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Opening the Gender Box: Legibility Dilemmas and Gender Data Collection on U.S. State Government Forms

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US states collect sex and gender data on official government forms to understand, identify, classify, and surveil populations. These forms' gender boxes—sets of questions about sex, gender, and gender identity paired with a wide variety of answer options—can mean the difference between legibility and erasure or between surveillance and privacy. They also create classic disclosure and legibility dilemmas that disproportionately burden transgender, nonbinary, gender-nonconforming, and intersex individuals. And yet, the socio-legal forces determining the design of these gender boxes have been insufficiently studied. Documents obtained through public records requests and interviews with civil servants responsible for form design demonstrate that gender box design stems from the competing yet mostly inertial pressures that define the socio-legal contexts of street-level bureaucracy. In other words, gender boxes are products of the institutional, technological, political, and social contexts in which they are designed. Specifically, gender boxes look the way they do because they are subject to the effects of bureaucratic processes, social networks, expertise, intergovernmental dependence, norms, path dependencies, and technologies, with implications for research and advocacy.

INTRODUCTION

Questions about sex and gender appear on thousands of official U.S. state government forms. These *gender boxes* are the beachheads of the state's power to use personal information to classify people—for good and for ill—on the basis of anatomy, chromosomes, expression, appearance, sense of self, or status. They play important roles in the social processes that determine gender (Westbrook and Schilt 2014). They have expressive effects that help socially construct popular consciousness about gender (Sunstein 1996; Waldman forthcoming). And gender boxes are the loci of vexing disclosure dilemmas. Gender box design can mean the difference between safety and police harassment, between getting necessary health care and being denied it, and between accessing benefits and being accused of fraud. Too much or too granular

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information can enhance state surveillance; too little and too general information can contribute to erasure in other contexts. Inconsistencies among gender boxes can cause denial of benefits for gender-nonconforming workers when benefits are meted out by computerized systems that translate inconsistencies as evidence of fraud (Waldman forthcoming). At the same time, any enforced homogeneity that would limit health forms and subsequent research and reporting to "male" or "female" can contribute to insufficient care for those who are neither (Kronk et al. 2020; Streed et al. 2020; Turney et al. 2020; Baker, Streed, and Durso 2021; Keuroghlian 2021).

Undoubtedly, gender box design is critically important, particularly to those whose gender identities do not match their assigned gender at birth. After years of advocacy, those designs are in a state of transition. Twenty-two states now allow individuals to identify as M, F, or X on official documents (Movement Advancement Project n.d.). The State Department issued its first US passport with an X gender designation on October 27, 2021 (Hauser 2021). The National Academies of Sciences, Engineering, and Medicine (2022) has called for new standardized gender boxes in the health care context. Scholars and advocates are also asking whether collecting information about sex or gender is necessary at all (Gender Free Coalition n.d.; Spade 2015; Wipfler 2016; Katri forthcoming). That advocacy has produced results, as well: in 2018, for example, the Centers for Medicare and Medicaid Services eliminated gender markers from Medicare cards (National Center for Transgender Equality 2018).

And yet, the gender box remains inconsistent. Health care intake forms are committed to the gender binary (McDowell et al. 2022). Public health questionnaires from the Centers for Disease Control and Prevention (CDC) include a wide variety of question/answer pairs about gender but far fewer about sex and sexual orientation (Kress et al. 2021). The US Census asks about sex but not about gender identity or sexual orientation (Velte 2020). Major social surveys, many of which inform government policy, are experimenting with gender boxes that include answer options beyond male and female but simultaneously reflect the gender binary through the references to "husbands," "wives," "brothers," and "sisters" (Westbrook and Saperstein 2015). Those studying gender reclassification rules and forms find inconsistency and chaos from state to state and from agency to agency (Currah 2022; Katri forthcoming). Recent studies of state government forms have also found that the gender binary exists alongside inconsistencies among gender boxes designed by the same agency (Waldman forthcoming).

Inconsistency is not always a bad thing; different arms of the state do not all need the same data. But scholars' focus on the formal law either as an explanation for or means of reforming the gender box is insufficient (Velte 2020; Katri forthcoming). This article offers an alternative account. Gender boxes are not only tools of power (Meadow 2010; Bea and Poppe 2021). They are also the work product of modern street-level bureaucrats (Lipsky 2010). Because there is much to learn from drilling down into the "mundane ... and detailed work of regulatory apparatuses" (Rose and Valverde 1998, 550), I submitted 138 public record requests to 45 US states and the District of Columbia; identified subject matter experts in state health, labor (including worker compensation and professional licensure), and motor vehicle departments; and conducted 76 interviews with civil servants responsible for designing, using, and updating government forms that ask for sex and gender data. Based on that original research, this study suggests that gender boxes are products of the institutional, political, technological, and social contexts in which they are designed. Bureaucratic processes, social networks, expertise, intergovernmental dependence, norms, path dependencies, and technologies all exert either competing or inertial pressures on gender box designers, resulting in slow and uneven change.

In demonstrating the connection between the gender box and the social forces shaping street-level bureaucracy, this study makes several contributions to socio-legal scholarship. It is the first study of state sex and gender data collection to learn from the perspectives of form designers. The study also adds to the literature on street-level bureaucracy by identifying pressures facing civil servants insufficiently described in previous literature and builds on science and technology studies scholarship on how data creates knowledge. Finally, sitting in a tradition of socio-legal scholarship that unearths the mostly hidden yet significant influence frontline workers have on making on-the-ground policy, the study also opens avenues for reform that have been undertheorized and insufficiently explored.

THE SOCIAL PRODUCTION OF KNOWLEDGE ABOUT SEX AND GENDER

This research sits at the intersection of several related socio-legal literatures. This article focuses on two of them—namely, the social processes through which surveys and data formulate knowledge and the social and institutional power of street-level bureaucracy to influence policy.

All surveys are social; they reflect conventions, norms, practices, and rhetoric that define “good” data (Biruk 2018, 5). Research subjects are made visible—or rendered invisible—not only by the design of survey questions and the political project of providing possible answers but also through the entanglements of authority, power, and discourse embedded in the relationship between surveyors and their subjects (Guyan 2022). Surveys also seek to quantify social phenomena in order to understand populations, make comparisons, and formulate policy. But as seductive as quantification may be, it is both normatively burdened by the social institutions that create and leverage surveys and can lead to “oversimplification, homogenization, and the neglect of the surrounding social structure” (Merry 2016, 4). Therefore, survey data constitute a form of power. When the state creates and administers surveys, the resulting data can determine who gets funding and how much. The data can mean the difference between intervention and neglect, freedom and control, inclusion and erasure. As Merry noted, “[r]ather than revealing truth, [quantitative] indicators create it” (5).

States collect quantitative data about their populations’ sexes and genders for a variety of reasons. The formal law requires sex or gender data as a form of identity verification for voting, driving, government benefits, and licensure, among so many other facets of social life (Spade, 2008; Waldman forthcoming). As Currah and Mulqueen (2011) note, gender data is also a securitizing tool. Gender data can also be used for research purposes and to spotlight gender-based discrimination (Clarke 2019). Ben-Asher (forthcoming) has traced the use of “legal sex” since the nineteenth century, finding broad and changing uses of gender data in family law, discrimination law, and elsewhere. In so doing, the state creates different truths depending on how they collect gender data.

Traditional approaches limited to the gender binary contribute to erasure, causing harm to marginalized groups within the queer community (Knauer 2012; Marcus 2015; James et al. 2016; Katyal and Jung 2021). In these cases, more and more accurate data could improve LGBTQ+ access to health care, help identify discrimination, and highlight injustice (Turney et al. 2020; Deutsch et al. 2014; GenIUSS Group 2014; Tate, Youssef, and Bettergarcia 2014; Reisner et al. 2015). On the other hand, more options for gender self-description trigger what Minow (1990, 20) called the "dilemma of difference" or what Scott (1988, 202) called the "conundrum of equality." That is, by claiming equality through surveys with inclusive gender data practices, marginalized communities reify a reality of static, easy-to-define gender categories (Braunschweig 2020, 78). What is more, states can take granular gender data to make transgender, nonbinary, gender-nonconforming, and intersex individuals more legible in service of white supremacy, heteronormativity, and patriarchy (Lugones 2007; Benjamin 2017; D'Ignazio and Klein 2020). It should come as no surprise that many transgender and nonbinary individuals avoid seeking health care and refuse to disclose or are uncomfortable disclosing gender identity data, even in trans-specific studies, out of concern for their privacy and safety (Thompson 2016; Kcomt 2020).

Given these dilemmas, socio-legal scholars have different views about the necessity and wisdom of gender data collection by the state. Wipfler (2016) and Katri (forthcoming) have looked beyond reforming gender data collection and have followed Spade (2015, 87) in urging resistance to using gender for identity verification because of the data's role in entrenching a white supremacist and patriarchal status quo. Cooper and Renz (2016) have shown how the law can police gender discrimination without bringing the state into the business of mass gender data collection and classification. Braunschweig (2020) has called abolishing state gender designations necessary to a broader queer and feminist emancipatory project. Others think there is a role for sexual orientation and gender identity data collection in the US Census, government surveys, and in health care contexts (Persily 2001; Mezey 2003; Adair 2019; Nobles 2000). Clarke (2019, 990) argues that the relevance of gender data varies with context. There are powerful reasons to want "each context of sex or gender regulation [to] consider[] the relative merits of various strategies for achieving nonbinary gender rights" beyond the narrow confines of gender neutrality in the law. In certain areas, collecting detailed gender identity data could surface antitransgender discrimination; in others, information could be used to expand the carceral state. Unsurprisingly, then, activists at the forefront of debates about state gender data collection support both initiatives to make gender boxes more inclusive of gender diversity and efforts to remove gender markers from official government documents (Saguy 2023). The inclusivity and design of the gender box sits the center of this scholarly debate.

STREET-LEVEL BUREAUCRACY AND THE GENDER BOX

To understand how the gender box creates new forms of knowledge, socio-legal scholars must see how law operates in practice (Silbey and Sarat 1987; Chamallas 1988;

Gould and Barclay 2012). After all, the laws on the books may require state agencies to collect sex or gender data, but they rarely—with only a few exceptions—say *how* to collect it, what questions to ask, what answers options to provide, and how to code those answers in statistical analysis. Much of that work is done by civil servants.

As Brodkin (2012, 943) notes, the "realities of work" can influence "policy delivery at the front lines . . . often in unexpected (and unseen) ways." Gender box designers and the civil servants that use them are similar to what Lispky (2010) called "street-level bureaucrats." Granted, traditional street-level bureaucrats have traditionally been defined by their face-to-face interactions with the public. But form designers share many of the same characteristics as Lipsky's frontline workers. Form designers' choices affect the practical implementation of the law (Bovens and Zouridis 2002, 181). They determine how sex and gender data will be collected even without formal authority (Maynard-Moody and Mushens 2000; Brodkin 2012, 942). The law "remains an abstraction" until these frontline workers carry it out and apply it in real life (Zacka 2017, 16). And form designers, like traditional street-level bureaucrats, sit within social contexts that can nudge their work in ways inconsistent with pure, arms-length economic rationality (Raaphorst and Loyens 2020). For these reasons, civil servants likely play critical roles in creating the quantifiable indicators that determine how society understands sex and gender.

And yet, the influence of civil servants on gender data collection remains understudied. Most scholars have focused on the survey instruments themselves—namely, censuses (Velte 2020; Guyan 2022), CDC questionnaires (Kress et al. 2021), and major social surveys often used in policy making (Westbrook and Saperstein 2015)—revealing how survey design often produces knowledge in ways that reify the gender binary. Although important foundational research, it is only a start.

Administrative scholarship suggests that process can influence decision making. More complex, multistakeholder processes not only give many people multiple opportunities to stop to delay new initiatives (Alison et al. 2015). They are also expensive and take time (Pentland and Feldman 2005). Decision making within those processes also matters (Ingber 2016). Of course, the inertial capacities of formal decision-making processes can vary with the people involved. When internal actors are "allies already" or when decision makers are committed to change, other barriers to change may crumble (Hoffman 2019).

Literature in organizational sociology and public administration suggests that all workers undergo a process of organizational socialization where newcomers learn the ropes and become acclimated to a workplace's culture (Van Maanen and Schein 1979, 212; Hatmaker et al. 2011, 396). On one hand, socialization has an inculcative element; the goal is to take a new worker and make sure they understand how things are done as well as the values and norms behind their work (Bauer, Worrison, and Callister 1998, 156). On the other hand, socialization also involves information seeking; workers ask questions, read manuals, watch others do their work, sit in on meetings, and attend trainings (Hatmaker et al. 2011, 397). As a result, workers' social networks can have competing effects: some can steer workers toward certain normative positions adopted by management or senior colleagues and others can expose workers to new ideas. Both may influence form design.

Although the formal law insulates the civil service from politics (Michaels 2015), strong prevailing norms pressure frontline government workers to stay out of the political fray (McAdams 1997; Posner 2000). As Ingber (2016, 687) has noted in the legal and national security contexts, "these norms … typically favor continuity" in the positions taken by the executive branch. In the case of gender box designers interviewed, norms against politicization took on two related, but distinct forms—resistance to political controversy and a belief that gender box design should be dictated by the political branches. Both may help maintain the gender box status quo.

Gender box design may not always be intentional. It can be based on the lack of a decision. Scholarship in management and sociology suggests that path dependency contributes to routinized organizational outcomes (Samuelson and Zeckhauser 1988). If sex and gender data collection has been done a certain way for a long time, it may be difficult to switch gears. That said, if gender boxes are bases for active discussion, the way civil servants engage in those discussion could reveal the social pressures they face.

Rich conceptions of stakeholder interests have also been missing from scholarship on gender data collection. Transgender, nonbinary, gender-nonconforming, and intersex individuals have an interest in their recognition as a matter of self-respect and social respect, both aspects of human dignity (Charlton 1998). Government actors may or may not be committed to gender inclusivity, but they may have an interest in learning from data and using it for policy (Brodkin 2012, 944). Technology vendors are another underappreciated stakeholder in state data ecosystems. A robust interdisciplinary literature in technology, privacy, and administrative law has highlighted the increasing automation of government agency decisions (Citron 2008; Crawford and Schultz 2014; Pasquale 2015, 2019; Eubanks 2018; Katyal 2019). Although much of that scholarship is focused on the implications of state use of algorithmic decision-making systems to make material decisions about people's lives, it also highlights the privacy risks associated with digitization (Schwartz 1991). Scholars have also shown how agencies can turn technology procurement into a form of policy making, burying policy changes in the designs of computational systems purchased to facilitate administrative work (Mulligan & Bamberger 2019). Therefore, technology may play a critical role in determining gender box design.

STUDY DESIGN

Sampling

Based on this literature, I submitted 138 open records requests to states' and the District of Columbia's departments of health, labor (including workers' compensation and professional licensure), and motor vehicles for any documents and communications about (a) the form design process, (b) contracts and associated documents related to the procurement of digital technologies that agencies use to collect and store demographic

TABLE 1.
Summary of Outreach and Results of Public Record Requests

Method of contact	Responses	Departmental responses	# of interviews	Medium	Follow ups
Public Record Requests ($n = 138$)	Contact info of expert/form designer provided	22	20	Phone	0
	Requested clarification	57			
	• No responsive documents or contact information provided	*10*	*0*	*n/a*	*n/a*
	• Asked to provide questions over email for response from subject matter expert	*15*	*15*	*Email*	5
	• Provided contact information for one or more subject matter expert	*32*	*33*	*16 Phone* *17 E-mail* *6 Declined*	3
	No responsive documents or contact information provided	59	0	n/a	n/a
Direct Contact (department website)		10	8	Phone	0

data, and (c) names and contact information for subject matter experts who had been or are involved in or might be knowledgeable about gender box design.[1] The results of those submissions are summarized in Table 1. The only states about which data could not be collected through either documents responsive to public record requests or interviews were Arkansas, Virginia, and Nebraska.

In addition to interviews, twenty-four departments in twelve states provided documents responsive to public records requests. All interviewees noted that their forms are reviewed at regular intervals, in response to legal or political changes, or based on advisory groups' recommendations. Where these reviews became relevant to the gender box, they are noted below. Interviewees were roughly evenly distributed across departments, with a slight overrepresentation of civil servants in health departments and those working in workers' compensation, unemployment, and professional licensure (35.5 percent) and a slight underrepresentation of motor vehicle departments (28.9 percent).

Interviews

One of the chief benefits of semistructured interviews is the capacity of flexible methods of qualitative research to identify nuance (Hind 2007). Semistructured interviews allow the researcher to ask initial questions and then subsequent questions based on responses. The goal is a more complete response than would be possible without deviating from a script. As Hoffman (2008, 274) notes, this allows the researcher to "understand the greater context, to obtain a large overview, and [to] … triangulate the accounts of differently situated interviewees with various bases of knowledge."

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[1] Arkansas, Delaware, Kentucky, Tennessee, and Virginia only allow residents of those states to submit public records requests and receive documents. Therefore, I submitted a total of 138 (three departments in 46 jurisdictions) instead of 153 (three departments in 51 jurisdictions) requests.

I conducted each of the 44 telephone interviews with a set of introductory questions (attached at Appendix A) and referenced at least one specific publicly available form that was designed by the interviewee's division or department. Therefore, the interviews included questions about the general form design process as well as questions about specific forms and gender boxes. Notably, although states are always in the process of updating their forms—for instance, the Oregon Department of Transportation has "determined that for most forms, we won't need to require gender to be marked" and … we will be removing that requirement in an upcoming rulemaking"[2]—this study is designed to understand the past and present and to describe the social forces that have shaped gender box design, many of which are likely to continue to do so throughout those forthcoming changes.

In addition, interviews focused on those with experience in form design, including their conversations, approach, rationales for certain actions, intentions, and any barriers in their way. Interviewees were allowed to expand on any question and talk about one topic in depth. This resulted in additional questions and extensive data collection, enhancing the study's validity (Denzin and Lincoln 2000). Each interviewee was also given the opportunity to be identified by name and title, pseudonymously, or entirely anonymously. Where interviewees did not indicate their gender identities, gender-neutral pronouns are used.

Telephone interviews ranged from twenty-five to eighty minutes with the majority lasting between thirty and forty-five minutes. I transcribed all telephone interviews and compiled all email responses. As a result, all quotes are direct quotations. I used an inductive, iterative grounded theory approach to coding, leveraging open and axial coding and relevant literature to analyze the interview data (Corbin and Straus 2008). I first coded all responses using conventional content analysis (Hseigh and Shannon 2005), identifying relevant insight responsive to the initial research goals described below. I then returned to the literature to allow for a second round of coding. Additional coding categories were identified from the interview responses themselves, as well. After this review, I followed up with additional questions via email with fifteen interviewees, all of whom responded. Responses were coded along the same lines as the first round of interview data.

The remaining interview subjects chose to respond to email questions. The limitations of email responses relative to telephone interviews is well known, but state government agencies place significant limitations on their workers' public communications. In search of better and more granular data, I chose to accept email as an accommodation to some interview subjects. The same iterative coding process was conducted on the data obtained from these responses.

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[2] David Martin, email message to author in response to public record request, March 17, 2022.

TABLE 2.
Aspects of Street-Level Bureaucrats' Social Context Affecting Gender Box Design

Competing pressures	**Decision making**	**Formal processes** can have normalizing and chilling effects	**Informal processes** can provide opportunities for entrepreneurship
	Social networks	**Local networks** can enforce tradition as workers "learn the ropes"	**Professional networks** can expose civil servants to new ideas
	Expertise	Refusal to consult with experts out of **hostility** or **perceptions of irrelevance** can maintain status quo	When consulting with experts, effects can vary with type of expert: **managerial** or members of **affected communities**
	Federalism	**Interdependence** between departments forecloses changes	**Independence** allows for different gender boxes
Inertial pressures	**Norms**	Norms of **political neutrality** can maintain status quo	
	Path dependencies	**Status quo biases** in bureaucracies maintain tradition	
	Complexity	Need to **simplify** information for superiors, elected officials, public can keep gender questions simple	
	Automation	Technologies designed to **automate administration** foreclose discussion about gender boxes	

FINDINGS: THE SOCIAL FORCES INFLUENCING THE GENDER BOX

This article's central descriptive claim is that gender boxes are the creations of the institutional, technological, political, and social contexts in which gender boxes are designed. These forces create a "complex institutional web" that presents civil servants with conflicting demands (Hupe and Hill 2007, 290). That is, although advocates may find some success in pushing states to enact laws to change gender box design, the social features of frontline decision-making and street-level work often matter at least as much to the gender box.

Specifically, government records and interviews with frontline workers reveal two categories of pressures that influence gender box design: those that exert competing pressures and those that have mostly inertial effects. The first category includes decision-making processes, information flow through social networks, conflicting conceptions on the necessity of expertise, and the concurrent dependence and independence of different government units. The second category includes norms against politicization, path dependent tendencies, institutional resistance to complexity, and trends toward digitization and automation of government services. Table 2 provides a summary. Although these forces do not always influence gender box design in the same way, they collectively offer a rich narrative explaining gender box heterogeneity today.

Competing Pressures on Gender Box Design

Decision-Making Processes

Most interviewees either explicitly or implicitly noted how the style and character of the form design and update process affected gender boxes. In most cases, formal decision-making processes stop change regardless of substance (Ingber 2016, 687). This resulted in more traditional forms.

For example, New York has an extensive formal process for redesigning forms. A representative of the state's department of health stated that "when forms need to be updated, we submit the changes to through a process. There's a division that handles almost all changes that I'm aware of. Sometimes, the changes we suggest get sent back to us for clarity. You have to be very specific when we need this done." A colleague in the state's labor department who worked on the Workforce Development System Rapid Response Customer Application also noted that forms with which they are familiar "are adjusted but through a process. The admin staff create a committee of subject matter experts in the department to review the changes. That could take months. Then there are revisions, and comments on the revisions take several weeks, maybe less, but definitely quite a bit of time usually. There are quite a few rounds of review, I'm not sure how many." In South Carolina, DMV staff propose an update, establish a team of "staff, relevant subject matter experts, and management from the appropriate directorate or business unit", develop a draft together, route the draft "through the agency's document management system to allow … experts, management, and executive-level staff to review", and then publish the update.[3]

There are indeed benefits to formal processes. They enhance uniformity and accuracy to ensure compliance and to reduce silly mistakes (Weber 2009, 214; Serpa and Ferriera 2019, 14). But those processes can hinder entrepreneurship among individual civil servants. A representative of one state government that asked to remain anonymous highlighted the benefits to affected communities from this approach. "It's a good thing I don't have to sit on a committee to hash out what we all have to collect about gender on our forms. I have colleagues who are retrograde on this, who won't even recognize the trans people we have on staff as trans." That impression tracks the literature in organizational decision making, which notes that decision makers that operate on committee consensus tend to make more conservative, modest, lowest-common-denominator decisions (Ingber 2016).

In Iowa, on the other hand, individual divisions have "the say on what content is presented" in forms, with forms staff only getting involved to harmonize "font style/size, layout, and how form numbers/revision dates are presented."[4] In North Dakota, an

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3. Kyle McGahee email message to author in response to public record request, March 28, 2022.

4. Andrea Henry email message to author in response to public record request, June 22, 2022.

administrator in the Disease Control Section stated that form updates were informal was because "we're a small state." A trained physician, this official was instrumental in the redesign of at least four new forms that tracked HIV, chlamydia, gonorrhea, and other STIs with questions about assigned sex at birth and "current gender identity" and included "Another Gender" and "Declined to Answer" answer options. This interviewee noted that "we were able to get some good things done because no one was standing in our way. I'm from a small town outside Bismarck, so this was a coming home for me after some years away at school, in practice, and in [government service] where I learned about this, but when I suggested this change, I asked how I would go about doing it and I was told to just do it." Note the contingent nature of form design in this example; North Dakota's Department of Health has several inclusive forms apparently because a single civil servant could make changes within the department's informal decision-making structure.

Multiple Social Networks

Information flow through the social networks of form designers also influences gender box design. An administrator who worked in the professional licensure division of the Tennessee Department of Health said that when they first arrived at their job, they "found it odd that we asked someone who wants to be licensed as an X-ray technician or something whether they're male or female." But, as time went on, their colleagues pushed them to keep the question as is. "I came to understand why we did and the constraints my colleagues had always been under. We need information for background checks and such. This is how it's always been done." Several other interviewees spoke explicitly about how time working with their colleagues changed their minds about a gender box, always to default back to the status quo. An interviewee from the civil rights office in a state department of labor stated that "we have to collect sex data because part of what we do here is enforce nondiscrimination law. I came in with all these ideas about how to do things and, over time, I came to realize that new is not always better. My colleagues who had been here a long time clued me into how many ripple effects it would cause" to change the gender question or add new answer options. That kind of context can be helpful in decision making, but, in this case, it discouraged change.

Even when interviewees did not explicitly acknowledge changing their views, the inertial effects of local networks were evident. Many spoke about the "way things are done here" and office cultures that recognized discretion but often centered it with managers. New ideas, on the other hand, often came from external, professional networks. Professional networks and conferences provide spaces for formal and serendipitous interactions (Edelman 2016). Public agencies will also establish relationships with teams in parallel departments and visit with those colleagues for the purposes of information exchange (Mullin and Daley 2009; Sedgwick and Hawdon 2019). Among those civil servants interviewed, these connections and the networks they built were significant sources of new perspectives on gender boxes.

Physicians in disease surveillance departments routinely spoke of how their "colleagues asked about sex and gender when we met at conferences, or when we sat for briefings with the CDC, or, honestly, when we just happened to download [another state's] forms." An epidemiologist said that they "read everything JAMA [*Journal of the American Medical Association*] puts out and there was just a 'research letter' on the very issue of sex and gender questions. It's through these things and talking with my colleagues that I learned how to do this right, or at least as right as I know." When administrators in the professional licensure division of the Washington Department of Health were updating their application forms, they spoke to "colleagues in Oregon and California, and did a comprehensive review of a few other state's forms." In Tennessee, a long-time employee in the Health Department's Communicable & Environmental Diseases and Emergency Preparedness Division "visited our colleagues in neighboring states in 2018. It's precisely the reason why . . . , starting at about 2019, I was able to add an 'Other' category to our forms for Hep A, B, and C surveillance."[5]

Notably, because workers sit in both types of networks, information flows compete. Where internal networks tended to exert inertial pressures, external networks appeared to have a greater capacity to facilitate learning. Of course, that is not always the case. Homogenous social networks have homogenizing effects whether they are internal or external (McPherson, Smith-Lovin, and Cook 2001), but at least among the civil servants interviewed, their external networks were characterized by what Granovetter (1983, 1365) called "weak ties"—namely, connections that link distinct tight networks. Weak ties are "local bridges [that] create more, and shorter, paths" between networks (p. 1366); that is, whereas strong ties (among office coworkers we see every day) tend to be homogenous and reinforce viewpoints, weak ties (among professionals in other departments or states) are able to connect different groups, contributing heterogeneity to information flow. Institutional arrangements facilitate that flow (Haggerty and Erickson 2000; Cohen 2008). Among civil servants interviewed, those arrangements included conferences and meetings with CDC officials, both of which linked sufficiently heterogenous groups and provided many with new ways to collect sex and gender data.

Perceptions on Expertise

Gender box heterogeneity also seemed to vary with frontline workers' perceptions about both the relevance and type of expertise necessary. The very nature of administrative bureaucracy, in which people are hired for their knowledge and skills but are also responsible for implementing mandates that may conflict with that expertise, creates ambiguity about the role of expertise in general (Metzger 2013). Perhaps that ambiguity explains why civil servants interviewed approached the relevance of expertise in designing gender boxes in four distinct ways: as hostile, irrelevant, managerial, or normative. And each approach either discouraged or catalyzed gender box changes.

Hostility to expertise animated three responses from frontline workers who believed that consulting medical experts or transgender and nonbinary thought leaders was an attack on their values. One stated, "Don't you go on about how anyone can identify as a man or a woman whenever they want; we don't do that woke stuff here."

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[5] Advocates from affected communities rightly see an "Other" category as nonetheless exclusionary and marginalizing (Price 2018; Kronk et al. 2020).

Another stated that they "do not need someone to tell me that male and female are different." The third was more circumspect, noting that an "expert in sex transition or whatever those people call it really isn't helpful when we're trying to prevent fraud." This last response may sound anodyne, but whether the interviewee was conscious of it or not, this comment taps into a discourse that transgender people are fraudulent "pretenders" (Bettcher 2014; Katri forthcoming). Indeed, the false suggestion that those assigned male at birth would fraudulently identify as female in order to gain access to female spaces was a primary animator of laws preventing transgender people from using public bathrooms that accord with their gender identities (Skinner-Thompson 2015).

The notion that medical experts may be hostile to traditional understandings about sex and gender may be surprising to anyone familiar with the historical relationship between the medical establishment and the LGBTQ+ community. The medical community used to stigmatize gay people as "sexual psychopaths" (Woods 2020). Physicians have long viewed queer expression as "pathological deviations from normal sexual development" (Duke 2011). More recently, however, the medical community's vocal support for gender affirming care in civil rights litigation and its general recognition that gender identity should be respected regardless of someone's assigned sex at birth have made it a target.[6] Therefore, resisting a role for supposedly progressive medical experts in the gender box design process exerted an inertial effect on forms, influencing at least three frontline workers to maintain the status quo of male/female answer options.

However, this kind of malice was rare among interviewees. That is not to say transphobia does not exist; biases are deeply ingrained in legal institutions. But far more common was the view that substantive expertise was irrelevant because sex and gender were perceived as matters of common sense. As one administrator in a professional licensure division noted, "I didn't realize having a sex question on a form to get a physical therapy license was controversial; our forms just ask for sex like everything else does." One interviewee responded to questions about seeking outside experts with confusion and incredulity: "Why would we need outside experts?" or "I don't understand what's confusing about this such that I would need an expert to tell me what sex is." A representative from Ohio stated that they were "confused by the question about updating or changing the sex question because this is kind of obvious, no?" And when sex and gender are "obvious," designing and updating gender boxes requires little, if any, outside perspective.

Conceptualizing sex and gender as common-sense categories has long been a tool of queer oppression because it entrenches stereotypes rather than the complexities of gender (D'Ignazio and Klein 2020, 30; Lvovsky 2021). The assumption of the sex/gender binary as common sense is still being used by those seeking to restrict the rights of transgender people and maintain the status quo in legal challenges to bans on gender-affirming hormone therapy.[7] Therefore, excluding expertise because of a perception that sex and gender are obvious exerted inertial pressures on gender box design, with many forms designed by these workers relying on binary "male" and "female" answer options.

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[6] Brief of American Psychological Association et al. as Amici Curiae in Support of Defendants-Appellees and Affirmance, Otto v. City of Boca Raton, 981 F.3d 854 (11th Cir. 2020).

[7] Petition for a Writ of Certiorari, Gloucester Cty. Sch. Bd. v. Grimm, No. 20-1163 (2021).

But frontline workers were not universally opposed to listening to outside experts. Two types of relevant expertise were evident from the interviews: Managerial expertise, or expertise focused on efficient data gathering and processing, and normative expertise, or the expertise affected communities can bring to make gender boxes more inclusive.

The frontline workers that focused on managerial values like efficient functioning of government and streamlining workflow consulted with colleagues who would ultimately use and analyze the data (Cohen 2019). As one civil servant in disease surveillance noted, "I spoke with administrators and consultants … and we even spoke to people at the CDC and asked them how we can help them do their jobs better." This interviewee also spoke to data scientists and statisticians in their or nearby departments: "I asked, 'How would you like this information presented if you were analyzing this material?'" These consultations could result in changes to gender boxes that keep data analysis as efficient and simple as possible. A consultant with the Washington Department of Health stated that when the state reports information to the CDC, for example, "it's being turned into quantitative data, like a '1' for male and a '2' for female. That makes things like self-identification hard. So we try to put an 'Other' category in there so at least that's just adding a '3' to their statistical analyses." That may not make for the most inclusive form, but it can explain some types of heterogeneity in gender boxes.

A few interviewees noted that they had spoken to transgender and nonbinary stakeholders when designing gender boxes. Those who consulted with affected communities tended to be civil servants who prioritized inclusive values, including "respect," "the need to be seen in forms," the "establishment of a trusted relationship with the client," and "to make sure no one falls through the cracks of the system just because they're different." The New Mexico Department of Health consulted with updated guidance from the Census Bureau, which allowed respondents to identify as "male, female, transgender, [or] none of these" (Office of Management and Budget 2021).[8] They also conducted their own analysis of the effectiveness of a two-step question: "What was your sex assigned at birth on your original birth certificate? (with possible responses Male and Female) and then asking, "How do you describe yourself? (with possible responses Male, Female, Transgender male, Transgender female, and Gender non-conforming)." Almost all interviewees who consulted with affected communities worked in divisions that reported HIV and sexually transmitted infections to state and federal authorities.

These civil servants are what Hoffman (2019) calls "allies already," meaning they bring their normative commitments to queer health and the LGBTQ+ community to their work and are more likely to do what is necessary to achieve equitable results. Four interviewees noted that they were either gay or queer, and three stated that they had spent their medical careers serving those living with AIDS. It should come as no surprise, then, that administrators who consulted with affected communities were able to point to specific forms that included gender boxes that respected diverse gender identities, including two-step questions, space for self-identification, and opportunities to decline disclosure (Price 2018; Kronk et al. 2020). For instance, Indiana's Adult HIV/AIDS Case Report asks for individuals' "sex at birth" and whether they are transgender. North Dakota's asks a two-step question of "assigned sex at birth" (male or female) and "current gender identity," with multiple answer options including "another gender" and "declined to answer." Washington State's asks "sex at birth" (male or female) and "current gender identity" but with only "male, female, female to male, and male to female" answer options. Colorado's Confidential Reporting Form for HIV is like Washington's. Therefore, as these examples indicate, consulting with affected communities created forms more inclusive of gender diversity.

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[8] Heidi Krapfl email message to author in response to public record request, March 14, 2022.

Dependence and Independence in a Federal System

In addition to consulting with outside experts, structural aspects of government design affect gender boxes. Departmental independence made gender box heterogeneity more likely but not a certainty. Dependence often created homogeneity because a department's forms may be dictated by someone else. A state agency's legal and financial dependence on federal agencies can also trigger gender box changes that accord with the rules and preferences of federal funders (Ashley 2021). In other words, overlapping jurisdiction inherent in a federal system exerts conflicting pressures on gender box design (Spade 2008).

Most interviewees noted that form updates were usually division specific, meaning that updating a Medicaid division's forms does not require buy-in from the disease surveillance or mental health departments. An administrator in the Colorado Department of Health noted that "different sides of the house are doing different things. On one side, there may be no template; they just want 10-point font. In the HIV space … they need buy-in from their stakeholders, including coalitions of diverse communities. So, they're able to do things differently." But, at the same time, interdepartmental dependencies also determined gender box design. The Chemical Test Section of the Wisconsin Department of Transportation was required to include a gender question with only male and female answer options on its application form for the Basic Breath Examiner Specialist Training Program because the department "needed to create a Wisconsin driver license number for out of state students taking" the class, and the license division only accepts male or female for licenses.[9]

Disease surveillance is a perfect example of intergovernmental dependencies both catalyzing and stopping change. All states participate in a national notification system in which aggregate and case-specific data on communicable diseases are reported to the CDC (Gostin 2008). As part of this process, the CDC creates sample reporting forms that many states adopt wholesale. But the CDC is not a monolithic institution. Its Adult and Pediatric HIV/AIDS Confidential Case Report Forms, which are used in Delaware, Georgia, New Jersey, Ohio, Rhode Island, Tennessee, and West Virginia, ask for individuals' "sex assigned at birth" with "male," "female," and "unknown" answer options, as well as "gender identity" with a variety of inclusive options. Most of the CDC's other disease surveillance forms ask for "sex" with just three answer options, and its reporting form for Multisystem Inflammatory Syndrome Associated With COVID

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[9] Angie Severson email message to author in response to public record request, March 21, 2022.

Form asks for "sex" but only provides "male" and "female" answer options. Different teams within departments do things differently.

Many states' HIV-related forms follow CDC guidance because the CDC requires it. In Wisconsin, for instance, the state's PrEP Questionnaire, which gathers information about the use of preexposure prophylaxis to reduce the spread of HIV, asks an inclusive two-step question "derived from the Centers for Disease Control and Prevention (CDC)'s 'National HIV Monitoring & Evaluation' (NHM&E) required variables. [The] CDC wants all state and local health department jurisdictions that are funded to provide HIV prevention services (as Wisconsin's is) to follow their NHM&E guidance when developing forms and use the variables outlined in the NHM&E tables."[10] Federal funding is another primary driver of gender box design, especially in health departments. According to a physician-administrator in the Rhode Island Department of Health, "all the funding, it comes from federal sources, so we are at the mercy of how the federal government wants [gender] reported." But other health-related forms under CDC guidance may not ask the same questions because there are no national data collection standards for all programs (Currah 2022, 15).

At the same time, there are explicit intergovernmental dependencies that have direct effects on gender boxes. For instance, all fifty states and the District of Columbia are part of the Interstate Compact on Juveniles, a contract that has been adopted as law regulating the interstate movement of minors under court supervision or who have run away to another state (Holloway 2000). The Compact's forms are uniform throughout the states because they are designed by the Interstate Commission for Juveniles, not individual states. Six of the Compact's ten approved forms ask for sex, all with the same "male," "female," and "unknown" answer options. Similarly, the National Driver Register (NDR), a division of the federal government's National Highway Traffic Safety Administration, maintains a database of information about those whose driving privileges have been revokes, suspended, or cancelled and those who have been convicted of serious traffic-related offenses (National Driver Register n.d.). The NDR-participating states collect information about a prospective driver's sex so National Highway Traffic Safety Administration can perform background checks because the NDR uses sex to categorize individuals in its database. Therefore, almost all NDR forms are the same.

Departmental interrelationships are primary drivers of gender box design for another reason: They create weak ties between networks of civil servants (Granovetter 1983). Interviewees working in disease surveillance often noted how they "talk to our friends at the CDC all the time" and how they design forms for physicians and surgeons within their states "so they can have an easier time communicating with us."

Inertial Pressures Reifying the Gender Binary

Many bureaucracies have "internal mechanisms for continuity" that put the brakes on change (Ingber 2016, 682). Frontline workers' experiences suggest at least four other facets of their social context that made even forms updated in 2021 largely path dependent, homogenous, and reliant on the gender binary. These social pressures include social norms, path dependency, resistance to complexity, and digitization.

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[10] Jacob Dougherty email message to author in response to public record request, March 16, 2022.

Staying out of Politics

Many interviewees shared the belief that political controversy was anathematic to the day-to-day functions of government. "I think [updating gender boxes] is a little too hot button right now," as a Nevada health official noted. "That's very political. I or any one of my colleagues could recommend a change, but I'm not sure. We have to make this department run, not set new policy." Of course, there is nothing apolitical about the design of gender boxes. As Lipsky (2010, 84) noted in his study of street-level bureaucrats generally, "the low-level decision-making environments" of frontline workers "determine the allocation of particular goods and services in society, utilizing positions of public authority." These actions are political, Lipsky argued, because they decide "that some people are aided, some are harmed." Similarly, the way governments collect information about sex and gender reflects normative and political decisions about who counts and who does not.

Rather than a concern about making versus implementing the law, these comments alluded to a broader point about the problems of making street-level law in a hotly contested space. An administrator in the New Jersey Department of Labor made this clear, stating that he "would be worried about [his] team asking for a change right now, even if I agree . . . [with the goal]. But . . . we have to make sure people get their benefits. Sometimes that means staying out of the way so other people can argue." These frontline workers conceptualized their jobs and their roles as distinctly apolitical, as players in organizational systems that distributed entitlements for citizens. And yet they acknowledged their discretion to redesign forms and gender questions. What stopped them from changing gender boxes sometimes was not so much politics as it was a particularly heated political debate.

The second type of norm against politicization was the insistence that gender box design was a legislative prerogative. The Delaware Department of Transportation noted that the question of how to ask for sex and gender information is "currently being discussed within Delaware's General Assembly as it not only applies to the Delaware Division of Motor Vehicles (DMV) but to other Delaware State agencies who use this type of information."[11] A frontline worker in Michigan stated that he "would not really feel comfortable making changes to something like [a gender box] unless it came down from leadership or, better yet, from the legislature." This type of response echoes in norms associated with the separation of powers and, therefore, is deeply embedded in executive agencies (Bradley and Siegel 2017; Renan 2018). But it remains a justification for bureaucratic inertia. As noted earlier, laws may require individuals to provide sex or gender data, but those laws rarely state how to ask for it. When I noted that legislation authorizing sex and gender data collection still gave civil servants leeway to design gender boxes, several people involved in form design had incredulous or incomplete

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11. Kristin Schaap, email message to author in response to public record request, March 29, 2022.

responses: “But still, I’d rather wait”; “Well, I don’t know what to say”; “Just not going there.”

Both conceptions of bureaucratic work—that it cannot touch controversy and must wait for specific instruction—create caricatures of Weberian functionaries working in an endless, top-down organizational structure (Weber 1968). Nevertheless, the result was inertial pressure on gender box design. Content to wait out political controversy, some frontline workers fell back on tradition and the binary gender box. In this way, norms against politicization entrenched path dependencies already enmeshed in the structure of organizational bureaucracy.

Bureaucratic Path Dependencies

Indeed, scholars of administrative agencies have long recognized that bureaucracies are susceptible to path dependencies, or the tendency to maintain a course of action due to familiarity and tradition alone. As Allison and Zelikow (1999, 149) argue, path dependence stems from the same “organizational processes” that make large administrative bureaucracies capable of coordinating complex functions: divided labor, specialization, and training for others to perform their roles as part of a larger machine (145). That kind of specialization sometimes nudges civil servants to fit new problems into old logics and traditions rather than think of new and, perhaps, better ways to do their work (149). Forms and gender boxes often face path dependent fates as a result.

For example, a representative of the South Carolina Department of Health and Environmental Control had “no idea why” a gender box was on the “Swimming Pool Incident Report,” which informs the state of severe injuries at camp pools. Nor did he know “why we ask for age information for that matter. My assumption is that the question was on the form when it was originally developed and its inclusion has never been reevaluated.”[12] The South Carolina DMV had a similar response. The state’s records “do not indicate a reason for using ‘gender’ on” one form, “nor for using ‘sex’ on” another. “Each SCDMV form could potentially have a different author. With that understanding, one could draw a reasonable conclusion that the author used a term that the previous version of the form had.”[13] Ten other civil servants responded similarly, with an administrator in Hawai’i’s DMV noting that they could not identify any “specific reason” why forms collected sex or gender data or why they asked for it in particular ways.[14]

Gender box homogeneity may also stem from status quo bias after staff turnover. Status quo bias refers to individuals’ preference for “doing nothing” over other alternatives even if one of those alternatives may be better in some way (Samuelson and Zeckhauser 1988). It affects organizational decision making, as well (45). The Division of Quality Assurance in Wisconsin’s Department of Health noted that several forms designed as early as 2008 and as recently as 2019 were developed by staff no longer employed by division, department, or Wisconsin state government.[15] The division had no information on why the forms' gender boxes had not been updated, changed, or even discussed in that time. One frontline worker in the New Jersey DMV stated that "these kinds of things don't really get talked about, at least, not since I've been here. These forms have been around a while, so who knows how they started, but we just use them and change the date." An administrator in the California Department of Labor offered a related point—namely that "the people who made these forms, it could have been anyone, they're long gone usually, so they probably had a reason and most of the time, we're just trying to get our work done under difficult circumstances."

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[12] Douglas Kinard, email message to author in response to public record request, March 9, 2022.

[13] McGahee, email.

[14] Lee Nagano, email message to author in response to public record request, March 31, 2022.

It is unclear whether general bureaucratic structures or more specific resource limitations explain why forms are simply recycled from year to year without much consideration. Lipsky (2010, 19) found that resource limitations on public defenders, teachers, police officers, and welfare workers forced those frontline workers to generate coping mechanisms, both psychological and practical, that allowed them to do their work. One of those mechanisms was the routinization of work. When updating forms, some will "continue doing what we've been doing." Others "focus on the trigger, a new court decision, a new statute, or a new order" rather than taking the update as an opportunity to reconsider other aspects of the form. And even when one of those exogenous shocks triggers a gender box update, some frontline workers will "keep it simple, add an 'other' or an 'unknown.' We're not about to consider deep questions of sex and gender here. That's your job."

The Problem of Gender Box Complexity

Exploring the epistemology of sex and gender is both time consuming and complex. Several interviewees suggested that an institutional resistance to complexity exerted additional inertial pressure on gender box design, incentivizing civil servants to provide data in the simplest way possible.

This was particularly true in health departments. State health departments collect data on communicable diseases and report incidents to state and federal health authorities. This relationship not only makes it more likely that disease surveillance divisions will use CDC-designed forms but also requires them to collect and analyze data in ways that are easily understood by elected officials, the public, and even data analytics software. Health departments publish annual reports about a range of conditions, from asthma and child morbidity to STIs. In almost all of those reports, populations are categorized as either male or female, with an occasional "unknown" category. A frontline worker involved in writing some of those reports in Tennessee noted that "we have to keep that simple because managers are reading it, electeds, but really it's for the public. It needs to be understood quickly." When asked if complexity necessarily requires only male/female answer options, this interviewee stated, "Well, no, but it is the simplest. And it's just easier for everyone to think along the same lines. Honestly, when my team is trying to get the report out, we need to do it in a way that makes it useful." The Rhode Island physician-administrator called this part of his job a "delicate balance." A colleague in Iowa stated the same thing, adding, "On the one hand, you want to respect everyone; on the other hand, not everyone understands these terms. . . . Plus, is it really helpful if a report says 0.001 percent of the population of asthmatics is transgender?"

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[15] Wisconsin DHS DQA Records, email message to author in response to public record request, March 7, 2022.

Simplicity also affects form design generally. Much like academic survey writers, state health departments have to balance the need for detailed information against the prospect of respondent fatigue from too many questions or too much complexity (O'Reilly-Shah 2017). One administrator noted that his division "has little control over civil surgeons, so we developed a form as a guide for them. But we also know that the longer our forms get, the less compliance we get. Doctors already spend way too much time inputting their notes, so our systems have to be simple." The resulting Tuberculosis Referral/Reporting Form asks for gender in a blank box but provides no instructions as to what responses are acceptable "so surgeons can fill out the form quickly and completely."

State agencies' resistance to complexity may seem strange to legal scholars. After all, the legitimacy of the administrative state is premised on its ability to bring expertise to a complex world (Calo and Citron 2021). But, like the formal law, the underlying foundations of administrative governance are not driving the frontline work that creates gender boxes. Currah (2022) may be correct when he says that epistemological questions of sex and gender do not drive the law of sex classification. Those questions are too complex. Rather, in some health departments, the contours of gender box questions and answer options may be mission driven to the extent that a primary mission of state health departments is to surveil populations, collect data, and disseminate in accessible ways (10). But if health department missions set the baseline that sex and gender data must be collected to understand disease prevalence in the population, a practical and institutional resistance to complexity is one among many forces that explain why gender boxes look one way and not another.

From Paper to HTML

However, in several states, the capacity of complexity, the epistemology of sex and gender, and agency missions to determine gender box design was foreclosed because of a decades-long trend toward digitization (Citron 2008). Although such systems could theoretically be designed to dictated specifications and thereby enhance the informal law-making powers of street-level bureaucrats, public documents and interviews with frontline workers suggest that technology has helped maintain the gender binary on government forms.

For instance, almost all of the Utah Department of Health's Medicaid forms, including both the initial application and providers' prior authorization forms, require individuals' gender and offer only male and female answer options. That similarity stems in part from a $187,000,000 procurement contract with Client Network Services, Inc. for the development and maintenance of the state's Provider Reimbursement Information System for Medicaid (PRISM). PRISM replaced the Utah Medicaid

Management Information System beginning in 2016, and offers health care providers a convenient "one-stop shop" for all Medicaid-related filings (PRISM n.d.). A representative from the Utah Health Department noted that all Medicaid "forms are going through or have just gone through a revision . . . to make sure forms are the same as the [PRISM] system." But PRISM foreclosed the possibility of revising gender boxes: "We did have a discussion of whether we should change the verbiage [in the gender question]. . . . We talked briefly, but it ended quickly because" the new "Medicaid system, it's always identified as gender and the system only allows for two options." Even if the staff wanted to change the form, having different questions "going online versus the paper form" would be problematic.

The same thing happened in Wyoming. According to a public records request, Medicaid forms for hospital admissions, acute psychiatric services, inpatient psychiatric admission, and prior authorizations must "interface with [the state's] Benefit Management System," which "only supports male or female data/entries, so our forms are limited to a male or female choice."[16] Although the state provided various rationales for collecting sex on some forms and gender on others and many of those rationales mirrored the missions and goals of the particular division, exogenous limitations imposed by technological systems also dictated gender box design independent of those goals.

PRISM's digitization of Utah's Medicaid system and Wyoming's digital Benefits Management System take away discretion from street-level bureaucrats; even if Utah's or Wyoming's Medicaid administrators wanted to change its forms' gender boxes, they could not. In Iowa, where the state's Department of Public Health agreed to share data with a state university to improve health equity for those with gambling and substance addictions, the department was limited in the kind of sex and gender data it could share because the Behavioral Health Reporting System was designed with only binary answer options for sex and genders. These systems simplify gender into categories that computers can understand, removing the agency expertise from the equation and necessarily excluding transgender and nonbinary individuals (Keyes 2018; Katyal and Jung 2021). In these ways, just like with the administrative state's increasing deference to the on-the-ground policy making of algorithms, technology procurement raises similar legitimacy questions because it shifts or erodes entirely civil servants' expertise and discretion (Calo and Citron 2021; Elyounes 2021). Additionally, as Hicks (2019) has described, digitization and automation have long been effective excuses for encoding binarized gender into administrative systems, erasing transgender, nonbinary, and gender nonconforming individuals. But, as I have shown, the inertial pressure of automation is just one among many forces pumping the brakes on inclusive gender boxes.

DISCUSSION: CREATING GENDER THROUGH FORMS

The social pressures affecting civil servants' approach to gender boxes are not unidirectional. Frontline workers responsible for form design pointed to different decision-making processes, the competing influences of overlapping social networks, variance in conceptions of the relevance of expertise, and interdepartmental dependencies as forces that would sometimes galvanize change or stop it. Many civil servants also suggested that norms against politicizing their work, path dependencies common to many bureaucracies, a resistance to complexity, and trends toward automation helped maintain the gender box status quo. As a result, some gender boxes will change or be eliminated, some will change randomly and arbitrarily, and some will stay the same. But change is possible. Based on evidence from individuals directly responsible for form design, inclusive changes happened when civil servants personally believed in the importance of respecting gender diversity, had access to affected community expertise, and enjoyed entrepreneurial discretion as a result of informal decision-making processes. Additional research may uncover other contexts that facilitate change. Among the civil servants interviewed, inclusive changes appeared to be least likely in contexts defined by formal decision-making processes, strong norms against even the appearance of politicization, entrenched path dependencies, persistent demands to simplify data, and high levels of automation.

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[16] Heather Canarecci, email message to author in response to public record request, March 23, 2022.

Although it is well accepted among socio-legal and STS scholars that quantitative metrics are social constructs imbued with social and institutional power relations (Biruk 2018; Merry 2016; Braun 2014; Zhao et al. 2023), this study has highlighted the importance of considering the hyperlocal social forces that define the day-to-day work of the people responsible for designing the means for collecting data that give meaning to those metrics. Indeed, this is the first study of state gender data collection to consider the perspectives of the people responsible for developing gender questions, collecting the information, and analyzing it for broader use. It is also the first to unearth internal agency processes that affect gender box design beyond the formal law on the books. Documents from public record requests have added to a scholarly literature mostly confined to the four walls of surveys themselves and the formal law.

Of course, that is not to say that the law on the books plays no role in gender box reform. California, for instance, is one of a small number of jurisdictions with statutes explicitly requiring the inclusion of "X" or nonbinary options on certain forms (Waldman forthcoming). And given that many interviewees noted that forms undergo revisions when relevant laws change, continued advocacy in local and state legislatures for gender box reform appears capable of routing around the mostly inertial social forces influencing frontline workers.

Standard-setting may also nudge otherwise inert frontline bureaucracy toward positive change. Following Bowker and Starr (1999) and Timmermans and Epstein (2010, 71), standardization "constructs uniformities" across fields. Like norms, standards are also a type of social regulation that can take the place of or supplement the formal law (Brunsson and Jacobsson 2000, 32; Lampland and Star 2009, 24). And they have proven influential in many contexts, from science and technology to international trade (Latour and Woolgar 1979; Timmermans and Epstein 2010). Standardization of the gender box across contexts may not always be appropriate—NASEM's (2022) gender box standards differ from those recommended by transgender and nonbinary health scholars (Kronk et al. 2020)—but the social process of standardization can identify stakeholders and catalyze action (Timmermans and Epstein 2010, 75).

Nevertheless, the salience of street-level bureaucracy may be good news for the prospect for reform. If the gender box was purely a matter of formal law, the only path is through every state legislature, a prospect that requires overcoming increasingly insurmountable political and structural barriers and risks backlash (Bowie 2021). As noted earlier, there is no reason to abandon these efforts. But advocates can also engage with street-level bureaucrats in contexts where gender data can achieve antisubordination and emancipatory goals. Clarke (2019) argues that different gender data may be relevant in different contexts: in some, male/female categories may suffice; in others, more inclusive data is necessary; in yet others, gender data may be unnecessary. That civil servants work in specific contexts makes them unique opportunities for reform advocacy, even if those frontline workers are mostly constrained by the inertial social forces described in this study. A multifaceted approach is necessary when the status quo is unacceptable.

Indeed, street-level approaches to equality agendas have worked before. As George (2017) has shown, new scientific information about "homosexuality's benign nature" that came to civil servants through direct meetings, sustained engagement, and scholarly publications helped frontline workers resist anti-LGBTQ+ laws. LGBTQ+ scholars have already recommended a similar approach for "queering" the state's approach to SOGI data. Guyan (2022, 155) argues that the state will only be able to use SOGI data for good if scholars help "develop the gender competence" of those frontline workers responsible for gender box design. In other words, street-level bureaucrats need to learn some of the skills necessary to properly collect and analyze gender data, including "understanding that historical and social factors mean that equality of opportunity is a fiction, and awareness of power differences between and within LGBTQ communities, and attention to the intersection of LGBTQ identities with other identity characteristics" (156). It also means "a willingness to assume a contrarian role in data discussions" that decenter traditional pathways and hierarchies of power (156).

Queering the gender box means resisting the law's historical role in medicalizing sex and gender and classifying people by fiat (Sudai 2021). But beyond that, it could take many forms. Like the movement for "design justice" (Costanza-Chock 2018), which seeks to democratize control over data collection and processing and bring communities most affected by the harms of automated technologies into the design process, a more democratic approach to gender boxes could engage experts in the LGBTQ+ community about both the design of gender boxes and their underlying purposes and goals. Then again, the "ban the box" movement offers an alternative approach. That movement seeks, at a minimum, to remove the box to check on employment application forms if job applicants have been convicted of felonies (Henry and Jacobs 2007). To achieve their goal, advocates built a movement with the formerly incarcerated and successfully lobbied civil servants and city and state governments across the country to remove the criminal history box from public employment forms entirely (Smith 2014). Neither approach is mutually exclusive. As Saguy (2023) has shown, progressive activists see the need to do both—namely, to push for greater gender box inclusivity *and* seek abolition of state gender data collection.

Notably, the prospect of eliminating gender categories from state government forms was almost completely absent from the interviewees' perspectives. This could reflect the nature of civil servant work, which is not always paradigm shifting. Or it could reflect the nature of the questions, which primarily focused on what civil servants do and the practical, day-to-day contexts of their work. Additional research could fill that gap. Although several frontline workers did not know why certain gender boxes were originally designed in particular ways, their ignorance was premised on staff turnover—"the person who designed this form is no longer working for the state," noted a civil servant from Wisconsin—not from a return to first principles.

Still, these explanations differ from the rationales scholars offer in favor of abolition. For Braunschweig (2020), ending gender data collection by the state is a feminist emancipatory project; for the American Medical Association's LGBTQ advisory committee, gender data should be removed from the public parts of birth certificates because of the harms transgender individuals face from inconsistent identification documents (Branigin 2021); for Spade (2015), "resistance" to asking for and providing sex and gender data is rooted in the state's history of institutional violence, particularly against those living at the intersection of matrices of domination (Collins 1990; Crenshaw 1991). Following Bridges (2017), low-income families, persons of color, and others most in need of government assistance must complete multiple forms to navigate labyrinthine processes to access benefits. Transgender women of color are disproportionately dragged into the criminal justice system where police fill out forms about them, not with them (Carpenter and Marshall 2017). Any transgender, nonbinary, gender-nonconforming, or intersex person who chooses treatment appropriate for their lives and identities requires interactions with forms from doctors, hospitals, and insurance companies, among others. Even for those who live without gender-affirming care, the need to update official documents to reflect their identities brings them face to face with forms used to categorize, gatekeep, and mete out benefits (Currah 2022). There are profound reasons to consider the oppressive nature of gender data collection in the first place.

CONCLUSION AND AVENUES FOR FUTURE RESEARCH

This study contributes to the socio-legal literature on gender data by focusing scholars on the institutional and social milieu of form designers. Therefore, it opens doors for additional research. Future work on the gender box could study how particular departments developed their inclusive gender boxes over time. Scholars can use state and federal Freedom of Information laws to request historical versions of forms and identify when and why changes in gender boxes occurred. Quantitative analyses of gender boxes can identify patterns based on region or department that remain hidden by this study's ethnographic approach. Similarly, a quantitative approach could consider concurrent changes in law, politics, society, and technology and identify correlates with inclusive gender box changes.

In-depth qualitative research could analyze how a specific team in a state agency conceptualizes sex and gender as well as their role in collecting sensitive information and making street-level law in general. Socio-legal scholars should also conduct research into the effects of automation on the embedded gender binary in the administrative apparatus. The work of Hicks (2019) on the prehistory of algorithmic bias in computerized systems and Keyes (2018) on transgender erasure by automated technologies can be extended to understand how government bureaucracies today encode erasure by binarizing gender in the automated administrative state. Given the harmful effects of erasure and the risks transgender, nonbinary, and gender nonconforming individuals face when their official sex and gender data conflict, this research agenda is timely and pressing.

But this research and advocacy requires humility and balance. As noted above, the social forces creating conflicting pressures on gender box design reflect difficult-to-resolve data dilemmas inherent in gender boxes. Therefore, the next steps for scholars and advocates should be modest, contextual, and sensitive to both the distributional and moral implications of data as a form of state power. Forms are at the center of the machinery of governance; they can also be the locus of long overdue inclusive change.

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APPENDIX A

What is your name and position within [STATE] [DEPARTMENT]?

How long have you worked for the [DEPARTMENT]?

What is the nature of your involvement in the development of forms in general? What are your responsibilities, if any?

Have you been involved in discussions, designs, or decisions about how your department's forms should ask for sex or gender data?

What is your department's process for designing new forms or updating old forms? How often are forms updated or redesigned?

When you are involved in this process, whom, if anyone, do you consult for advice when designing a new form or sex/gender question?

Consider [FORM], do you know why the departments asks for sex/gender data? What about why it is asked in this way?

Have you participated in any discussions about whether and how to ask for sex or gender data? If so, what were the nature of those discussions? If not, why, in your opinion and experience, were those discussions foreclosed or did not happen?

Could you look at the two forms I provided ahead of time? Both of these forms come from your department. Do you know why these forms ask different sex/gender questions?

If you were in complete control over how your department designed the sex/gender question on [FORM], how would you do it?

What, if anything, is preventing you from designing the question/answer pair that way?