in thinking about concepts as collectively performed practices have implications for both (1) philosophy and design as disciplinary fields (Section "Design × Philosophy: Connecting Disciplines through Material and Collective Practices"), (2) knowledge production (Section "*Moments of Reading* Workshop: Assembling Concepts through Visual Thinking and Collective Deliberation"), and (3) political identities in democratic design settings (Section "Political Implications of Reconceptualizing the Relation between Design and Philosophy"). While our chapter seeks to reimagine the relationship between the two disciplines, in conclusion, we would like to offer some reflections on how such an ecumenic movement can happen.

For philosophy, reimaging philosophy and design as co-creation practices can entail further thinking about what different forms of design practices can do for conceptual work. This way of making knowledge with others has an extended lineage. For example, the Chicana feminist Gloria Anzaldúa extensively used drawings during her lectures in a way that exceeds the illustrative purposes of the visual material. The drawings, upon which she relied extensively during her public lectures, were both the medium through which the theorizing happened and the means for community-building. As Galvan (2023) shows in her interpretation of Anzaldúa's works, "[T]hrough incorporating drawings into her talks, she encouraged listeners to join her in co-creating their understanding of her concepts alongside her." More recently, Smith et al. (2023) intervened in the conceptual work of philosophers of technology through pictorial design, demonstrating how the visual exhibits a role irreducible to the discursive, textual dimension. We join this call while also suggesting expanding the sensorium beyond the visual domain into other modes of the sensible. This line of inquiry can also benefit from further articulating the implications such reimagining of design and philosophy can have for politics and democracy—a step we have taken in this chapter.

Looking for resemblances between making and knowing also changes the way we conceive the relationship between technology and design practices. As mentioned throughout this chapter, our understanding of technology extends beyond the focus on artifacts and use practices to include what we have called "conceptual labor." That is, as knowing entails material practices of making, concepts are expressed through technologically mediated practices. Technology is then intimately related to the conceptual: concepts spawn from practices enabled by technologies (such as this card-based workshop)

that can be later formalized or stabilized into new technologies, and that can furthermore lead to newer practices. The *Moments of Reading* workshop and the visual methods mentioned in this section showcase how design workshops and, more broadly, design practice, understood as a wide set of social contexts oriented to making, can be a form of technology—more precisely, a technology of conceptualization.

When it comes to design, we advocate for continually acknowledging an unstable, politically salient, and philosophically rich conceptual work that is always present in design practices. If, as we argue, design and philosophy are not an after-the-fact addendum to each other, then it implies an absence of any exterior position. Moving forward with an understanding that concepts are never fixed and pre-given entities but are rather always collectively performed and potentially changeable articulations can help to endow design practices with a sense of heaviness about the inherent conceptual work that the discipline is involved in. Moreover, while participatory design tradition has extensively articulated the necessity of broadening involved parties in the design process, the moments of dissensus, as we suggested, can more vividly accompany moments of knowing and making.

Appendix

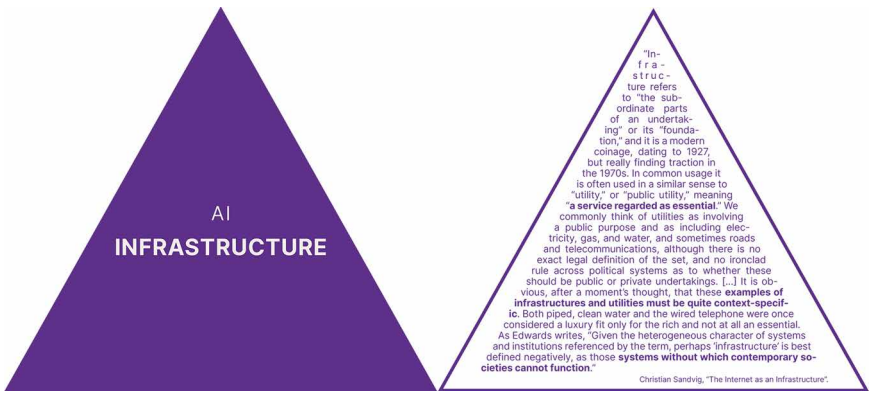

Figure 8.3 Card for "Infrastructure," 2023. Design by Dmitry Muravyov and Jordi Viader Guerrero. Text in Sandvig, C. (2013) "The Internet as an Infrastructure," *The Oxford Handbook of Internet Studies*, p. 86–106.

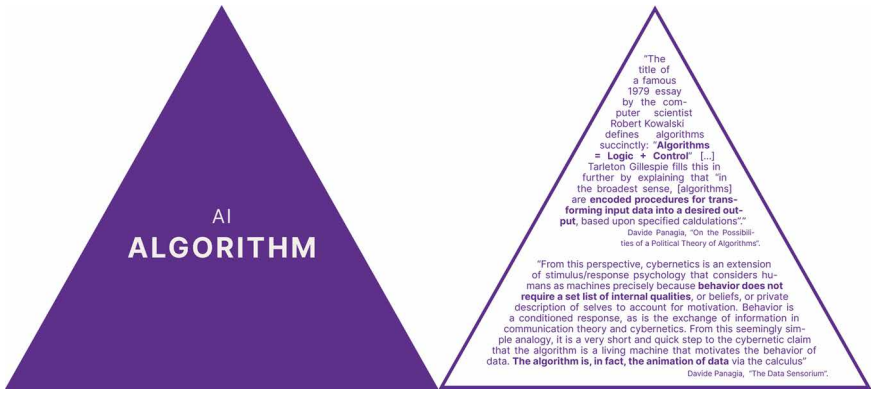

Figure 8.4 Card for "Algorithm," 2023. Design by Dmitry Muravyov and Jordi Viader Guerrero. Texts in Panagia, D. (2021) "On the Possibilities of a Political Theory of Algorithms," *Political Theory*, 49(1), p. 109–33, and Panagia, D. (2018) "The Data Sensorium," *Cultural Critique*, 101, p. 234–48.

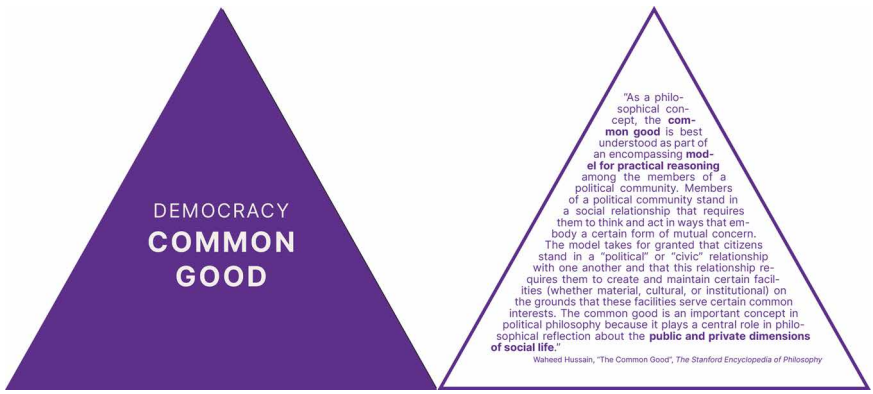

Figure 8.5 Card for "Common Good," 2023. Design by Dmitry Muravyov and Jordi Viader Guerrero. Text in Hussain, W. (2018) "The Common Good," *The Stanford Encyclopedia of Philosophy*.

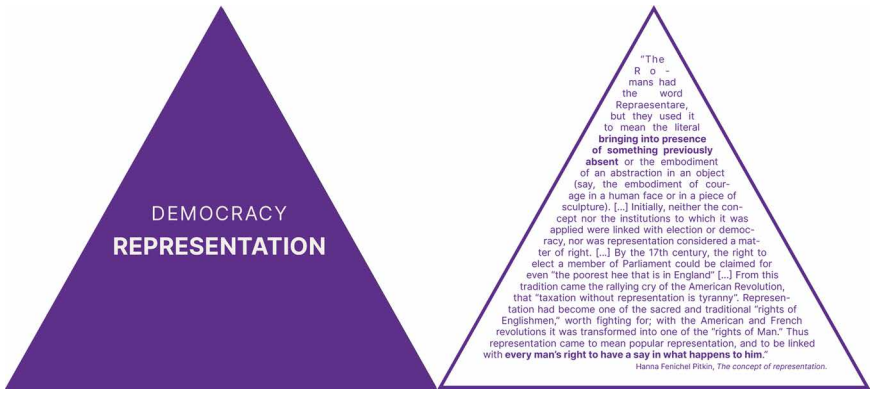

Figure 8.6 Card for "Representation," 2023. Design by Dmitry Muravyov and Jordi Viader Guerrero. Text in Fenichel Pitkin, H. (1967) *The Concept of Representation*, p. 3.

Figure 8.7 Card for "Decolonial," 2023. Design by Dmitry Muravyov and Jordi Viader Guerrero. Text in Abdulla, D., Ansari, A., Canlı, E., Keshavarz, M., Kiem, M., Oliveira, P., Prado, L., Schultz, T. (2019) "A Manifesto for Decolonising Design," *Journal of Futures Studies*, 23(3), p. 129–32.

Figure 8.8 Card for "More-Than-Human," 2023. Design by Dmitry Muravyov and Jordi Viader Guerrero. Text in Forlano, L. (2017) "Posthumanism and Design," *She Ji: The Journal of Design, Economics, and Innovation*, 3 (1), p. 16–29.

Acknowledgments

The authors would like to thank Syafira Fitri Auliya, Karin Bogdanova, and Meike Hardt for the feedback during the developmental stage of the workshop. We also want to thank Daniel Leix Palumbo and Matt Coler for hosting the second iteration of the workshop during the Intro to Voice Technology course at the University of Groningen. Finally, and importantly, we want to thank all the participants of both workshops' iterations. This research would not have been possible without their contributions.

Funding Information

This research has been funded by the TU Delft AI Initiative.

Notes

1 www.tudelft.nl/ai/ai-demos-lab.
2 This inductive, empiricist model, however, remains indebted to rationalist idealism in as much as it imagines the empirical and concrete to be rationally organized.
3 See the notion of "cultural techniques" that regards the technical as material chains of operations in localized contexts that may or may not consolidate into stabilized technologies (Rieder 2020: 83–9; Siegert 2013). Cultural techniques precede and codetermine conceptualization as they are social and material practices that process and arrange the world through distinctions, displacements, or differentiation. Counting, for example, being a technique that precedes the concept of number and, therefore, mechanical technologies for calculation (Winthrop-Young 2013). In a

similar way, we propose that design practices—understood not as a singular activity of "designing" but as a wide set of social contexts oriented toward intentionally making things with materials—can function as techniques of conceptualization. In this way we align with an "anti- or counter-platonic stance" (2013: 8) of conceptualization, in this chapter transformed into "conceptual labor," to implicitly underline the material, collective, and economic aspects of hermeneutic activities.

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