

# THE GENDER BINARY WITHIN DANISH DIGITAL CITIZEN IDENTITY

An analysis of official websites and MitID

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**ABSTRACT:** In this article, I examine the gender binary present in Danish digital citizen identity through a content analysis of official websites pertaining to the CPR number, Gender reassignment, Name change, and the MitID app. My own experience with MitID app was also used as a data collection method. These forms of categorising Danish citizens in the digital sphere play into the existing gender binary whilst also allowing for its subversion to a certain extent. The analysed texts point to Denmark allowing for a considerable degree of fluidity between genders/sexes, whilst however still enforcing a binary opposition of male and female.

**KEYWORDS:** Digital citizen identity, e-government, gender binary, CPR number, transgender.



Introduction

In the digital sphere, citizen identity becomes data. Tracked, collected, quantified, and categorized in e-government platforms, it lacks nuance and fluidity. Governments thus form and codify citizens' (digital) identities – and these may greatly differ from reality. Responsibility, care, and insight is paramount, especially with digital, and emerging AI, classification technologies permeating the public sector.

As existing studies suggest, gender is often understood just as a binary variable in e-government research (Dhungel 2022: 1313). Similarly, Henry et al. (2021: 1) speak of “limited scholarly attention” to gender power relations in digital citizenship, highlighting its exclusionary practices and calling for its feminist rethinking. McNutt (2007: 22) offers a similar critique yet believes a committed integration of gendered analysis could help e-governments promote gender equality.

In Denmark, these are important questions as Danish citizens are often conceived as “digital by default” (Schou & Hjelholt 2018: 514) by the government. In this paper focused on the Danish e-government, I explore my research question (RQ): “How does the Danish digital citizen identity codify gender/sex of its citizens, according to official websites and the MitID app?” by conducting a content analysis of relevant Denmark's official websites and the MitID app.

Guided by my RQ, I aim to view (gender) identity predominantly as a *regulatory fiction*, i.e. enforcing the gender binary of male/female especially on non-conforming identities. However, I also aim to examine the potential empowerment provided by digital citizen identity.

First, I chart a queer theory introduction and compare the emancipatory ideals of early cyberfeminist and glitch feminist theorists with the contemporary regulatory reality of how digital identities can be used for commercial, surveillance, and normative means. The subsequent chapters illustrate how dealing with digital identity should be a delicate and responsible matter, even more so for governments. I then examine this in a case study of the categorisation of citizen digital identity in Denmark related to the CPR number, Gender reassignment, Name change, and the MitID app.

## Identity as a regulatory fiction: The subversion of, or subscription to, power regimes

In the first chapter, I describe identity categories as a *regulatory fiction* using the work of the prominent feminist and queer studies scholar Judith Butler (2006: 44), to later serve me as a theoretical framework

for my analysis. My aim is to both showcase the limiting nature of subscribing to such categories, as well as Butler's (2006: xxvi) own later discussions around the potential use of their power for their own subversion. The aim of this chapter is to provide the background for viewing identity as a contested and constructed category that can serve both as an instrument of binary and regulatory oppression, as well as allow for the existence of "unreal" bodies which can perhaps function as a vital instability in the system of identity categories.

To show how classifying people according to limiting categories of identity can be oppressive, I borrow Butler's (2006: 44) notions of gender and sexual identity as a *regulatory fiction*. Butler considers the "univocity of sex, the internal coherence of gender, and the binary framework for both sex and gender" to be "regulatory fictions that consolidate and naturalize the convergent power regimes of masculine and heterosexist oppression." These naturalised power regimes and the resulting oppression are then the target of Butler's (2006: 44) subversion.

This subversion, however, is not done by moving to a certain "utopian beyond" where these categories immediately subsist, but instead by gradual confusion and proliferation of their *regulatory fiction*, i.e. challenging their position as immovable, foundational, and reified.

This approach could also be understood as using the power bestowed upon these regulating categories (of "man/woman", "male/female", "trans", or any other) in ways that fight against them. Butler (2006: xxvi) suggests that whilst claiming a (marginalised) identity can potentially make it into "an instrument of power one opposes", such identity can also wield this influence to instead revert its very own power. Speaking for example of transgender or intersex people and sexual minorities, who are deemed "unreal" by the limiting system of identity categories, Butler (2006: xxvi) calls this mode of existing a "vital instability" and a "performative surprise" that can produce agency for change.

This contrasts Butler's (1993: 308) earlier claims, which portrayed identity categories only as instruments of regulatory regimes and called out their false promises of being "rallying points for a liberatory contestation of that very oppression" – essentially questioning the political effectiveness of claiming these (marginalised) identities.

I raise these discussions to show the back-and-forth ideations around identities (be it traditional, non-binary or other) within the social hierarchy and power structures. These uncertainties further illustrate the need for delicacy. I argue that these questions amplify the position of identity categories as a *regulatory*

*fiction* – by potentially placing upon (marginalised) bodies the need to consistently wrestle with these issues and in doing so engage with the existing oppressions described by Butler (2006: 44).

In the following chapter, I elaborate on this view of identity categories as instruments (or subversions) of regulatory regimes in the context of the digital sphere and cyber- and glitch- feminist theories.

## The promises and limits of digital identity: Emancipation(?) through the digital self

The onset of information technologies in the 1990s sparked discussions of a “revolution” brought by technology and digital culture in certain feminist circles regarding (gender) identity – as documented by Paasonen’s (2010: 71). As the author argues, paraphrasing Sadie Plant who coined the term “cyberfeminism” (Consalvo 2012: 1), “In Plant’s work, information networks are seen as emancipatory in themselves, subversive in terms of gender structures and gendered power relations.” (Paasonen 2010: 71). These ideas generally circled around “moving beyond biology” and breaking traditional gender roles, relations, and divisions through technological means (Paasonen 2010: 72).

The idea of “moving beyond” categories via digital technologies however contrasts with the cited views of Butler – who preferred a proliferation and confusion of categories instead. A prominent strand of cyberfeminist thinking, closer to Butler’s notions, has been Donna Haraway’s (1987: 16–17) idea of the cyborg – an entity moving across, not beyond, the hierarchical categories of artificial and natural, Man and Woman, organic and technological.

A more recent development of this line of thinking was proposed by Legacy Russel (2020: 15) in the book *Glitch Feminism: a manifesto*. Here, the author signals “a refusal” of the binary system imposed on human bodies through something called “the glitch” – a body “indecipherable within binary assignments” and refusing to perform according to rules and definitions, reminiscent of Butler’s (2006: xxvi) term “vital instability”. These ideas of “glitching between binaries” or “existing before a final concretized identity”, borrowing the words of Sundén (2015), can also be partly seen as a continuation of Haraway’s (1987: 16–17) cyborg.

Sundén (2015), however, goes on to problematize this notion of emancipatory glitching, asking: “Who or what gets to glitch between man and woman, and how?”, pointing out the privilege needed to become a “glitch subject”, as not everyone is able to perform such glitching, as well as its often-present associations with having a female-identifying body.

Still, the concept of glitch feminism is meant as an opening towards trans-inclusivity within feminism but without establishing “trans” as yet another fixed category. Its goal lies in modifying notions of sex, gender, and self-naming in general in ways that more resemble the self as being unfinished, ever-changing – i.e. a set of “liminal variations” (Russel 2013).

This idea of identity categories being limiting is crucial for understanding their function in e-government, how gender/sex can be ascribed to people within digital interfaces, as well as the social hierarchies and divisions involved in their presence. As Curran-Troop and Prins (2022: 1) summarize in their review of Glitch Feminism: “online feminists seem to agree that the digital realm offers new possibilities as well as familiar oppressions.” This potential enforcement of limiting categories will be further examined in the following chapters on digital platforms.

## Gender and sex as data

Within digital platforms, the categories of gender/sex identity are intensified through the platforms’ ability to quantify, categorise, track, and capitalise on digital identities which function here as data – as highlighted by José van Dijck (2014; van Dijck et al. 2018) across her works in the field of platform studies.

Of particular interest to my paper are van Dijck’s (2014: 198) contributions to the concepts of *datafication* – “the transformation of social action into quantified data”, and *dataveillance* (data surveillance) – “a form of continuous surveillance through the use of (meta)data”, both serving within an overall data-usage-normalising ideology of *dataism*.

Van Dijck’s focus lies both on private companies such as those operating social media platforms, as well as public and academic bodies and agencies who are using data from these platforms on a large scale to track human behaviour (van Dijck 2014: 198). The idea of digital (gender) identity being emancipatory gets further complicated when gender is treated as data by both public and private bodies. Related issues include data safety and privacy concerns, the strict categorisation of gender, or even its involuntary ascription to users.

Regarding the first point – data safety and privacy – van Dijck (2014: 198) raises the issue of *dataveillance*. She illustrates this concept via an example of the American-Russian whistleblower Edward Snowden’s leak of documents from the US National Security Agency, which highlighted the failure of the institutions to handle citizens’ (meta)data in an accountable and legal way, despite the people’s trust. As van Dijck

(2014: 198) claims: "...the Snowden files have further opened people's eyes to the interlocking practices of government intelligence, businesses, and academia in the adaptation of dataism's ideological premises."

## Facebook and the gender binary

To briefly illustrate the second and third points – categorisation, or even involuntary ascription of gender categories – I will present an example of Facebook's approach to the *datafication* of gender. This is relevant to my paper due to the fact, as van Dijck (2014: 200) shows, that government, police, and intelligence services often already benefit from social media data for citizen monitoring, prediction, and other use cases.

As Facebook faced critique for its binary options for users' gender and sexual orientation, it broadened these categories in 2014 and also allowed users to choose no gender category at all (van Dijck et al. 2018: 11). Later, Facebook replaced the gender column with an open text-field for users' free expression (D'Ignazio & Klein 2020: 100). However inclusive this change may seem, van Dijck et al. (2018: 11) comment that such decisions made economic sense in gathering more specific consumer information. They however concede that it also broadened the social norms around the gender binary.

The questions of whether to proliferate identity categories, or reject them, raised in the first chapter of this paper, were thus resolved at Facebook by allowing users to do both (although with, arguably, ulterior commercial motives).

Van Dijck's et al. (2018: 11) concession about expanding the binary and social norms, however, falls short in light of the evidence presented by Bivens' (2017: 1) study of Facebook's programming. Bivens (2017: 1) shows that Facebook's internal user profiling algorithms still classified users only as "male" or "female" despite the number of gender options available. D'Ignazio and Klein (2020: 100) then argue that: "Evidently, this decision was made so that Facebook could allow its primary clients—advertisers—to more easily market to one gender or the other. Put another way, even if you can choose the gender that you show to your Facebook friends, you can't change the gender that Facebook provides to its paying customers."

I am raising these interwoven examples of *dataveillance*, *datafication* and *dataism* to highlight the issues of power within digital platforms' tracking and ascription of its users' (or citizens') gender. The questions of power and control, and their potential wrongful use, should be key areas of interest when looking at

state forms of digital identity – where more than “just” a person’s social media profile may be at stake. I will cover this area of interest in the following chapters, and in more detail in my analysis and discussion.

## Legal gender recognition

Digital citizen identity closely relates to the legal framework regarding gender recognition in a given state. This connection is illustrated by Holzer’s (2022: 166) analysis of the means of changing one’s gender and name, as well as the impacts of state-imposed gender labels, within EU countries; with a focus on “certain trans and intersex persons, notably those who have a gender marker and/or a name on their identity documents that do not reflect their gender identity, gender expression and/or physical characteristics in a normative manner”. As Holzer (2022: 167) points out, all Council of Europe countries have laws distinguishing citizens based on their (legal) gender – e. g. laws on marriage and legal partnership, military conscription, retirement ages or gender-specific laws aiming for gender equality, such as quotas for women or equal-pay legislation.

According to Holzer (2022: 168), an incorrect legal gender identification can bear many negative effects on individuals (especially those in positions more scrutinised by the government), whilst the ability to easily correct this discrepancy (for example by changing one’s legal gender) has been shown to have positive effects, mainly on mental health, self-confidence, and access to certain services (trans-specific health care or marriage) as well as the individuals’ overall position and interactions within society with lesser risk of misgendering (referring to people using the wrong gender) and discrimination based on an incongruent ID. As documents from The European Commission (2020: 14) show, however, these benefits are present mainly if the person “passes” in the eyes of others (is accepted as their identified gender) regardless of their ID documentation’s congruency.

People who’d prefer not to be identified within the binary of male or female (such as some intersex or non-binary identifying people) face their own issues. Non-binary legal recognition is present in just a few EU countries – for example in Germany, Malta, Iceland or in Austria (only for intersex people) (Council of Europe 2022: 35) – in Australia and New Zealand, most of Canada’s provinces, and some US states – for example in Oregon, Washington DC, or California (Maier 2020: 209). However, presenting a gender-neutral marker in official documents (such as “X”) is also associated with the fear of increased discrimination and stigmatization as opposed to presenting a document with an “M” or “F” (NEK CNE 2020: 24–25;28). The additional heightened border surveillance of gender non-conforming individuals

then further contributes to turning such markers into “biopolitical instruments of regulation” (Quinan & Hunt 2023: 382).

The ways of ascribing this legal gender status within digital citizen identity will be discussed in the following chapter.

## The forms and risks of e-government

According to Lips (2013: 1), information and communication technologies open new ways of managing citizen identity and interactions with the state via the concept of e-government. This gives governments the opportunity to improve their effectiveness, prevent frauds or increase public safety through digital management. According to Lips (2013: 1), it also potentially raises the risk of discriminatory surveillance or judgement based on obtained personal information – exacerbated also by automatic and algorithmic discrimination of already underprivileged groups (Jørgensen 2023: 124).

The right management of citizens’ digital identity is key for a successful e-government, as it allows citizens to identify themselves to public offices and other institutions or services: banks, car rental offices, paying taxes, looking for a job, accessing insurance or health-related services etc. (Průša 2015: 8). This is why trustworthiness of such systems is essential (Průša 2015: 9).

Electronic identity is a two-part system. First is the ID document available to the citizen – e.g. electronic identity credentials, personal citizen number, ID card with a chip, SIM card implementation etc. (Průša 2015: 3–4), and then the backend, unavailable to the citizens, meaning the population register database storing citizen information (Průša 2015: 1–2).

Looking at the case study of Denmark, Jørgensen (2023: 125) argues that the practices of e-government are at a risk of following the logic of “surveillance capitalism” (Zuboff 2019) stemming from the private sector, only here renamed as “smart governance”, and that without proper moral, critical, and rights-based approach, “the digital welfare state may disempower citizens and advance a digital technocracy that treats its citizens as data points suited for calculation and prediction.”

Jørgensen (2023: 126-127) raises the issues of “data politics” and looks at the power discrepancies present in acquiring and handling data, the impacts of automated decisions on (re)producing discriminatory practices towards marginalised citizens and obscuring new approaches to data, and describes citizens’ attempts to contest these social categories and data regimes in regards to race, ethnicity, and gender: “For



instance, long battles have been fought over who gets counted or measured, when, how, by whom, for what purpose, etc.” (Jørgensen 2023: 127).

Despite all the potential risks of e-government, Denmark’s public sector is highly digitalised with 76% of Danes having confidence in public authorities’ handling of their personal information, according to Statistics Denmark (2019).

Denmark additionally allows a change of legal gender according to self-identification, requiring a 6-month evaluation period, but without the need for sex reassignment surgery (or any treatment in the case of adults) since 2014 (Hilden et al. 2021: 1801). However, it still classifies its citizens in a gender-binary system through the CPR number, which indicates person’s legal gender according to the last digit (even = female, odd = male) (Hilden et al. 2021: 1801). According to a study of the Danish population’s sexual/gender identity by the project SEXUS (Frisch et al. 2019: 92), 6.3% of people assigned as female at birth and 3.2% of people assigned as male at birth indicated a different or unclarified gender identity.

In the following chapters of this paper, I will focus on Denmark’s e-government and analyse its approach to categorising its citizens’ gender identities according to the presented theory and data.

## Methodology, theoretical, and analytical framework

Through a *qualitative content analysis* of materials provided by the Danish government regarding its forms of digital citizen identity, and of the MitID app used for this sake, I will apply the theoretical concepts of *regulatory fiction*, *datafication*, and *legal gender recognition* to an e-government case study. I will focus on digital identity as both a *regulatory fiction* in the context of gender binaries, as well as on its benefits for citizens.

Qualitative content analysis, as defined by Mayring (2000: 2), lies in a methodical analysis of texts within their context of communication. Texts may be any type of communication or content of media. I will divide my analysed content into categories as per Mayring’s (2000: 3–4) method of *inductive category development*, with my selection of material being guided by my theoretical framework and research question. The inferences of my analysis will be focused on the present texts, whilst considering their political and cultural context of communication.

My aim will be to report my findings and analyse them through the presented theoretical lens, and answer my research question: “How does the Danish digital citizen identity codify gender/sex of its citizens, according to official websites and the MitID app?”

I will focus my analysis on official online documents provided by the Danish government regarding its forms of digital citizen identity, as well on the MitID app, through which citizens interact with their digital (gender) identity. I will collect my data from Danish government websites discovered within my preliminary research, including [www.cpr.dk](http://www.cpr.dk); [www.mitid.dk](http://www.mitid.dk); [sst.dk](http://sst.dk); [international.kk.dk](http://international.kk.dk); and [www.personregistrering.dk](http://www.personregistrering.dk); and from my personal interactions with the Danish digital ID app MitID.

All mentioned webpages are included below the List of literature with a specific link to the analysed content. In text, they are also cited through their full hyperlinked URL.

## Analysis and Discussion: Danish digital identity and codifying gender – CPR number

Denmark's categorization and codification of its citizens' gender/sex varies in intensity and depends on the area of e-government and the text being analysed. [Cpr.dk](http://cpr.dk) for example tells citizens that the 10<sup>th</sup> position of the CPR number indicates gender, but does not explain how – potentially assuming that the reader knows a priori between which genders the indication occurs, and how they correspond to numbers.<sup>1</sup> Through the CPR number, quantification of (binary) gender identity, and its *datafication*, thus occur in the first steps of becoming a Danish citizen not only on a factual level, but also on the symbolic one, with gender identity being represented via a number.

The website [international.kk.dk](http://international.kk.dk) provides further information. Everyone residing in Denmark requires a CPR number and it is needed to “open a bank account, access your health insurance, borrow books from the library, pay tax, receive a salary and so on.”<sup>2</sup> The prevalence and importance of the CPR number through its connection to vital public services highlights a near constant exchange of data between citizens and public bodies as well as the virtual impossibility of existing outside the gender binary in the state's eyes.

As further information on [cpr.dk](http://cpr.dk) however shows, this part of Danish digital (gender) identity is open to legal, voluntary, and accessible change of what could be described as “glitching between binaries”. The

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<sup>1</sup> CPR n.d.: “Opbygning af CPR-nummeret”. Accessed 9 December 2023 from <https://cpr.dk/cpr-systemet/opbygning-af-cpr-nummeret>

<sup>2</sup> City of Copenhagen n.d.: “CPR number”. Accessed 9 December 2023 from <https://international.kk.dk/live/cpr-registration-and-documents/cpr-number>

website itself uses the terms “errors” (“fejl”), “incorrect indication of gender” (“forkert angivelse af køn”) or “misuse” (“misbrug”) of identity in which cases a correction of CPR number is possible.<sup>3</sup>

Transgender people’s ability to change their CPR number is then mentioned separately from these cases – indicating that incorrect indication of gender, errors, or misuse of identity aren’t necessarily connected to transgender persons’ need to change their CPR number. This could be seen as an inclusive formulation, avoiding associating negative language with transgender people’s identity. On the contrary, a glitch feminist lens could see errors as positive and the need to “correct errors” to “fit into a system” as being in opposition to the idea of “glitching”, or to being, in Butler’s later terms, a “vital instability”, as I describe in the first two chapters of this paper.

Ultimately however, changing one’s CPR number means a change in the corresponding databases, effectively changing one’s legal gender. The page dedicated to the change of CPR number for transgender people at [cpr.dk](https://cpr.dk) contains documents about this for persons both over and under 18 years of age. The latter need to have been undergoing a form of “gender-modifying treatment” (for example gender-affirming hormone therapy), require custodial consent, and their case will be weighed individually. Noteworthy is the language used about gender change – it is described as experiencing the “opposite gender” or “the other gender”, reflecting the existence of gender binary within Danish system.<sup>4</sup>

All the more interesting is then the mention of a possible application to “get the gender designation X in your passport” (Indenrigs- og Sundhedsministeriet 2014). There seems to be (or have been before September 1, 2014, when the rules for CPR change came into effect), at least according to the website, an option to avoid this omnipresent gender binary via an “X” marker in one’s passport, as mentioned also by Quinan and Hunt (2023: 381).

Changing one’s legal gender according to self-image, but also to “fit the system”, may go against the idea of “glitching” or may subscribe to ideas of a *regulatory fiction*. However that may be true in theory, “correcting” one’s legal gender is proven to lead to positive effects (mentioned also in this paper) and this codification of a *regulatory fiction* might allow someone to have their preferred gender identity officially confirmed, at least in the eyes of the state. The *regulatory fiction* then might be reassuring – and the

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<sup>3</sup> CPR n.d.: “Kan jeg få nyt personnummer”. Accessed 9 December 2023 from <https://cpr.dk/borgere/kan-jeg-faa-et-nyt-personnummer>

<sup>4</sup> CPR n.d.: “Juridisk kønsskifte (transkønnede)”. Accessed 9 December 2023 from <https://cpr.dk/borgere/kan-jeg-faa-et-nyt-personnummer/juridisk-koensskifte-transkoennede>

subscription to the gender binary can be a way to better identify with the “other gender”, effectively aiding the person in embodying the gender they feel to be.

## Gender reassignment

To further aid in embodying the correct gender, an official website regarding “gender-modifying treatment” (“Kønsmodificerende behandling”) exists at sst.dk.<sup>5</sup> Additionally, the Copenhagen Municipality also has official information and courses on voice training, available at csv.kk.dk, although this does not relate as much to e-government.<sup>6</sup>

Sst.dk also offers key information about the discrepancy between a gender-reassigned CPR number and the gender assigned at birth. This site shows that regardless of one’s gender being legally “corrected” via CPR, one’s new legal gender can still pose as an instability in the system.<sup>7</sup> This occurs for example when interacting with the health service, as some laboratory tests or examinations are interpreted based on the present CPR-registered gender and will provide incorrect results.<sup>8</sup> The healthcare professional thus must be, in certain circumstances, informed about the gender assigned at birth.

Sst.dk further informs that a person with a gender-reassigned CPR number will not be automatically called in for screenings for gender-related diseases such as breast or cervical cancer and must arrange these screenings themselves.<sup>9</sup> These discrepancies show how official government systems may struggle with discerning between person’s organs and their gender identity – causing one to “fall outside” the system. However liberating, anti-regulatory, or “glitching” that may be, it can put an individual at risk or force them into unpleasant situations in which they may be asked to debate their sex and gender with the healthcare and other public systems that use the CPR number.

## Name change

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<sup>5</sup> Sundhedsstyrelsen n.d.: “Kønsmodificerende behandling”. Accessed 9 December 2023 from <https://www.sst.dk/da/Borger/Seksuelt-sundhed-seksualitet-og-koensidentitet/Koensidentitet/Koensmodificerende-behandling>

<sup>6</sup> CSV n.d.: “Stemmetransformation”. Accessed 9 December 2023 from <https://csv.kk.dk/for-borgere/stemme/stemmetransformation>

<sup>7</sup> Sundhedsstyrelsen n.d.: “Ændring af CPR-nummer”. Accessed 9 December 2023 from <https://www.sst.dk/da/Borger/Seksuelt-sundhed-seksualitet-og-koensidentitet/Koensidentitet/AEndring-af-CPR-nummer>

<sup>8</sup> This paper was written before the recent changes (Hinsby 2025). Sst.dk however still provides the mentioned information.

<sup>9</sup> Sundhedsstyrelsen n.d.: “Ændring af CPR-nummer”. Accessed 9 December 2023 from <https://www.sst.dk/da/Borger/Seksuelt-sundhed-seksualitet-og-koensidentitet/Koensidentitet/AEndring-af-CPR-nummer>

Personregistrering.dk mentions “male”, “female”, as well as “unisex” names.<sup>10</sup> A male cannot have a female name and vice versa – there is however a long list of approved unisex names, albeit it is much shorter than the male or female ones.<sup>11</sup> Such a position of being in between the gender binary does not seem to be possible for patronymic surnames – those ending either in “-søn” or “-datter” meaning either the “son of” or “daughter of”.

Allowing unisex names may not necessarily be in opposition to the gender binary as it may simply mean that a name has both a male- and a female-identified version which happen to be identical, or just that it applies to “either of the two” genders. The gender binary is also encouraged through not allowing males to carry female names and vice versa. It is however interesting to note, that whereas people may not be “unisex” in themselves, their names can be.

Nevertheless, Copenhagen’s Municipality website kk.dk informs of a youth profiling survey that allowed respondents to, for the first time, indicate their gender as “non-binary” – thus officially indicating their gender identity towards the state (or the city municipality) as existing outside the official gender binary for the study’s purposes.<sup>12</sup>

## MitID

The areas of how the Danish government may look at gender and sex as data come together in the MitID digital identity service (Digitaliseringsstyrelsen 2023). Asking for a CPR change,<sup>13</sup> booking a doctor’s appointment for a “gender-modification treatment” referral or accessing medical records at sundhed.dk,<sup>14</sup> and applying for a name-change can all be done through or with the help of the MitID system.<sup>15</sup> It also allows access to the bank, Digital post, and a variety of public self-services and websites.<sup>16</sup>

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<sup>10</sup> By-, Land- og Kirkeministeriet n.d.: “Naming rules – Changing your name”. Accessed 9 December 2023 from <https://www.personregistrering.dk/hc/en-gb/articles/360021861879-Naming-rules-Changing-your-name>

<sup>11</sup> Familieretshuset n.d.: “Godkendte fornavne”. Accessed 9 December 2023 from <https://familieretshuset.dk/navne/navne/godkendte-fornavne>

<sup>12</sup> Københavns Kommune n.d.: “Orientering om Ungeprofilundersøgelsen – København 2023/23”. Accessed 9 December 2023 from <https://www.kk.dk/dagsordener-og-referater/Sundheds-%20og%20Omsorgsudvalget/m%C3%B8de-04052023/referat/punkt-6>

<sup>13</sup> CPR n.d.: “Juridisk kønsskifte (transkønnede)”. Accessed 9 December 2023 from <https://cpr.dk/borgere/kan-jeg-faa-et-nyt-personnummer/juridisk-koensskifte-transkoennede>

<sup>14</sup> City of Copenhagen n.d.: “Going to a doctor”. Accessed 9 December 2023 from <https://international.kk.dk/live/healthcare/going-to-a-doctor/going-to-a-doctor>; Københavns Kommune n.d.: “Bestil tid til Borgerservice”. Accessed 9 December 2023 from <https://www.kk.dk/bestiltid>

<sup>15</sup> By-, Land- og Kirkeministeriet n.d.: “Naming rules – Changing your name”. Accessed 9 December 2023 from <https://www.personregistrering.dk/hc/en-gb/articles/360021861879-Naming-rules-Changing-your-name>

<sup>16</sup> MitID n.d.: “About MitID”. Accessed 9 December 2023 from <https://www.mitid.dk/en-gb/about-mitid/>

I will focus on data collected whilst personally registering for MitID through the MitID app. The registration requires, among other things, a Danish CPR number and a passport or an ID card with an electronic chip. Upon scanning my passport, the app required a scan of my face to match the passport photo. I repeatedly received an error stating that “The photo in your passport/ID card does not match your facial scanning” and a list of recommendations on how to avoid this issue. I could not resolve the issue and upon physical visit to the Citizen Service Centre to prove my identity, there was not enough of my data in the citizen registry, so I was not able to receive access to MitID, barring my access to its services. My passport photo is just one year old, and my appearance has not significantly changed.

Possible reasons for the app not recognizing my appearance are given on the MitID website – wearing glasses, bad lighting, or a change in appearance since taking the passport photo.<sup>17</sup> Despite me not being transgender, a change of appearance from one’s passport is arguably something that likely affects transgender people more as they’re undergoing transition.

This introduces another form of gender-incongruent ID (Scheim et al. 2020: 196–197), this time visually and algorithmically enforced via the use of image scanning and visual recognition software. This potentially bars these citizens from public services such as Digital post or borger.dk and makes them prove their identity in person – likely leading to more cases of debating one’s identity and confronting a disparity between physical reality and their recorded digital identity.

The invisibility of trans and non-binary people in the eyes of computer vision and facial recognition systems is a problem beyond the scope of this paper. In closing, I want to only briefly mention Schiebinger’s (2021: 10) study, finding that “transgender faces may pose challenges for facial recognition systems” because of gender-affirming hormone therapy changing the shape and texture of one’s face. Schiebinger (2021: 10) thus recommends a revision of algorithmic parameters to focus for example more on the person’s eyes.

These issues are further documented by Keyes (2018: 88:11), finding that such software “is particularly likely to misclassify (and so discriminate against) trans people”, whilst the absence of trans or non-binary faces in machine learning datasets (Keyes 2018, 88:13) and the presumption of gender being binary “additionally harms non-binary people, who by definition cannot be accurately classified” (Keyes 2018:

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<sup>17</sup> MitID n.d.: “Cannot get the passport and face scan to work?”. Accessed 9 December 2023 from <https://www.mitid.dk/en-gb/get-started-with-mitid/get-mitid-with-passport/cannot-get-the-passport-and-face-scan-to-work/>

88:11). All resulting in what Butler (2006, xxvi) might call “unreal” identities (discussed also in the first chapter of this paper).

## Conclusion

I have analysed Danish government websites related to the construction of digital citizen identity, and the MitID app, through a theoretical lens of *regulatory fiction*, *datafication*, and *legal gender recognition*, with focus on my RQ: “How does the Danish digital citizen identity codify gender/sex of its citizens, according to official websites and the MitID app?”

My qualitative content analysis shows that Denmark views gender/sex identity as binary. This manifested itself via a) language – using formulations “the opposite sex” and “the other gender”, b) the symbolic level – using a numerical representation to quantify gender as data, c) the systems themselves – CPR number’s classification of gender as only male or female.

However, a level of openness to “glitch between binaries” was also present within the analysed texts, mainly the ability to change one’s legal gender and CPR number to “the other gender” based just on self-identification for people above 18 years old (and thus use the *regulatory fiction* in a gender-affirming way), and to change one’s name including unisex options. Partial evidence was found that Denmark allows (or allowed) for “X” gender-marker in passports in certain circumstances.

Issues were also present, specifically the systems’ inability to distinguish between citizens’ organs and gender identity upon a change in CPR number – resulting in citizens “falling outside” the system of certain health screenings or potentially getting wrong test results, as CPR number is here taken to correspond to both one’s gender and one’s biology. These issues were however officially admitted by the texts.

A second issue was found with access to Danish digital identity via MitID’s facial scanning feature. In being unable to match my face to my passport, I could not register for MitID, even upon personal meeting with the Citizen Service Centre as not enough data on my identity existed. This issue is likely to be more prevalent with transgender individuals whose appearance changes due to transition. The visual and algorithmic facial recognition embedded in the MitID app introduces yet another form of gender incongruity within official forms of ID documents for trans people and adds onto the body of existing problems trans and non-binary people face while dealing with machine-learning classification software and the government.



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