Designing with publics that are already busy

A case from Denmark

Birkbak, Andreas; Petersen, Morten Krogh; Jørgensen, Tobias Bornakke

Published in:
Design Issues

DOI (link to publication from Publisher):
10.1162/desi_a_00507

Publication date:
2018

Document Version
Publisher's PDF, also known as Version of record

Designing with Publics that Are Already Busy: A Case from Denmark

Andreas Birkbak, Morten Krogh Petersen, Tobias Bornakke Jørgensen

Introduction: Making a Data Set Public

Recent discussions in design research have turned the attention to how design interventions take part in the formation of publics.[1] The discussion is informed by recent work in Science and Technology Studies (STS) and related fields, which has drawn on the political philosophy of John Dewey to argue that problematic objects (or issues) play a key role in democratic politics because of their ability to "spark a public into being."[2] For design research, this proposition raises the question of how designers might contribute to the organization of publics when designing objects.

To be sure, designers for a long time have understood themselves as pursuing normative goals as part of their design work. The question that bears asking is what specific kind of "good" designers are pursuing when they seek to design for the orchestration of publics. Drawing on the work of Bruno Latour, Erling Bjögvinsson and colleagues have argued that publics must be understood as problematic assemblies, always socio-material and mobilized through issues or controversies.[3] The question for design, they argue, is how to design agonistic spaces that facilitate and that "infrastructure" the unfolding of public matters of concern. To quote the title of this special issue, the question is how to "organize provocation, conflict, and appropriation." In the pragmatist conceptualization of publics currently being developed in STS research and beyond, these "goods" are important to achieve.

Establishing the emergence of publics as the goal of design work also raises the question of what other "goods" are left out by this missional focus. The risk of establishing an instrumental approach to the formation of publics arises, in which facilitating their unfolding remains the responsibility of the designer. This problem is both a normative and a practical one because an instrumental approach can severely limit the scope of participation when designers construct publics by designing things. Solving this challenge might require that designers are prepared to consider how the "sites for future use" of their creations are already overflowing

1 Christopher A. Le Dantec and Carl DiSalvo, "Infrastructuring and the Formation of Publics in Participatory Design," *Social Studies of Science* 43, no. 2 (April 1, 2013): 241–64, doi:10.1177/0306312712471581; Carl DiSalvo, "Design and the Construction of Publics," *Design Issues* 25, no. 1 (Winter 2009): 48–63, doi:10.1162/desi.2009.25.1.48; and Thomas Binder, Eva Brandt, Pelle Ehn, and Joachim Halse, "Democratic Design Experiments: Between Parliament and Laboratory," *CoDesign* 11, no. 3–4 (2015): 152–65, doi:10.1080/15710882.2015.1081248.

2 John Dewey, *The Public and Its Problems,* 1st ed. (New York: Henry Holt and Company, 1927); Noortje Marres, "Issues Spark a Public into Being," in *Making Things Public: Atmospheres of Democracy,* ed. Bruno Latour (Cambrige, MA: MIT Press, 2005); Bruno Latour and Peter Weibel, eds., *Making Things Public: Atmospheres of Democracy* (Cambrige, MA: MIT Press, 2005).

3 Erling Bjögvinsson, Pelle Ehn, and Per-Anders Hillgren, "Design Things and Design Thinking: Contemporary Participatory Design Challenges," *Design Issues* 28, no. 3 (Summer 1, 2012): 101–16, doi:10.1162/DESI_a_00165.

Design*Issues:* Volume 34, Number 4 Autumn 2018 https://doi.org/10.1162/DESI_a_00507

with situated understandings of what "goods" need to be pursued. Taking these pre-existing normative projects into account seems key to avoiding an approach that sees publics as yet another instantiation of "users" of design objects.

We develop this argument by discussing our recent attempt to design an online data visualization tool for public use. The tool was intended to help maintain and extend public contestation around a specific data set on the Danish power elite.[4] By making this data set available for further public exploration through a user-friendly web interface, we hoped to contribute to the ongoing formation of publics around the issue of power—especially the continued presence of "old boy" networks, such as corporate boards of directors.

Although web logs show that our tool was taken up by casual users in a limited period after its launch, no sustained interest materialized. To mitigate this problem, we drew on the tradition of participatory design to try and include members of relevant publics in the design process as "future sites of use."[5] Specifically, we reached out to three sites of knowledge production: a public service newsroom, a university research office, and a business consultancy. We knew from the creators of the elite data set that all three sites contained knowledge professionals who had expressed an explicit interest in working with the elite data set. The selection of the specific cases was motivated by our wish to reach across several sectors of knowledge production (i.e., journalism, business, and academic research).

Instead of simply inviting the potential future users of our tool to a design workshop, we decided to adopt an ethnographic interest in the existing "goods" that guided the public for which we wanted to design. Upon exploring the data practices unfurling at the three sites, we found that they were already busy with concerns that were both highly relevant to the data practices we were trying to facilitate, while overflowing and provoking our framing of the publics we were trying to spark into being. This discovery caused us to raise the question of how to design *with* rather than *for* publics that are already busy, and to propose a reconsideration in design of the publics we hope to spark into being.

Publics and Design: The Problem of Relevance

The question of how to design with rather than for publics touches on the issue of how exactly to conceptualize publics inspired by the pragmatist thoughts of John Dewey and others, as well as recent work in STS. We start by adding some nuance to this theoretical question before moving on to describe our own design challenge and what can be learned from it.

4 Christoph Houman Ellersgaard and Anton Grau Larsen, "Data Exchange Network: The Danish Elite Network," *Connections* 35, no. 1 (2015), doi:10.17266/35.1.5.

5 Jesper Simonsen and Toni Robertson, eds., *Routledge International Handbook of Participatory Design* (London: Routledge, 2012).

In his 2009 article, Carl DiSalvo observes a surge in scholarship around the theme of design as an enabler of collective action and argues that the work of Dewey on political philosophy offers particularly useful conceptualizations.[6] The reason is that Dewey's approach asks the question of how publics are constructed. His thinking thus is a resource for getting away from abstract understandings of politics as made up of taken-for-granted entities, such as "the state" and "the public." Instead, DiSalvo reads Dewey's theory of publics as emphasizing how multiple publics must be expected to co-exist because they are constituted by specific issues. Following Dewey, the consequences of issues, such as environmental disasters, epidemics, or in our case, the proliferation of new kinds of digital data, are variously felt and perceived by various groups in society, resulting in a multiplicity of publics.

The design challenge that DiSalvo ends up foregrounding is a problem of communication among disparate publics—something that designers might take up and try to tackle with tactics such as the "projection" of possible future scenarios or the "tracing" of the heterogeneous networks of actors and entities that make up an issue. These design interventions are understood as means to aid the construction of publics that can better handle the specific matters of concern.

By focusing on the multiplicity of publics sparked into being by indirect consequences, DiSalvo's reading highlights Dewey's commitment to pluralism. This perception casts Dewey as a liberal political philosopher, which is a widespread interpretation of his work.[7] However, recent work in STS has emphasized other elements of Dewey's political philosophy that somewhat alters how we might approach the question of how to design for public engagement. These alternative readings of Dewey include the work by Latour and Weibel on *Making Things Public,*[8] and they are also particularly well explicated in the work of Noortje Marres.

In her book on material participation, Marres carefully distinguishes what she calls the problem of *relevance* from the conventional (liberal) problem of *pluralism* in relation to the formation of publics.[9] The problem of relevance arises because of the way Dewey defines publics as formed by indirect consequences of actions, Marres argues. As a result, publics are always struggling with how to make their situation relevant to actions taking place elsewhere.

Following Marres's reading of Dewey, this issue of relevance is not just a problem to be solved; instead, it is what constitutes public engagement. Problems of relevance can play out as public controversies over what parties should be considered and

6 DiSalvo, "Design and the Construction of Publics"; Dewey, *The Public and Its Problems.*

7 Robert B. Westbrook, *John Dewey and American Democracy* (Ithaca, NY: Cornell University Press, 1993).

8 Latour and Weibel, *Making Things Public.*

9 Noortje Marres, *Material Participation: Technology, the Environment and Everyday Publics* (London: Palgrave Macmillan, 2012).

accounted for in relation to an issue, and as disputes over how to delineate the issue in the first place. For Marres, such processes are what define public engagement. No stable public sphere exists on which we can rely for the democratic handling of issues. To the contrary, contestations of the appropriate setting is part of what marks publics, when they are defined as struggling with problems of relevance. In accordance with this argument, Marres urges us to "stay with" the problem of relevance because it is what allows democratic politics to unfold.[10]

This idea is quite far removed from the standard liberal interpretation of Dewey, in which better means of communication might be mobilized to help multiple publics come together and deal with the issue that mobilized them. In fact, where the relevant boundaries of a public issue lie cannot, by definition, be known. If we expect these delineations to be contested, the challenge for designers cannot just be to come up with a better way for disparate publics to communicate; these publics do not have a predetermined setting on which this communication can build.

This alternative reading of Dewey found in current STS research might sound pessimistic, but the important upside is that agency is distributed more widely with this conceptualization of publics. For our purposes here, a crucial facet is how the ability to act in relevant ways is continuously attributed not only to designers, but also to publics and issues. When publics are defined by their struggle with the problem of relevance, they must always already be expected to be engaged in processes of inquiry.

Following DiSalvo, such processes of public inquiry can benefit from designerly tactics, such as projecting and tracing. With Marres, these tactics no longer can be understood as the privilege of designers. Indeed, DiSalvo also notes that Dewey's conceptualization of the public is grounded in the "concrete situations, experiences, and materiality of everyday life."[11] What this groundedness means for publics-oriented design is that the challenge is not so much seeking to enact publics through design things, as connecting to already existing engagements of publics. What follows from defining the problem of relevance is that designers cannot determine in advance what the relevant intervention might be.

One way to act on this insight, we think, is to always ask what kind of situated "good" is being pursued by a specific design project. The assumption that this pursued good aligns neatly with other "goods" already being pursued in the settings and among the publics with which we are trying to engage must be avoided. As STS scholar Annemarie Mol has shown, "the good" cannot be settled once and for all in practice—it is something that needs to

10 See Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press Books, 2016).

11 DiSalvo, "Design and the Construction of Publics," 48.

be "done," and can be done in multiple ways.[12] For instance, a tomato might be valued as *good* in a variety of ways that draw on different registers, measurements, instruments, and practices.[13] Keeping this multiplicity in mind is particularly useful when dealing with publics and their problems of relevance because struggles over relevance mean that we must expect several ways of establishing relevance to be in play.

These theoretical insights into the constitution of issues and publics have practical implications for how to organize specific design interventions. What does it mean—in practice—to design for publics without assuming a common good? To explore how this practice might work, we first explain how we initially tackled our own design challenge and then discuss our encounters with the existing practices, concerns, and enactments of "goods" in three exemplary sites of future use.

Design Challenge: An Online Data Exploration Tool

The design challenge that initiated our explorations began with the idea that if an object is carefully made public, it can also contribute to the organization of publics. As such, our efforts were quite well aligned with DiSalvo's idea that Latour and Weibel's question, "How are things made public?" can be articulated another way for designers: "How are publics made with things"?[14] In our case, the thing was a new sociological data set on the Danish power elite, and our design challenge was to make these data available in a way that facilitated the construction of publics related to the data.[15]

The data set was compiled by two Danish sociologists: Anton Grau Larsen and Christoph Ellersgaard for the period 2012–2013. It was assembled by adding together publicly available data on who sits as members of bodies that are conventionally assumed to be "powerful" in contemporary Euro-American societies—most notably, a large number of corporate boards of directors and boards of trade unions, but also various business clubs and boards of associations and foundations.[16] The result of this data collection effort was a huge amount of network data because co-membership of any committee was assumed to represent a tie between two people. In total, the data set consists of 62,841 relations among 37,750 persons.[17] By using network analysis techniques focusing on various centrality measures, the two sociologists could identify what they saw as the top of the Danish power elite, consisting of the 423 most connected individuals in the data set.[18]

12 Annemarie Mol, *The Body Multiple: Ontology in Medical Practice* (Durham, NC: Duke University Press, 2002).

13 Frank Heuts and Annemarie Mol, "What Is a Good Tomato? A Case of Valuing in Practice," *Valuation Studies* 1, no. 2 (November 27, 2013): 125–46, doi:10.3384/vs.2001-5992.1312125.

14 DiSalvo, "Design and the Construction of Publics," 49.

15 For a discussion of related design challenges, see Tommaso Venturini, Donato Ricci, Michele Mauri, Lucy Kimbell, and Axel Meunier, "Designing Controversies and Their Publics," *Design Issues* 31, no. 3 (Summer 2015): 74–87, doi:10.1162/DESI_a_00340.

16 The project adds to a line of similar work—most notably, "They Rule," by Josh On (http://www.theyrule.net/about).

17 Ellersgaard and Larsen, "Data Exchange Network."

18 Anton Grau Larsen and Christoph Houman Ellersgaard, "FORSKNINGS-NOTE: Det Tværgående Magtnetværk – Magteliten Som Toppen Af de Vigtigste Sektorer I Danmark," [Research note: The cross-cutting power network - The power elite as the top of the most important sectors in Denmark], *Dansk* 26, no. 3 (2016): 106–13.

This list naming the absolute power elite in Denmark made a media splash when it was published. The two sociologists were interviewed by all major Danish news media; they gave sold-out talks and even published a bestselling book about the project.[19] In one sense, then, the sociologists had crafted a thing—in this case, a data set—that already showed considerable potential for sparking publics into being. However, the process also left the data set rather black-boxed. Although the list of the 423 most central people in the network had been widely publicized, the data set itself remained accessible only to a small number of technologically savvy data analysts. In the spirit of further public contestation, including yet-to-be-discovered perspectives on power, we launched a design intervention, aiming to make the data set available in a more open-ended and user-friendly way.[20]

Such a project immediately prompts a host of design decisions. In making these decisions, we took inspiration from the classic participatory design tenet of considering "use-before-use."[21] We wanted to be guided by the specifics of the "future sites of use" of our tool. Knowledge professionals, such as journalists, consultants and researchers, were already showing a lively interest in the data set and its various potentials and were mobilized by the data set in non-trivial ways. We came to see these entangled practices of the professionals exploring the potentials of the data and the data's mobilizing the knowledge professionals as constituting the key features of the future sites of use.

We approached these professionals as experts of their own day-to-day work, having both the skill and the democratic right to be involved as co-designers of the network exploration tool.[22] For example, such involvement could be staged and achieved through the deployment of design games, allowing the professionals to "show and tell" us about their current and future day-to-day knowledge practices and their effects.[23] In other words, we sought to assemble a participatory configuration in which we could draw on participatory design methods to unlock the current knowledge practices that would unfold at the future sites of use. We also sought to begin co-designing knowledge practices that could meaningfully enact the future use value, and the various related "goods," of the data set.[24]

Before organizing such a process, we needed a working prototype and constructed the interface shown in Figure 1 for this purpose.[25]

19 Anton Grau Larsen, Christoph Ellersgaard, and Markus Bernsen, *Magteliten: Hvordan 423 danskere styrer landet* [The Power Elite: How 423 Danes Run the Country] (Copenhagen: Politikens Forlag, 2015).

20 See, e.g., Venturini et al., "Designing Controversies and Their Publics."

21 Johan Redström, "RE: Definitions of Use," *Design Studies* 29, no. 4 (July 1, 2008): 410–23, doi:10.1016/j.destud.2008.05.001.

22 Simonsen and Robertson, *Routledge International Handbook of Participatory Design.*

23 Eva Brandt, Jörn Messeter, and Thomas Binder, "Formatting Design Dialogues – Games and Participation," *CoDesign* 4, no. 1 (March 1, 2008): 51–64, doi:10.1080/15710880801905724; Eva Brandt, "Designing Exploratory Design Games: A Framework for Participation in Participatory Design?," in *Proceedings of the Ninth Conference on Participatory Design: Expanding Boundaries in Design—Volume 1,* PDC '06 (New York: ACM, 2006), 57–66, doi:10.1145/1147261.1147271; Eva Brandt and Jörn Messeter, "Facilitating Collaboration Through Design Games," in *Proceedings of the Eighth Conference on Participatory Design: Artful Integration: Interweaving Media, Materials and Practices—Volume 1,* PDC 04 (New York: ACM, 2004), 121–31, doi:10.1145/1011870.1011885.

24 Elizabeth Shove, Matthew Watson, Martin Hand, and Jack Ingram, *The Design of Everyday Life* (New York: Bloomsbury Academic, 2007); Elizabeth Shove, Mika Pantzar, and Matt Watson, *The Dynamics of Social Practice: Everyday Life and How It Changes,* 1st edition (Los Angeles: SAGE Publications, 2012); and Jack Ingram, Elizabeth Shove, and Matthew Watson, "Products and Practices: Selected Concepts from Science and Technology Studies and from Social Theories of Consumption and Practice," *Design Issues* 23, no. 2 (Spring 22, 2007): 3–16, doi:10.1162/desi.2007.23.2.3.

25 At the time of writing, the tool is also live online at elite.cadm.dk (Danish language only).

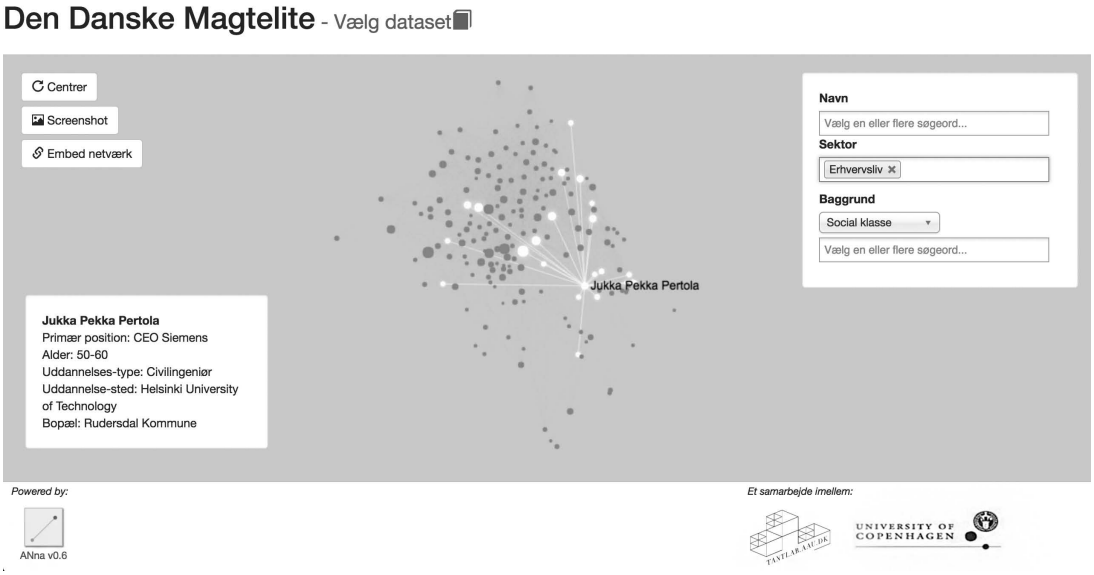

Figure 1
Screenshot of data exploration tool for the Danish power elite data set. Image courtesy of Andreas Birkbak.

At the center of the interface is a network visualization, which the user can customize by filtering the options available in the white box to the right. Here, the user can search for a specific person, filter to find individuals from a specific sector of society, or highlight people based on their educational background and similar variables available in the data set. The user can use these options to customize the extent of the network data being visualized, and also can zoom in and out and click on specific nodes to highlight (in bright yellow), and thus explore, their individual networks. Here, a white box pops up at the left of the screen that has additional background information about that individual—in this case, the CEO of the Danish branch of the company Siemens. Finally, three buttons at the top left allow the user to recenter the graph, to make a screenshot, or to get a link they can use to embed the customized network elsewhere on the web, which allows the visualization to maintain parts of its interactive features outside of our tool.

In designing and programming this tool, we pursued a dual ambition: We sought to make a complex data set more user-friendly and to leave as much of its complexity as possible for users to navigate themselves. We did so to enable new, meaningful and valuable kinds of knowledge practices to come into being at the three sites of future use. Thus, the tool was intended to contribute to the organization of publics by facilitating processes such as "discovery," in DiSalvo's term, where the expression of an issue is not finalized by designers, but is left open for a public that might be multiple and thus to bring a variety of interests and practices to the table.[26] In short, we sought to act as "data democratizers,"

26 DiSalvo, "Design and the Construction of Publics," 60.

believing that the relevant concern was to make a complex data set more readily available for publics—not least, for various knowledge professionals who would then be better equipped to play out the democratic "good" of agonistic pluralism.

Already Busy: Existing Concerns in Future Sites of Use

The next step we took was to reach out to potential future sites of use for our data exploration tool, aiming to engage them in the design process. The three sites we eventually contacted were selected because they showed a non-trivial interest in the elite network data set: They included a public service newsroom, a university research group, and a business consulting firm. At all three sites, we were invited to visit as ethnographic researchers of the knowledge practices they enacted. We visited the three sites between December 2015 and March 2016, using interviews and observational methods to understand the existing role of data sets at each site. At least one author was present at each site visit, and all authors afterward contributed to the analysis by means of shared audio files and shared documents.

Through these brief ethnographic encounters, we sought to develop contextual knowledge about both the potential future "users" and the future "sites" of use, including knowledge about the existing entanglements between things, publics, and "goods." We explored the knowledge practices of these journalists, researchers, and consultants by asking questions about *how* data figured into their day-to-day work and to what effect. This focus on how, rather than *why*, was a deliberate methodological choice. Asking why the professionals used data would have configured the professionals as human and all-powerful users of data and would have given us insight into their individual arguments and reason for data use. In contrast, exploring *how* their knowledge practices unfurled allowed us to understand how the practices we were interested in were closely intertwined with concerns that go beyond use of data.[27]

At first we were tempted to think of this host of other concerns as "noise" in relation to our design challenge, which came with the specific concern of how to design a useful tool for public use. However, as we explored the three settings, we saw that the handling of data was not a task that could be separated from concerns about professional identities and professional craftsmanship. These concerns meant that what counted as desirable data practices was intertwined with how our informants tried to find ways to act as "good" professionals and to stay relevant to the world around them. To illustrate, at the site of the public service newsroom, we interviewed employees of a new data

27 See, e.g., Mol, *The Body Multiple,* and her praxiographic approach to ethnography.

journalism unit. We learned about the difficulties of collecting, linking, and analyzing large digital data sets, such as the elite data set. The journalists explained that new digital data often come "polluted"—that is, incomplete or forwarded in formats that render them difficult to work with. In the face of such challenges, one of the journalists was praised by his manager for his willingness "to go through fire and water" to clean, complete, repurpose, and combine a variety of data sets. However, what motivated these practices was the aim not only of becoming data-proficient, but also of telling stories that traditional journalism sources did not allow for. One of the best tactics here, we learned, was to link several data sets because doing so allowed the journalists "to see a new reality that you would not have seen otherwise."

For the public service broadcaster, building a new department dedicated to data journalism was part of its ongoing efforts to find an edge for the newsroom in relation to other news producers, especially newspapers. Setting up a new group to focus on "investigative journalism" or "feature articles" was seen as constituting too big an invasion of newspapers' terrain. However, the head of the data journalism unit understood data journalism to be an open playing field in Denmark. As such, the knowledge practices that we found at this site were about more than discovering new realities through novel combinations of digital data sets. They also were very much about making sure that public service news remains competitive and relevant in the twenty-first century.

At the second site of investigation, a university research office, we found a similar pattern: New knowledge and data-fueled practices turned out to be closely entangled with changes in the craft of academic research. Our informant—a junior researcher—recounted how his own trajectory as a scholar was shaped by the availability of new kinds of data. Analyzing digital data and networks allowed him and his colleagues to have an overview of huge amounts of existing qualitative data in ways that were not possible before. Until recently, the analysis of large amounts of unstructured text required a researcher to be immersed in the material for weeks. This level of focus is not compatible with the demands for flexibility and simultaneous engagement in multiple projects, which our interlocutor felt were increasingly demanded of young researchers. However, with new digital tools, they could structure the data in ways that also make switching in and out of a project easier. The primary need is to be able to "organize data as part of an already busy everyday life"—and not only to engage with existing mounds of qualitative data. Especially because of their networked affordances, digital data sets offer new ways of achieving this balancing act, too.

These new "data opportunities," as the junior researcher called them, also enact reshaped methods and roles in the research group. The researcher did not begin his career as a network data analyst but was trained in discourse analysis and qualitative social science methods. However, during his doctoral training, the primary investigator of the research project to which he was hired to contribute needed someone to deliver a social network analysis. None of the more senior researchers working on the same project showed interest in taking up this challenge, so he was given the task. He took several courses to learn the craft of network analysis, and it eventually became a key part of his professional identity at the department, where he now works as an Assistant Professor. As such, new digital data-handling techniques not only play a role when he conducts research, but also are part of transformations in what it means to do research in the first place. His profile page on the university website specifically highlights his work with "new, fancy research methods," which has also contributed to his successful academic career.

At the third site, we encountered yet another reconfiguration of a well-established profession. The site was a business consultancy that brands itself as highly driven by research and innovation. As one of the two founders of the consultancy explained, the consultants aim to deliver "research-based advice" with "a really high degree of innovation." Thus, the consultants never rely on the same old time-honed methods in delivering their analyses, as some business consultants tend to do. As a result, new digital data sets and the network analyses they offer have caught the attention of the firm. One of the attractions is the capacity to better represent complexity. As the co-founder puts it, "you often face the problem that the world is incredibly complex, and then you reduce it to a number in a table. A network visualization makes it possible to 'see the greatness,' to feel that you have an overview. It has the same attraction as a geographical map. You can explore it."

While new network visualization techniques offer new analytical opportunities for the co-founder and his company, the consultants also have been forced to change how they work. Instead of giving clients firm directions to follow, they are offered a more exploratory style of consultancy. For the co-founder, who is not himself a data analyst, the work of translating a network visualization into something valuable for a client is a key task. He first talks with the in-house analysts to understand "what we can say" based on the visualization. Then he tests whether these arguments, which are now validated by the analysts, can be "formulated in another universe—namely, that of the client company." If

he is unsuccessful, "clients will simply say that they do not understand, resulting either in prolonged methods discussions or in their simply ignoring the analysis." As such, the new opportunities offered by large digital network data have forced the co-founder and his colleagues to experiment with how they understand the role of data and, to some extent, to reinvent their own craft and practices as business consultants.

Discussion: From Engaging Publics to Engaged Publics

These encounters with the existing practices at some of the key sites of future use made us question our ability to act as intentional data democratizers.[28] What we found was an already present "liveliness" in the relations between one of our target publics and its digital data and devices.[29] In the potential sites of future use we explored, dynamic and self-propelled data practices were already forming, and they were intertwined with deeply felt concerns about professional identities, and about what counts and should count as professional skills more generally.

These ongoing experiments with new data opportunities and new roles at the three future sites of use suggest that the people we imagined ourselves to be designing *for* were in a sense already in possession of considerable design agency themselves. Moreover, this agency does not seem to be focused solely on designing new data practices; instead, it is connected with an ongoing reinvention of what it means to be a *relevant* journalist, researcher, and consultant. At each of these three sites, the data set of the power elite in Denmark had become part of and contributed to ongoing work to define and design "good" journalism, "good" research, and "good" consultancy in a world that has an increasing abundance of large digital data sets.

Such observations offer an opportunity to examine and discuss different design approaches to publics that are potentially crucial for instigating public engagement with design interventions. When tackling our design challenge of producing an online data exploration tool, we first thought of publics as future users waiting somewhere "out there" to be engaged by our carefully crafted design thing. A rather unidirectional and instrumental understanding of things as mobilizers of people, echoed across the "classic" participatory design literature,[30] also seems to be looming in the recent fora on designing for public engagement.

As a part of this positioning of ourselves and our things as designers of human publics, we assumed that the elite data set was a sufficiently politically charged matter that it could "spark a public into being" if only we added good design.[31] "Good design"

28 Lars Bo Andersen, Peter Danholt, Kim Halskov, Nicolai Brodersen Hansen, and Peter Lauritsen "Participation as a Matter of Concern in Participatory Design," *CoDesign* 11, no. 3–4 (October 2, 2015): 250–61, doi:10.1080/15710882.2015.1081246.

29 Noortje Marres and Esther Weltevrede, "Scraping the Social?" *Journal of Cultural Economy* 6, no. 3 (2013): 313–35, doi:10.1080/17530350.2013.772070; Evelyn Ruppert, John Law, and Mike Savage, "Reassembling Social Science Methods: The Challenge of Digital Devices," *Theory, Culture & Society* 30, no. 4 (July 1, 2013): 22–46, doi:10.1177/0263276413484941.

30 Douglas Schuler and Aki Namioka, eds., *Participatory Design: Principles and Practices* (Hillsdale, NJ: Lawrence Erlbaum, 1993); Joan Greenbaum and Morten Kyng, eds., *Design at Work: Cooperative Design of Computer Systems* (Hillsdale, NJ: Lawrence Erlbaum, 1992).

31 Marres, "Issues Spark a Public into Being."

here meant designing a user-friendly online tool that afforded open-ended and non-linear exploration of the data set. This view is in line with DiSalvo's reading of Dewey, whereby publics are expected to be marked by contestation and controversy, which needs to be facilitated through communication between the human parties involved. The need instead was to see "good design" as staying with the trouble in terms of accounting for the "doings" and enactments of humans, things, and their various entanglements.

What our ethnographic encounters with the three future sites of use suggest is that by subscribing to a particular idea about what constitutes good publics, we also ended up with an *instrumental* conceptualization of publics, paired with an essentialized understanding of the elite data set as a political "thing" par excellence.[32] In practice, it turned out that the future sites of use did not in any neat way resemble publics ready to be activated by a well-designed matter of concern. Instead, new practices were already being invented based on concerns that were related to the elite data set and similar digital data opportunities, but the invented practices also overflowed and pointed beyond these concerns.[33]

Taking inspiration from Marres's reading of Dewey instead, a less instrumental approach understands publics, first, as materially and discursively heterogeneous and, second, as always already engaged in processes of inquiry. In other words, problematic objects must be understood as active participants in the formation of publics and their processes of inquiry. This perspective points toward a *performative* understanding of publics, in the sense that "there need not be a 'doer behind the deed,' but that the 'doer' is variably constructed in and through the deed."[34]

In our case, this sense of a "doer-in-process" means that the publics for which we first tried to design were never simply "out-there," waiting to be acted on by us, or constructed by us, but were already coming into being somewhere at the point where the rise of new digital data sets meets other pre-existing concerns—in our case, the professional identities and professional craftsmanship of journalists, researchers, and consultants. Our publics were shot through with other things they were also "busy doing,"[35] which meant that they were not waiting around for designers to make data accessible to them in particularly democratizing ways.

How can we design with this less instrumental and more performative understanding of publics in mind? A key move, we think, is to make the most of overflows, such as the ones we encountered in our explorations of sites of future use, and use them to broaden the range of things that can come to be counted as

32 Bruno Latour, "From Realpolitik to Dingpolitik or How to Make Things Public," in *Making Things Public: Atmospheres of Democracy*, ed. Bruno Latour (Cambridge, MA: MIT Press, 2005).

33 Michel Callon, "An Essay on Framing and Overflowing: Economic Externalities Revisited by Sociology," in *Laws of the Markets*, ed. Michel Callon, 1st ed. (Wiley-Blackwell, 1998).

34 Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (New York: Routledge, 1999), 181.

35 Mike Michael, "'What Are We Busy Doing?' Engaging the Idiot," *Science, Technology & Human Values* 37, no. 5 (September 1, 2012): 528–54, doi:10.1177/0162243911428624.

relevant. Designing *with* publics thus becomes a matter of collaboratively tinkering with what might constitute "good" practices.[36] In our case, we not only were designing a "good" online tool, but also were taking part in the ongoing and collaborative tinkering with what might constitute "good" ways of integrating new kinds of data into existing knowledge practices and "good" journalism, research, and consultancy.

Such an approach to designing *with* publics also means letting go of too-quick and potentially instrumental ideas about what constitutes "good" publics. Ironically, having a fixed and firm theoretical conceptualization of good publics might block the formation of publics in practice because their struggle with problems of relevance gets ignored. Revisiting the example of tomatoes used by Heuts and Mol, being valued as a particularly good tomato is not necessarily beneficial: "*In the end* these tomatoes get eaten. And while eating performs tomatoes as 'good to eat,' it also finishes them off. Valuing may lead on to destruction."[37]

A similar dynamic might be in play when we value publics as worthy of designing *for* without realizing that they are already busy. Designing with publics thus means not to eat up pre-existing publics—something that might require us to let go of the idea of creating a better world through the design of things.[38] Instead, and maybe less hungrily, designers and their things should understand themselves as publics on par with other kinds of publics, but involved in a particular mode of inquiry. The challenge, to us, is not to extend this "designerly" mode of inquiry to other publics, but to connect to these other publics and thereby enable valuable practices of tinkering with what might constitute "the good" at various sites.

36 Heuts and Mol, "What Is a Good Tomato?"; Mol, *The Body Multiple.*

37 Heuts and Mol, "What Is a Good Tomato?," 125 (italics in the original).

38 Bruno Latour, *A Cautious Prometheus?: A Few Steps Toward a Philosophy of Design (with Special Attention to Peter Sloterdijk)* (Design History Society Falmouth, 2008).