Development Informatics

Working Paper Series

The Development Informatics working paper series discusses the broad issues surrounding digital data, information, knowledge, information systems, and information and communication technologies in the process of socio-economic development

Paper No. 76

Spatial|Data Justice: *Mapping and Digitised Strolling against Moral Police in Iran*

AZADEH AKBARI

2019

Table of Contents

Spatial|Data Justice*:*
Mapping and Digitised Strolling against Moral Police in Iran

Azadeh Akbari
Heidelberg University

2019

Abstract

Through a case study of women's resistance against the moral police in Iran, this paper contends that claims to data justice cannot be investigated unless they are situated in broader political frames. Whilst the current literature uses a single axis analysis of data justice as well as conceptual tools that are appropriated for democratic power relations, this research positions data justice in a matrix of injustices in an unequal and undemocratic political apparatus.

The paper scrutinises the intersection of data and spatial injustice in Iran by analysing the way traffic camera footage is used against female drivers with improper veiling. Considering compulsory hijab and policing of it as a spatial injustice that limits and disturbs women's access to public places, the case study examines ways of resistance that address spatial|data injustice: firstly, a mobile phone application called Gershad that uses collective mapping to pin moral police patrols on maps by users; secondly, a social media campaign called White Wednesdays that encourages women to film and share their public strolls without hijab, their confrontations with religious pro-regime people, and videos of singing, dancing and cycling in public spaces.

Using Fraser's theory of "abnormal justice", this research draws attention to particularities of each case of data justice; taking into account the intersections of socio-political axes of injustice in different layers of local, regional and global analysis. The paper offers a "situated" analytical framework by bringing in space as an inquisitive component and moves from a sole discussion of data justice to a more intersectional study of spatial and data justice combined. Participation in "small data" projects is introduced as one resistance strategy against injustices of big data systems, fulfilling the principle of "parity of participation" to achieve justice, especially in undemocratic political contexts.

A. Introduction

This paper is written as part of a collection of case studies on urban data, inequality and justice in the global South. On its journey to apply a lens of data justice to urban data, this case study has taken a step back to engage itself critically with a broader question, 'can any claim to data justice be studied without addressing its intersection with other forms of injustice?' In doing so, this case study has immediately exposed itself to immense political questions and therefore conceptualises a framework for data justice (section B.1) based on Fraser's theory of abnormal justice (Fraser 2008). According to this theory, the first criteria for achieving justice, namely distribution, recognition, and representation cannot be discussed when a group of people are deprived from participation in "authorized contests over justice"(Fraser 2008, 408). Hence, this research puts the question of data justice firstly, inside a political agenda and secondly, in intersection with other forms of injustice.

As a case study of such formulation of data justice this paper analyses the way traffic camera footage is used in Iran to criminalise women who drive without proper hijab. This paper posits compulsory hijab as a form of spatial injustice (Soja 2010) as it affects women's freedom of movement, their feeling of security and meaningful participation in social life. Spatial|Data Justice is then introduced as a way to examine the intersection of these two forms of justice (section B.2) providing a short introduction to the history, challenges and contestations over the issue of hijab in Iran. The essay then proceeds to a more detailed discussion of surveillance of women and its interrelations to issues of spatial|data justice (section B.3) and aims to contribute to the shortcoming of surveillance studies' literature by addressing surveillance of women as a large group of population. Section B.4 introduces two case studies of resistance against spatial|data justice: firstly, a mobile phone application called Gershad that uses collective mapping to pin moral police patrols on maps by users; secondly, a social media campaign called White Wednesdays that encourages women to film and share their public strolls without hijab, their confrontations with religious pro-regime people, and videos of singing, dancing and cycling in public spaces.

Using thematic analysis methods (section C), some of the recurring themes in Gershad's twitter account and also videos posted on the White Wednesdays' campaign's Instagram account are explored. The findings of this analysis (section D) demonstrate strong connections between hijab activism, spatial justice and wider political agendas. Here, these two small data projects are portrayed as a possible way to tackle the injustices in larger data sets. Finally, the paper recommends integration of other forms of injustice as an axis of analysis in studying data justice (section E). Taking a political and critical approach to data justice, this case study aims to draw attention to the inadequacy of any discussion on data justice without its situatedness in a broader political framework, and recommends a scrutiny of data justice in an intersectional matrix of injustices with different layers of local, regional and global analysis.

B. Background

B1. Data Justice

With the unbelievable speed of developments in the field of data technologies and their significant impact on the transformation of our lives, debating data justice is timely if not late. Several studies have focused on ways that could make data ethically just, such as making machine learning fairer by mitigating discrimination without collecting sensitive data (Veale and Binns 2017), preventing biases in educational data mining (Ben Shahar 2017) or, excavating representations of minorities and outliers in big data (Welles 2014). Although a significant effort, other academic enquiries take a more holistic approach and situate data in already-existing discourses of justice. Heeks and Renken (2018) divide approaches to data justice into three categories of 'instrumental data justice' to ensure fair use of data, 'procedural data justice' to ensure fair handling of data, and 'distributive rights-based justice' to ensure rights of privacy, access, ownership and representation. Although these approaches clarify incidents of injustice in data systems, they do "not encompass the social structures which at least partly determine data uses, processes, distributions, and rights" (Heeks and Renken 2018, 96).

The authors then define structural data justice as "the degree to which society contains and supports the data-related institutions, relations and knowledge systems necessary for realisation of the values comprised in a good life" (Heeks and Renken 2018, 96). Albeit they immediately recognise the importance of defining what a good life means, the discussion around it stops at the recognition of the problem. Similarly, existing data justice discourses emphasise more on the individual level of justice. For example, an ecosystemic approach based on Sen's capabilities theory defines data justice based on three pillars of visibility, digital (dis)engagement and countering data-driven discrimination (Taylor 2017) and hence provides universal answers to a particular question. Taylor develops her model by asking, "What are good governance principles for the use of big data in a democratic context, and who should be responsible for determining them?" (Taylor 2017, 10); a question that brings about a completely different set of answers if asked in an undemocratic context. This paper then aims to elaborate on the political aspects of data justice by situating itself in the context of critical data studies (Dalton and Thatcher 2015) and by shedding "light on political struggles and social processes that precede artefacts… [r]evealing the political and social interests embedded in technology" (Silva 2007, 175).

In such critical approaches to data justice, surveillance is understood as an "active social process" (Jiwani 2015) that upholds social structures. Such disciplinary roles could also be assigned to data systems. Johnson argues that databases have a normalising function and theorises "data systems as disciplinary surveillance" (Johnson 2014, 268). He shows for example how educational databases of students' performance are used to cut underperforming programs and affect educational choices of students or the financial funds available to them. Although his observations are made in a democratic context to achieve 'information justice' through open data (Johnson 2014), his observations can be well used in undemocratic environments. Other researchers have highlighted the relation between data-driven governance and broader social justice agendas (Dencik, Hintz, and Cable 2016, 1) but their work covers mainly activists resisting government surveillance at user level and does

not include surveillance on large groups of people. Regardless, the aforementioned research recognises the urgency to "examine the ideological basis of data-driven processes, situating this form of governance within a *political agenda* […] scrutinis[ing] the *interests* and *power relations* at play in 'datafied' societies that enfranchise some and disenfranchise others" (Dencik, Hintz, and Cable 2016, 9).

In order to include the above-mentioned political aspect in conceptualising data justice, this study uses the concept of 'abnormal justice' (Fraser 2008). The theory of *abnormal justice* argues that the 'what', the 'who', and the 'how' of justice remain disputed in our time. Consequently, there is no shared understanding of "what justice claimants can look like (individuals or groups, fellow citizens or all human beings), the substantive focus of justice claims (economic redistribution only, or other ontologically different forms of redress), which social divides possess injustice (e.g., nationality, ethnicity, class, gender, sexuality), and the agencies and scales of arbitration and redress (state or non-state actors, territorial or supraterritorial bodies)" (Cinnamon 2017, 612-3). In order to achieve justice under such circumstances, Fraser defines "the normative principle of parity of participation. According to this principle, justice requires social arrangements that permit all to participate as peers in social life" (Fraser 2008, 405). She then identifies three main obstacles of justice in an "ordinary-political" way (Fraser 2008, 407), as distribution, recognition, and representation. These obstacles were also addressed in one way or the other in the studies on data justice mentioned above. The outstanding difference is, however, Fraser's reflection on the milieus that make justice realisable, acknowledging the fact that, "in order to apply the principle of participatory parity to first-order questions of distribution, recognition, and representation, one must be able to jump to the next level, where the frame itself is in dispute" (Fraser 2008, 407). Fraser introduces then a new level of "metapolitical injustice" comprehending "injustices of misframing. Such injustices occur when a polity's boundaries are drawn in such a way as to wrongly deny some people the chance to participate at all in its authorized contests over justice" (Fraser 2008, 408).

B2. Spatial|Data Justice
In addition to integration of political dimensions to any discussion of justice, this paper argues that data justice cannot be fully comprehended unless in an intersection with other forms of injustice. Data justice has been discussed in conjunction with other social agendas, such as development (Heeks and Renken 2018), economic justice (Newman 2015), legality of surveillance (Cinnamon 2017), etc. In a more metapolitical level, following Fraser's formulation of justice, this case study takes an intersectional approach (Cho, Crenshaw, and McCall 2013) to data justice in conjunction with spatial justice. This claim is based on understanding two basic principles: that "the political organization of space is a particularly powerful source of spatial injustice" (Soja 2009, 3), and that "a focus on data justice is […] not only on the justness of data practices [but also on] the biases and inequalities baked directly into data" (Cinnamon 2017, 622). It is needless to say, that the same set of data could have been studied through the lens of, for example, class discrimination against poor cyclists that act as messengers and food deliveries in metropolitan Tehran and their income is extremely dependent on breaking traffic rules. In the current case study, the spatial aspect is only one axis of the matrix of injustices that shape the debated data injustice.

In his book *Seeking Spatial Justice*, Edward Soja (2010) offers a detailed chronological study of the concept of spatial justice in works of different geographers, but majorly focuses on the 'right to the city' in works of French philosopher Henri Lefebvre (Lefebvre 1968) and Marxist geographer David Harvey (Harvey 2003). Lefebvre's transformative formulation of space as reflective 'and' constructive of social relations, changed the way 'space' was understood, and scrutinised the social organisation of space in capitalist times (Lefebvre 1991). The formerly mentioned authors all emphasise the "socio-spatial dialectic [meaning that] the spatial shapes the social as much as the social shapes the spatial" (Soja 2009, 2). In order to shed some light on the concept of 'spatial justice' in a more concrete and action-oriented approach, this paper follows the propositions of the *Journal of Spatial Justice*, a pioneer in publishing in the field:

"I. There are two cardinal forms of spatial injustice:

A. The involuntary confinement of any group to a limited space – segregation, ghettoization – the unfreedom argument.

B. The allocation of resources unequally over space – the unfair resources argument.

II. Spatial injustice is derivative of broader social injustice – the derivative argument.

III. Social injustices always have a spatial aspect, and social injustices cannot be addressed without also addressing their spatial aspect – the spatial remedies argument.

IV. Spatial remedies are necessary but not sufficient to remedy spatial injustices – let alone social injustice – the partial remedy argument.

V. The role of spatial injustice relative to social injustice is dependent on changing social, political, and economic conditions, and today there are trends that tend both to decrease and to increase the importance of the spatial – the historical embeddedness argument" (Marcuse 2009, 3).

Figure 1. "improperly veiled women cannot enter" a warning that should be visibly hung at the entrance of any space with public access. Photo from Mohyeddin (2005).

According to the above-mentioned formulation of spatial justice, this paper frames compulsory hijab as an issue of spatial injustice, which deprives women, fully or partially, from accessing public spaces (Justice for Iran 2014), limits their freedom of movement, affects their feeling of security and well-being in public (Gould 2014) and gravely restricts their participation in different aspects of social life. On 22 June 1980, just a year after the victory of Iranian revolution, women were banned from entering governmental and public service buildings without hijab (covering of their hair and body) (Shojaie 2014). Women's demonstrations against compulsory hijab did not receive any support from their former comrades (Sedghi 2007) and their voices got lost in the revolutionary haze of the days. With the invasion of Iraq in September 1980 and beginning of an 8-year gruelling war, the issue of hijab seemed even more irrelevant. Finally in 1983 and with the ratification of the Islamic Punitive Law in the Iranian Parliament, not having proper hijab in all public places was considered an

offence punishable with 74 lashes (Justice for Iran 2014, 12). The punishment was later changed in 1997 to 10-60 days of imprisonment or a fine (ibid, 14).

From the violent suppression of women's largest rally against compulsory hijab on 8 March 1979 to the legal and social establishment of controlling women's clothing in the years afterwards, street patrols of "revolutionary committees" played an important role in harassing women who were deemed not properly covered (Kar 2017). By the ratification of the new Islamic Punitive Law and disbanding of committees in 1993 (Justice for Iran 2014, 13), police forces were then legally required to arrest women who disobeyed the compulsory hijab law. This commenced police surveillance of women in all public spaces of Iran until today. In addition to patrolling public spaces such as parks, streets and public transportation, every university, hospital, government office, public service bureau, shopping mall and similar is staffed to control women's clothing (see Figure 1). In 2005, special police forces called "Guidance Patrol" [Gasht-e-Ershad] were installed to observe compliance with compulsory hijab code (Erdbrink 2014). The Guidance Patrols aim mainly to bar improperly veiled women from entering public spaces and increase the risk of defiance. For example, in Tehran[1], arrested women are transferred to the Bureau against Social Corruption, part of the Police Forces for Social Security. There, their photos are taken and their personal information is archived. Arrested women should fill up forms about their psychological well-being and then wait for family members to bring them proper clothes. Before leaving the police station, they have to destroy their 'bad' clothes with scissors. If a woman resists at any stage of the process or repeats the 'crime' frequently, a legal case will be made and she would be sent to the courts of law.

B3. Compulsory Hijab and Surveillance of Women

Taking the political aspect of spatial|data justice into account unfolds another important interrelation. After the controversial presidential elections in 2009 and the subsequent uprising, CCTV cameras became compulsory in cafes, universities and even kindergartens. Traffic control cameras mushroomed in big cities and although it was publicly announced that police and security forces could only have access to footage of these cameras upon judicial request, it was revealed in 2015 that the entire country's urban CCTV cameras transmit their footage to the headquarters of Special Police Forces, who are mandated to deal with insurgency (Voice of America Persian Service 2015). Using data gathered through traffic cameras for other purposes soon proved useful in controlling women's hijab.

In continuation with strict control of women's clothing in public spaces, as of June 2017, women who do not properly cover their hair while driving are legally prosecuted and their cars are impounded (Mizan News Agency 2017). In December 2017 twitter users reported that 'improper hijab' was being captured on traffic cameras (see Figure 2). Just a day after the reports, the head of traffic police denied the rumours (Tasnim News 2017). Amid such denials, improper hijab fines and impounding of cars is so customary that legal consultation websites publish step by step guides for women who receive text messages with a code 14/15 as a warning for improper hijab in a vehicle (Bidbarg Legal Consultancy 2018). It is not clear if the 'crime' is spotted by a guidance patrol or a CCTV/traffic camera. As mentioned

---

[1] There are many documented accounts of women who have been arrested by the Guidance Patrols, see for example, (Pardis 2011) (M 2015) (Bidarzani website 2015).

مجید آذرپی 🇮🇷
@majidazarpey

Follow ⌄

این صف یارانه و شیر و نون و فیلان نیست.
این جماعت همه به خاطر بدحجابی در موقع رانندگی
اینجا(پلیس امنیت اخلاقی)هستند
جدیدا در جاده‌ها، بدحجابی توسط دوربین‌های راهنمایی
رانندگی ثبت می‌شود

🌐 Translate Tweet

6:14 AM - 16 Dec 2017

Figure 2. The Tweet reads, "This is not a milk or bread queue. All these people are at Moral Security Police station because the driver of their car has had improper hijab. Recently improper hijab is being captured on CCTV cameras on the roads"(Azarpey 2017).

before, the government actively uses the footage of traffic cameras in tackling political dissent. It is therefore not unexpected that similar methods would be used against women. By doing so, the traffic data is not solely gathered to facilitate road safety and traffic control but also it gathers, classifies and uses data for other purposes, such as surveillance, sorting, disciplining and punishing women.

Surveillance of specific groups inside a bigger population has been long a subject of study in the field of surveillance studies. Surveillance has even been considered "as a means of social sorting" (Lyon 2003, 8). This sorting function has been studied in a variety of areas such as database marketing targeting specific categories of consumers (Gandy 1993), colonialism (Sa'di 2012), race (Browne 2015), using heteronormative paradigms for justification of the 'war on terror' (Puar 2007), etc. However, this paper focuses on sorting practices that not only reflect the already existing discriminatory power relations but also consolidate them through surveillance. The overlapping of two fields of gender studies and surveillance studies had not received much attention until recently. In 2009, some of the main researchers in the field of surveillance studies stated firmly that, "surveillance studies needs gender and sexuality" (Ball et al. 2009). Such need has resulted in more thorough examination of surveillance apparatuses through the lens of gender and race (Van der Meulen and Heynen 2016) (Dubrofsky and Magnet 2015) but the research remains overwhelmingly in the global North.

The current literature on the subject could be roughly divided to three categories:
a) Surveillance that specifically targets women, for example voyeuristically through CCTV cameras in public urban spaces (Koskela 2002), monitoring the appeal of cocktail waitresses in casinos (Bayard de Volo 2003), controlling strippers not to get any unreported tips (Egan 2004), limiting women's activity in outdoor recreational parks (Wesely and Gaardner 2004), etc.
b) Surveillance that is built on other unequal power relations, for example surveillance of African American young women and their fear of sexual harassment by police officers (Brunson and Miller 2006), violence against women and the contradictory role of surveillance in prevention of violence and control by case workers (Campbell 2000)

(Gordon 2000) (Mason and Magnet 2012) or how shelters for victims of domestic violence tailor their services in a way that excludes some racial categories or undocumented immigrants (Smith 2015), surveillance of non-gender-normative bodies (Conrad 2009) (Beauchamp 2009) or exclusion of transgender people from state-issued birth certificates (Moore and Currah 2015).

c) Surveillance as a gendered practice, for example how surveillance systems "operate on ideals of masculine control at a distance and as a result enforce a masculinization of space and practice" (Monahan 2009, 299), or how surveillance expands the male gaze (Van der Meulen and Heynen 2016).

In continuation to the above-mentioned studies, this paper examines not only the surveillance of female drivers by a strictly controlling and oppressive male gaze, but also investigates the "masculinisation of space" (Koskela 2002) through surveillance. The afore-mentioned concept was coined to explain that the installation of CCTV cameras, not only does not prevent harassment of women, but also contributes to masculinisation of space, since most of the camera room operators are men. Taking this concept to a context that women's public presence is severely controlled through law, police forces and, surveillance, gives it new meanings and effects.

Consequently, here, surveillance is understood as an infraction of "social justice", that sorts "people into categories, assigning worth or risk, in ways that have real effects on their life-chances (Lyon 2003, 1). Therefore, this paper studies compulsory hijab not only as surveillance of women but also as a way of producing public space that is not tolerant towards specific female bodies. It must be noted here that compulsory hijab is only one of a number of legal freedoms that Iranian women lost after the revolution. The Iranian progressive family law was one of the first laws that were abolished after the 1979 revolution, leaving married women with no rights to education, work, and travel. Other patriarchal laws prohibited women to work in occupations that were deemed masculine such as being a judge, pilot, president, etc. As clearly reflected in the definition of spatial justice, 'justice' in such situations cannot be achieved with just spatial remedies. Social justice and consequently spatial justice require a strong political will for change.

B4. Against Spatial|Data Injustice

As mentioned earlier in this paper, resistance against compulsory hijab dates back to the first months after the 1979 revolution in Iran. Although the resistance initially had a legal, political and rights-based approach, after the violent suppression of demonstrations and arresting, torture and execution of political activists, resistance against compulsory hijab was transformed to ongoing everyday acts of resistance, which focused on intentional improper veiling, e.g. putting on makeup, leaving hair out, wearing short or tight clothing, etc. These everyday strategies have been the subject of numerous studies and popular journalism (for academic examples see (Sedghi 2007), (Bayat 2010) and (Sadeghi 2010)). Following a global trend, urban governance in Iran is on the path to digitalisation and many government services are now delivered through electronic systems. These governmental systems work based on large databases that gather, classify, summon and archive data. The data gathered through traffic cameras reflects the already existing spatial injustice against women and as a result, in addition to the old resistance strategies, there are new trends of resistance that take a data approach.
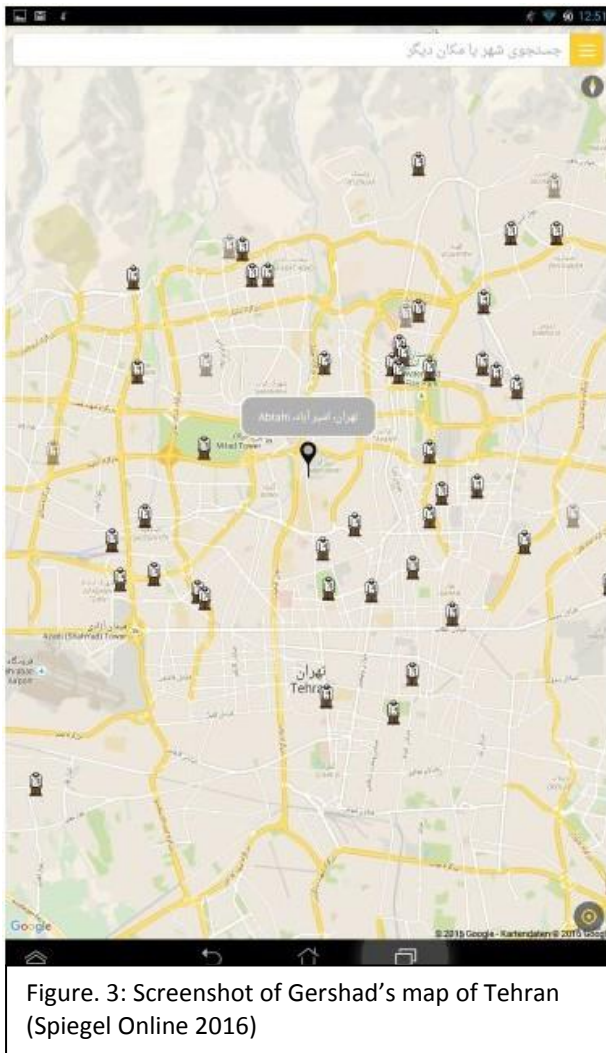
Figure. 3: Screenshot of Gershad's map of Tehran (Spiegel Online 2016)

Small data has been contemplated as a tool of justice that would go beyond the usage of data by others and would concentrate on how individuals, groups or communities use data for themselves "in order to live the life they value" (Heeks and Renken 2018, 95). In a structural view, small data is theorised through data intermediary organisations, "as channels through which citizens can influence the balance of representation/privacy and the nature of data ownership and access … important determinants of the constitution and distributive benefits of information value chains" (Heeks and Shekhar 2019, 1008). In a more networked view and with a political understanding of data systems, small data initiatives by groups of people, who are themselves affected by data injustices are rather considered as active resistance. This case study examines two different small data projects that aim to tackle the issue of Spatial|Data injustice.

Although surveillance of such a large group of people seems practically impossible, in 2013 three million women received "injunctions" through police patrols in Tehran for their improper hijab (Gershad n/a) . In 2017, 207,000 women undertook written promises to correct their behaviour, while 18,000 women were sent to court (ibid.). In response, an anonymous group of activists created "Gershad[2]", a collective mapping application that allowed users to pin moral police patrols on the map (see Figure 3). The application soon attracted younger tech savvy women and men that helped each other avoid prosecution and aggressive police behaviour.

Another recent development is the White Wednesdays' campaign that encourages women to walk in public spaces without headscarves, film the walk and possible confrontations, and post it on social media (https://www.instagram.com/masih.alinejad). The videos have caused heated national debates and the number of anonymous participants is growing by the day. The White Wednesdays' campaign stands not only as a claim to physical space but also occupies digital space by publishing its own narrative of how space should be organised justly. The videos also act as returning the gaze of surveillance and its normalising effect on women that have been systemically controlled, surveilled and criminalised. In doing so, although they do not gather data as systematically as a mapping application such as

---

[2] Literally means going around moral police patrols

Gershad, they protest the unjust collection of women's data by using the same tool as the authorities: their cameras. Though the identification of police officials or documentation of the aggressive behaviour of pro-regime passers-by is not collected in a data system per se, the White Wednesdays' campaign succeeds in highlighting the disciplinary power of surveillance and the intersection of spatial and data justices.

C. Methods

In order to shed light on the concepts introduced in this paper, and the interrelation between them, the case study uses thematic analysis of Gershad's twitter account, and videos posted on the White Wednesdays' campaign's Instagram account. The tweets from Gershad's twitter account, in the year preceding 25 May 2019, were downloaded and after cleaning, coded and categorised based on their content. Also, the last 300 videos of White Wednesdays' Instagram, preceding 25 May 2019, were coded and categorised.

Braun and Clarke (2006, 79) define thematic analysis as "a method for identifying, analysing and reporting patterns (themes) within data". In this research, hijab activism and different modes of resistance against policing of women's clothing, have been considered as key themes. Other themes were understood in relation to the key themes. Thus, the thematic analysis has been conducted in a 'theoretical' manner, meaning that the themes identified "tend to be driven by the researcher's theoretical or analytic interest" (Braun and Clarke 2006, 84).

Therefore, driven by the theoretical framework of abnormal justice, general political commentary at the level of "metapolitical injustice" (Fraser 2008, 408) has been coded as a theme. Following the paper's understanding of intersectional justice, other instances of injustice, such as activism on labour rights, teachers' unions, violence against women, religious minorities, etc. have been coded as relevant themes. The other thematic codes mainly cover the objectives and functions of the application or the social media campaign. Additionally, this paper has analysed the social media posts on a semantic level and has not taken a discourse-analysis approach, as the limited scope of this case study does not allow a more detailed study of the reasons behind the formation of the specific messages posted on social media. All the themes and subsequent categories will be discussed in detail in the following section.
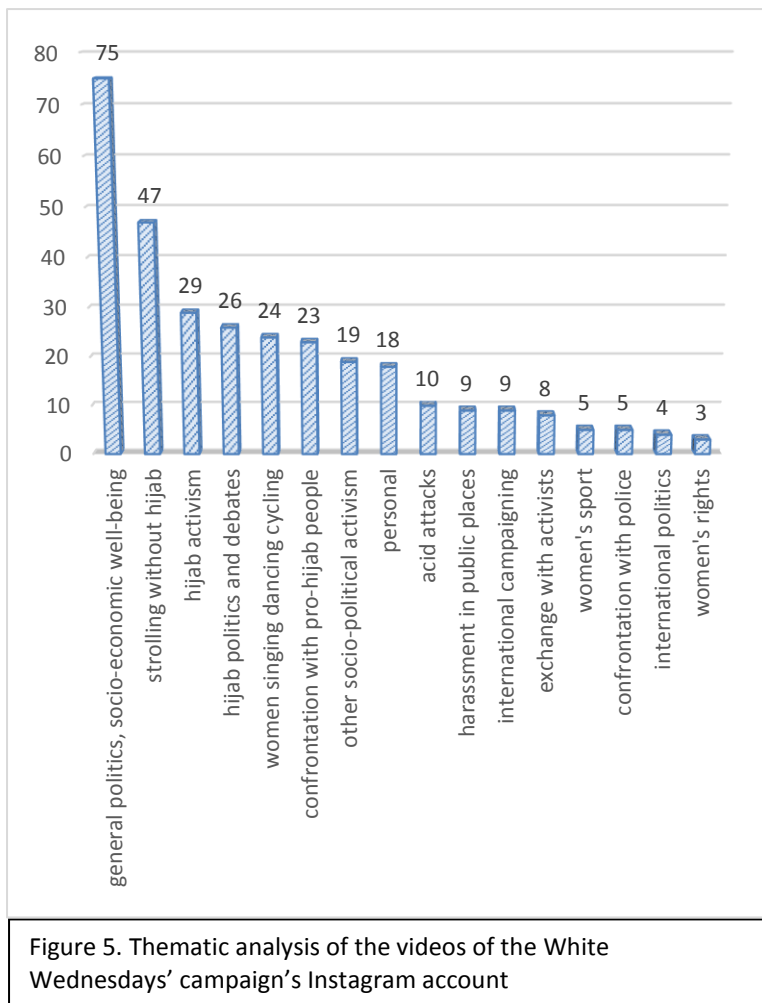
D. Findings

This paper has introduced the concept of spatial|data justice in order to put emphasis on the intersection of data justice with other forms of justice, when justice is envisaged in a broader political framework. Such intersections, overlaps, associations and references between spatial justice – here the case of compulsory hijab – data justice and the general political situation can be clearly demonstrated through the thematic analysis of two main resistance trends against compulsory hijab. A thematic analysis of Gershad's tweets (see Figure 4) shows a major involvement with the application's main purpose as a collective mapping tool with 56% of the posts dedicated to sharing the location of guidance patrols in Tehran. Together with location maps in other towns (8%) and, guidelines, technical information and update alarms (11%), 75% of the twitter activities address the pursuit of the application itself. Eight percent of the tweets tackle the issue of compulsory hijab by debating news, interviews, official statements, and public policies. The rest of the tweets (16%) contribute to the more general political discussions in Iran, specifically those that question the undemocratic nature of ideological imposition on people, such as police violence against people who publicly eat or drink during the month of Ramadan.


Figure 4. Thematic analysis of tweets by Gershad Application
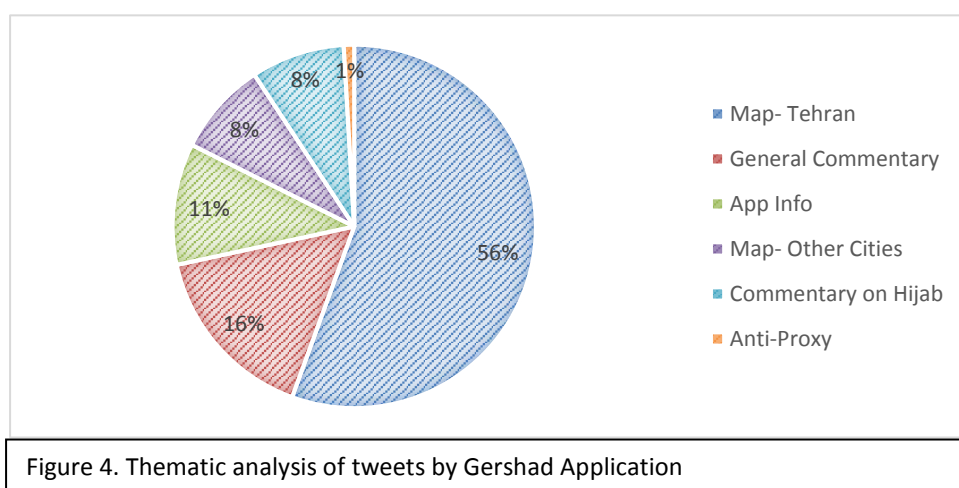
Such overlap between resistance to different forms of policing is also clear in the application's recommendation of anti-proxy technologies. Since the application was filtered by the Iranian authorities, the app developers regularly shared free anti-proxy applications for their users, but as off April 2019 the anti-proxy settings are integrated into the application configurations. Although such technologies would enable users to benefit from the application, they also pave the way for users to circumvent the strict policing and control of the cyber space[3]. Gershad, as a small data project, not only challenges the spatial injustice against women but also provokes resistance against other forms of injustice by confronting the strict control and policing that affect the daily life of Iranians. In doing so, the application goes beyond a mapping experience and targets the political foundations that are used to justify policing.

---

[3] Reporters Without Borders listed Iran as one of the 15 enemies of the Internet in 2016 (Reporters Without Borders 2016).

Figure 5. Thematic analysis of the videos of the White Wednesdays' campaign's Instagram account

Such a political engagement is even more observable in the videos posted on the Instagram account of the founder of White Wednesdays' campaign. As portrayed in Figure 5, the most frequent theme in these videos is the commentary on general politics and a harsh critique of the socio-economic circumstances of Iranians. The campaign also takes a solid stance in advocating women's right to public spaces by frequently posting videos of women dancing, singing or cycling in public spaces – which are all forbidden. Although hijab is being frequently discussed as women's right to choose their clothing, the links to spatial injustice are evident. Here, the right to the city entails more substantial political elements, which problematises the dominant discourses on female bodies, women's role in the family and society and their public engagements. Consequently, issues of prohibiting women to enter football stadiums or to compete in international sports events addresses simultaneously other forms of discrimination in conjunction with spatial justice. Harassment in public spaces and acid attacks also emerge as themes that highlight not only women's lack of access to public spaces but also the violence they experience trespassing the established boundaries. Among the videos of women's confrontation with people opposing their hijab-free strolling, most videos depict confrontations with religious people. The videos demonstrate a larger ongoing debate at the public level about the religious justifications of ideological organisation of space. Most of the videos in this category are hashtagged with "my_camera_my_weapon," accentuating the act of resistance by reciprocating the violence with returning the gaze.

Figure 6. Thematic clusters of the videos of the White Wednesdays' campaign's Instagram account
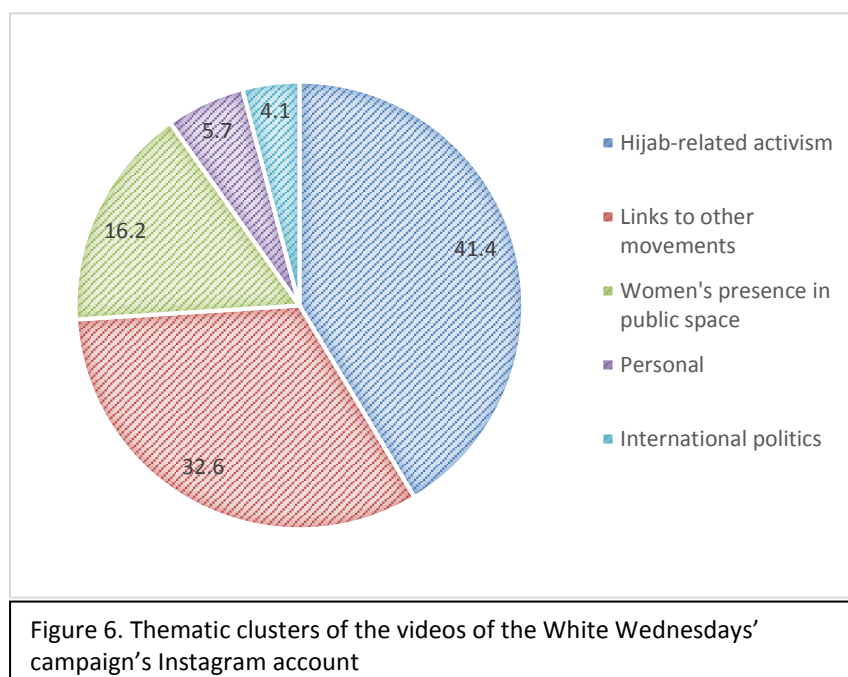
The interconnections between the identified themes could be better illustrated by clustering the similar themes into larger categories (see Figure 6). Although hijab-related activism – including videos of women strolling without hijab, their confrontation with police, and religious or pro-regime people, and news and updates about arrested activists – constitutes the larger body of Instagram posts, the specific coverage of other resistance movements – including workers' unions, teacher unions, religious minorities, etc – comprise a considerable percentage of all the Instagram posts. The interrelation between activism against compulsory hijab, political resistance and spatial justice are clearly demonstrated in the way this small data project links these concepts together. The immediate reference to larger political frameworks could also be observed in the way the campaign represents itself at an international level to not only draw support for its activities, but also to put more pressure on the Iranian government to change its practices of systematic discrimination against women.

E. Discussion and Conclusions

This paper has theorised data justice by using the theory of 'abnormal justice' (Fraser 2008) with the recognition that justice cannot be formulated when specific groups of people have no chance/right to participate in "authorized contests over justice" (Fraser 2008, 408). By applying the principle of 'parity of participation' (Fraser 2008, 407) in order to recognise a situation as potentially bearing the possibility of justice, the Fraserian conceptualisation instantaneously exposes its political nature. Therefore, I have argued that data justice, as an instance of justice, cannot be scrutinized without considering the political framework that encompasses it. Such understanding of justice challenges the current literature on data justice that mainly focuses on democratic power relations. As this paper series pinpoints the issue of data justice in the global South, it proves necessary to situate questions of data justice also in less- and un-democratic settings. Furthermore, a political understanding of data justice cannot be complete, if it is not situated in intersection with other instances of injustice. In this case study, the overlap between spatial and data justice is explored but other research can incorporate other axes of analysis.

After developing a theoretical framework for spatial|data justice, the paper has specifically examined the aforementioned concept in regards to a case study in Iran. The extreme implementation of compulsory hijab regulations against women is defined as a case of

spatial justice, since it regulates, bars and controls women's access to public spaces. Hence, the usage of traffic camera footage to punish female drivers with improper veiling is treated as a mishandling of data – a data injustice – but also only meaningful in conjunction with another form of injustice: spatial injustice. This critical intersectional approach to data justice is fully reflected in two examples of resistance against spatial|data injustice. The first example, Gershad, is an application that uses collective mapping to locate moral police patrols and the second example is a campaign that encourages women to reclaim the public space by strolling without hijab and recording possible reactions and confrontations. A thematic analysis of the social media posts by both projects demonstrate not only a strong interconnection with other forms of activism but also a manifest stance against undemocratic political systems. Such references to political issues reveal an underlying interrelatedness of discourses of justice, including those on data justice.

Drawing from the case study of Iran, this paper develops an intersectional political approach to data justice that situates the issue in a matrix of injustice within a broad political framework. Although such a matrix of injustice might seem less chaotic in a democratic political framework, especially in countries of the global North, a closer look would reveal hidden intersections. Furthermore, as data justice cannot be limited to a specific platform's data polices, it also cannot be contained in a country's approach to data and privacy rights. This paper argues that an intersectional political approach to data justice, as an analytical tool, could be employed in variety of contexts. In the next section, some possible research projects are discussed that would apply analytical tools conceptualised based on this case study. Additionally, although here a small data vs. big data approach has been introduced as a possible resistance strategy against data injustice, each case of data injustice would necessitate a different analysis of resistance alternatives based on its situatedness in the matrix of injustices within a political framework.

E1. Recommendations for Future Research

Spatial|data justice as a concept with an intersectional approach to data justice could contribute to any research in this area that has a spatial component. For example, research on informal settlements that analyse the right to the city for marginalised groups of citizens in conjunction with data-related issues could apply spatial|data justice as an analytical tool. Such research could include surveillance of crime in slums, informal settlements' mapping failures, collective mapping of neighbourhoods and many other research areas that specifically investigate 'space'.

A political intersectional approach to data justice could also include other forms of injustice. This paper has taken space as an axis of analysis but other notions are immediately imaginable. Even in this paper's exact case, 'class' could be considered as an analytical dimension, when it comes to motorcycle messengers in Tehran, that earn their living by minimising the time of a journey between two points in a city stretching to 1748 km^2 through constantly breaking traffic laws. These messengers fall prey to the extensive network of CCTV cameras while economic circumstances and the low quality of state delivery services gravely affects their observance of traffic rules. Other broader examples could be drawn in different levels of analysis. There is for example a massive amount of research on the treatment of undesirable bodies (homosexual, queer, transgender, Muslim,

veiled, poor, etc.) in European immigration systems[4]. The biometric and immigration data that is being collected on such bodies cannot be considered in a sheer discourse of data justice, since in order for a body to be the subject of such gathering of data, one must first belong to an undesirable category. European passport holders that enter the UK for example, do not even pass through such strict regimes of control. Here, doing justice to data justice necessitates an intersectional approach; an approach that cannot be even contemplated without positioning the question in the wider political framework of European immigration policy and socio-historical dimensions of such policies.

This case study also aims to open the discussion to a more detailed and deeper level of analysis of intersections of data justice. Here, thematic analysis has been used to demonstrate the interconnections between different instances of injustice, but other qualitative methods might have provided the case study with other conceptions of how these links are formed and maintained. For example, a discursive analysis of the social media posts could have shed light on the diversity of apprehensions of justice. Exploring and coding the social media content without emphasising one specific form of injustice, here spatial injustice, might have also brought about other interesting intersections using grounded theory.

Other fundamental considerations on 'power' and 'social structure' could also change the analytic direction of this case study's question and might lead to disparate theoretical discussions of data justice. One example is not to dichotomise power to "power of agency – "power to" – […and] structural power – "power over" (Heeks and Renken 2018, 97) and rather treat power in a Foucauldian framework arguing that "power is everywhere" and "comes from everywhere" (Foucault 1998, 63). What would such an understanding of power mean for an intersectional analysis of data justice? Another thread of thought could be followed in theorising data systems (Kitchin and Lauriault 2018) or surveillance (Haggerty and Ericson 2000) as an assemblage containing a "multiplicity of heterogeneous objects, whose unity comes solely from the fact that these items function together, that they "work" together as a functional entity" (Patton 1994, 158). Using assemblage theory could also affect how resistance to intersectional data injustice is formulated, which includes not only the state as the hegemonic power in establishing surveillance discourses but also "a number of other agents, such as users, civil society, regional and international flows, technological advancements, things and code" (Akbari and Gabdulhakov 2019).

Finally, as claims to data justice cannot be addressed without referring to political dispositions, research on data justice is also not exempt from such political repercussions. As a feminist activist and academic, writing about compulsory hijab without strong feelings is a cumbersome exercise. It is also a fine political line to walk since the issue of hijab is by far not a local issue, but an international tool to criticise the political foundations of the Islamic Republic of Iran. The controversy caused by the meeting between Masih Alinejad, the founder of White Wednesdays' Campaign and Secretary of State Mike Pompeo (Radio Farda 2019) is a bitter reminder that losing the political perspective in alleviating one case of injustice, can bring about other forms of injustice, if not more violence, war and insecurity.

---

[4] One almost comprehensive directory of such research could be found in a European Commission policy review titled, "Research on Migration: Facing Realities and Maximising Opportunities" (King and Lulle 2016)

References

Akbari, Azadeh, and Rashid Gabdulhakov. 2019. Platform surveillance and resistance in Iran and Russia: The case of Telegram. *Surveillance & Society* 17 (1/2): 223-231.

Azarpey, Majid. 2017. *Twitter*. https://twitter.com/majidazarpey/status/941914487635918849.

Ball, Kirstie, Nicola Green, Hille Koskela, and David J. Phillips. 2009. Editorial: Surveillance studies needs gender and sexuality. *Surveillance & Society* 6 (4): 352-355.

Bayard de Volo, Lorraine 2003. Service and surveillance: Infrapolitics at work among casino cocktail waitresses. *Social Politics* 10: 347-376.

Bayat, Asef. 2010. *Life as Politics: How Ordinary People Change the Middle East*. Stanford: Stanford University Press.

Beauchamp, Toby. 2009. Artful concealment and strategic visibility: Transgender bodies and U.S. state surveillance after 9/11. *Surveillance & Society* 6 (4): 356-366.

Ben Shahar, T. H. 2017. Educational justice and big data. *Theory and Research in Education* 15 (3): 306-320.

Bidarzani website. 2015. Women's Experience of Guidance Patrols. *Bidarzani*. http://bidarzani.com/20614.

Bidbarg Legal Consultancy. 2018. Improper Hijab Fine for Female Drivers. *Bidbarg Legal Consultancy*. https://bit.ly/2UFGDle.

Braun, Virginia, and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3 (2): 77-101.

Browne, Simone. 2015. *Dark Matters: On the Surveillance of Blackness*. Durham: Duke University Press.

Brunson, Rod K., and Jody Miller. 2006. Gender, race, and urban policing: The experience of African American youths. *Gender & Society* 20 (4): 531-552.

Campbell, Jacquelyn C. 2000. Promise and perils of surveillance in addressing violence against women. *Violence Against Women* 6 (7): 705-727.

Cho, Sumi, Kimberle Williams Crenshaw, and Leslie McCall. 2013. Toward a field of intersectionality studies: Theory, applications, and praxis. *Signs: Journal of Women in Culture and Society* 38 (4): 785-810.

Cinnamon, Jonathan. 2017. Social injustice in surveillance capitalism. *Surveillance & Society* 15 (5): 609-625.

Conrad, Kathryn. 2009. Surveillance, gender and the virtual body in the information age. *Surveillance & Society* 6 (4): 380-387.

Dalton, Craig M., and Jim Thatcher. 2015. Inflated granularity: Spatial 'Big Data' and geodemographics. *Big Data & Society* 2 (2): 1-15.

Dencik, Lina, Arne Hintz, and Jonathan Cable. 2016. Towards data justice? The ambiguity of anti-surveillance resistance in political activism. *Big Data & Society* 3 (2): 1-12.

Dubrofsky, Rachel E., and Shohana Amielle Magnet (eds.). 2015. *Feminist Surveillance Studies*. Durham: Duke University Press.

Egan, R. Danielle. 2004. Eyeing the scene: The uses and (re)uses of surveillance cameras in an exotic dance club. *Critical Sociology* 30: 299-319.

Erdbrink, Thomas. 2014. When Freedom Is the Right to Stay Under Wraps. *The New York Times*. https://www.nytimes.com/2014/05/08/world/middleeast/when-freedom-is-the-right-to-stay-under-wraps.html.

Foucault, Michel. 1998. *The History of Sexuality: The Will to Knowledge*. London: Penguin.

Fraser, Nancy. 2008. Abnormal justice. *Critical Inquiry* 34 (3): 393-422.

Gandy, Oscar H. 1993. *The Panoptic Sort: A Political Economy of Personal Information*. Boulder: Westview Press.

Gershad. n/a. About Us. *Gershad*. https://gershad.com/#about.

Gordon, M. 2000. Definitional issues in violence against women: Surveillance and research from a violence research perspective. *Violence Against Women* 6 (7): 747-783.

Gould, Rebecca. 2014. Hijab as commodity form: Veiling, unveiling, and misveiling in contemporary Iran. *Feminist Theory* 15 (3): 221-40.

Haggerty, Kevin D., and Richard V. Ericson. 2000. The surveillant assemblage. *British Journal of Sociology* 51 (4): 605-622.

Harvey, David. 2003. The right to the city. *International Journal of Urban and Regional Research* 27 (4): 939-941.

Heeks, Richard, and Jaco Renken. 2018. Data justice for development: What would it mean? *Information Development* 34 (1): 90-102.

Heeks, Richard, and Satyarupa Shekhar. 2019. Datafication, development and marginalised urban communities: An applied data justice framework. *Information, Communication & Society* 22 (7): 992-1011.

Jiwani, Yasmin. 2015. Violating in/visibilities: Honor killings and interlocking surveillance(s). In *Feminist Surveillance Studies*, edited by Rachel E. Dubrofsky and Shoshana Amielle Magnet, 79-92. Durham: Duke University Press.

Johnson, Jeffrey Alan. 2014. From open data to information justice. *Ethics and Information Technology* 16 (4): 263-274.

Justice for Iran. 2014. 35 Years of Hijab in Iran; Extensive Violation of Womens' Rights. *Justice for Iran.* https://justice4iran.org/wp-content/uploads/2014/03/Hijab-report-Final-FA.pdf.

Kar, Mehrangiz. 2017. How We Were Veiled?. *Shahrvand*. https://shahrvand.com/archives/85738.

King, Russell, and Aija Lulle. 2016. *Research on Migration: Facing Realities and Maximising Opportunities.* Luxembourg: Publications Office of the European Union.

Kitchin, Rob, and Tracey P. Lauriault. 2018. Toward critical data studies: charting and unpacking data assemblages and their work. In *Thinking Big Data in Geography: New Regimes, New Research*, edited by Jim Thatcher, Josef Eckert and Andrew Shears, 3-20. Lincoln: University of Nebraska Press.

Koskela, Hille. 2002. Video surveillance, gender, and the safety of public urban space: 'Peeping Tom' goes high tech? *Urban Geography* 23 (3): 257-278.

Lefebvre, Henri. 1968. *Le Droit à la Ville*. Paris: Anthropos.

---. 1991. *The Production of Space*. Oxford: Blackwell.

Lyon, David (ed.). 2003. *Surveillance as Social Sorting: Privacy, Risk, and Digital Discrimination*. London: Routledge.

M, Maryam. 2015. A Day Spent with Guidance Patrol. *Iran Wire*. https://iranwire.com/fa/features/2266.

Marcuse, Peter. 2009. Spatial justice: Derivative but causal of social injustice. *justice spatiale | spatial justice* 1: 1-6.

Mason, Corrine, and Shoshana Magnet. 2012. Surveillance studies and violence against women. *Surveillance & Society* 10 (2): 105-118.

Mizan News Agency. 2017. Legal Cases for Improperly Veiled. *Mizan News Agency*. https://bit.ly/2Kz6l68.

Mohyeddin, Samira. 2005. *Personal Website*. http://www.samiramohyeddin.com/2005/08/.

Monahan, Torin. 2009. Dreams of control at a distance: Gender, surveillance, and social control. *Cultural Studies ↔ Critical Methodologies* 9 (2): 286-305.

Moore, Lisa Jean, and Paisely Currah. 2015. Legally sexed: Birth certificates and transgender citizens. In *Feminist Surveillance Studies*, edited by Rachel E. Dubrofsky and Shohana Amielle Magnet., 58-78. Durham: Duke University Press.

Newman, Nathan. 2015. *Data Justice: Taking on Big Data as an Economic Justice Issue.* Data Justice Organization.

Pardis, Sara. 2011. Report on Tehran's Guidance Patrols. *Kalame*. https://www.kaleme.com/1390/08/12/klm-79151/.

Patton, Paul. 1994. Metamorpho-logic: Bodies and powers in a thousand plateaus. *Journal of the British Society for Phenomenology* 25 (2): 157-169.

Puar, Jasbir K. 2007. *Terrorist Assemblages: Homonationalism in Queer Times*. Durham: Duke University Press.

Radio Farda. 2019. Pompeo Tells Iranian Rights Activist Of U.S. Support. *Radio Farda.* https://en.radiofarda.com/a/pompeo-meets-with-alinejad-and-voices-us-support/29752266.html.

Reporters Without Borders. 2016. The 15 Enemies of the Internet and Other Countries to Watch. *Reporters Without Borders*. https://rsf.org/en/news/15-enemies-internet-and-other-countries-watch.

Sa'di, Ahmad H. 2012. Colonialism and surveillance. In *Routledge Handbook of Surveillance Studies*, edited by Kirstie Ball, Kevin D. Haggerty and David Lyon, 151-158. London: Routledge.

Sadeghi, Fatemeh. 2010. Bypassing Islamism and feminism: Women's resistance and rebellion in post-revolutionary Iran. *Revue Des Mondes Musulmans Et De La Mediterranee* 128: 209-228.

Sedghi, Hamideh. 2007. *Women and Politics in Iran: Veiling, Unveiling, and Reveiling*. Cambridge: Cambridge University Press.

Shojaie, Mitra. 2014. How Hijab Became Compulsary After The Revolution?. *Deutsche Welle Persian*. https://p.dw.com/p/1B2j8.

Silva, Leiser. 2007. Epistemological and theoretical challenges for studying power and politics in information systems. *Information Systems Journal* 17: 165-183.

Smith, Andrea. 2015. Not-Seeing: State surveillance, settler colonialism, and gender violence. In *Feminist Surveillance Studies*, edited by Rachel E. Dubrofsky and Shohana Amielle Magnet., 21-38. Durham: Duke University Press.

Soja, Edward W. 2009. The city and spatial justice. *justice spatiale | spatial justice* 1: 1-5.

---. 2010. *Seeking Spatial Justice*. Minneapolis: University of Minnesota Press.

Spiegel Online. 2016. Neue App: So warnt Gershad die Iraner. *Der Spiegel Online*. https://www.spiegel.de/fotostrecke/gershad-app-fotostrecke-134500-4.html.

Tasnim News. 2017. The Head of Traffic Police Denied the Rumours on Improper Hijab Fines. *Tasnim News*. https://bit.ly/2v20Nqb.

Taylor, Linnet. 2017. What is data justice? The case for connecting digital rights and freedoms globally. *Big Data & Society* July-December: 1-14.

Van der Meulen, Emily, and Robert Heynen (eds.). 2016. *Expanding the Gaze: Gender and the Politics of Surveillance*. Toronto: University of Toronto Press.

Veale, Michael, and Reuben Binns. 2017. Fairer machine learning in the real world: Mitigating discrimination without collecting sensitive data. *Big Data & Society* July-December (1-17).

Voice of America Persian Service. 2015. Special Police Forces Have Access to CCTV Cameras. *Voice of America Persian Service*. http://m.ir.voanews.com/a/iran-police-camera/3115271.html.

Welles, Brooke Foucault. 2014. On minorities and outliers: The case for making Big Data small. *Big Data & Society* April-June: 1-2.

Wesely, Jennifer, and Emily Gaardner. 2004. The gendered 'nature' of the urban outdoors: Women negotiating fear of violence. *Gender & Society* 18: 645-663.

Acknowledgements

About the Author

Azadeh Akbari is a PhD candidate at the Department of Human Geography, Heidelberg University. Her research uses Iran as a case study to investigate the links between surveillance and spatial justice in physical and virtual spaces in undemocratic contexts. Azadeh holds an MSc in Gender Research from the London School of Economics and has been a journalist and activist for many years. Her PhD project is funded by the Hans Böckler Foundation of the German Trade Unions.