


RESEARCH ARTICLE

# Data governance and citizen participation in the digital welfare state

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## Abstract

U.S., UK, and European municipalities are increasingly experimenting with data as an instrument for social policy. This movement pertains often to the design of municipal data warehouses, dashboards, and predictive analytics, the latter mostly to identify risk of fraud. This transition to data-driven social policy, captured by the term “digital welfare state,” almost completely takes place out of political and social view, and escapes democratic decision making. In this article, I zoom in on The Netherlands and show in detail how sound data governance is lacking at three levels: data experiments and practices take place in a so-called “institutional void” without any clear democratic mandate; moreover, they are often based on disputable quality of data and analytic models; and they tend to transgress the recent EU General Data Protection Regulation (GDPR) about privacy and data protection. I also assess that key stakeholders in this data transition, that is the citizens whose data are used, are not actively informed let alone invited to participate. As a result, a practice of top-down monitoring, containment and control is evolving despite the desire of civil servants in this domain to do “good” with data. I explore several data and policy alternatives in the conclusion to contribute to a higher quality and more democratic usage of data in the digital welfare state.

## Policy Significance Statement

U.S., UK, and European social policies are in the middle of a data transition, increasingly using data warehouses, dashboards, and predictive analytics to design, implement, and manage social policy. This article articulates the challenges of data governance and democratic legitimacy in detail by addressing:

1. How this data transition transgresses legal, ethical, and data quality norms.
2. How this transition takes place in an institutional void without a democratic mandate.
3. How emerging practices create data-driven control rather than adequate services in social policy.
4. Which alternative scenarios for “good” use of data for social policy there are.
5. How to involve citizens in the design of the data transition.

## Introduction

Municipalities in various developed democratic countries are experimenting with data to help them design, implement, and manage various aspects of social policy. Concretely this mostly means that they

connect structured administrative data from many different sources and subject them to micro-data analytic techniques, rather than engage in scraping and exploring unstructured data from new digital data sources. A number of local councils in the United Kingdom, for instance, have explored whether and how predictive analytics can provide early warning systems to identify families with vulnerable children who would be in need of child services (McIntyre and Pegg, 2018). Several cities in the Netherlands are trying out predictive analytics to assess the risk of early school dropout (cf. VNG/Berenschot, 2018). Sketchy evidence exists, furthermore, about experiments with predictive analytics to detect chances of benefit fraud in countries as diverse as Denmark (Andersen, 2019), Belgium (Ballon, 2016), the United States (Singer, 2015), or Brazil (Mari, 2019).<sup>1</sup>

As several critical authors have explained, such a data transition in social policy is not without risks. Virginia Eubanks (2018), for instance, describes many cases of careless automation and datafication in the social policy of U.S. states that left millions of people wrongly accused of fraud and deprived of their benefits. Data technologies and algorithms, she concludes on the basis of years of extensive interviews and observations, have created a “digital poorhouse,” in which already disadvantaged groups are subject to more control and surveillance than ever before. Other authors, too, have pointed at the “surveillance assemblages” that increasingly determine social policy and welfare decisions (e.g., Maki, 2011; Pleace, 2007), and more generally at badly designed algorithms privileging certain groups of people and discriminating others (e.g., Wachter-Boettcher, 2017). Alston (2019, p. 1) rapporteur on extreme poverty to the United Nations (UN) strongly warns that the “digital welfare state” should move away from “obsessing about fraud, cost savings, sanctions, and market-driven definitions of efficiency” if it does not want become a dystopia of control and punishment.

Yet, when asked, the civil servants working in this arena all express a desire to “do good” with data, and they frame their efforts in terms of putting data “to greater use in making better decisions and improving the quality of life for families and communities” (e.g., Technology for Civic Data Integration, 2017, p. 2). Moreover, they are themselves aware of the privacy risks of linking administrative data and are opposed to a “Big Brother” form of local government. Dutch civil servants, instead, think of the potential of data for social policy from “the perspectives of dialogue, self-direction, and cleverly and gradually exploring dominate over the will to control, exclude and influence,” (VNG/Berenschot, 2018, p. 69). They thus join the critics in their fear of surveillance and state control, and are looking for ways to prevent the excesses of big data applications. Despite such overall good intentions, actual data-experiments in social policy often go wrong and cause controversy, as the work of Eubanks (2018) shows.

The study at hand aims to explain this paradox by describing in detail which operational challenges municipalities face when working toward data-driven social policy. The emerging practices in the so-called “social domain” of Dutch municipalities serve as source material. This domain includes the social benefits services, youth care services, debt support, care for vulnerable people, and early school dropout. Many municipalities in the Netherlands, especially the big ones, are trying to find out how to make better use of data and these trials are the focus of the analyses presented here. As we will see, this detailed description results in constructive criticism about data governance that is meant to help municipalities in their further work with data and that will enable more grounded social reflection, debate, and, possibly, intervention. In the following, I first give more background about social policy in the Netherlands, then describe three popular data applications (warehousing, dashboards, and predictive analytics) and the legal, ethical, and quality decisions that together produce a practice of top-down monitoring, containment, and control. I explore several data and policy alternatives in the conclusion, in order to contribute to a better understanding and more democratic usage of data in the digital welfare state.

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<sup>1</sup> This article was published in Dutch last year as: van Zoonen L (2019) Fatale remedies: Data transitities in het sociaal domein. *Sociologie* 15(1), 19–43.

## Policy Context and Institutional Void

During the past 5 years, Dutch municipalities have been looking into the question of what “big data,” as they tend to call it themselves, may mean for the successful implementation of municipal tasks in social policy. This interest is part of a general discourse about data producing superior knowledge about economic and societal challenges but it is also the result of the 2015 decentralization of social policy in the Netherlands. At that time, the national government transferred the responsibility for youth care, social security, and care for the chronically ill and the elderly to the municipalities. The measure was intended to bring government assistance closer to the people and also to make it more effective and cheaper. After 3 years, however, the national, regional, and municipal governments concluded that this transition had not yet been finished and had not reached everyone; an additional effort is thought to be necessary under the slogan “Noticeable improvement in the social domain” (IBP, 2018, p. 20). The budget ambitions had not been attained either since the costs of social policy in the year 2017 have increased instead of decreased. The expectations for 2018 and 2019 are no different (cf. Bekker, 2018; Steiner, 2018a,b).

In this context, it is not surprising that local governments are perpetually looking for instruments to control the implementation and costs of social policy. Improved use of existing and new kinds of data, combined with smart data linking and analytical techniques is widely seen as having great potential. The director of the Association of Dutch Municipalities (VNG) has stated, for instance, that data “provides insight into reality and generates the possibility to adapt policy in a well-considered way when things go wrong” (Kriens, 2016). As data offers more opportunities for concrete actions than party politics does, she claims, municipalities “should embrace data” (Kriens, 2016). The Stimulansz Foundation, an established consultant to Dutch municipalities, declares that data linking “[can] help you as a municipality to work even better, more precise, and efficient. When you are detecting fraud, for instance, or providing supervision during debt counselling” (Stimulansz, n.d.). Several other big consultants and local small and medium enterprises offer their services to municipalities to help them organize and link their data, and to experiment with relevant applications.<sup>2</sup>

The terminology of “precision,” “efficiency,” and “well-considered adaptations” suggests that the use of data relates to operational issues of implementation, and is meant to improve service and make management more efficient. Municipalities are, however, also aware that risks are involved in and make a great effort to get informed about the possible violation of citizens’ privacy. Moreover, an analysis of relevant, so-called “data-driven” initiatives, commissioned by the VNG, suggests that the municipalities also pursue a clear ethics while working with big data (VNG/Berenschot, 2018, p. 69).

Nevertheless, the transition to data-driven social policy almost completely takes place out of political and social view. In the run-up to the 2018 municipal elections, Kruiter (2018) sensed reluctance among local political parties to turn social policy into an electoral issue. For this reason, the umbrella organization of advisory councils in the social policy domain advised its members about issues likely to play a role in the municipal election and about the points on the political agenda they might be able to influence (Handreiking, 2017). None of the 15 proposed policy fields related to data, algorithms, or privacy.

The lack of social and political debate about big data in social policy fits seamlessly with the concept of “institutional void” introduced by public administration scholar Hajer (2003), about policy fields that change rapidly and are barely influenced by political direction. According to Hajer, this particularly applies to new social issues such as energy transition or new technologies, of which the data transition constitutes a part. The absence of a political mandate connects in these cases with a lack of institutional procedures and directions, in which a variety of actors, such as officials and involved citizens, have to shape the subject matter and policy along the way. During this process, says Hajer, a new administrative and political reality will come about: “Actors not only deliberate to get to favorable solutions for particular problems, but while deliberating they also negotiate new institutional rules, develop new norms of

<sup>2</sup> At its website Pilotstarter, the Dutch Association of Municipalities (VNG) provides an overview of these and numerous other experiments, see <https://depilotstarter.vng.nl/projecten?thema=62>.

appropriate behavior and devise new conceptions of legitimate political intervention” (Hajer, 2003, pp. 175/6).

For this article, this notion of an “institutional void” helps to formulate the question which new rules, norms and interventions shape the data transitions in social policy and what their consequences will be. Partly, this question pertains to data governance, that is “the framework for decision rights and accountabilities to encourage desirable behavior in the use of data” (Weber et al., 2009, p.6), but an important background to the question is also the lack of public visibility and a democratic mandate for data transitions in social policy. I will first discuss three dominant manifestations of big data applications in the social domain: the *data warehouse*, the *dashboard*, and *predictive analytics*. Next, I will discuss data analytical and ethical problems. I hope to show that, despite the municipal goals of dialogue and self-direction, a top-down practice of control is emerging, which has its roots in the notion of “data steering” and which leaves no space for citizens or other stakeholders. As an alternative, I will explore what big data may mean when we start instead from the ideal of “data service” and collaborative design, and I will outline the contours of a research project in which we used this as a starting point.

### **Data Practices in the Social Domain**

Municipalities collect and manage countless personal data: to begin with from several basic administrations that are part of Dutch legislation (of persons, income, and vehicles, for instance), but also as a result of the provision of services and the issue of permits. People who qualify for a service from the social policy domain are obliged to submit a whole range of personal data. In this domain Article 17 of the Participation Act applies, about the obligation to provide information. Furthermore, some municipalities purchase additional, anonymized data from commercial parties (e.g., Hartholt, 2017). The most important partner in data applications is the Netherlands Office of Statistics (CBS), which has numerous data from the social policy domain at its disposal and offers its expertise to municipalities through its Urban and Rural Data Centers.<sup>3</sup>

#### ***Data warehouse***

All these data are received and stored in different ways and fall under the responsibility of various departments within the municipalities. For this reason, many municipalities want to set up a data warehouse, in which they can bring all data together in a structured manner. Their expectation is that this will make “joint analyses,” “early detection,” and “adjustments” possible (Flemish Citie, n.d.). Yet, municipalities seem to underestimate how much money and time this requires. The municipality of Rotterdam withdrew from commissioning a big consultant to furnish the city’s data warehouse for five million euro. The municipality of Enschede thought a half-year commission to bring order to the data in its social domain would suffice, but ultimately needed 3.5 years (de Winter, 2018). According to public administration experts (Janssen and Van der Voort, 2016) the data and the analytical techniques do not pose the greatest challenge, but rather the organization of it and the new coordination processes required for a soundly functioning data warehouse.

#### ***Dashboards***

Once there is a well-developed data warehouse, the expectation is that data can be better analyzed and presented, especially in the form of municipal dashboards: a collection of interactive and continuously actualized data presented in histograms, pie charts, and other known statistical visualizations. The Dublin Dashboards, started in 2014, are well known and are a source of inspiration for many municipalities (Kitchin et al., 2015; 2016). In the Netherlands, the dashboard of the Dutch Association of Municipalities

<sup>3</sup> In January 2019: The Hague, Eindhoven, Groningen, Heerlen, Kempen, Leiden, Leidschendam-Voorburg, Schagen, Venlo, and Zwolle.

(VNG) *What is the position of your municipality* enables municipalities to compare their place with the rest of the Netherlands on an extensive range of indicators, one of which is the Municipal Social Policy Domain Monitor (Gemeentelijke Monitor Sociaal Domein).<sup>4</sup> The data involved come from the Social Support Act registrations,<sup>5</sup> submitted every half year to the CBS by the municipalities themselves. The CBS then supplements these data with data about (among other things) income, household composition, and neighborhood profiles. Of the total of 380 municipalities, 312 have submitted their data. The monitor is regularly extended with new indicators, such as the recently added “Life path analysis,” which indicates how social provisions are used over time. Data are pseudonymized and aggregated according to CBS rules. Users are able to carry out their own analyses and visualizations on these aggregated data. With the monitor, the VNG hopes to assist municipalities with the detection and direction of developments in the social policy domain; the reformulation of policy; the delivery of information about accountability to the city council and the citizen; and with insight into their own municipal performance in the social domain compared to other municipalities.<sup>6</sup> Furthermore, it is believed that a good dashboard enables municipalities to extrapolate existing trends, thus substantiating future expectations.

### *Predictive analytics*

The third and most controversial municipal ambition concerns the opportunities data offers to predict individual problem behavior. In this regard, the Dutch police have taken the biggest steps; since 2017, they work with the *Crime Anticipation System* that predicts bi-weekly whether there is a greater chance of crime in a specific area based on criminal history, location data, and other variables (Police, 2017). The social policy domain knows two nation-wide data coupling systems for the investigation of suspected fraud: the system risk indication (SyRI), which targets citizens who might commit benefit fraud and the Healthcare Fraud Information Hub, which focuses on dodgy healthcare providers. Both systems work on the basis of signals given by concerned officials, citizens, or institutions who suspect fraud is being committed. As yet, the prediction of fraud or other problem behavior only occurs in the form of experiments. A well-known example among Dutch municipalities comes from the municipality of Zaanstad where a trial took place to prevent domestic violence based on data from police reports, the Personal Records Database (BRP), Social Security, debt counselling, restraining orders, and the use of services. The company that collected and processed the data concluded the data was not sufficiently detailed and did not show any pattern on top of that (Noord-Hollands Dagblad, 2015). Other problems the municipalities hope to get more control over are early school drop outs, debt accumulation, fraud risks, and undermining crime (e.g., Bouman, 2016). In all cases, the prediction process is the same: based on patterns from the past risk factors are identified and projected onto the entire group. Whoever scores high on those factors, will be identified as a potential risk. The municipal service involved may subsequently decide whether to effectively check on these people. According to VNG/Berenschot, in 2018 there was no Dutch municipality where the use of this kind of “predictive analytics” had become common practice; it only occurred in an experimental and project-based form. In the countries surrounding us various comparable experiments are being carried out (e.g., Andersen, 2019; McIntyre and Pegg, 2018).

What all three data practices have in common is that they are carried out in public–private collaborations. No Dutch municipality, with the possible exception of Amsterdam, possesses the expertise and structural funds to furnish a data warehouse for itself, design a functioning dashboard, and develop predictive systems. Especially in smaller municipalities, research departments have vanished under the pressure of budget cuts. Big and small companies have jumped into the resulting gap, have rapidly specialized in the social policy domain and offer a variety of data products. Multinationals such as Deloitte, Accenture, and EY, for example, have specialized sections, while Dutch small and medium-size

<sup>4</sup> <https://www.waarstaatjegemeente.nl/>.

<sup>5</sup> Social Support Act, in Dutch: Wet Maatschappelijke Ondersteuning (WMO).

<sup>6</sup> <https://www.vngrealisatie.nl/producten/gemeentelijke-monitor-sociaal-domein>.

enterprises (such as Eiffel in Arnhem, IO Research in Enschede and Amsterdam or Ynformed in Utrecht) offer ready-made dashboards or algorithms.

### **Quality, Ethics, and Privacy**

The data applications currently carried out in the social policy domain have two related, problematic sides: the quality of the data and the analytical models used are disputable, while questions about ethical and privacy frameworks remains unanswered.

#### ***Data quality***

In the context of all fraud experiments, for instance, it is unclear whether an irregularity in the data indicates fraud, administrative illiteracy of clients or a failing municipal bureaucracy. Eubanks (2018) describes how an automation process in the U.S. state of Indiana hampered the delivery of personal data to such an extent that over a million people lost their welfare benefits because they were unable to comprehend the instructions. In the Netherlands, the lawyers' collective Social Story observes that some municipalities intentionally make it hard for people to apply for social security by asking them for an extreme amount of data (Rubio, 2018). In 2017, the consumer TV-program Radar presented the case of a woman on social benefits who was accused of fraud because she took care of her demented mother and had not included her mother's savings in her own declared income. The viewers' response demonstrated that many people had encountered the same problem (Radar, 2017). These examples show that the measurement of the independent variable of "fraud risk" based on existing fraud cases is not valid; after all, it is unknown whether the measurement is based on a correct or flawed interpretation of an administrative irregularity. This makes all predictive analyses that use this variable unreliable.

More in general, there is little insight into the way in which municipalities organize and process the registration of data in the social policy domain. The part of this data covered by the CBS meets the international standards for official statistics. In the social policy domain, however, much more data is registered and used, such as in the Self-Reliance Matrix (ZRM), designed by the Amsterdam Board of Health which is used in a number of big cities to score characteristics of citizens in the welfare system in 13 domains of daily life. These scores vary from "has acute problems" to "is completely self-reliant." It is an instrument to support administrators, yet it is not an adequate means of gathering valid and reliable data. The scores are based on subjective assessments by so-called client managers and their colleagues, on self-reporting and on unstandardized source documents ("the administration," as it is called in the ZRM Guide<sup>7</sup>). In this way, the chances of a measurement error are stacked, as the Amsterdam Board of Health itself observes (GGD Amsterdam, 2015, p. 21): "A number of ZRM client profiles proof that client managers do not score the ZRM correctly; profiles have been found that you would not expect for a group of people who apply for care within the social domain. In addition, (...) many domains had not been scored." Other ways of collecting data in the social domain, such as the typically Dutch "kitchen table talk" or the reports of administrators are intended as aids to the provision of service, not as means for systematic data collection and analysis.

To unreliable and weakly valid data applies the old statistics adage of "gigo": "*garbage in–garbage out*," which cannot be overcome by either a sound data infrastructure (warehouse) or an advanced dashboard of predictive analytics. With respect to these last two points, there is still another problem with the availability and choice of indicators and the quality of the analytical models. The municipality of Zaanstad already noticed this when it tried to predict the occurrence of domestic violence: it turned out that the available and selected indicators did not show mutual correlations. The Zaanstad example illustrates that the quality of a prediction completely depends on the quality of the indicators and the underlying analyses of past cases. Although a number of relations between social vulnerability and other variables are known (with educational level as an important common thread), the current scientific state of affairs does

<sup>7</sup> <https://www.forensischewegwijzer.nl/web/uploads/2017/08/Handleiding-Zelfredzaamheid-Matrix-1.pdf>.

not yield sufficient detail to include sensible indicators and historical patterns with certainty in algorithms (cf. Keuzenkamp, 2017). As far as the results of experiments with predictive analytical techniques in the social domain have been published, they quite frequently seem to be trivial or misleading: school results are the best predictor for early school dropout (cf. Kuijer, 2015); the number of meetings a person entitled to social security does (not) have with an administrator is the best predictor for fraud risk; in Amsterdam, the highest number of reports about litter come from the posh Concertgebouw quarter.<sup>8</sup>

### *Ethics and privacy*

The lack of data and analytic quality becomes clearer if we consider more closely how current practices in the social domain compare to the combined technical and ethical standards of data governance that have been developed recently. Data scientists work with four quality measures for data applications in both the public and private sectors, which in the Netherlands have been adopted as guidelines by the Association of Dutch Universities (VSNU, 2018). Data must be FAIR (findable, accessible, interoperable, reusable); algorithms must be FACT (fair, accurate, confidential, transparent); and the infrastructure must be ROBUST (resilient, open, beneficial, user-oriented, secure, trustworthy). The data projects in the social domain are far from meeting these three technical standards, nor do they meet the fourth, more human-oriented data standard of SHARED values: an abbreviation referring to the principle that data projects should not reinforce existing inequalities and should support citizens from diverse backgrounds in a positive way.<sup>9</sup> A comparable set of principles has been formulated by data professionals and activists who have spoken out about responsible data use in the TADA Manifesto. Amsterdam is the first municipality to have included these principles in its 2018 coalition agreement.<sup>10</sup>

The absence of sound data governance in the social domain can be illustrated concretely by returning to the case from the TV-program Radar about the woman who took care of her demented mother and did not declare her mother's savings. If we consider her case as a potential data source for predictive analytics, it becomes clear that a flaw in the data supply is qualified as fraud (nonvalid data  $\neq$  FAIR); this unjustified qualification turns out to occur more often, but not always or everywhere (unsystematic data  $\neq$  ROBUST); an unreliable variable has been included in the algorithm, which as a result does not predict either fairly or accurately ( $\neq$ FACT); caregivers end up in risk profiles and are stigmatized as potential fraudsters ( $\neq$ SHARED).

This problem of data quality, choices of indicators and opaque algorithms, and its ethical and social consequences have been mapped and criticized in many ways (e.g., Kitchin et al., 2015; Blauw, 2018; Eubanks, 2018; Noble, 2018). Municipalities are also well aware of these issues as is shown, for instance, by the agendas of the Urban Big Data Knowledge Workshop of the municipality of Rotterdam and the municipality of Amsterdam's Data Lab.<sup>11</sup> Their concerns about privacy and data ownership have grown in particular after the introduction of the new European privacy legislation in the General Data Protection Regulation (GDPR) in May 2018. The as yet unsolved issue in the social domain is how the GDPR relates to paragraph 1, Article 17 of the Dutch Participation Act, in which the obligation of the recipients of public assistance to provide information has been laid down: "the person concerned (...) will, on request or on his/her own initiative, issue a statement without delay about all the facts and circumstances of which it is reasonably clear to him/her that they may affect his/her labor participation or the right to assistance." That requirement is at odds with the central principles of the GDPR, such as data minimization and limited data retention. Furthermore, the term "reasonably" leaves ample room for the individual interpretation by employees in the social domain who regularly ask too much information, as shown, for instance, by the casuistry of the National and Amsterdam ombudsmen<sup>12</sup> (cf. van Zoonen, 2018). With respect to the

<sup>8</sup> Personal communication with the author from the municipalities of Rotterdam and Amsterdam.

<sup>9</sup> SHARED: Sustainable, Harmonious, Affective, Relevant, Empowering, Diverse.

<sup>10</sup> <https://tada.city/over-ons/>.

<sup>11</sup> <http://urbanbigdata.nl/>; <https://www.meetup.com/nl-NL/DataLab-Amsterdam/events/past/>.

<sup>12</sup> [www.nationaleombudsman.nl/](http://www.nationaleombudsman.nl/); [www.ombudsmanmetropool.nl/](http://www.ombudsmanmetropool.nl/), search terms "privacy" or "district team."

implementations in the social policy domain, the municipal inclination toward dashboards and predictive analytics is at odds with the central values of “purpose limitation” and “limited processing” to be found in the GDPR. The intention behind issuing personal data to the administrators of the social domain is to acquire support from the municipality, not to submit oneself to fraud detection of big data projects. Some privacy experts even go one step further, arguing that under the new European privacy legislation almost all forms of “big data” have become illegal (Swire, 2019).

### **Involving Citizens**

Despite the many unsolved problems with data governance in the social policy domain, the ultimate goal of the Dutch municipalities seems to remain the same: a gradual development toward data steering as “the new normal,” in which the use of dashboards and predictive analytics is embedded in the regular municipal processes (VNG/Berenschot, 2018). The challenges concerning data quality, ethics, and privacy are seen as important operational issues that can and will be solved in the long term with some patience (cf. van Zoonen, 2019).

The context (decentralization) and objective (budget control) through which data steering has been introduced in the social policy domain produce, however, more than just implementation issues; there are fundamental and ideological issues as well. The data transition stems from the urgent municipal need to gain control over budgets and services provided in the social policy domain after decentralization. Few municipalities possess the necessary infrastructure and knowledge, for which they enlist the help of big or small consultants. With respect to such procurements, the questions arise whether the interests of the municipality and the consultant run parallel, whether the knowledge gained stays within the municipal organization, and whether it will be possible, over time, to integrate the subcontracted project into the municipal processes. In a study on the outsourcing of ICT services, Delen et al. (2016) conclude that only 60% is successful. In addition, in this kind of public–private co-operation, the most important partner in the social policy domain is forgotten: the citizens who need the support offered by the services, in the municipalities’ terminology: the “clients.”

### **Legal obligations**

Yet, Dutch municipalities have a legal obligation to ask clients about their experiences and to involve them in the way in which they are supported in the context of the Social Support Act (WMO). This obligation takes the shape of, among other things, an annual survey containing 10 pre-coded standard questions about the accessibility, quality, and effect of the provided support. The standardization makes it possible to compare the outcomes between municipalities and within municipalities over time. The VNG dashboard shows for the majority of municipalities how citizens score the support provided in the WMO context; in 2018, 75% of the citizens in the social domain of the five big municipalities said they were satisfied with the service provided.<sup>13</sup> In comparison, the number of clients who indicated that they were content about the Dutch Railways in 2018 was 10% higher, at 84% (Halfjaarcijfers, 2018); the percentage of people who reported they were satisfied with their most recent police contact in 2017 was considerably lower, at 61% (Veiligheidsmonitor, 2017). In addition to the satisfaction surveys, the WMO, just like the Participation Act, requires that citizens in the system must be enabled to have their say about the implementation of the act. Many municipalities meet this requirement by setting up one or more “client councils,” analogous to the patient councils in healthcare. Since each municipality has its own autonomy in this respect, the interpretation differs considerably per municipality and there is much discussion whether these councils can assume a critical position vis-à-vis the municipalities. The National Client Council and the Trade Union Federation (FNV), for example, have reported a number of cases in which critical client councils have been hindered in the execution of their task (Willen, 2018).

<sup>13</sup> <https://www.waarstaatjegemeente.nl/dashboard/Gemeentelijke-Monitor-Sociaal-Domein/Cliëntervaring-Wmo-1093/> (accessed 3 February 2019). This tool makes a comparison possible between the outcomes of various Dutch municipalities.



### **Excluding clients**

Citizens and client councils thus seem to play no role at all in the municipalities' choice of data techniques, their use and application. They do not appear in the various policy papers and their participation is met with opposition. When a member of the Rotterdam client council asked the department of Employment and Income permission to use the municipal data we used as a research team (see below), the municipality refused because it was unclear whether this was allowed under the new GDPR. The client council intended to use the data to gain more insight into the fate of the elderly unemployed, which would enable them to develop specific activities for this group.<sup>14</sup> The refusal to let the client council partake in the analysis of municipal data is noteworthy: first, since the request is directly in line with the data ideologies embraced by the national and local governments. After all, as the National Expertise Center Open Government states, "inhabitants should get the opportunity to turn their involvement into concrete actions by making use of open data."<sup>15</sup> One might argue that data projects in the social domain are not about open data given their highly personal and sensitive nature. Yet, the municipalities do grant access to these data to businesses and academic partners. That a representative body of the people who are the subject of these projects is barred from participation is, second, in direct contradiction with the advice given by the Advisory Council for Science and Technology. As early as 2012, the Council argued that successful urban innovations will only come about through a so-called *quadruple helix co-operation* between the government, companies, knowledge institutes, and citizens (AWT, 2012). The innovations the municipalities are looking for in the social policy domain are being designed and developed, however, without those citizens directly involved.

### **Filling the Institutional Void**

Until now, I have shown in as much detail as possible with which goals, instruments, and actors municipalities are encouraging the data transitions in the social policy domain. Although both national and local governments have expressed the wish to improve the provision of services in the social domain (IBP, 2018, p. 20) and prefer to speak of data in terms of dialogue and autonomy (VNG/Berenschot, 2018), it seems, nevertheless, that the evolving practices are strongly focused on top-down monitoring, containment, and control. Citizens in the system are subjected to those processes, as a group and sometimes individually, without knowing it. The speed of the development of dashboards and the many experiments to predict fraud risks with the aid of data techniques bear witness to this, as does the total absence of citizens in the design of these data practices. The municipalities work with big or small companies and knowledge institutes, yet they are unable to set up the dialogue they so desire with citizens about the use of their personal data. Citizens in the system may perhaps respond via surveys about "client satisfaction" or via client councils, but the way in which the municipalities have introduced data techniques in the social domain leaves little room for an active, initiating, and equal input by the citizens who deliver the data.

The institutional void around using data for social policy goals, is thus slowly filled by a set of practices that is undesirable from the perspective of the legal frameworks of the GDPR and the social domain, the quality principles of responsible data use and general ethical standards. This is a situation that indeed nobody actively strives for; nevertheless the understandable desire for quick results (cf. Mamman and Saffu, 1998), the almost unavoidable compulsion of daily organizational processes within municipalities (e.g., Ten Bos, 2016), and the unequal power and knowledge positions within the quadruple helix (cf. Deakin et al., 2018) work toward a top-down use of data in the social domain. In addition, we need to recognize also how the notion of "data driven" or "data steering" itself contributes to the top-down tendency of monitoring, containment, and control.

<sup>14</sup> Personal observation and communication.

<sup>15</sup> <https://www.open-overheid.nl/open-data/> (accessed 3 February 2019).

***The discourse of steering***

Engelbert (2019) discusses how the words “driving” and “steering” suggest that something or someone is going to provide direction. The concept is in keeping with the prevalent idea that modern governments need to steer instead of follow and that such steering is possible and practicable. Engelbert further argues that the steering discourse makes a concerted effort of, for instance, citizens unlikely since steering jointly is after all literally impossible, as the well-known Dutch saying about the impossibility of two captains on the same ship expresses. In the same way, Meijer (2015) analyses the more specific concept of “data steering” by using the metaphor of the cockpit. He plays off steering in the airplane cockpit against the image of a flock of birds and discusses the different kind of data practices emerging from the flock: individuals, groups, institutions, or small companies collect, produce and share their data to solve their direct need for neighborly help, tools, knowledge, or services. According to Meijer, such new sharing practices fit in well with the discourse about a participatory civil society in which citizens design their own lives and environments.

The concept of “data steering” in the social domain unites the steering discourse and current data rhetoric with a very specific outcome: it suggests that factual data and their recognizable patterns will generate the steering. Administrative insights, official knowledge, policy directions, or citizens’ wishes do not have a self-evident place in this: after all, there is no similar discourse of administrative, policy, or civic steering. Data determines the direction, while administrators and officials sail along and citizens are not even on board, even though they co-own the ship since, after all, it sails on their data.

If we take Hajer’s observation about an institutional void in which new rules, standards, and interventions emerge through everyday deliberations and actions of a variety of actors, we can conclude that in the social domain (with data warehouses, dashboards, and predictive statistics) these everyday processes are inadvertently leading to a harsh political reality in which municipalities collect as much data as possible about their citizens in the system. The goal of municipalities is to monitor their own processes and budgets in this way and predict the risk behavior of their “clients.” In doing so, municipalities will probably violate the new privacy legislation and they will unavoidably make mistakes made in individual cases because of the lack of quality of both the data and the analytical models. Moreover, the group of citizens in the system is in its entirety painted as problematic, both financially and from a management point of view, because of these data practices. The desires and needs citizens express about the social domain do not fit in with the notion of data steering, which makes them invisible. This dynamic is reinforced by the absence of citizens or their representative bodies in the design of the new data processes.

Without any clear intervention from legislation, representative politics, public officials, or participating citizens, this is the scenario to which data steering in the social domain may lead. It is a scenario of control that nobody actively wishes or aims for, yet as I hope to have shown, it may automatically come about as a result of everyday processes and by the way in which the objectives, instruments, and processes of data steering are formulated and carried out. Which of these elements need to be changed to get a different scenario?

**Care Instead of Control**

Various authors, who mainly write about the United States and the United Kingdom, argue that the use of big data in the social and public domain will almost certainly result in undesirable scenarios (e.g., Eubanks, 2018; O’Neil, 2016). EU regulations and the Dutch SHARED data standards, in contrast, focus on the development of data practices that will contribute to human dignity and social harmony, and in which privacy in all its meanings will be guaranteed.<sup>16</sup> Moreover, a Dutch court has just ruled that SyRi, the system Dutch municipalities can use to detect fraud risk is currently executed in a way that violates

<sup>16</sup> Increasingly, transparency and ownership of/control over personal data, for example, also fall under the umbrella concept of “privacy.”

privacy laws. Privacy advocates feel that this ruling must lead to significantly different data practices and may change data use in the social domain elsewhere too (Kleen, 2020).

The ruling also evokes the need for alternative data scenarios which are informed by scientific, policy, and legal considerations. In scientific reflections on new technologies, their potential application is most often formulated in two directions: either to exert control or to provide service. Lyon (2006), for example, speaks of “care” in opposition to “control,” and I have used the term “service” in opposition to the term “surveillance” (van Zoonen, 2016). The analysis of data practices in the social policy domain shows that they move by and large in the direction of applications for surveillance, while municipal experiments to provide better services is much rarer. In the context of decentralization policy, however, the provision of services should constitute an important area of application; after all, the policy was introduced to bring the services closer to the people. Furthermore, a service application of data in the social domain will, perhaps, suffer less sizeable problems with the GDPR: citizens in the social domain surrender their data because they are in need of financial or other support, and data techniques focused on service provision may meet the criterion of “purpose limitation.”<sup>17</sup>

For this reason, the obvious alternative data scenarios for the social domain starts at the objective of improving the service provided to citizens. This is impossible without their involvement from the very first stage of designing such projects. Their needs and the support offered to them are, after all, what it is all about. How can this be put into practice and which citizens, precisely, are the ones to involve?

### *Involving citizens*

In the Dutch benefit system experiences are collected through the Client Experience Monitor. However, this is too general an instrument to obtain an active input from citizens and it does not ask them about the way municipalities and other benefit institution collect and process their data. The obligatory “client councils” are an obvious potential participant to design alternative data scenarios, but they report that they are not always sufficiently sustained by the people they represent (Cuelenare and Mulder, 2017). Besides the client councils required by law, in recent years, countless civic initiatives and voluntary networks have been set up, for instance via café meetings for the unemployed, application platforms, and city rooms. Together, they give shape to the participation forced into existence by the ideal (or ideology as critical authors would claim) of a participatory society. They have a broad range of locally rooted experiences at their disposal as well as suggestions for improvement of the services provided in the social domain. These informal networks share information with each other in a way that reminds one of Meijer’s aforementioned notion of the bird flock. It is a world of experiential knowledge and situated solutions, in which a clear need for a better provision of services exists and requirements must be met before one can deal with personal data.

This does not mean that those wishes can be known, collected and formulated simply and unequivocally, especially since the use of data is an almost complete unknown in these circles. It is both a participatory and a design assignment to enable people to take part in the development of data techniques in the social domain. Many good instruments have been developed for civic participation, caught in terms such as “living labs,” “Hackathons,” or “GovJams.” Although these events are usually populated by professionals, officials, and technology students, a fundamental part of these design methods is that the experiences and perceptions of end users are included from the start in the joint design process. There is little experience with the participation of vulnerable citizens, although in one of the GovJams taking place annually in Rotterdam, people with debts were also involved, while former delinquents participated in another GovJam (Van Waart et al., 2016). Another rare example of such collaborative design comes from the United Kingdom, where in 2013, four national data centers were set up to make a whole range of administrative data from all layers of government available for scientific research. Through a series of dialogues with citizens about data, the British Office of National Statistics tried to find out the views they have on such an extensive process to open up and link administrative data. The 2-day dialogues consisted

<sup>17</sup> I hereby note that I am not a legal expert and that this argument may be more complicated in practice.

of an informing stage, during which participants received comprehensive information about data techniques, and an opinion-forming stage, during which their views and suggestions about responsible use of the data were discussed. The dialogues showed that it is certainly possible to inform average citizens about data techniques and that they were able to stress clear priorities with respect to their involvement and privacy dilemmas. The British citizens prioritized transparency as the most important value (Cameron et al., 2013).

### **A Concrete Experiment**

The last question to ask is whether such a service scenario for data in the social domain has to deal with problems comparable to those in the control practices which are developing now. To do so, I will reflect on the quality, ethics, and citizen participation in one of our own research projects about the potential of data for the development of personalized reintegration strategies to get a paid job. This goal is analogous to the personalized strategies common in, for example, the commercial, political, and medical sectors. The idea behind this is that data opens up the possibility of tailored support, which would prevent citizens in the system from being subjected to strategies that in their specific case are not useful at all. The research consisted of five parts: which data is interesting to use from a scientific and municipal perspective; where can this data be found and is it available; is it possible from a financial, practical and administrative point of view to link this data for use and analysis; which analytical techniques will enable us to determine patterns and predictive indicators; and what do citizens in the system actually think and suggest about the way in which their data is used?

#### ***Data quality***

In our project, too, it gradually became clear that the validity and reliability of many municipal data sets were not strong enough to include them in our research. In the final analyses, we could only use two municipal data sets about the number of “client contacts” that “client managers” report, and about the reintegration program the person was referred to. The rest and vast majority of the data originated from the microdata of the Dutch Office of National Statistics (CBS). To us also applied that the collection, selection, preparation, and processing of the data that makes linking and analysis possible, took longer than anticipated. The fact that we failed to find a researcher with the needed knowledge and skills fast enough also played a role. The shortage of data scientists is a widely acknowledged problem; those present mostly prefer business over science or the government (VSNU, 2018). For that reason, we also included a researcher working for the municipality of Rotterdam in the project team, to make sure that the expertise gained will stay within the municipal organization as well.

#### ***Ethics***

To the issues concerning ethics and privacy applies, first of all, Article 89 of the new GDPR, which argues that personal data can be processed for scientific research as long as it is subjected to appropriate guarantees regarding the rights and liberties of the person involved. For our study, there were three such guarantees: we have to abide to the academic codes which prescribe that this kind of research must be assessed by an ethical review commission, which not only will assess the compliance of our activities to legislation, but also to the behavioral codes upheld by the Dutch universities with respect to honesty and due diligence, reliability, verifiability, impartiality, independence, and responsibility (VSNU, 2014). In addition, we have reached a so-called “processors’ agreement” with the municipality of Rotterdam, in which external parties commit to the obligation of building enough guarantees into their project regarding privacy, safety, and secrecy, which must be subjected for testing by a municipal privacy officer. Finally, strict technical and ethical rules apply to the use of CBS microdata such as, for instance, the rule that the exportation of data from the CBS environment is prohibited.

### ***Citizen participation***

We have included data dialogues in our study with citizens in the social domain of the four big municipalities. In doing so, we followed the British example, offering a hands-on exercise with pseudonymization, data linking, and predictive statistics, followed by several rounds of discussion about privacy, transparency, and control over one's personal data. In these dialogues, we heard similar stories about municipal and social security organizations who handle citizens' data carelessly, who demand to know the same data over and over again, who treat citizens badly and pressure them, and who provide them with incorrect information. For this reason, our citizens in the dialogues were exceptionally distrustful of the municipality, the social security organizations and of everything "the system" wants to impose on them. Although none of the participants doubted our integrity, nobody believed that municipalities would be able to handle the new data techniques in a confidence-inspiring way. They worried in particular about predictive analytics and further automation of the support, which would lead to "one of those calculating programs that will then boss you around about what to do next." The linking of their personal data, however, caused the participants little concern, since the municipality "already knows everything about us that there is to know"; they feel they already lost their privacy the moment they were forced to apply for social security. Yet, transparency is a wish they clearly expressed, as none of our dialogue partners knew who is permitted to look at their municipal data file, at which moment, and for what reason (also see van Zoonen, 2018).

Thus, the data dialogues can clearly give direction to the possible design of personalized reintegration strategies based on data. However, the dialogues especially tell us that, argued from the citizens' point of view, data do not present the most obvious way to improve the quality of the social domain. To our standard opening question during the data dialogues, to give one golden tip to municipalities about how to improve their services, we received answers that mainly had to do with the interaction "at the counter," such as one and the same "client manager," continuity in the approach, respectful treatment, and less coercion. This is consistent with the signals already emitted earlier and more frequently by the client council (e.g., Cuelenare and Mulder, 2017, p. 13).

### **Conclusion**

This article has focused entirely on the shortcomings of the data transitions in the social domain. It follows, therewith, closely the current academic, economic, and societal obsession with data as useful tool to solve municipal problems. However, there are wider critical questions to ask. It remains, imperative, for instance, to also consider whether there are alternative, nondata means to improve the provision of services and overcome a municipal deficit in the social domain. A case in point is the quality of administrators in the social domain who themselves often are employed on a precarious and temporary contract, and are thus unable to provide the consequent and reliable contacts that citizens in the system would benefit from. Another question is whether the financial and knowledge investments needed to set up a reliable and valid data system, to maintain it and structurally embed it the municipal organization, will outweigh the expected returns. Moreover, our talks with citizens strongly suggest that data steering, whether it is used for surveillance or service purposes, will always function as an instrument of "the system." In this respect, it is illustrative that the agency that which funded our research (ZonMw "Skillfully back to employment"<sup>18</sup>) states at its site that it has been set up at the request of the ministry of social affairs and the ministry of health, in co-operation with three national social security organizations. It is specifically aimed at answering to problems raised by the Dutch municipalities. Citizen representatives have been involved only at a later stage in the program's knowledge sharing, as recipients of the outcomes rather than as setters of the agenda. In fact, our own study suffers from the same problem: we have formulated our research question without any active input from citizens because we were uncertain if and how their ideas and input would match the funding requirements.

<sup>18</sup> <https://www.zonmw.nl/nl/onderzoek-resultaten/preventie/programmas/programma-detail/vakkundig-aan-het-werk/>.

Nevertheless, based on the SHARED principles regarding human-centered deployment of data, all stakeholders in the social domain should be involved in the initial formulation of the challenge at the center of a data project. A “steering” discourse strongly suggests that only one single actor is to give direction: it may be data or, in a complete reversal, citizens, but the term itself makes a collective effort difficult. There is an interesting lesson to learn from the physical domain of municipalities, where urban (re) development, with all its accompanying pitfalls, is tackled from the start in conversation and collaboration with inhabitants, businesses, administrators, and knowledge institutes. While this concerns the design of physical spaces, the metaphor of jointly designed data space for the social domain which can be used by the municipality, clients, businesses, and knowledge institutes together, helps to think about other questions than the ones data steering scenarios allow for, such as: is it a closed or open space; what are we going to do in that space; who is allowed to remain in that space and co-operate with us; who has a key or is a concierge present; and how do we furnish this space to make it pleasant to stay in? Another relevant metaphor is that of a “data commons,” analogous to the commons pasture (“the commons”), on which all villagers could keep their cattle in premodern times (De Graaf and Stikker, 2018). In Dutch, the word “gemeente” (municipality) stems from the word “meent” (commons); in the same vein, we might speak of a “data meent” (data commons), where citizens can contribute, control and—if needed—share their personal data.<sup>19</sup>

Despite all the goodwill and ethical awareness in the municipalities’ social domain, the emerging data steering discourse and practices are bound to produce unwanted outcomes. This article should therefore be read as an urgent appeal to municipalities, companies, and scientists, to dwell on the implicit, unnoticed consequences of their data practices and experiments, and explore more collaborative practices that benefit all.

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<sup>19</sup> In particular, see the joint DECODE project of Barcelona and Amsterdam, funded by the EU. <https://www.decodeproject.eu/>.

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