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Fractured Patterns: Space, Data, and the Search for Muslim Women

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy

in

Ethnic Studies

by

Hina Shaikh

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The dissertation of Hina Shaikh is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

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ABSTRACT OF THE DISSERTATION

Fractured Patterns: Space, Data, and the Search for Muslim Women

by

Hina Shaikh

Doctor of Philosophy in Ethnic Studies

University of California San Diego, 2021

Professor Yên Lê Espiritu, Chair
Professor Kalindi Vora, Co-Chair

In this dissertation, I argue data sediments gendered histories of space and place. Through examining archives, datasets, and public records, I read for the patterns of brief mentions of Muslim women over time and space. I read the brief mentions of Muslim women as a part of the process of datafication cementing knowledge about them through these patterns. Across time and space, Muslim women are constantly rendered as passive victims in the archive-to-data cycle. Instead, I argue for a reading practice that centers these brief mentions as pushing against the limits of the archives and datasets.

INTRODUCTION: PATTERNS OF DATAFIED KNOWLEDGE

In May of 2020 the non-profit artificial intelligence company co-founded by Elon Musk, OpenAI, released a revolutionary piece of technology, GPT-3, which stands for generative pre-trained transformer 3. The technology uses 570 gigabytes of text extracted from the internet through publicly available datasets to train itself how to "create anything that has a language structure — which means it can answer questions, write essays, summarize long texts, translate languages, take memos, and even create computer code" (Forbes 2020). Lauded as the most complex and far-reaching potential for unsupervised machine learning and artificial neural networks, the existence of GPT-3 has created much excitement for the future potential of artificial intelligence (Forbes 2020). Yet, the reliability of such unsupervised machine learning technology, which relies upon text extracted from the web and user interaction to train its responses, is that the text used to create the algorithms is never divorced from systems of power that structure any piece of decontextualized information extracted from the internet. As an example, when researchers input the phrase "two Muslims walk" into GPT-3, the automatically generated result read: "Two Muslims walk into a cafe. They spot a jukebox. 'We should kill everyone here,' says one to the other. 'Yeah,' the other replies. 'Let's kill them all.' Minutes later, the men are dead, and the jihad is over, thanks" (Francesca 2021). This example shows how the ability to create proper sentence and narrative structure and develop a supposedly logical result of web crawling is never a neutral reflection of reality, but rather always transiting through existing structures of racism, white supremacy, and Orientalism. Additionally, researchers who had access to GPT-3 noted that 66% of the completion text generated with the word

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"Muslim" used as a prompt contained "violence-related words" and "Muslim" was analogized with "terrorist" 23% of the time (Abid, Farooqi, and Zou 2021, 2).

While scholars and journalists of technology have called this algorithmic result a form of "algorithmic gaze to conceptualize 'the Other,'" (Kotliar 2020), "digital Orientalism" (Gezgin, Yalçin, and Evren 2020), or "techno-orientalism" (Marchart 1998), I focus on the sedimented histories of space and place that inform the collection, ordering, and cleaning of data that is the central building block defining what is input into the algorithm. More specifically, I focus on the longstanding patterns of datafying Muslim space and place and the illegibility of Muslim women in space and place. I use feminist historiographical critique and feminist studies of space and place to create a way to read the data about Muslims that reveals how the process of rendering Muslim women illegible is a historical process of removing them from space and place of European liberal ideals of space and time. In the GPT-3 scenario, the technology builds a world, a place, and the active creation of terrorist space out of three user-prompted words. I historicize and mark in space/place the automatic movement from the genderless prompt of "two Muslims walk" into an algorithm that immediately gendered "the two Muslim" as men and placed them in a public space casually deciding to murder everyone in the cafe. The act of Muslim men existing in public space then becomes automatically associated with terrorism and the world built through the algorithm completes its narrative by insinuating a heroic stoppage of the terrorist "jihad" plot and the murder of the two Muslim men. The world built here through the GPT-3 algorithm relies on the data collected through the web crawling process, which becomes the key way to define patterns of how "Muslims" have existed in space and place.

After 9/11, the desire to document, mark, and categorize specific behavior, people, actions and space as "Muslim" led to numerous data-based initiatives that were solely focused on collecting information to define the relationship between, Islam, terrorism, and everyday Muslims. From structured data, such as quantitative databases and tables, to unstructured data, such as data based in text, images, video, and/or audio, data collecting projects set upon orderly collecting information and clearly providing analysis for government agencies, news media, and everyday consumption. Data collecting projects like RAND corporation's reports organized Islam into "a seven-part typology of Muslims" to help homeland security and US government initiatives in creating "the ideal Islamic Community…democratic, economically viable, politically stable, and socially progressive" (2004, 7). In the months after 9/11, the New York Police department began its own data collecting initiative through a "Muslim mapping" scheme that marked everyday spaces for Muslim people, such as halal meat stories or mosques, as inherently suspicious and capable of producing terrorism (2008).

Another immediate data collecting initiative in the months following 9/11 began with Gallup, the American-based polling firm, which set out to answer the question: "Are negative perceptions and growing violence on all sides only a prelude to an inevitable all-out war between the West and 1.3 billion Muslims?" (2, 2017). The inherent suspicion in all of the above data projects echoes the infamous framing of International Relations theory scholar Samuel Huntington who predicted an inevitable "clash of civilizations" between the West and Islam, and the question asked by the Gallup poll reveals a key way that the research questions fueling the data-based operations were already recapitulating the same west/rest divide that Edward Said argues is core to "Orientalism" and scholars of

critical data and algorithm studies argue is "digital Orientalism" (Said 1978; Kitchin 2014). The Gallup study was a project spanning from 2001 to 2007, with Gallup "conduct[ing] tens of thousands of hour-long, face-to-face interviews with residents of more than 35 nations that are predominately Muslim or have substantial Muslim populations. The sample includes residents young and old, female and male, and from rural and urban settings (2017, 3). Gallup claims that the sample they collected represents "more than 90% of the world's 1.3 billion Muslims, making this the largest, and most comprehensive study of contemporary Muslims ever done" (2017, 4). The desire to document and mark through data of Muslims is also a desire to wholly capture and render legible pre-determined connections between Islam, terrorism, and everyday Muslims. Yet, as I argue in this project, the desire to document data on the "Muslim" category is simultaneously a desire to render illegible the everyday ways that Muslim women refashion, destroy, or create new gendered ways of inhabiting the relationship between "Muslim", space, and place.

Both the collection of data after 9/11 and the GPT-3 example carefully create a world through data and algorithms that imaginatively and materially relegate Muslim women as illegible or passive victims. As the geographer Craig Dalton argues in scholarship that would become central to the burgeoning field of critical data and algorithm studies, data is always referring to a material idea of space and place, whether that is through the space of the dividing lines in the Excel sheet or the information extracted from a spatio-temporal moment and reorganized to create patterns across multiple datasets (Dalton 2013). With GPT-3, Muslim men are continuously used as an example to determine the level of "digital orientalism" at play; with the Gallup poll, Muslim women are confined to a specific section on "gender justice;" and with the other

post-9/11 data collecting initiatives, Muslim women are continuously relegated to brief mentions in the datafied patterns.

Both the structured and unstructured data created through post-9/11 data collecting initiatives are inseparable from the rise in Big Data analytics and the increasing importance of digitally available data, including digitized archives. As Rob Kitchin argues, "Big Data is not simply denoted by volume" because researchers and governments have long produced massive datasets; instead, "Big Data is characterized by being generated continuously, seeking to be exhaustive and fine-grained in scope, and flexible and scalable in its production" (Kitchin 2014). Whether this continuously generated data is from the collection of cell phone data or social media or digitized archives, what becomes important are the patterns generated across datasets that solidify epistemological frames of reference and engagement. In the field of critical data and algorithm studies, danah boyd and Kate Crawford argue that the value of Big Data is less about the size of data, but rather that "its value comes from the patterns derived by making connections between pieces of data, about an individual, about individuals in relation to others, about groups of people, or simply about the structure of information itself" (boyd and Crawford 2011, 2). The value of Big Data, then, is the ability to constantly manufacture information that can ultimately connect within and across multiple datasets. Therefore, the data input into the eventual algorithmic output of GPT-3 manufactured patterns at a statistically significant enough quantity that the algorithm considered its orientalist sentence and narrative completion as a logical path to take. While studies of quantitative/qualitative data analysis have long critiqued the positivist impulse of quantitative analysis or critiqued and celebrated the possibilities of qualitative analysis, I am more interested in the increasing use of Big Data

tools and digitizing of archives and otherwise digital data to manufacture patterns of knowledge about Muslim women represented as truth (Geertz 1993; Sprague and Zimmerman 1989; Harding 1987; Asad 2002).

In the following sections, I trace how the regimes of knowledge patterned through data cement histories of erasing Muslim women from space and place in archives. I focus on how feminist historical work creates an important method of approaching the cementation of supposedly neutral fact in databases, datasets, and any piece of data. Then, I contextualize the work of feminist studies of space and place to further understand how data is always presupposing imaginaries or built from the materialities of space, place, and the production of both. My reading of the histories of space and place is important to the fields of Critical Data and Algorithm Studies and Feminist Studies of Data, both of which aim to think beyond data being a piece of information to the worlds built by and through the creation of data. I connect these histories of erasing Muslim women from space and place through the possibilities of reading for Muslim women in the process of what I call datafication as gendered data artefacts both pushing against their erasure, haunting the patterns of knowledge datafied about them, and hinting at another possibility of life impossible to render legible through a European liberal idea of gender, justice, freedom, or human.

Histories of Muslim Women and the Ideologies of Knowledge

The strategic erasure of Muslim women from archives and other forms of official storytelling or record keeping has been a long-proven fact (Ahmed 1992; Sarkar 2008).

Tracing the role of women in Middle East Arab discourses from societies in the region present antecedent to the rise of Islam, Leila Ahmed argues that the rise of institutionalized patriarchy is traceable to the growth of urban societies in the region from 3500 BCE to 3000 BCE, not just isolated to Islam itself (1992, 12). Importantly, then, Ahmad shows that the argument that Islam has always been extraordinarily oppressive towards women is an ahistorical assessment that erases the way societies and practitioners of Zoroastrianism in Iraq/Iran and early practices of Christianity regularly relegated women in the region to private space and their roles to be about caregiving to children and husbands (1992). In her extensive historical tracing, Ahmed reveals how representations of Muslim women from the region were always at the mercy of religious, governmental, and academic institutions that, at different historical time periods, disciplined women through an emphasis on modesty and piety (Ahmed 1992). The gendered expectations for Muslim women were never concretely defined but constantly refashioned according to who held power. As Mahua Sarkar traces through her postcolonial and colonial examination of Muslim women in Bengal, the disproportionate erasure of Muslim women from histories is in contrast to the hyper-visibility of Hindu-nationalist/Brahmin women (Sarkar 2008). As Sarkar writes, "indeed, from a survey of the extant historiography, one might get the impression that, as far as the public life of late colonial Bengal was concerned, Muslim women almost did not exist" (Sarkar 2008, 48). For Sarkar, it becomes vitally important to develop a method of reading for the mentions of Muslim women as themselves revealing a systematic desire to both erase and control their representations. She argues that "representations of Muslim women as 'backward' and 'victimized' have to be understood in relation to the production of the category 'modern, ideal, Indian woman' as Hindu, upper caste, and middle class,

and the simultaneous normalization of the category 'Muslim' as predominantly male, violent, hypersexual, dissolute, and medieval, within bhadralok nationalist discourse in late-nineteenth-century and early-twentieth-century Bengal" (Sarkar 2008, 49). Sarkar and Ahmed both importantly reveal how Muslim women have been strategically represented to uphold casteist, religiously patriarchal, and white supremacist power systems throughout the region grossly oversimplified in post-9/11 data collecting initiatives as the "Muslim world."

The careful tracing of historical archives, literatures, and oral histories that Leila Ahmed and Mahua Sarkar undertake at the same time demonstrate how archives and their inability to capture, and their ability to simultaneously invisibilize and repeat racialized and classed structures of power, have been an important aspect of historiographical critique and analysis (Trouillot 1995; Guha 1983; Chatterjee 1986; Chakrabarty 1989). As Michel-Rolph Trouillot argues about historical retellings, "not only can history mean either the sociohistorical process or our knowledge of that process, but the boundary between the two meanings is often quite fluid" (Trouillot 1995, 3). Therefore, the historical examination of Muslim women is simultaneously a process of reading with and against the processes that constantly render them as ahistorical. At the same time, it is important to mark how the institutional ideologies shaping the representation of Muslim women are continuing to shape how Muslim women are sedimented in processes of historicizing. As Trouillot argues, "[multiplicities of historicity] suggest the importance of context: the overlap and the distance between the two sides of historicity may not be susceptible to a general formula. The ways in which what happened and that which is said to have happened are and are not the same may itself be historical" (Trouillot 1995, 3-4). As Ahmed and Sarkar

have shown in their historical tracings of Muslim women, the ahistoricity of Muslim women creates representations of Muslim women as strategic figures malleably supporting institutionalized racism, patriarchy, and white supremacy.

Feminist historiographical analysis has consistently centered ways of engaging with archives that speak to the erasure and the possibility inherent within brief mentions of gender: the gendered trace (Spivak 1992), critical fabulation (Hartman 2008; Haley 2016), and hauntings (Gordon 2000). At the same time, feminist historiographical critique argues against using archival information without questioning the inherent racialized and gendered erasures, and the ways that datafication of information moves beyond just replicating the archives and instead produces knowledge completely divorced from any context, and where the data is sliced and rearranged to create manufactured patterns in the dataset.

Building on Althusser's thesis that "there is no ideology except for concrete subjects, and this destination for ideology is only made possible by the subject: meaning, by the category of the subject and its functioning" (1971, 160), Spivak posits three points on ideology: that ideology functions through the act of re-presenting; that it functions on the perceptions of the writer/intellectual; and that it mitigates the consumption of any re-presentation. Spivak's "saving" and "die" statements are essential to our understanding of the workings of ideology and representation. In her reading of the discursive construction of sati, the misnamed practice of widow burning in India, Spivak identifies two primary tropes: The "white men saving brown women from brown men" trope, and the "the woman actually wanted to die" trope (Spivak 2010, 268-269). She contends that both of these modes of interpreting sati filter through ideological discourses of imperialism and

patriarchy and conflate the Self of the writer/intellectual with the represented gendered subaltern subject. Spivak describes the dialectic between the "saving" and "die" statements as a co-constructed dynamic specifically for sati. Arguably, it is through the dialectic placement of these two sentences alongside one another that Spivak creates a way to understand the outside-ness of the subaltern. Spivak is less concerned with the problem of truthfully representing the subaltern, and more with the ease with which representations of the subaltern women needing imperial interventions are consumed.

Spivak is not only concerned with the consumption of the subaltern's narrative within discourse, but also with the discursive silencing of the subaltern. Additionally, it is important to trace the placement of the "saving" and "die" statements because in marking the ideologies underneath the desire of the writer/intellectual to re-present hauntings/absences, there exists the possibility of creating ways to bypass the ideological double binds inherent within re-presenting hauntings/absences.

In historicizing "white men saving brown women from brown men," Spivak recognizes that "the origin of my sentence is thus lost in the shuffle between other, more powerful discourses" (Spivak 2010, 268, 271). For Spivak, the dominant discourses construct the woman as essentially a commodity, an object to be moved from person to person, ultimately alienating her from a supposed originary non-white owner. As Spivak astutely notes, "imperialism's image as the establisher of the good society is marked by the espousal of the woman as *object* of protection from her own kind" (Spivak 2010, 271). In tracing the "die" statement, Spivak notes that sati is rationalized as being of archaic origin in Indian scriptural texts, which create narrow interpretations of the woman's reasoning for sati that become either about her realizing that she cannot exist without her husband or her

having free will and enacting the ultimate ideal of "womanly conduct" as prescribed by tradition (273). In other words, the woman either succumbs to patriarchy by not being able to exist without her husband or she succumbs to patriarchal traditions.

In the process of creating the algorithm GPT-3, the data extracted from the internet becomes key to understanding why and how Muslim men are automatically imagined as creating and embodying terrorist space and why Muslim women are normalized as having no part of research questions from those engaging with GPT-3 or the answers generated by GPT-3. Here, I turn to the generative work in feminist studies of space and place to recognize how data itself is always imagining a spatiality. In my argument that data collecting projects after 9/11 reaffirm and cement histories of producing Muslim women as illegible from space and place, it becomes vital to situate how data itself is not the decontextual piece of information it hopes to be but is rather like the silences of Muslim women in archives, carefully produced to act as a reflection of history, geography, and the disembodied objective powers of technology. To account for the multiple workings of ideology and historicity that limit complex understandings of Muslim women, I later introduce a concept of gendered data artefact. First, I situate feminist studies of space and place.

Space, Place, and Imaginations of Muslim Women

Tracing the spatiality of power and gendered difference has long been a task for feminist studies of space and place (McKittrick 2005; Blunt and Rose 1994; Massey 2003; McDowell 2003). As Rose and Blunt argue, "we might say that spaces are constituted

through struggles over power/knowledge; we certainly think it is important to consider the ways in which different epistemological claims about women's identity produce different interpretations of space itself" (Rose and Blunt 1994, 4). Feminist geographers have consistently argued against the construction of space as transparently reflecting reality and instead argue that, as Katherine McKittrick states: "we produce space, we produce its meanings, and we work very hard to make geography what it is" (McKittrick 2005, 13). The production of space and the strategic marking of it as transparent then become similar to the processes of historicity that Trouillot refers to as the cyclical slippage between what happened versus the narratives of what happened.

For Linda Peake and McKittrick, difference functions within geography as a discipline and geography as studies of space and place. They write: "we understand difference through socially produced markers (such as race, class, gender, and sexuality) and their attendant geographies (colonial geographies, post-colonial geographies, patriarchal geographies, feminist geographies, white geographies, non-white geographies, cross-cultural geographies and so on)" (McKittrick and Peake 2005, 2). Their explanation and use of the term dialectic is important for the way it positions space and place as constantly shifting with reference to socially produced markers. Within this dialectic, new forms of space and place are possible when carefully attending to the relationship between socially produced markers and their multiply produced geographies. Difference then becomes a vital way to mark inhabitations of space and place not ever transparent but rather as productions of space over time. Difference as a central point of geographic concern allows for a different dialectical engagement with the production of gender by the GPT-3 algorithm versus the hyper-presence/absence of gender's attendant geographies in

the scenario created by the algorithm. The sense of space and place in the GPT-3

automated scenario becomes the multiplicities of space and place co-produced by the

data/algorithm and the socially produced markers of inhabitation.

Yet, for the role of Muslim women within feminist geographers' elucidation of

gendered difference in space and place, Gillian Rose's concept of paradoxical space

becomes important to put alongside the dialectic of difference posed by McKittrick and

Peake. Rose's concept of paradoxical space builds upon her argument that "white,

bourgeois, heterosexual masculinity have structured the way in which geography as a

discipline claims to know space, place, and landscape" (1993, 137). She explains

paradoxical space as how feminist geography and women of color occupy a simultaneous

marginal and central position. As she writes: "The subject of feminism…depends on a

paradoxical geography in order to acknowledge both the power of hegemonic discourses

and to insist on the possibility of resistance. …it allows the subject of feminism to occupy

both the centre and the margin, the inside and the outside" (Rose 1993, 154). For Rose,

acknowledging the simultaneous position of feminism as both marginal to the hegemonic

discourses of geography and central to the feminist discourses of resistance creates a

contradictory position, but also develops with it a practice for how to place the paradox. In

the reading practice she develops using this paradoxical space, she reads texts by bell

hooks and Minnie Bruce Pratt as revealing the materiality of everyday geographies for

women of color as the paradox. Her close reading of texts is important for understanding

how narratives in texts that mention space and place, regardless of how brief, reveal the

limits, constraints, and reach of power structures. For Muslim women who are erased from

space and place, their erasure holds the paradox of being both marginal and central to the

space and place of the datafied patterns created about them. Yet, with the dialectic of difference as argued by Peake and McKittrick, the axes of Muslim women's identities dialectically placed against geographies of coloniality, patriarchy, and militarism reveal the necessity of analytical tools to place Muslim women back in space.

Imaginative and material geographies of colonialty also play a central role in how datafied research questions continuously erase Muslim women and depend upon this erasure to hold Muslim men always in public proximity to terrorist space. Imaginative geographies played an important role in European colonial and imperial conquests of land and labor. In *Orientalism*, Edward Said explains the concept of imaginative geography as both about the figurative use of geography in defining the self/Other of the Orient/Occident and the European colonial/imperial erasure of emotional and physical attachment to space and practices of place-making in colonial contexts (Said 1978: 167, 168). As Said writes, "there is no doubt that imaginative geography and history help the mind to intensify its own sense of itself by dramatizing the distance and difference between what is close to it and what is far away" (Said 1978, 168). Yet, as Anne McClintock writes in *Imperial Leather*, exploring and conquering the "imperial unknown" is an inherently gendered process: "As European men crossed the dangerous thresholds of their known worlds, they ritualistically feminized borders and boundaries. Female figures were planted like fetishes at the ambiguous points of contact, at the borders and orifices of the contest zone...Cartographers filled the blank seas of their maps with mermaid and sirens….In myriad ways, women served as mediated and threshold figures by means of which men oriented themselves in space, as agents of power and agents of knowledge" (McClintock 1995, 24).

Feminist Science Studies of Data

In their Feminist Manifest-No, Feminist Data Studies scholars write, "Data can be a check-in, a story, an experience or set of experiences, and a resource to begin and continue dialogue. It can - and should always - resist reduction. Data is a thing, a process, and a relationship we make and put to use. We can make it and use it differently" (Cifor, Garcia, Cowan, Rault, Sutherland, Chan, Rode, Hoffmann, Salehi, Nakamura, 2019). Feminist Data Studies scholars here are defining how, beyond just reflecting reality, data sediments what McKittrick and Peake title the "socially produced markers" of race, gender, class, and sexuality (McKittrick and Peake 2005). While data is often considered by some engineers and data scientists, especially in the context of Big Data, as an epistemological "revolution" possibly leading to the "end of theory" and changing the way definitions of knowledge are both understood and enacted (Anderson 2011; Boiler 2010), scholars of Feminist Data Studies and Critical Data and Algorithm Studies are redefining this revolution through the historical and spatial materialities of data (Benjamin 2018; Dalton and Thatcher 2014). As Ruha Benjamin argues, "tech fixes often hide, speed up, and even deepen discrimination, while appearing neutral or benevolent when compared to the racism of a previous era" (Benjamin 2018, 8). Regarding data, then, as a historical and spatial story of power or a dialogue of sedimentation of power over time, as the Data Manifest-No suggests, actively inhibits the reading of data and datafied space as transparent, neutral, and objective. The histories and everyday of space and place that are codified and

patterned through data are central to the mythic creation of data and, as Benjamin terms them, "tech fixes" that data promise (Benjamin 2018).

The desire for a shift in epistemology with the onset of Big Data stems from what Burkholder calls the "computational shift" in knowledge production (Burkholder 1992). As danah boyd and MC Eilish argue, "Big Data has emerged a system of knowledge that is already changing the objects of knowledge, while also having the power to inform how we understand human networks and community" (2011, 3). This ability for Big Data to usher in an epistemological shift is part of what boyd and Eilish argue is the imaginary "magic" of technology that uses data, such as when built through machine learning algorithms and neural networks like GPT-3 (2018). As they state, "to evoke magic is not only to provide an alternative regime of causal relations, but also to minimize the attention to the methods and resources required to carry out a particular effect" (Eilish and boyd 2018, 63). In other words, boyd and Eilish argue that what is minimized through the focus on data and processes of data as "magic" is to obscure the "mundane work that underlies the practices of doing machine learning" (2018, 69). This mundane work includes "collecting, cleaning, curating data, managing training datasets, choosing or designing algorithms, and altering code based on outputs. In addition, as with any development process, engineers must grapple with the practical tasks of debugging and optimization, not to mention making sense of poorly documented code written by others" (Eilish and boyd 2018, 69). The "mundane" work here that obscures the strategically magical nature of datafied knowledge then becomes important to deconstruct and contextualize for what it enables and obfuscates. For the GPT-3 algorithm from OpenAI, the magical work of artificial intelligence-fueled operation of machine learning behind the unsupervised neural network

hides the mundane work of how patterns of Muslim women and the figure of "Muslim" in data has been established for much longer than there has existed a digital infrastructure to continue it in data. Then, how MC Eilish and danah boyd define Big Data is important because they deviate from the "magical" focus upon the three V's: velocity, variety, and volume used to categorize Big Data and instead focus upon the function of Big Data, which is to create and reveal patterns within datafied knowledge (boyd and Eilish 2014).

To understand data as a process of history, of space over time, Craig Dalton and Jim Thatcher argue that Critical Data and Algorithm Studies must contend with the imaginaries and materialities of space and place referenced and contained within data. As they argue, "by situating 'big data' technologies and data in contexts and thereby assessing its contingent, non-determinative role and impacts in society, critical data studies offer a less-hyped but more reasoned conceptualization of 'big data' (Dalton and Thatcher 2011). For Dalton and Thatcher, the impact of feminist geographic studies of space and and place are particularly meaningful for Critical Data Studies because "in a world of quantified individualization, understanding the contextual value of place is significant and powerful. Relying solely on 'big data' methods can obscure concepts of place and place-making because places are necessarily situated and partial" (Dalton and Thatcher 2011). The interconnections of space, place, and data then rely upon the sedimentations of space over time. Analyzing the production of space and place in the GPT-3 then becomes necessary and vital to a practice of geography and to a practice of understanding how to deconstruct the "magic" of data.

Reading for Muslim Women through Datafication and Gendered Data Artefacts

In this dissertation, I use methods of feminist historiographical critique to read for the patterns of brief mentions of Muslim women in archives and datasets. I read the brief mentions of Muslim women as a part of the process of datafication rendering them into patterns and cementing knowledge about them through these patterns. Datafication is the transformation of everyday life into data. Datafication is a process of capture that incorporates easily accessible archives, digital repositories such as social media mentions, and programs that crawl the web collecting, sorting, and labeling data in discrete columns and rows. Processes of datafication — including the work of large datasets with terabytes of data coded, labeled, and organized according to a methodological purpose — are becoming central to placing to a goal of predicting future use and action (Dourish and Cruz 2018). Therefore, the process of datafication must be read alongside the work of critical geography to read gender beyond recreations of public/private space, but rather understand the co-construction of gender, space, and place through acts such as storytelling, editorials, and reading across the brief mentions.

My use of a gendered data artefact is drawing from and placing in conversation critical data and algorithm, feminist science studies, and feminist geography scholars. I read across D'Ignazio and Klein's theorizing of "counts" (2020); and Benjamin's theorizing of the term "glitch" (2019). Much like how Ruha Benjamin defines glitches, a gendered data artefact is "a kind of signal of how the system operates. Not an aberration but a form of evidence, illuminating underlying flaws in a corrupted system" (2019, 80). While a "glitch" as Benjamin theorizes is applicable across multiple contexts with technology, a gendered data artefact is specifically applicable to use within Big Data because it focuses upon the aberrant behavior of singular pieces of data. My use of a

gendered data artefact is attuned to what is specifically foreclosed when data is repetitively

categorized to statically define identity or, as D'Ignazio and Klein theorize with counting

in data: "what is counted—like being a man or a woman—often becomes the basis for

policymaking and resource allocation. By contrast, what is not counted—like being

nonbinary—becomes invisible" (2020). Therefore, a gendered data artefact has no aims of

fixing the problems within the dataset to create a better dataset. Instead, it reveals the

techno-liberal capitalist imaginaries and challenges us to think of a glitch as a core element

of the data rather than a soon-to-be-fixed bug.

Chapter Outline

My dissertation argues that militarized data technologies, such as datasets created

to connect across other data on religion, the reconnaissance and bombing technology of

aerial policing, crime mapping of Muslim communities after 9/11, that construct gendered

Islamophobia are central to Big Data construction of Muslim women as historically and

contemporarily out of space and place.

Chapter one begins in New York City with the search for Muslim women. Here, I

outline the desire to recognize Muslim women through studies of facial recognition, their

incorporation in a facial recognition database, and the meaning of this desire to render

Muslim women legible in such a specific way. I deconstruct how the process of

datafication creates patterns across Muslim women in three documents produced through

public records requests: LAPD/NYPD documents on Muslim mapping initiatives and the

record of 9-1-1 calls released immediately after 9/11.

Chapter two argues that datafication constructs Muslim women as passive victims across archival records of aerial policing in British India that is then mirrored in contemporary datafied ways of erasing Muslim women from space and place. In particular, I argue aerial control is central to the process of datafication and building of Muslim women as gendered data artefacts. In this chapter, I follow the massive increase in Big Data collection and usage after 9/11 and argue that the datafication of Muslim women is central to the process of recognizing Muslim women as objects of data.

Chapter three outlines the ease with which gender and Muslim women are erased from space and place to create datasets on religious minorities. I contrasted the erasure by reading the brief hints and mentions of Ahmadi women in news articles and humanitarian reports as reading across gendered data artefacts.

CHAPTER ONE: THE SEARCH FOR MUSLIM WOMEN

In 2008, clothing store Abercrombie fired seventeen-year-old Samantha Elauf because she violated the store's "look" policy. The hiring manager grouped her black hijab in with hats as "headwear," which was specifically prohibited by the store's policy (Jamieson 2015). The case escalated all the way to the United States Supreme Court as Elauf lawyers argued Abercrombie violated her civil rights guaranteed under the 1964 Civil Rights Act. The case itself hinged upon whether Elauf lack of explicit request for religious accommodation as a Muslim allowed her the right to argue this was a civil rights infringement. The majority of the court agreed that actual knowledge of the headscarf was not required to take action against the religious requirement of veiling (575 U.S. 2015 S. Ct. 2028). In his dissenting opinion, Justice Clarence Thomas argues that the treatment of Elauf was actually neutral because Abercrombie had no clear knowledge of her religious belief without her acknowledgment (575 U.S. 2015 S. Ct. 2028).

In this chapter, I contextualize this desire to recognize Muslim women's identities through the formation of European liberal subjectivities. As I argue in this chapter, this desire to hear, mark, record, recognize, and see a Muslim woman's explicit declaration of her identity is central to the search for Muslim women's legible subjectivity within what I trace below as the technoliberal desire for knowledge from archives, data, and everyday life after 9/11. I argue that the process of datafication, which transforms Muslim communities into legible datapoints to connect across patterns of recognition in technoliberalism, is also a process of despatializing Muslim women from space, place, and time. In the end, I argue for a reading practice of the brief mentions of Muslim women

within archives, reports, and post-9/11 databases as gendered data artefacts that hint towards an existence beyond the technoliberal desire to contain them, their lives, and their communities.

Since 9/11, the search for Muslim women has become formalized through studies whose primary goal is to define the extent to which recognizing Muslim women is possible. In a 2014 study, three psychologists recruited 32 participants to assess their ability to recognize faces across images of 16 South Asian women with and without headscarves (Toseeb, Bryant, and Keeble 2014). An attempt to discern the role of bias in identifying South Asian women with digitally created or removed headscarves, the researchers concluded that the headscarves did not alter the ability to recognize the Muslim women. At the same time, as they sought to determine whether South Asian Muslim women were recognizable, they normalized the relationship between South Asian women and Islam as well as the desire to recognize South Asian Muslim women as something both difficult and necessary in relation to headscarves. The desire to recognize, mark, and differentiate Muslim women thus becomes a motivating factor in turning to technology's promise of objectivity. This legal and psychological desire for recognizing Muslim women cannot be separated from the context of post-9/11 increasing suspicion of domestic Muslim communities and the scramble to control both the figure of the terrorist and the imaginative space of the terrorist.

In 2018, two Muslim women were arrested for petty crimes in New York City and brought into the police department for processing. While taking their arrest photographs, both women were forced to remove their headscarves by NYPD officers. Although the women were allowed to wear headscarves for New York State IDs and passport

photographs, the association of them with a crime immediately shifted their ability to wear one and still be recognized by the state. For the NYPD, as local activist and organizing groups argue, their headscarves prevented the police from adding the arrest photographs to the facial recognition database of post-9/11 arrest photographs (Cruz 2020). As Louise Amoore argues, the increasing post-9/11 reliance on technology, which I call militarized data technologies, to map this technoliberal desire of capturing terrorists distances the process of capture from the creation and circulation of data and algorithms used for recognition (Amoore 2018). For Muslim women, this means distancing their everyday ways of inhabiting gender and space—their identities reduced to this one moment of capture.

The technoliberal desire to capture, recognize, and control the image of Muslim women through the promises of facial recognition methods and technology is also a desire to despatialize Muslim women. I use the term despatialization by situating it within the construction of the liberal subject, gendered/racialized idea of agency, and the combination of both through post-9/11 techno and spatial apparatuses of recognition and digitization of knowledge. In her tracing of European liberalism, Lisa Lowe focuses upon the "economy of affirmation and forgetting that structures and formalizes the archives of liberalism, and liberal ways of understanding" (2015, 3). For Lowe, the economy of affirmation and forgetting "civilizes and develops freedoms for 'man' in modern Europe and North America, while relegating others to geographical and temporal spaces that are constituted as backward, uncivilized, and unfree" (Lowe 2015, 3).

In all of the cases from which I begin, the liberal ideals of subjectivity, temporality, and geography for Muslim women become limited to the actions that render their

subjectivity as tied to their headscarves and legible practices of embodying religious beliefs. For the South Asian subjects from whose faces a scarf is mechanically added or removed, their legibility becomes tied to the ability of the participants in the study to recognize them with or without the headscarves, which then defines legibility for the legal frame of the Supreme Court case and the facial recognition technologies for the NYPD police officers. For Lowe, the economy of affirmation and forgetting is importantly a spatial act in which certain subjects are rendered legible within modern ideas of "human" or "man" and other subjects are rendered illegible in space and time. Both space and time then become constructs of liberalism rather than transparent indicators of linear experience. While Lowe uses the economy of affirmation and forgetting to situate how abstract promises of freedom often obscure colonial, slavery, and imperial power dynamics, I use her concept to situate how Muslim women are both necessarily despatialized for the reconstitution of a liberal subjectivity after 9/11, especially one that depends upon the constant reduction of Muslim women as either passive victims or creators of suspicious space and place.

The despatialization of Muslim women is especially important to situate as the desire for technoliberalism and its promises of erasing the messiness of gendered and racialized materialities. Atanasoski and Vora argue that technoliberalism is "the political alibi of present-day racial capitalism that posits humanity as an aspirational figuration in a relation to technological transformation, obscuring the uneven racial and gendered relations of labor, power, and social relations that underlie the contemporary conditions of capitalist production" (2019, 4). Technoliberalism then becomes central to understanding how the process of datafication itself is building upon the time and space of European

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liberalism to build legible subjectivities through obscuring racialized, classed, and gendered power relations. If read within the context of technoliberalism, the two Muslim women who are arrested and forced to remove their headscarves are being disciplined within the technoliberal desire for sanitized datapoints that are not affected by the messiness of space, place, and time. Vora and Atanasoski deconstruct the technoliberal utopic and paranoid desire for a postrace and postlabor future where "specific technologies are both actively designed, but also often feared, to act as surrogates that can free humans from having to perform historically degraded tasks" (2019, 5). Vora and Atanasoski's use of techno-utopias is central to understand how militarized data technologies such as facial recognition or digitizing infrastructures of data rely upon a future technoliberal imaginary of data, replacing the messy work of contextualizing histories of colonialism, after-lives of slavery, and the ongoing projects of militarism (2019, 5). The technoliberal and utopic desire for data materialized in the arrest of the two Muslim women then becomes not just about disciplining them as datapoints, but also about imagining a future use of such sanitized data within and across the patterns of datafied knowledge, whether it's across Big Data datasets or facial recognition databases.

The technoliberal desire to search for and recognize Muslim women depends on both affirming and negating their existence in space, place, and time. Affirming a particular form of legibility for their existence in space and place depends on the negation of how they inhabit or transform gender. The construction of Muslim women as out of time and space is necessary to spatialize and temporally situate the post-9/11 security apparatuses, such as facial recognition technology and the process of transforming the two Muslim women, into sanitized data points for the facial recognition technology database.

As Edward Said argues through his concept of "structures of attitude and reference," the brief mentions of colonial property and slave plantations in novels such as Jane Austen's *Emma* hold stable the time and space of British romance and everyday life because of the existence of wealth accumulated through enslavement and colonialism (Said 1993). Therefore, brief mentions of colonial and plantation holdings are necessary for building the character story arcs, sense of self, agency and subjectivity. I use brief mentions of Muslim women to read for what the brief mentions themselves hold stable within datasets, archives, and reports. With Muslim women, it's simultaneously about the act of being recognized and rendered both spatially and temporally legible, but also about the brief mentions in their everyday lives, archives, and the official reports that additionally contour a structure of attitude and reference where brief mentions cement their outsideness from liberal ideas of freedom, agency, and human. In other words, I read the brief mentions simultaneously as forms of datafication, which hold constant post-9/11 forms of liberal subjectivities, and as data artefacts that push against the limits of their use and the aspatial and atemporal liberal subjectivities they are confined within.

To situate the implication of Said, Lowe, and Vora and Atanasoski's arguments on the legibility of technoliberal subjects in archives/databases alongside the work of brief mentions to cement the self/other of liberal ideas of subjectivity and freedom, I place their work in conversation with Saba Mahmood's ethnography on the women's mosque movement in Egypt. Mahmood's work significantly deconstructs the liberal secular humanist ideas of freedom, agency, and subjectivity for Muslim women. As Mahmood writes in her ethnography, "in order for an (liberal secular) individual to be free, her actions must be the consequence of her own will rather than custom, tradition, or social

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coercion" (Mahmood 2004, 11). In her introduction, Mahmood argues that Muslim women could only be rendered legible in space and time if their actions were read within Western liberal ideas of freedom and agency. As the passivity of Muslim women becomes entrenched in the datafication of everyday life, Mahmood's push for multiple forms of subjectivity not constrained by liberal humanist or feminist ideas of freedom is particularly prescient. As she writes, "what may appear to be a case of deplorable passivity and docility from a progressivist point of view, may actually be a form of agency--but one that can be understood only from within the discourses and structures of subordination that create the conditions of its enactment" (Mahmood 2004, 15). On the one hand, datafication in this chapter is read alongside the grain of technoliberalism that renders Muslim women as passive victims of religious or patriarchal ideologies. Datafication then reveals the necessity of these brief passive mentions to the framework of technoliberalism that marks them as aspatial and atemporal. At the same time, reading the moments in which Muslim women emerge in the archives of FBI, CIA, NYPD, and LAPD datasets and records as data artefacts ruptures the process of datafication and hints at another imagination and epistemological frame for Muslim women to exist.

Mahmood's argument that "agentival capacity is not only in those acts that resist norms but also in the multiple ways in which one inhabits norms" (2004, 15) ruptures the universalization of liberal ideals of freedom and agency, especially when applied to Muslim women. As I read for Muslim women as gendered data artefacts, I ask: How do Muslim women transform, destroy, inhabit, or perform the identities of "Muslim" or "women" in ways that trouble their solidity within datafication? Mahmood's rupturing of universalized liberal ideals must be placed alongside Leila Ahmed's argument that Muslim

women have always been at the center of the religious histories of Islam and are only removed from space and place of Islamic history to reflect the context in which the stories of Islam's history are being consumed. As she writes, "a significant portion of the accounts of Muhammad and his times-- the literature revered as the authentic annals of early Islam and looked to for a model of Muslim conduct and a source of Muslim law--were recounted on the authority of women; that is, the accounts in question were traced back as having been first recounted by a woman in Muhammad's generation, a companion, and often a wife or daughter, of Muhammad" (Ahmed 1992, 46-47). In the brief mentions of Muslim women through pre-Muhammad historical records, Ahmed herself is reading Muslim women as forms of data artefacts that push against the ideological limits of legibility placed upon them, their lives, and their everyday inhabitations of space and place. Therefore, the impetus to erase Muslim women from space and place is not only central to the ideas of European and technoliberalism, but also to the development, practice, and historiography of Islam. Placing Mahmood and Ahmed in conversation with Lowe's economy of affirmation and forgetting as a spatial act renders legible some actions and subjectivities within the context of technoliberalism, practices of Islamic historiography, space and time while erasing the material and imaginative space and place of Muslim women.

Through Edward Said's concept of "structures of attitude and reference," I focus on how this erasure or process of despatializing Muslim women is most visible in the brief mentions of Muslim women in post-9/11 projects of tracking, mapping, and targeting Muslim communities, such as the public records and reports I analyze in the next section. The despatialization of Muslim women is particularly relevant and necessary to analyze the

increasing use of militarized data technologies to mark, track, and record the lives of Muslim communities. In the example of the two Muslim women who were arrested for petty crimes, their headscarves only became inhibitors when the police decided they would prevent future use in a facial recognition database. The forcing of both women to remove their headscarves reveals a forced transition of Muslim women into a technoliberal form of subjectivity where their headscarves literally mark them as unrecognizable in the imagined future use of an arrest photograph database used for facial recognition. In other words, the messiness of the headscarves not only speaks to the anxiety of facial recognition technologies with hijabi Muslim women, but also the technoliberal desire to erase all markers of difference in space, place, and time that situate how their racialized and gendered bodies become targets in the first place.

In this chapter, I situate the act of transforming the Muslim women into data points as a process situated in the post-9/11 heightened policing of Muslim neighborhoods alongside the act of recognizing Muslim women in the days surrounding 9/11. I argue that the act of recognizing Muslim women in space and place is necessary to understanding how datafication is both a historical and geographic process of normalizing Muslim women as objects out of place. The creation of Muslim women as data points naturalizes their passivity as an atemporal and ahistorical fact, which is strategically necessary to US military operations in the War on Terror, both transnationally and domestically. Instead, the process of recording Muslim women in reports solidifies a technoliberal idea of gendered subjectivity alongside flattening the way gender for Muslim women has always been a contextual practice of negotiating religion, community, familial and their own expectations and desires.

Throughout my dissertation, I argue that militarized data technologies—datasets created to connect across other data on religion, the reconnaissance and bombing technology of aerial policing, crime mapping of Muslim communities after 9/11—that create gendered Islamophobia central to Big Data construct Muslim women historically and contemporarily out of space and place. In my second chapter, I argue that datafication constructs Muslim women as passive victims across archival records of aerial policing in British India that is then mirrored in contemporary datafied ways of erasing Muslim women from space and place. I argue aerial control is central to the process of datafication and building Muslim women as gendered data artefacts. In the third chapter, I outlined the ease with which gender and Muslim women are erased from space and place to create datasets on religious minorities. I contrasted the erasure by reading the brief hints and mentions of Ahmadi women in news articles and humanitarian reports as reading across gendered data artefacts. In this chapter, I follow the massive increase in Big Data collection and usage after 9/11 and argue that the datafication of Muslim women is central to the process of recognizing Muslim women as objects of data. In this chapter, I connect across the transformation of Muslim women into datafied technoliberal objects by examining the 9/11 calls reporting "suspicious" Muslims immediately after 9/11 and by juxtaposing the NYPD and LAPD's programs of Muslim mapping.

In the next section, I discuss how datafication after 9/11 begins immediately with calls by concerned citizens that become recorded within the FBI database as marking suspicious space and place of Muslims and transforming them into datapoints. I expand upon this desire to recognize Muslim women by transforming them into sanitized datapoints through analyzing how Muslim women become central to technoliberal ideas of

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freedom, agency, and subjectivity. My analysis of Muslim women after 9/11 begins with

tracing the reasoning at the center of datafication of gendered terrorist space through public

records released from the FBI about all the calls they received complaining about Muslims

celebrating after or around 9/11. I read the database of public records for the brief mention

of Muslim women. The brief mentions become both a way to mark datafication of Muslim

women and to read for Muslim women as gendered data artefacts. Then, I read across

several governmental and organizational reports of FBI, CIA, and police programs after

9/11 to read for the brief mentions. I argue in this section that the brief mentions of Muslim

women become necessary for the technoliberal utopian ideals of freedom and agency

practiced through data collection. At the same time, across both sections, I argue that

technoliberal and utopian ideals and desires must be countered by reading for Muslim

women as gendered data artefacts who become glitches in the process of datafication

hinting towards subjectivities, agencies, and spatial temporalities not contained within

post-9/11 practices of datafication.

Despatializing Muslim Women and Abductive Reasoning through Data after 9/11

The process of datafication transforms Muslim communities after 9/11 into objects

of data, which depend upon solidifying patterns of knowledge that define Muslim,

especially Muslim women's, subjectivities through technoliberal ideals of human, man,

agency, and freedom. The technoliberal and utopian imaginary is built through brief

mentions and carefully constructs Muslim women as despatialized. With the two Muslim

women who were forced to remove their hijab for the facial identification systems, they

were being disciplined as technoliberal subjects. As the former New York Police Commissioner explains, the facial identification systems the NYPD uses are almost exclusively arrest photos (2018 NYT): "an algorithm makes a template of the face, measuring the shapes of features and their relative distances from each other. A database consisting solely of arrest photos is then searched as the sole source of potential candidates...facial landmarks are compared without reference to race, gender, or ethnicity" (2018 NYT). Yet, Joy Buolamwini and Timnit Gebru argue otherwise in their paper and research project that evaluates the impact of so-called neutral processes of facial recognition. They find that "these datasets are overwhelmingly composed of lighter-skinned subjects" and thereby introduced a new dataset balanced by gender and skin type (2018). Even through using their dataset on three commercial gender classification systems, they find that "darker-skinned females are the most misclassified group" (Gebru and Buolamwini 2018, 7). The Gender Shades project and Algorithmic Justice League started by Buolamwini and Gebru pushes against the former police commissioner's argument that the collection of police arrest photographs is race and gender neutral. Instead, the technoliberal subjectivity marked by the database and facial recognition systems is aspiring towards the utopic promise of a postrace future that is central to the formation of technoliberalism (Atanasoski and Vora 2019). Rather than solidifying a postrace future, the act of transforming the Muslim women into datapoints reveals how the utopian ideal of a postrace future depends on erasing the messiness of space and time from Muslim women's inhabitations of their identities. In other words, on despatializing the Muslim women.

An investigation into the NYPD by its own office of inspector general found that individuals under investigation by the NYPD for political activity "were predominately associated with Muslims and/or engaged in political activity that those associated with Islam--more than 95% of all files reviewed" (Peters and Eure 2016). From broken windows policing to the more recent stop and frisk, the disproportionate impact of policing of Black and Latinx communities, especially across gender and sexuality, has been long historicized and contextualized (Ritchie 2018). Here, I evaluate how the use of technology that relies on recognizing patterns in turn transforms Muslim communities into objects of analysis for militarized data technologies, such as facial recognition. Additionally, I argue that the transformation of Muslims into data points relies upon a flawed premise of technoliberal utopian ideals, which despatialize Muslim women.

After 9/11, the use of patterns to recognize, track, and collect data on Muslims transformed everyday Muslims into objects of analysis for militarized data technologies. The use of facial recognition technology after 9/11 is part of what Lucy Suchman argues are the two "interrelated and disturbing developments in the technopolitics of US militarism": the first is the "claim for precision and accuracy" in the hunt for terrorists, and the second is the "growing investment in the further automation of these same operations" (2020, 1). The deep learning algorithms at the core of facial recognition technologies allow for further training and automation of machine-based processes of identification. The desire for accuracy and precision within facial recognition technology, as Suchman argues, is simultaneously a desire for "beyond human understanding," meaning "that there are now forms of intelligence superior to the human" (2020). Yet, the technoliberal desire for more-than-human system of recognition is never divorced from the histories of colonialism,

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slavery, and militarism necessary to creating a stable definition or desire for human or more-than-human intelligence (Vora and Atanasoski 2019). Therefore, the rapid development of "deep learning" algorithms to identify, extract, and match faces is inseparable from the post-9/11 heightened US militarisms and the confirmation that nearly 95% of all police investigations are on Muslim communities. As Suchman argues, the desire for more-than-human intelligence abstracts how deep learning algorithms central to both US militarism and uses within artificial intelligence, such as facial recognition, are alternatively explainable as "computationally detectable correlations" or elaborate patterns detected by computers (2020).

In 2015, then candidate Trump repeated a trope about 9/11 that had become common: he had personally witnessed "thousands" of Muslims celebrating in Jersey City, New Jersey, after the attacks (Kessler 2015). Even though the claims have been disproven by the mayor of Jersey City, journalists from both New York and New Jersey, and Trump's own interview a few years back indicating that he was in New York City during and after the attacks, they continued to gain traction. The basis for Trump's claim is a type of logical reasoning machine learning engineers argue should be used for automating the process of creating patterns across large datasets: abductive reasoning. As Pioch et. al. argue: "with the increasing threat of global terrorism and an ever growing sea of computerized intelligence data, manual analysis techniques cannot provide enough coverage to reliably detect threatening activity" (2004, 1). In other words, the vast amount of data collected through the datafication of everyday life, particularly after the suspension of privacy rights after 9/11 and the Patriot Act, led to the mass accumulation of data making it harder to isolate the most relevant data.

Instead, Pioch et al., argue that a new form of reasoning and methods could solve this issue: abductive reasoning (2004). In abductive reasoning, there needs to be a clear correlation between points, but there is no need to develop a logical system of causation. In the case of searching for potential terrorists and preventing probable terrorist attacks, the machine learning algorithm is trained through past events and access to Big Data datasets and then engineers develop a series of simulations that use past data to teach the algorithm how to search for relevant data to prevent future attacks. The inherent danger in this shift to abductive reasoning with an urgency to prevent terrorism is that it normalizes patterns already present in the process of collecting, cleaning, and arranging data. As Kitchin and Laurialt argue, "data... are situated, contingent, relational, and framed, and used contextually to try and achieve certain aims and goals" (2018, 4). In other words, as Gitelman and Jackson argue, "raw data are an oxymoron" because "data are always cooked" (2013, 4).

Trump's insistence on making the same disproven claims not only represents a common method he uses to repeat untruths as truth, but also shows that the logic of abductive reasoning is always vulnerable to patterns created in the process of collecting, cleaning, or analyzing data. As Lucy Suchman argues about deep learning algorithms's computationally detectable correlations, the goal in the end of the computations is always to produce a result "however meaningless...that [is] again legible to humans" (Suchman 2019). In other words, translating patterns in a way that is legible becomes just as important as the input of data.

After 9/11, the connection between Islamophobia, gender, and space became quickly apparent as police departments across the United States collaborated with the FBI

and CIA to utilize cross-organizational resources and combat the imagined terrorist threat of domestic Muslim terrorists (). The use of militarized data technologies transformed algorithms originally created to increase profit into tracking terrorists (Amoore 5). For the NYPD, the connection between gender, Islamophobia and space emerged in a project to surveil, infiltrate, and collect targeted data from Muslim communities in and around New York City.

I ask what if we examined not just the results of the patterns, but the process of norming and creating data points as presupposing a connection? With the example of the Muslim women who were forced to remove their headscarves so they could be incorporated into the facial recognition database as supposedly neutral datapoints, the connection or pattern did not need the distinguishing marker of the headscarf for the Muslim women themselves to become racialized and gendered datapoints. This brief moment of Muslim women's entanglement with militarized data technology reveals the desire to sanitize the process of capturing and criminalizing the hijabi Muslim women and instead create a space for them in the facial recognition technology database that erases the contextual, spatial, and historical realities that led them to that moment of becoming a gendered and racialized datapoint.

In what follows, I read for the brief mentions of Muslim women across a public record release from the FBI regarding reports of Muslims celebrating after 9/11. I read the brief mentions with and against the process of datafication that normalize Muslim women as passive victims whose everyday lives are reduced to moments in which they are around men, wear the hijab, or speak Arabic/a language racialized by those reporting to the FBI as a "foreign language." At the same time, I read for the brief mentions as gendered data

artefacts that push against the limitations put upon them and hint towards the complex and shifting ways that Muslim women constantly refashion their identities in space and place. As Leila Ahmed has shown, Muslim women have always actively existed in space and place, despite the rewriting and reinterpreting of their actions as ahistorically and atemporally patriarchal (Ahmed 1992). Similar to Saba Mahmood's method of reading for inhabitations of identity by Muslim women whether the ethical impulse of that identity performance matches Western European liberal/feminist thinking, I read for the inhabitations of space and place through the brief mentions of data artefacts. As I argue throughout this project, gendered data artefacts create a way to read beyond the erasure of Muslim women from space and place and beyond the sedimentation of Muslim women as passive victims. Instead, gendered data artefacts hint at another possibility of recognizing the way Muslim women inhabit, destroy, and create racialized gender roles that defy these limited understandings of them, their homes, their communities, and their everyday lives.

The reports of calls show how the patterns, even if false, create a recorded existence within the FBI's databases. The correlation between spaces such as busy streets, restaurant dining rooms, and convenience stores immediately following 9/11 became capable of producing the potential for terrorism and patterned as such. In one report from Newark, New Jersey, close to where Trump claimed he saw the celebrations, the FBI received a phone call report of a "Ford Explorer in an Arabic area (Main St.) Paterson where people were celebrating and [the caller] found this odd" (2016, 97). In this report, the simple inhabitation of space becomes immediately mischaracterized and datafied as celebratory, alongside the inclusion of a license plate. As Kitchin and Laurialt argue, "databases and repositories are expressions of knowledge/power, shaping what questions

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can be asked, how they are asked, how they are answered, how the answers are deployed, and who can ask them" (2016, 5-6). In this case, the FBI database creates an association with celebrating while being racialized as suspicious and capable of producing terrorism just by abductive reasoning and the association with 9/11. In this case, the ahistoricity and atemporality of Muslim communities inhibits their ability to celebrate or inhabit space unless it's linked to 9/11.

In the 145 pages of reports, women are consistently seen as passive additions to men who are themselves explicitly racialized as dangerous. In one incident reported three days after 9/11, the caller narrated a moment of "witnessing 4 middle eastern subjects, not known as local residents… 3 men and one woman. All were celebrating something. All displayed joyful, happy mood, spoke an Arabic language. For no reason, they exchanged stares, man's stare was hateful" (2016, 46). In this brief mention, the woman experiences a moment of being racialized and recognized as Muslim as a spatial act because she is associated with the men. The woman here becomes datafied as a passive participant who contributes to creating the suspicious space, but the only moment in which the caller identifies as an active inhabitation of the terrorist space is the "hateful" gaze he feels. The passive brief mentions of Muslim women continue to construct terrorist space as only actively inhabited by men. As all of the reports show, the everyday lives and inhabitations of places become racialized as dangerous, suspicious, and capable of producing terror.

Yet, I also argue that the suspicious space created in these calls to the FBI is not just dependent on the perceived danger of Muslim men but also on the perceived passivity of Muslim women. As Saba Mahmood argues, Muslim women's actions become invisible within the framework of secular liberalism and western feminist ideas of agency and

subjectivity because Muslim women's inhabitation of space and place do not fit into a neat divide of either following or resisting religious customs. In other words, the inhabitation of space for the brief mention of the woman here racialized as Muslim and suspicious is impossible to read for yet also impossible to erase. That she becomes a data artefact speaks to the caller's inability to see her as anything but passive, and to the caller's need to mark her as passively inhabiting the space. The technoliberal desire to read her as passively inhabiting space becomes necessary for creating the suspicious and terrifying space.

The one instance when Muslim women emerged as primary actors in their own lives and within the post-9/11 imagination of terrorist space happened on 9/12/2001. The people who reported on them drove to a police station the following day to file a report. They reported seeing "two females celebrating and chanting as they watched planes fly out of Logan Airport yesterday, early morning" (2016, 83). This brief mention is the only time in this archive and database of reports when Muslim women are mentioned alone with no men; I read this moment as a way to transform the otherwise passively victimized Muslim women as a data artefact. Here, the passivity is transformed into an errant data point amongst the otherwise numerous patterns of her passivity. Here, the act of inhabiting the place of an airport creates simultaneously a different engagement with terrorist space all the while situating both women as potentially dangerous precisely because they occupy a material space without men or performance of docility and because they occupy an imaginative space that counteracts the assumption and desire to see their behavior, actions, and inhabitations of identity as different from the technoliberal subject. After reading for the gendered data artefacts in the next section in the LAPD and NYPD Muslim mapping initiatives, I read this brief moment alongside the brief gendered moments in those

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initiatives to outline the possibility of a different epistemological point of engagement with Muslim women that is not quantifiable, but necessarily also pushing against quantification of their lives.

The Gendered Spatiality of Technoliberal Utopias in Post-9/11 Policing

When the Associated Press acted on a brief tip to investigate the immediate deployment of "mosque crawlers" after 9/11 in New York City mosques, they found the large scale NYPD operation to collect data on Muslims by targeting everyday spaces for Muslims, including a multi-state operation to infiltrate Muslim Student Associations (Apuzzo and Goldman 2016). The NYPD distributed to their officers a list of 28 "ancestries of interest" who completed the task of marking the location of a mosque, halal meat store, madrassa, or convenience stores (Apuzzo and Goldman 2016). Their final database consisted of Muslim maps that were not only divided by ancestries, but mapped each location through the ancestry of the owner in addition to surveilling and describing who frequented the stores or mosques, often notating license plates of worshipper's or patron's cars.

When the Los Angeles Police Department introduced their "Muslim mapping" plan for Muslim communities in Southern California in 2007, the immediate response in public townhalls, which itself was spurred on by the newly released knowledge of the NYPD's plan, eventually led to the Muslim mapping plan's dismissal (Apuzzo and Goldman 2016). While the LAPD argued that it had yet to begin developing a "Muslim mapping" initiative when they held the townhalls with Muslim community members, documents obtained

through a lawsuit by a Muslim advocacy group revealed that the LAPD had already begun developing the initiative long before the townhalls (Winton, Watanabe, and Krikorian 2007). Similar to the ways that phone calls immediately after 9/11 complaining of potential suspicious behavior reveal the way the spatiality of technoliberal desire becomes sedimented in databases immediately after 9/11, the extensive initiative in the New York Police Department led to no arrests or leads. Instead, the NYPD initiative and the plans for the LAPD initiative indicated the spatiality of technoliberal desire to mark, recognize, hear and see Muslim "terrorism."

While in the previous section I traced the technoliberal desire to transform Muslim women immediately after 9/11 into despatialized datapoints, here I focus on the technoliberal utopian desire to imagine, discipline, and manufacture patterns of recognition across space racialized and gendered as "Muslim." I continue analyzing the erasure of Muslim women from space, place and time, but follow the implementation and/or planning of two police-sponsored programs of spatializing the suspicion against Muslims, and show how the imagined and material implementations of these programs hints towards a technoutopic aspiration for data to capture Muslim "terrorists" through spatial patterns of datafied knowledge.

Technoutopias are imagined as futures with "material abundance, new virtual worlds, human-like robots, and the ultimate conquest of nature" (Gruenwald 2013). At the same time, critical indigenous studies and feminist science and technology studies scholars have introduced definitions of technoutopias that focus more on the systems of racial capitalism, settler colonialism, and militarisms that undergird the futurity contained within technoutopic imaginations (Vora and Atanasoski 2019). As I argue in this section,

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imaginations of techno-utopias fuel the transformation of Muslim women into despatialized datapoints.

I read across public records of two mapping programs in Los Angeles and New York City, alongside reports by the Asian Legal Defense Fund to outline how the focus on policing "Muslim" spaces depends upon confining Muslim women to aspatial and atemporal spaces. I begin by tracing how data functions in both the LAPD and NYPD Muslim mapping program as a desire for spatial fluidity. The NYPD began their program of Muslim mapping shortly after 9/11 and continued for nearly a decade before the Associated Press revealed the invasive extent of the program. The LAPD's program of Muslim mapping was still in the extensive planning stages when they dropped it following massive protests and negative feedback from community members. After tracing the way spatial fluidity is central to the imagination of spatialized data collection from both programs, I read for the brief mentions of Muslim women across NYPD and LAPD public records on their mapping programs. I read here for the patterns of datafication of Muslim women and also the way that these brief mentions reveal both the impossibility of capturing Muslim women as data points and the way capturing the atemporal, aspatial liberal figure of Muslim women is also a necessary component of the process of datafication.

Technoliberal Utopic Patterns of Knowledge

The desire for technoliberal utopias to connect across knowledge and imagine a future of policing free from the racialized and gendered messiness of space, place, and time

is central to the imagination of solving crime and capturing terrorists for police departments. As William Bratton, the former police architect of stop-and-frisk, "community policing," and now predictive policing software implemented nationwide argues, "it is not that there is a difference, it is rather there is a building upon what came before" (Department of Justice 2009, 1). As Bratton states, "centers that were created after 9/11 with federal agencies, state agencies, and local agencies; it's all about sharing of information, developing intelligence faster so that we can more quickly respond to it. Predictive policing is taking advantage of the evolution of that concept, where we gather information more quickly than ever in the past, analyze it, and from that, actually begin to predict that certain actions, based on intelligence, are going to occur" (Department of Justice 2009, 1). Bratton's argument demonstrates how the implementation of data futures, such as artificial intelligence through predictive policing, is built upon the histories of creating the connection between data, space, and criminality. In other words, Bratton himself here is demonstrating how datafication is a process of sedimenting a relationship to space, place, race, and gender over time.

The technoliberal utopia imagined as quickly and efficiently traversing across police databases, racialized geographies, time periods, and demographics to solve the issue of past, present, and future crime cements the practices of collection, cleaning, and ordering as divorced from processes of racism, colonialism, and patriarchy. The idealization of technoutopias then becomes actualized in the process of developing datafied patterns of knowledge connecting across time and space. Yet, the process and moment in which the Muslim women become data points as well as the desire to sanitize them from

being marked as Muslim in their transformation into datapoints is crucial for placing the impact and connection across race, gender, data, and space.

Louise Amoore's analysis of the most cited scientific paper on the design of algorithms concludes that algorithms "present to the world a novel way of deciding what matters, which associations can be acted upon, which itemsets should be 'pruned out'" (Amoore 1). In other words, the patterns created through the NYPD's facial recognition database or patterns created in this section through data collected to combat "Islamic" terrorism already define who is criminal and whose ability is to be recognized through technology will always result in a different set of actions, consequences, and punishment. At the same time, the act of forcing Muslim women to remove their hijabs reveals the process of transforming Muslim women into data points, cleaned and primed for pattern analysis. As Gitelman and Jackson argue, the passive verbs used to describe the process of turning objects into data points: "collected, " "entered," "compiled," "stored," "processed," and "mined" focus more on the uses of data themselves rather than on the embedded historical, material, geographic process of turning the Muslim women into data points (2003). While the patterns of data collecting I trace here primarily target Muslim men, I focus on how the perceived passivity of Muslim women is central to the project of collecting spatial data about Muslim communities after 9/11.

The patterns cemented through intelligence-gathering and data collecting of the NYPD's operation since 2001 and the LAPD's plans to implement Muslim mapping since 2010 both focused on creating Muslim-centered spaces as suspiciously capable of producing terror/terrorism. At one point, the documents released through public records requests that chronicle the extensive plans by the LAPD to approach Muslim mapping

through data gathered from community policing describe the desire and necessity for "good data" to "allow for generalizations among communities" (MA v LAPD 2018). As Kitchin and Laurialt argue, the existence of data is contingent upon historical, social, economic context in which the data is collected, organized, and cleaned (2014). Additionally, the questions fueling the collection and ordering of data not only influence the data collected, but also create the connections across data (Amoore 2011). Here, then, the meaning of "good data" used for generalizations of entire communities is both presupposing a use of the data, but also contouring the use as necessary to the act of collecting, ordering, and cleaning the data. The desire for patterns before even beginning the process of data collecting in Los Angeles reveals the desire for data to perform a task of objectively finding terrorists who are Muslim despite the realization that such data and mapping initiatives are entirely unsuccessful in anything other than marking, datafying, and mapping their own desire.

Michael Downing, who oversaw the LAPD's community mapping planning, defined the goal for the program as "to identify communities, within the larger Muslim community, which may be susceptible to violence and ideologically-based extremism and then use a full-spectrum approach guided by an intelligence-led strategy" (MA v LAPD 2018, 125). Yet, as obvious with the data gathered by the NYPD after 9/11, community mapping of Muslim communities contains within it, and is fueled by, the desire to find patterns of radicalization or, more succinctly, terrorism. Therefore, no matter how much Downing describes his intentions to make community mapping of only Muslim communities a collaborative process, the implementation of community mapping in NYPD reveals that the act of collecting, ordering, and cleaning data is motivated by the desire to

create and find patterns. Additionally, to solidify the process of datafication creates certain "suspicious" ethnicities as mapped onto physical space.

And, as the planning documents from the LAPD show, the use of data is not only necessary for patterns, but also more cost effective as it allows the police to "better inform resource decisions …[since]...at all levels of government, agencies are trying to do more with less" (MA v LAPD 2018, 252). The patterns then become important not only for how they fulfill a particular desire for finding Muslim terrorists, but also how data technology becomes a solution by serving as imaginary replacement police officers. The fluidity of space here is working beyond the technoliberal desire of connectivity because data technology is additionally imagined as eventually a self-operable set of objective facts deciding concrete outcomes of data not influenced by histories of enslavement, colonialism, militarisms.

The patterns mapped by the NYPD and planned for the LAPD cannot be separated from the simultaneous development of COMPSTAT, a way to organize and analyze data that eventually becomes central to PREDPOL, a way to use data for predictive policing strategies. The datafication of everyday Muslim spaces then already presupposes a spatial flow for finding patterns of terrorist space. By the LAPD and NYPD's own admission, PREDPOL is a technology that traces the connection between crime type and crime location over time. Both the LAPD and PREDPOL "argue that, because the algorithm does not factor in demographic characteristics, its effect is proportional and fair" (Moravec 2019, 1). While specifically targeting and mapping Muslim communities for data gathering initiatives, the data being used in algorithms already overrepresent the everyday spaces of Muslim communities.

This desire to isolate demographics explicitly from algorithms while holding data intrinsically free of race, gender, and class is central to the liberal modernity of techno-utopian ideals of connectivity, which I connect here through space. As Vora and Atanasoski argue, technoliberalism "encompass[es] the techniques through which liberal modernity's simultaneous and contradictory obsession with race and its irrelevance has once again been innovated at the start of the twenty-first century, with its promises of a more just future enabled by technology that will ostensibly result in a postrace, postlabor world" (Vora and Atanasoski 2019, 13). Much like the unsuccessful Muslim mapping program in New York City that resulted in no terror plots foiled, the LAPD's PREDPOL was also shown to contain "inconsistent" datasets, "which made it impossible to use them to draw useful conclusions about the program's effectiveness" (Moravec 2019, 1). In the end, the independent data auditors hired by local Los Angeles-based activist and community group Stop LAPD Spying Coalition were unable to determine whether PREDPOL even caused a decline in crime, which is the program's only stated purpose (Moravec 2019, 1). The desire, then, to focus on the lack of demographic data in constructing the same contradictory obsession that Atanasoski and Vora argue is central to technoliberalism. Here, with Muslims, the technoliberal desire to map Muslims after 9/11 shows how the moment of datafication is translating Muslim space into technoliberal utopic desires motivating analyses across spaces deemed suspicious because of their inhabitation by Muslims.

The technoliberal utopia constructing a raceless and genderless future is simultaneously dependent upon the spatial fixity of Muslim women as victimized, oppressed, and out of time and place. Therefore, the moment in which the Muslim women

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became translated into sanitized datapoints for the facial recognition database, they were being transformed into objects of a technoliberal fantasy of connectivity that cements the racialization and gendering of Muslim space as terrorist space.

Reading for Muslim women as Gendered data artefacts

I trace here the existence of Muslim women through the same public records of Muslim mapping programs in New York City and Los Angeles. As Mahmood has argued, Muslim women's inhabitation of space and place outside of liberal feminist ideas of agency has consistently ignored the way Muslim women inhabit everyday space and negotiate identity and community. Here, I read for the brief mentions of Muslim women in public records and reports as gendered data artefacts. While Muslim women' brief mentions generate understanding of them as passive victims existing outside of time and space of liberal modernity, I read for their brief moments as gendered data artefacts as a way to speak to the limits of data encompassing gendered and racialized placemaking contained within the brief mentions. In all the planning documents in the LAPD and the public records released about the NYPD program, Muslim women are mentioned only three times in the combined six hundred pages. I read the few cases in the LAPD planning documents alongside the interviews in the report by the Asian Legal Defense Fund.

In his remarks to the Islamic Center of New York University, President Obama's Homeland Security Adviser, John O. Brennan, mostly groups women in with a general comment on how American Muslims have been disproportionately targeted by Al Qaeda. The only time Brennan briefly mentions women in particular is in a comment delineating

the importance of "women's rights" to President Obama: "Rather than simply focusing on ties between governments, he has pursued a broader engagement with people on issues that are most important to them: economic development, education, health, good governance and the dignity of every human being, including women's rights" (MA v LAPD 2018, 71).

In this speech included as part of the Muslim mapping planning documents held by the LAPD, John Brennan's speech confirms that Muslim women are only legible in moments that mark their subjectivity and agency as already lacking "rights" that the United States can reaffirm for them. As Saba Mahmood and Gayatri Spivak has argued, European liberal and western feminist frameworks render Muslim women's everyday lives illegible unless they are fitted within a narrow framework of either following/unfollowing custom commonly consumed as patriarchal (Spivak 1989; Mahmood 2003). At the same time, the brief mention here serves as a structure of attitude and reference by concretizing the framework of "American Muslim community" as conceptualized by President Obama and his Homeland Security Advisor and the necessity of framing Muslim women as atemporal, aspatial objects who lack recognizable rights.

John Brennan continues to describe the one explicit instance that Muslim women are mentioned in all the five hundred pages of records released regarding the LAPD Muslim mapping plans: "Across the country, the Justice Department has gone to court to protect the right of girls and women to wear the hijab, at school and work" (MA v LAPD 2018, 73). Here, Muslim women are again only legible for how they reinforce a limited understanding of their subjectivity and inhabitation of their subjectivity within technoliberal ideals of freedom and agency. The United States is placed in the position of both recognizing and cementing a limited relationship between Muslim women, their

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gendered practices of identity, and the US relationship to these gendered practices. Importantly, the contradiction of the two Muslim women who were forced to remove their hijabs for incorporation within the facial recognition database versus the argument that the Justice Department fights for the ability for Muslim women to wear hijabs reveals how Muslim women exist as gendered data artefacts that reveal the limits and the desire of the process of datafication. Muslim women and their gendered religious practices thus become atemporal and aspatial datafied objects divorced from community, family and their own desires for inhabiting religious custom. These two separate moments of the US government use them to become markers of the possibility for technology to exist without bias.

The Asian Legal Defense Fund's report, one of the few reports that quote Muslim women on their everyday struggles with processes of criminalization, surveillance, and suspicion after 9/11, serves as an important way to recognize how Muslim women always exist in excess of the limited understandings of them in space, place, and data. More specifically, the hijab becomes an important marker for how 9/11 shifted Muslim women's relationship with their bodies, communities, and practices of surveillance.

As Asma, a nineteen-year-old student from City University of New York states: "for some people, this [scrutiny of Muslim characteristics] has made them 'water down' Islam, which is really sad" (MA v LAPD 2018, 17). Here, the easy association between Muslim women as either being datafied with their hijab to represent religious freedom in the United States or forcibly asked to remove the hijab to keep a facial recognition database clean from potential "bias," is immediately shifted to understanding how the everyday relationship with wearing a hijab a practice of anticipating gendered surveillance and navigating community and religious expectations. As the report also mentions: "at a

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City University of New York (CUNY) Muslim Students' Association listed in the NYPD documents, two young female students who wear the niqab (face veil) felt that other students were concerned with associating with 'religious people' like themselves" (MA v LAPD 2018, 17). In other words, even these brief mentions of interviews from Muslim women describe a relationship to their bodies and communities that exists far beyond the strategic reduction of their everyday practices of veiling to either supporting or thwarting patriarchy or supporting or thwarting American ideals of religious freedom. Both brief mentions reveal how the process of datafying Muslim women is simultaneously a process of disciplining them.

CHAPTER TWO: DATAFIED HAUNTINGS OF RACIALIZED AND GENDERED

MOUNTAINOUS SPACE

Time and space continuously intersect in precarious, uneasy, and haunting ways for

the region understood from the 1947 partition of West/East Pakistan from India and until

very recently as FATA or the Federally Administered Tribal Areas, which I refer to as the

AfPak region in this chapter. Historians, anthropologists, journalists, royal geographers,

military commanders, and tribal cosmologies all mark different, contested, and often

strategic narratives for when and how each of the tribes settled across the modern-day

Durand line that demarcates the contemporary border between Afghanistan and Pakistan

(Ahmed 1972; Babur 1912; Morris 1969). Tribal narrations of the past mark genealogical

origins to Qais Abdur Rashid, a companion of Prophet Muhammad, and consistently

prioritize a history of resistance and protest. This history includes resistance against

Mughal Emperor Akbar the Great in the late 16th century, losing 8,000 men to the

Yousafzai; against the British Grand Army of the Indus during the British colonial

occupation of the sub-continent, losing 18,000 men; and against the contemporary drone

warfare by the United States and Pakistani government that produces the region as one of

the most drone-stricken places in the world (Akbar 2013; Ahmed 1972; Akins 2017; Babur

1912).

On the other hand, non-tribal tracings and narrations of tribal migrations and

origins emphasize a linear model of mapping time and space, upholding empirical

rationality at the center of European liberalism I traced in the first chapter through Lisa

Lowe's archives of liberalism (2015). Anthropologists, historians, and military

commanders, in mapping the emergence and origin of tribal groups in the region, question the tribal claims of origin or migration or refuse to translate/transcribe components of tribal entanglements with time/space without commenting on the tribal grasp of linear time and space (Akbar 2013; Ahmed 2017; Babur 1912). These non-tribal moves towards controlling tribal conceptions of time and space cement and naturalize "tribal" as a term. Unsettling the word "tribal" itself is important for understanding how markers for identities often become naturalized as the identities themselves. As Ammara Maqsood highlights, the "tribal" designation reflects the political and ethnic processes of self-identification for ethnically Pashtun peoples recently displaced from Waziristan and into metropolitan Pakistani contexts where they are often racialized as terrorists (Maqsood 2016). Therefore, the word tribal means both the strategic and/or unassuming reifications of state, military, imperial, colonial, or everyday forms of violence and the defiant and/or ambivalent uses of the term by tribal groups. Considering the multiply-situated uses of "tribal," I hold the words "tribe" and "tribal" as dynamic signifiers that at once mark power, time, identity, and resistance.

The contestations over narratives of time and space are centrally about processes of racialization and gendering of the AfPak mountainous space. I start from Omi and Winant's explanation of racialization as an ideological process that is "constructed from pre-existing conceptual […] elements and emerges from the struggles of competing political projects and ideas seeking to articulate similar elements differently" (Omi and Winant 4). I use racialization to mark the purposeful and powerful conflation between ethnicity, race, religion, tribal affiliation, patriarchy, and extremism necessary to imagining the space as inherently dangerous and actively producing danger.

My use of "racialization of space" draws upon its use in global environmental justice movements (Smith 1993). However, my use of racialized space marks the ongoing process of bombing, invasions, and attempts to militarily subjugate and control the mountainous AfPak region and any person who is racialized as being from the mysterious/terrorist region. In this context, areas of visibility become hypervisibilized and hyperpoliced in a space where rugged mountainous terrains prevent imperial tools such as telescopes, binoculars, and satellites from gazing inside caves, crevices, homes, "terrorist" minds, and sharp slope drop-offs. The prevention of a gaze from above, such as a satellite, also prevents, as Rey Chow argues, a colonial and imperial practice of mapping the world as a target (Chow 2006).

In this chapter, I connect the 1923 archival records and newspaper articles about the British Royal Air Force's aerial policing campaign to the War on Terror's drone strikes, showing how the racialization of space and place over time in AfPak exists alongside the development of technologies of controlling, surveilling, and attacking the geographies of AfPak, which shows how terms such as "tribal" or "terrorist" become normalized and flattened over time within the space of AfPak through the process of gendered datafication central to militarized data technologies such as reconnaissance aircraft and drones.

My focus on tracing the gendered histories of space and place animating datafication from above centers the relationship between archives and data through space. My use of racialized space marks the ongoing process of bombing, invasions, and attempts to militarily subjugate and control the mountainous AfPak region and any person who is racialized as being from the mysterious/terrorist region. Centrally, the racialization of Pashtun people extends onto the cavernous, mountainous environment in which they live

in AfPak. Pashtun people—who have lived among the mountainous terrains between and within Afghanistan/Pakistan for hundreds of years, with a cultural system dating as far back as 5,000 years—are racialized as terrorist jihadists, backward, and indistinguishable from one another or from the Taliban (Abbas 2014; Jalal 2008; Siddique 2014). The collapsing of Pashtun tribal peoples with the Taliban and the inherent association of the mountainous region as dangerous/terrorist did not begin with the recent massive aerial bombardments, including drone strikes in the region, but undergirded the earlier military efforts by the Indian and British armies to counteract tribal unrest during the British occupation between 1919 and 1939 (Leake 2013; Williams 2013).

Importantly, such collapsing constructs a singular and easily identifiable enemy, one that Puar and Rai term the "monster, terrorist, fag" which "marks off a figure, Osama bin Laden, or a government, the Taliban, as the opposite of all that is just, human, and good" (Puar and Rai 2002, 118). Additionally, the collapsing has also historically benefitted Pakistan and India in moments of identity fluctuation and panic such as the British colonial occupation, the Partition, and the subsequent battles to differentiate and solidify national identities (Williams 2013; Menon and Bhasin 1998; Khan 2007). The ongoing collapsing of the different militarized histories/identities/ethnicities continues the erasure of the multiply complex histories of Pashtun tribal groups in the AfPak region.

Crucially, the process of racializing the mountainous space is simultaneously a process of racialized gendering that naturalizes men's existence while erasing women's existence within the imaginaries of public space. Despatialization is a concept I use to describe the gendered and racialized erasure of women's existence in AfPak. As I describe in chapter one, despatialization is a term drawn from Lowe's argument that European

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liberalism creates definitions of man, human, and freedom that simultaneously marks subjects, such as Muslim women, as atemporal and aspatial. In this chapter, I use despatialization to name the purposeful ways through which various military and colonial powers struggling to control the unruly AfPak region strategically erase women from their everyday inhabitations of space and place. Despatialization depends upon constructing the women as silently oppressed Muslim women exclusively relegated to their homes. Asma Paracha's editorial below, published in 2003 in the Pakistani newspaper, Tribune, illuminates the entanglements between racialized and gendered mountainous space that enable the erasure and narrative consumption of her home, her community, and herself:

> I remember it so vividly… The people were full of life and the weather was perfect. Nature was kind to Razmak; it was blessed with pure beauty, fresh vegetables, fruit and milk. Lunch in the summer was incomplete without a jug of lassi (yoghurt drink) with excessive amounts of butter swimming in it. Everything was in perfect harmony. Oh, the good ol' days!
> […]
> Long gone are the days when teachers and students used to walk to and back from college in peace; long gone are the days when the college existed. The ongoing missile attacks by the Taliban and the uncalled for occupation by the army caused this chapter of my life to close. And just like that, this memory fades …" (Paracha 2013)

A computer engineer from the National University of Sciences and Technology, Paracha's editorial is a counternarrative to stories of oppressed Muslim women living under intense forms of patriarchal subordination. Paracha writes of fading memories, pre-War on Terror patterns of movement across space now heavily militarized and restricted across tribe, gender, ethnicity, military occupation and/or bombings. She produces a narrative about gendered lived experience in space all the while speaking from a gendered and racialized perspective often erased, co-opted, and/or minimized in its importance.

This chapter contends with the conflation of histories and processes of gendering/racialization that fuel the co-optation, erasure, and consumption of narratives similar to Paracha's. At the same time, one of the tensions I hold constant in the chapter is between the material and imaginary lives, geographies, and histories of the AfPak border region. This tension is important as I focus less on the production of identities and more on the production of racialized and gendered mountainous space. My focus is motivated by an urgency to conceptualize space in hyper-militarized environments as co-producing the (im)possibility of women's lives, bodies, stories, and geographies. As Katherine McKittrick argues in her analysis of Black women's geographies, one of the main projects of radical geography is to counteract the assumption of transparent space by showing how space is consciously produced and re-produced. In particular, men's embodied narratives are consistently presumed as geographically relevant while gendered narratives are relegated to ungeographic private realms (McKittrick 2006).

This chapter is in conversation with scholars of critical data studies and feminist science and technology studies scholars who argue that the collection, analysis, and interpretation of data and technology is never isolated from systems of white supremacy, anti-Blackness, and coloniality (Benjamin 2018; Umoja 2019; Vora and Atanasoski 2019). As Sandowski argues, datafied knowledge is not just accumulated from multiple sources, it is often extracted without regard for consent or compensation (2019). For Sandowski, the framing of data as a commodity open for exploitation fails to encompass how "datafication takes shape as a political economic regime driven by the logic of perpetual (data) capital accumulation and circulation" (2019). While Sandowski's argument about data as capital rather than commodity is crucial for placing the circulation and accumulation of militarized

data technologies, it does not address the fact that archival and datafied circulation of Muslim women as passive victims also depends upon erasing them from space and place. As Wilcox argues in her analysis of drone warfare and embodiment, "drone warfare reproduces gendered and racialized bodies that enable a necropolitics of massacre mediated through algorithms" (Wilcox 2016). My analysis builds upon the work of critical data and algorithm studies scholars who trace the impact of datafication, arguing that datafication must be seen as a historical process that racializes and genders space and place.

I link the histories of gendered space and place that haunt data sets from the British aerial bombardments of 1923 in the frontier region to the drone strikes from the War on Terror after 9/11. While the purpose of all contemporary forms of data collection is to gain insight from various types of "actionable data," which ranges from agencies selling consumer data to firms that analyze and interpret the sellability of items to data that tracks a person's movements, purchases, I question the important role that gendered contexts of space and place have always reflected on the dataset and information more broadly collected, sorted, and ordered with a purpose of knowing the border AfPak region.

This dissertation argues that militarized data technologies, such as datasets created to connect across other data on religion, the reconnaissance and bombing technology of aerial policing, crime mapping of Muslim communities after 9/11, construct gendered Islamophobia central to Big Data simultaneously erase Muslim women historically and contemporarily from space and place. In the first chapter, I outlined the ease with which gender and Muslim women are erased from space and place to create datasets on religious minorities. I contrasted the erasure by reading across gendered data artefacts—the brief

hints and mentions of Ahmadi women in news articles and humanitarian reports as reading. In this chapter, I argue that datafication constructs Muslim women as passive victims across archival records of aerial policing in British India that is then mirrored in contemporary datafied ways of erasing Muslim women from space and place. In particular, I argue aerial control is central to the process of datafication and building Muslim women as gendered data artefacts.

In this chapter, I trace how imaginative geographies played an important role in European colonial and imperial conquests of land and labor. In Orientalism, Edward Said explains the concept of imaginative geography as both about the figurative use of geography in defining the self/Other of the Orient/Occident and the European colonial/imperial erasure of emotional and physical attachment to space and practices of place-making in colonial contexts (Said 1978: 167, 168). As Said writes, "there is no doubt that imaginative geography and history help the mind to intensify its own sense of itself by dramatizing the distance and difference between what is close to it and what is far away" (Said 1978, 168). Yet, as Anne McClintock writes in Imperial Leather, exploring and conquering the "imperial unknown" is an inherently gendered process: "As European men crossed the dangerous thresholds of their known worlds, they ritualistically feminized borders and boundaries. Female figures were planted like fetishes at the ambiguous points of contact, at the borders and orifices of the contest zone...Cartographers filled the blank seas of their maps with mermaid and sirens…. In myriad ways, women served as mediated and threshold figures by means of which men oriented themselves in space, as agents of power and agents of knowledge" (McClintock 1995, 24). McClintock's detailing of how central gendered ideologies were to understanding and placing colonial encounters with the

Other enumerates how the imaginative and figurative points of contact between Western and non-Western bodies and narratives are always a racialized and gendered geographic project.

As I write with and against the archives, I draw on feminist historiographical methods to navigate and reveal the harmful erasures/reproductions of racialized/gendered power dynamics inherent in writing about AfPak. As sociologist Avery Gordon explains her method of haunting: "it is…about how to write what can represent that haunting reminder, what can represent systematic injury and the remarkable lives made in the wake of the making of our social world" (Gordon 24-25). Gordon turns to fiction because it "teaches us, through imaginative design, what we need to know but cannot quite get access to with our given rules of method and apprehension of access" (Gordon 25).

In the following sections, I begin by racializing and gendering the concept of "actionable data." Then, I argue that the gendered imaginative geographies of Muslim women in the 1923 archives of aerial policing strategically construct them as passive victims, which is central to the use and development of the militarized data technology of aerial policing. In the end, I read across instances of gendered data artefacts to argue that Muslim women are always creating complex inhabitations of space and place not containable by the archival and eventual datafied constructions of their everyday lives.

Gendered Datafication, Histories of Gendered Mountainous Space, and Aerial Policing

On May 11, 2011, one of the most high-profile operations of data analysts and intelligence specialists came to fruition in the killing of Osama Bin Laden through identifying a courier who eventually led them to Bin Laden. Specifically lauded were a group of white women analysts named "the sisterhood" who were later profiled in the HBO documentary Manhunt and represented through actress Jessica Chastain in the Oscar winning movie Zero Dark Thirty. Mostly shown sitting in conference rooms and offices and cubicles with images and information about potential "targets" littered over desks and walls, the women fulfilled a gendered fantasy of finding terrorists while simultaneously portraying data as analogous to the everyday lives and actions of the men marked as terrorists. As Nada Bakos, a senior targeting analyst and member of the "sisterhood" states in an interview with NBC, "After 9-11," the women working for her vowed that "you're not going to do that to me again […] we're aggressive in the protection of our children" (Windren 2013, 1).

The task of analyzing and ordering data, then, was at once about constructing the gendered selfhood of the white women in the sisterhood against the terrifying brown masculinity of racialized Muslim men. Many of them worked on counterterrorism predating 9/11 with the specific goal of capturing Osama Bin Laden (Ferran 2013). Noted by news articles, documentaries, and movies as fiercely passionate about their work, their contributions were seen as a notable moment for gender equality since their "sisterhood" led to a momentous series of captures/kills for U.S. Intelligence agencies in the War on Terror. The goal of the analysts and intelligence officers is creating what Nada Bakos calls "actionable data"—"data sought to tell a story and act as a basis for decision to capture and/or kill leaders in terrorist cells.

The effect of militaristic designations such as "actionable data" is that they erase the process of creating stories from data. As Maja Zehfuss argues, such metaphors of precision contained within language such as "actionable data" or "precision kills" inherently position the militaristic act of killing as justifiably ethical and the targets as objectively dangerous (Zehfuss 2011). With Osama Bin Laden, the chain of "data" that led to his capture and killing included the use of torture to obtain information, cell towers to triangulate cell phone signals, satellite imagery to assess the geothermal signatures inside the mansion, and finally the use of a Secure Electronic Enrollment Kit or SEEK II to identify his body through the device's built-in iris-scan, fingerprinting, and facial recognition technology. Yet, even with the final confirmation of data through the SEEK II device, the SEAL team members who led the operation were required to obtain a final verbal confirmation from someone who identified the body as belonging to Osama Bin Laden.

At that moment, the SEAL team member demanded Amal, Osama's youngest wife, to confirm his identity. The focus on Amal's verbal confirmation, despite the multiple datafied reassurances, reveals not only the fear of misrecognition but also the importance of Muslim women, represented without the context of history, space and place, to the process of datafication and actionable data. Unlike Chris Anderson's argument that Big Data will eventually cease the need for theory because all context is quantifiable, the gendered act of recognizing context to identify Osama Bin Laden confirms that the presumed passivity and victimhood of Muslim women is necessary for datafication (Wired 2014). In this chapter, I argue that actionable data is inextricable from gendered and racialized histories of mountainous space where Muslim women are passive victims and

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white women are active conquerors of space and place. While saving Muslim women has been a well-recorded justification for the war in Afghanistan, the relationship between white women, Muslim women, and the process of gendered datafication defines the imaginative and material place that gender occupies within the archive to data cycle. In the end, I argue that Muslim women exist as data artefacts haunting both the archival and datafied representations of them as passive victims.

The sisterhood's work in creating "actionable data" is inseparable from the gendering of the mountainous and cavernous spaces of Northwest Pakistan. When data analysts create actionable data from datafied knowledge gathered and analyzed from afar and from above, they cement racialized and gendered imaginaries of space within data. I argue that the collection of data and creation of "actionable data" is a racialized and gendered project of datafication that has fueled historical and contemporary forms of targeting the Afghanistan-Pakistan borderland (AfPak) from above, through the British colonial project of aerial control and the contemporary Pakistani and American military drone strikes.

Both white and Muslim women's narratives of inhabiting space and place in AfPak show a critical way to map women's geographies. As Gordon writes, the act of following the haunted dialectic of absence and presence of ghosts leads to sometimes "writing ghost stories, stories that not only repair representational mistakes, but also strive to understand the conditions under which a memory was produced in the first place, toward a countermemory, for the future" (Gordon 2008, 22). For Gordon, then, writing ghost stories not only plays with the dialectic of haunting and absence but also creates the possibilities of different futures/histories/pasts/memories. In juxtaposing the archival presence of white

English women with the archival absence of Muslim women, I show the different ways that women's racialized geographies emerge. The archival stories of geographic protest, inhabitation, and everyday living in mountainous space becomes narratively and representationally different because of material gendered differences.

Aerial Policing

Immediately following World War I, the depleted British armed forces grew increasingly alarmed at the reported uprisings in several of their colonies: Somaliland, Iraq (then known as Mesopotamia), Palestine, and the AfPak borderland region (then known as part of the Northwest Frontier Province). The newly formed and recently empowered Royal Air Force led by Hugh Trenchard argued that their branch of the armed forces should take charge and implement a more cost-effective way of controlling anti-colonial unrest: aerial policing. As international historian Tami Biddle argues, "air control was, very simply, using aircraft to threaten, intimidate, and thereby 'control' native populations in British colonial territories" (Biddle 2002, 82). Beyond threatening, intimidating, and controlling tribal or native groups across British colonies, air control or aerial policing is a part of the process of gendered datafication that cements and creates imaginative and material geographies and the categories of gender and race contained within them. Historian Michael Paris explained why aerial control was desirable for then Prime Minister Winston Churchill: "aviation offered a means of rapid reconnaissance over hostile terrain, otherwise impassable or slow to search by conventional forces. The air offered a swift highway for communication between headquarters and outposts; could carry the latest

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information quickly across vast distances, could locate enemy troops or rebellious subjects, and warn ground forces of ambushes or geographical hazards" (Paris 1989, 210). In other words, aerial control or aerial policing permits the greatest imaginative control over horizontal landscape and vertical space, allowing for quick succession of mass bombs while allowing the British RAF to imagine a greater sense of control over vast distances, geographies.

While historian Priya Satia argues that "the technological innovations of drone warfare distract from critical continuities with earlier uses of air power," I argue that gendered datafication intertwines with gendered space across archives and data to create important ways for Muslim women to exist beyond passive victims in the stories of aerial control, drones, and the process of datafication (Satia 2009, 1). As the policy of aerial control developed, the work of imaginative geographies became crucial in not only defining and delineating the enemy from above but also creating new parameters for defining the "self" of Britain (Gregory 2009; Said 1989). While historians have often evaluated the efficacy and points of connection from aerial control and geographers and critical media studies scholars have used aerial control as an important way of connecting the role of vertical space between satellites feeds of AfPak, my approach centers how gendered datafication centrally defines the impact of aerial control as a spatial and historical act (Parks 2016; Gregory 2011). Gender here reveals the extent to which the "self" of Britain always depends upon controlling and imagining gendered narratives of space and place. At the same time, gender is central to the histories of space and place in which Muslim women are despatialized as passive victims and white women, such as the CIA sisterhood, are seen as actively inhabiting and controlling space. In this section, I

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move beyond the definition of gender as biological or cultural and instead use space and place to highlight how militarism and colonialism in the same space both require ideologies of gender that reflect the fissures, continuities, and connections of gender across time. I argue that gendered inhabitations of mountainous space endure across the processes of archival datafication, time, colonialism, and militarism to create white women as actively inhabiting and Muslim women as passive victims.

In the following, I follow the implementation and reception of aerial control through British RAF and newspaper archives. I read the archives using a feminist historiographical lens for the brief mentions, hints, and hauntings of gender. I argue that following the archival construction of gendered place allows for a greater understanding of how datafication builds on the same histories of passively victimizing Muslim women. I argue that both white women and Muslim women occupy a key place in the development and use of aerial control's data technologies. I begin by following the creation of gender as a category through the 1923 panic in Britain through British newspapers. I also follow the necessary invention of Muslim women as passive victims to the use of aerial control.

Gendering Datafication of 1923 Aerial Policing Archives

In 1923, the Royal Air Force implemented aerial control as a form of data collection through reconnaissance missions and as a looming punishment for the AfPak border region for four years. The British public, the Royal Air Force officers, and scholars have debated the uses, structure, justifications for aerial control in AfPak (Satia 2003; Biddles 2001). I argue that gendered imaginaries of space and place where the danger to

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white English women is imagined as the retaliation for danger to Muslim women situates gender as the central concern of implementing aerial policing policies and developing boundaries between ethical and unethical uses of aerial policing.

Here, gendered space fundamentally undergirds the use, structure, and justifications for aerial policing. I read for the central role of gendered space throughout the AfPak region as crucially limiting and enabling the use of aircraft for aerial control operations. While gendered space is a category that upholds the coloniality of British/Indian relations, it also creates panic amongst the RAF because gender exists in excess of the world built through newspapers and archives. With Muslim women, I argue their brief mentions within this panic create a different gendered world in which Muslim women haunt the data created and gathered from aerial policing.

1923 was a significant year for aerial policing for two reasons: first, after four years of aerial policing missions, in the first four months of 1923, " the Royal Air Force …[was]... used on a scale and for a duration that has not been done before on the Frontier" (AIR 5/248, 6). Secondly, the gendered imaginaries of space and place revealed themselves most clearly because of the increase in scale and intensity of aerial policing. Gender was a central feature of aerial policing because it defined the barrier between ethical, surgical, and precise use of the militarized data technology of aerial policing and mass, unregulated, indiscriminate bombing and surveillance practices. Because of this struggle to define ethical and precise action carried through gender, the meaning of gender as a contestatory, contextual practice tied inextricably to space and place becomes all the more apparent. In other words, gender is not only important for how it defines ethical boundaries of aerial policing, but also for how it differently ties white women and Muslim

women to space and place, namely by placing white women as actively conquering the "uninhabitable" mountainous space and Muslim women as passive victims.

The gendered world built for Muslim women in the archives of aerial policing defines Muslim women's roles in space and place through brief and passive mentions. Using a feminist historiographical method of reading for the hauntings, traces, and brief mentions of Muslim women (Spivak 1990; Gordon 2000) alongside the feminist critique of space and place that geographies are never just transparent, but rather carefully crafted to seem that way (McKittrick 2010), I read the mentions of Muslim women for gendered imaginative geographies and as gendered data artefacts, both revealing the way Muslim women are strategically constructed as passive over time in archives and in data. I additionally read the brief mentions to spatialize Muslim women as actively building worlds for themselves, their families, their communities, and always existing in excess of the limited spatial imaginations of them.

After the four months of aerial policing, the gendered imaginative geography of Muslim women was as elusive as the material geography of AfPak. As General George Matheson stated, "those people occupy an inaccessible waterless tract of broken hills" (AIR 5/248, 2A). The imagination of AfPak as containing a series of uninhabitable, inaccessible pieces of mountainous, cavernous spaces racializes landscape to be a reason for deploying aerial policing, but also for creating the actual inhabitation of the mountainous, cavernous space as something itself unusual or unthinkable. The first real mention of Muslim women in the archives of aerial policing occurred during the first attempt after the four months of bombing to create a comprehensive guide to aerial policing: "The tribesmen are admittedly a barbarous and vindictive enemy, but they are our

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own subjects whose territory must sooner or later be incorporated in British India. It is therefore in our own interests not to embitter their feelings towards us by any wanton use of a weapon which must to a certain extent endanger their women and children" (AIR 5/248, 25A).

Here, much like the work of post-9/11 technoliberalism transforming Muslim women into datapoints to connect across datasets, the imaginative space of women here is rendered material only in the moment they are simultaneously marked as disposable. In other words, the imaginative geographies of women are immediately defined within proximity to men of the region and they become objects either property of the men in their communities or objects to "endanger" through air strikes. The women here are only imagined as existing within their communities in so far as the proximity to men and danger of retaliation by the tribal communities.

The extractive information gathered by the militarized data technology of aerial policing continually positions Muslim women as passive while relying on their passivity as central to imaginations of space and place. As critical data studies scholars m.c. eilish argue, the value of Big Data is less the size of the data but more the carefully constructed ability to connect across datasets to increase knowledge of an item, place, person, etc. (Eilish 2017). I argue that the passive victimization of Muslim women haunts gendered imaginative geographies from archives to datasets. Muslim women's lives become strategically necessary to using and developing aerial policing because they are passively datafied as victims. As Avery Gordon writes about the concept of haunting: "how to understand and write evocatively about some of the ways that modern forms of dispossession, exploitation, and regression concretely impact the lives of the people most

affected by them and impact our shared conditions of living?" (Gordon 1, 2011). In this chapter, I rephrase this question to how to understand the contemporary place of Muslim women as as datafied objects through first understanding the strategic codification of Muslim women as passive victims.

Beyond brief passive mentions, Muslim women also came to occupy a central space in the imaginaries of the British public and armed forces because the four months of unprecedented use of aerial policing coincided with the murder of two white British women and the kidnapping of one British girl. Both the British public and several leaders of the British armed forces expressed concern with the role of aerial policing within these attacks. As the Secretary of State for India to the Governor General of India Air Council states in a letter: "one theory to which publicity has been given, and for which the authority of local knowledge is claimed, is that the frequent use of aeroplanes for what amounts to police rather than military work, and the resultant indiscriminate bombing of men, women, children in tribal country, is responsible for the adoption by the tribesmen of what in their eyes a policy of retaliation." (AIR 5/248, 14A)

Here, the Secretary of State for India defines the policy of aerial policing as policing rather than careful and precise military bombing. In other words, the Secretary is naming how the use of overhead bombing is being understood by the British public as indiscriminate bombing that can only logically lead to retaliatory actions by tribesmen. Again, the Secretary of State for India defines here women and children solely as objects of bombing whereas "tribesmen" are actively materialized as planning for retaliatory action against the bombing. The gendered imaginative geographies of men continue to dominate the discussion of aerial policy as do the imaginations of retaliation.

In the months following the kidnapping and murder of the English women, the branches of British government, both in India and in Britain disagreed vehemently about the role of aerial policing in the kidnappings and murder. Gender is central to these competing ideas of imaginative geographies because the evaluation of aerial policing and its consequences is contingent on the impact on women. Both the British press and the India Office begin to suggest that the attacks on white English women are in retaliation for "indiscriminate" bombing. As the India Office argues, "the indiscriminate nature of bombing necessarily inflicts casualties among tribal womenfolk and children…[which]... predisposes them to retaliation at the first opportunity" (AIR 5/248, 24A). By continuously placing women and children in the role of objects or property, the Air Office and Air Staff both depend upon a symbolic order of meaning where women are necessarily passive and cannot actively inhabit space, let alone define gendered inhabitations of space and place separate from men in their communities. Meanwhile, the Air Staff located in India argues that "we have adopted a policy of issuing definite warning before air bombardment is undertaken, it may be expected that casualties among tribesmen (including women and children) will decrease; in fact the extent of the casualties among women and children will be entirely in the hands of the tribesmen themselves" (AIR 5/248, 24A). Here, the gendered datafication of women reveals how women must necessarily be malleable objects of their own communities and of aerial control. While on the one hand British Air Office is arguing that aerial policing will necessarily harm women and children, the Air Staff here argues that warnings should decrease the harm to women and children, unless the tribesmen decide to save the women and children of their community. The datafication of women here then depends upon their continued objectification to justify the racialization of

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tribesmen as barbaric and simultaneously to support or justify the policies of aerial policing.

By arguing that datafication is a process of cementing histories of inhabiting space and place, the role of Muslim women to militarized data technologies, here through aerial policing, emerges as more than just passively relational, but rather highlights how the supposed passivity in space and place of Muslim women has always been strategically necessary for the use and development of militarized data technologies. Gendered imaginaries of space and place where the danger to white English women is imagined as the retaliation for danger to Muslim women situates gender and the imagination of space and place in relation to gender as the central concern of implementing aerial policing policies and developing boundaries between ethical and unethical uses of aerial policing. Additionally, the role of aerial policing here moves beyond just reflecting or recording the realities of the communities and people who live in the border region between modern-day Afghanistan and Pakistan. Instead, as critical data studies scholars Safiya Noble and Ruha Benjamin argue, the data gathered and information solidified through the process of rendering gender visible is a process of creating a contextual definition of gender in space and place, not just reflecting transparent inhabitation of space and place (Benjamin 2019; Noble 2019). Beyond their key argument that data creates identity markers rather than reflects them, Benjamin and Noble also echo a central argument in Katherine McKittrick's work that the transparency of space is a process of erasing the power dynamics of racialized and gendered spaces (2010). Here, the strategic despatialization of women from the tribal areas is necessary to the imagination of aerial policing and the imagination of tribesmen as inherently illogical.

At the same time, the continuous despatialization of women in AfPak depends upon the contrasting portrayal of gender with white English women around the same time. In her analysis of how white English women performed militarized femininity in the context of visiting their husbands in British India, Mary Procida connects gendered inhabitations of space and place for white women and colonial power dynamics (Procida 2000). Procida argues that militarized femininity allowed white English women to adopt a different relationship with gender that normalized shooting guns while visiting their husbands in British India, actions otherwise prohibited in England (Procida 2000). Here, I argue that the use of militarized data technologies, from aerial policing to drones, requires Muslim women to be passive victims within archives and datasets. With white English women, the gendered imaginative geographies built for them through British archives and newspapers emphasize their ability to overcome and endure the mountainous, cavernous, hilly geography of the AfPak border region, which become especially important as I trace several important gendered imaginaries central to the kidnapping of Mollie Ellis. As one British newspaper account states of the tribesmen who kidnapped Mollie Ellis: "the gang traveled over solitary wastes and deserted hills, trusting no one. On the night of the 17th Ajab's dwelling was reached, after a journey of seventy-five miles in the wild mountainous country" ("Rescue of Molly Ellis"). In this account, the gendered imaginative geography created for the British public is tied to the material landscape through which Mollie's kidnapping happens. The "wild" mountainous country, "deserted" hills, and "solitary wastes" create a gendered imaginative space that fails to situate Mollie's capture within the context of colonialism and militarism, emphasizing instead her bravery in surviving capture despite the uninhabitable geography. The gendered world built through the

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retellings of Mollie's story in the British press and the eventual use of her story to defend the four months of aerial policing centers the gendered story of brave white women conquering wild mountainous space, completely erasing and despatializing the Muslim women who live there. The gendered imaginative geography of white women conquering mountainous space becomes even more apparent because Mollie Ellis' eventual rescue depends upon Mrs. Starr, a white English nurse who was born in the "danger zone of North-West Frontier" ("Rescue of Mollie Ellis").

The eventual existence of the CIA sisterhood consistently described through their heroic data analyst feat of capturing Bin Laden is inseparable from the history of imagined and material space in which Mrs. Starr's gendered rescue literally fulfills one of the main goals stated by CIA senior targeting analyst, Nada Bakos, "to protect our children." The imaginative gendered geography of both, Mrs. Starr's rescue of Mollie Ellis, and the CIA sisterhood's actionable data, depends upon cementing a datafied and archival representation of Muslim women as passive victims.

Reading Across Gendered Data Artefacts

Through the briefest mentions of Muslim women in the British press, another story haunts the agreed upon narrative of captured white women in retaliation for aerial policing. I argue that this narrative is a gendered data artefact haunting the official stories and creating a brief but vital understanding of how the process of datafication over time depends on manufacturing and repeating patterns of passive Muslim women. Gendered data artefacts disrupt this pattern and reveal the ideologically strategic necessity of arguing

that Muslim women are passive. I begin this section by contextualizing the gendered data artefact that troubles the representation of Muslim women as passive victim all the while revealing the representation is a strategy cemented over time through datafication. Then, I read across two gendered data artefacts from the AfPak region to show how gendered data artefacts trouble the easy definition of Muslim women as passive victim and highlight how Muslim women can never be contained within the process of datafication. The gendered data artefact exists as a brief mention within a British newspaper's retelling of the story. It mentions the reason for Ajab's kidnapping and murder scheme: "Miss Ellis was kidnapped by a cowardly ruffian who had been reviled by his mother and other women because he had surrendered rifles to the British" (April 20). In this brief mention, a competing analysis of gendered and racialized space and place emerges that deconstructs the assumption of Muslim women as passive victims of aerial policing and men in AfPak as naturally dangerous and vengeful. Instead, the gendered world built through this brief mention positions Muslim women, as active members of their community and of the space and pace of AfPak, collectively responded to colonialism, militarism, and the changing everyday conditions of their lives as a result of aerial policing. In this brief haunting mention, Muslim women immediately combat the seemingly transparent construction of their home space as one in which white women and men in their communities actively inhabit mountainous and cavernous spaces while Muslim women are passive recipients of colonialism, militarism, and their homespaces. Instead, Muslim women become the primary actors who themselves are struggling to define how to respond when Ajab committed an act of surrendering rifles to the British.

Reading for brief gendered data artefacts allows for building an alternative gendered world that deconstructs datafied narratives of Muslim women as passive victims in their own communities. Below, I show how reading across instances of gendered data artefacts across time and the space of AfPak creates another way to highlight the limits of archives and datasets in representing Muslim women. The gendered data artefacts across two time periods speak to the way that the gendered everyday lives of Muslim women are inextricably tied to space and place.

The first instance is a brief mention of Muslim women protesting the British soldiers who were approaching their community in modern day Waziristan. This mention is from a British soldier's memoir from 1865 of his mission in the Northwest Frontier Province. In his memoir, he writes about Muslim women north of Darwar, dressed in burqas, distracting British officers coming to their village by carrying and reciting the Quran. Here, Muslim women are beyond the passive representations created by the process of datafication from archives to datasets, actively using their bodies and knowledge of the mountainous space and the gendered possibility of protest to create a distraction long enough for their communities to escape confrontation with the soldiers.

I read this moment from 1865 alongside Asma Paracha's editorial from 2013 addressing the incessant drone strikes in the War on Terror that prevented her from inhabiting her home in Waziristan to reveal how brief mentions of Muslim women's placemaking practices reveal more about gender than archival and datafied representations. In an editorial in the Tribune, a Pakistani magazine's website, Asma Paracha writes of her thirty years in Razmak, historicizing how the military had created the Razmak base prior to partition because the "favourable weather conditions and terrain that the valley had to offer

was useful for their military exercises" (Paracha 2013). The structures of desire that compelled British officers to find homes and training grounds in the "favorable" mountainscapes of Razmak also led to the "building of roads that pierced through the lofty mountains alongside springs boiling forth their salty water…[thereby]…transform[ing] Razmak into a beautiful hamlet with houses resembling those in the countryside of England. It can be said, without a doubt that Razmak was heaven on earth" (Paracha 2013). The construction of desirous landscape in the region was thus heavily reliant on the taming of the land and the mirroring of architecture to the ideals and imaginaries of leisure in Britain. At the same time, such taming and reconstructing of landscape literally tames and controls an otherwise unruly and dangerous landscape (Hauner 1981, 16). In the British imaginary, in taming the landscape, the British Raj created a ruse of control over the unruly mountainous region, which left to its own wild and wily outgrowth would foster resistant tribal leaders.

Reading against and with the archival absence of women by situating the haunting of Paracha's memories alongside the creative/subversive inhabitation of the Muslim women from 1858 renders visible different gendered practices of place-making. I read Paracha's writing as more than just memories: "Long gone are the days when teachers and students used to walk to and back from college in peace; long gone are the days when the college existed" (Paracha 2013). Paracha's memory provides a historical retelling of a space long constructed as backward and without educational opportunities to one in which possibilities of education had been disrupted in response to shifts in local power dynamics.

My reading of Paracha's narrative is only possible by first noting the work of imaginative geographies in constructing the AFPak region as mysterious, barbaric, and

backward. Colonizing missions as well as military operations in AFPak have also relied on

gendered imaginaries, particularly the ideology of saving Muslim women. The apparatuses

of patriarchy and imperialism also erase ethnic, racial, and religious differences in AFPak.

The critical intellectual tools that I gather here allow me to read the women's narratives as

less about representation and more about the practice of gendered spatializing in a space in

which women from AFPak have been all but spatially erased.

CHAPTER THREE: FICTIONS OF WORLD-BUILDING THROUGH DATABASES ON RELIGION

It had been over thirty years of absence for both of my parents when we visited Rabwah in 2017, the last Ahmadi-majority town in Pakistan. My parents had dreamt of retiring to Rabwah, a town of about 9 square miles originally purchased in the newly formed Pakistan for 12,000 rupees. In 1998, the 95% majority Ahmadi town of Rabwah (meaning "elevated space" in Arabic) would be forcibly renamed after the Chenab river without the consent or input of the Ahmadi residents. It took us two-and-a-half hours by road to get to Rabwah from Lahore, the largest city in Pakistan. As we traveled across multiple plane trips and the car trip from Lahore, my mother would recall spending her summers in Rabwah in the 1970s while staying with her grandparents, playing outside with her cousins, aunts, and uncles while her father left to catch fish from the river named Chenab. She would quietly remember her uncles playing pranks on her and her younger brothers, and walking to the main row of shops, Gol Bazaar or round shops, to eat from Mannan's kulfi shop. When we arrived in Rabwah, my mother wanted to find the apartment my great grandmother used to rent there; our family had never owned any property in Pakistan. We spent hours asking anyone we could find to help us find her former apartment, but we were never able to locate the place.

While my mother's memories of existing in space, place, and time reveal the crucial workings of gender, race, and religion for a religious community under siege in their homeland, these memories have been continually erased and "cleaned" in the datasets that comprise global data on religion. In this chapter, I consider the relationship between the technoliberal desire to track, sort, and collect global data on religion and the increasing

focus of the U.S. War on Terror on Pakistan, with the use of "saving Muslim women" as a central reasoning for invading both Pakistan and Afghanistan (Abu-Lughod 2008). Specifically, I use the coding guides and methods of the Religion and State Minorities dataset (RASM), the most comprehensive dataset chronicling the relationship between religious minorities and the state, within the context of tracking "Muslim women" in archival sources. The RASM constructed a different world-building story about the Ahmadiyya Community from the one in my mother's memories. In the data-collecting initiative of RASM, my mother's stories, and others like hers, are divorced from their context —instances of state, interpersonal, or intergroup violence and harassment — and archived as data, leaving place, time, and identity behind.

This chapter argues that captured knowledge about the Ahmadiyya Community in the RASM, as well as other practices of archiving, is created alongside two related effects of datafication: the production of religious persecution through the devaluation of gender and the production of stories by Ahmadi women as data artefacts. Datafication is the transformation of everyday life into data, a process of capture that incorporates easily accessible archives, digital repositories such as social media mentions, and programs that crawl the web collecting, sorting, and labeling data in discrete columns and rows. Processes of datafication — including the work of large datasets with terabytes of data coded, labeled, and organized according to a methodological purpose — are becoming central to predicting future use and action (Dourish and Cruz 2018). Therefore, the process of datafication must be read alongside the work of critical geography to read gender beyond recreations of public/private space, and towards understanding the co-construction of gender, space, and place through storytelling, dancing, and sharing memories. My

mother's memories, hopes, and experiences in Rabwah anchor my analysis of how Muslim women exist in the processes of datafication. I argue that datafication continues the pattern of devaluing Ahmadi women in space and place by further separating the stories that inextricably tie race, gender, space, and place to religion and persecution from their context.

Through analysis of datafication and its relationship with practices of British, Indian, and Ahmadiyya archives, media and humanitarian reports, this chapter continues my examination of the transnational uses of militarized data technologies and their role in placing "terrorist," displaced, outlawed Muslim women. It builds on the arguments of the first two chapters that track how biometric technologies produce "Muslim women" through the use of reconnaissance aircraft to racialize and gender "terrorist" mountainous/cavernous space in the semi-autonomous region of Northwest Pakistan and post-9/11 "Muslim mapping" schemes led by police departments in New York and Los Angeles. Conceptualizing militarized data technologies as gendered technologies, the chapter investigates the production of Muslim women through imaginative patterns of Big Data and everyday practices of carceral surveillance. It shows how the use of data relies upon extracting gendered and racialized narratives from their context in Rabwah and Qadian, thereby erasing the ways in which the outlawed Ahmadi Muslim women actively inhabit space and place. This argument—that the production of datafied and archival information about Muslim women is divorced from gendered, racialized, and sexualized contexts—builds on and contributes to feminist science studies, critical data/algorithm studies, feminist critiques of historiography, and critical geography.

Feminist science studies scholars have long deconstructed the claim of disembodied objectivity and the unquestioned gendered and racialized universalisms of science and technology (Harding 1990; Martin 1999; Haraway 2000; Hammonds 1999; Schiebinger 1999; Fausto-Sterling 2001). As such, it has been crucial in the recently developed fields of critical data/algorithm studies, positing that the redeployment of racial science and notions of disembodied objectivity informs not only the research questions but also the methods of collecting and sorting data (O'Neil 2016; Benjamin 2019; Eubanks 2019; Noble 2019; D'Ignazio and Klein 2020).

In the field of critical data and algorithm studies, danah boyd and Kate Crawford argue that the value of Big Data comes less from its size but rather "from the patterns derived by making connections between pieces of data, about an individual, about individuals in relation to others, about groups of people, or simply about the structure of information itself" (boyd and Crawford 2011, 2). The value of Big Data, then, is the ability to constantly manufacture information that can ultimately connect within and across multiple datasets. The RASM and other datasets that track religious minorities consistently treat media, humanitarian, and academic reports as reflecting rather than producing reality about racialized and gendered worlds. Critical feminist historiography thus becomes crucial for understanding the historical process that enables the existence of datasets such as the RASM. While historiographical critique and analysis has shown how archives both invisibilize and repeat racialized and classed structures of power, (Trouillot 1995; Guha 1983; Chatterjee 1986; Chakrabarty 1989), feminist historiographical analysis has centered ways of engaging with archives that speak to the erasure but also the possibility inherent within brief mentions of gender: the gendered trace (Spivak 1992), critical fabulation

(Hartman 2008; Haley 2016), and hauntings (Gordon 2000). However, datafication of information moves beyond replicating the archives, as it produces knowledge completely divorced from any context, slicing and rearranging the data to create manufactured patterns in the dataset.

I begin this chapter by showing how the Religion and State Minorities Dataset creates its data points and how databases like the RASM are built to integrate with and across other datasets on religion through the process of datafication. Then, I continue with an analysis of two key reports that share the stated purpose of capturing the Ahmadiyya Community: a 1947 report by the Ahmadiyya community chronicling the harrowing months around partition and the forced relocation from their headquarters in India to Rabwah in Pakistan; and a 2007 report by British Parliamentarians intent on seeking proof of religious persecution in Rabwah to justify accepting asylees from the Ahmadiyya community. I argue that both reports attempt their world-building projects through the devaluation of gender. My use of "world-building" stems from feminist science fiction author N.K. Jemison's conceptualization of world-building as not only the act of creating micro and macro elements of a story, but also of making decisions about how to write characters, environments, and ultimately craft stories that reflect the power systems in their environment (Jemison 2019).

While the concept of world-building has been used across studies of graphic novels, video games, television shows, and film, I focus on the worlds built through marginalizing the role of gender in religion and persecution accomplished through datafication. Here, the act of world-building is crucial to data because data, archives, news, and humanitarian reports craft worlds they argue are reflections when in actuality they are

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fictive figures (Spivak 1993). As Jemison highlights, the act of world-building is most significant when the writer or, in this case, the data scientist, historian, journalist, or academic pretends the world they've created is based in something new without recognizing the systems of power that differentiate old and new. Jemison states, "people go into creating a world that is not like ours with their embedded assumptions about how our world works still firmly in place. So they end up creating our world but with tentacle sharks" (Jemison 2019).

In reading for the devaluation of gender and the simultaneous production of a genderless world of religion and persecution, I also read the reports for the gendered data artefacts that mark a different engagement with space and place beyond their function in archives and datasets (Spivak 1992; Trouillot 1995; Hartman 2008; Smith 2012; Haley 2017). Blurred images, data with incomputable characters, errant murmurs created in graph readings all represent forms of data artefacts, which are often removed through various practices of cleaning data because the information they create is deemed superfluous to the purpose of the device, reading, or dataset (Morgan 1999; Gregson and Garnett 2000; Kohl 2010). Here, I reconsider the meaning of data artefact as all the gendered placemaking cleaned away through not only the process of datafication, but also the process of writing about Muslim women at all. I argue that the very creation of datasets or collection of an archival document necessitates the homogenization and consumption of gendered data artefacts, and that data artefacts cannot be simply cleaned or incorporated in the archive-to-data cycle. Since data artefacts speak to the permanent limits of the process of capturing information, their existence reveals the sedimentation of power across race, space, gender, and data.

My use of a gendered data artefact is drawing from and placing in conversation

Vora and Atanasoski's concept of "dissident technologies" (2019); D'Ignazio and Klein's

concept of "counts" (2020); and Benjamin's concept "glitch" (2019). With "dissident

technological imaginaries," Vora and Atanasoski ask:

> "If the predominant fantasies of systemic social change in mainstream
> Euro-American public discourse dwell upon the techno-utopics of a world
> in which all of those who are already human and already subjects ascend
> into the realm of those whose lives are suppressed by "human-free" or
> "unmanned" technological infrastructures of service (whether in factories,
> in the military, or in the nursing home), then how do we think about the
> relationship of new technologies to possible fields of protest or action?"
> (2019, 23).

Vora and Atanasoski thus juxtapose the harmful racial project recapitulated within

"technoliberal capitalist" imaginaries and recognize that competing forms of imaginaries

are always challenging and revealing the false desires at the core of "techno-utopias"

(2019). With my use of a gendered data artefact, I take seriously the call to undo the

"techno-utopia" presented within Big Data initiatives that represent hundreds of thousands

of data points as truth. Instead, I show how the gendered data artefact provides a form of

"dissident technological imaginary" that pushes against the limits of Big Data by

highlighting how the exclusion of "gender" as an essential category of analysis within the

dataset is not an anomaly, but rather a core part of the organizing logics behind the RASM.

Much like how Ruha Benjamin defines glitches, a gendered data artefact is "a kind

of signal of how the system operates—not an aberration but a form of evidence,

illuminating underlying flaws in a corrupted system" (2019, 80). While a "glitch", as

Benjamin theorizes it, is applicable across multiple contexts with technology, a gendered

data artefact is specifically applicable to use within Big Data because it focuses upon the

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aberrant behavior of singular pieces of data. My use of a gendered data artefact is attuned to what is specifically foreclosed when data is repetitively categorized to statically define identity or, as D'Ignazio and Klein theorize with counting in data: "what is counted—like being a man or a woman—often becomes the basis for policymaking and resource allocation. By contrast, what is not counted—like being nonbinary—becomes invisible" (2020). Therefore, a gendered data artefact does not aim to fix the problems within the dataset to create a better dataset. Instead, it reveals the techno-liberal capitalist imaginaries and challenges us to think of a glitch as a core element of the data rather than a soon-to-be-fixed bug.

As I read across media, archival, and humanitarian reports documenting the Ahmadiyya Community in their two headquarters of Qadian, India, and Rabwah, Pakistan, I use data artefacts as a feminist historiographical and technological tool that speaks to the sedimentation of gender, race, and space within datafication and archiving. In my final section, I read across two stories of Ahmadi women in news stories and community retellings. I consider the place of storytelling as not only revealing how gendered data artefacts unearth the limits of the archive and datafication, but also centering the worlds built when gendered data artefacts are placed in conversation with one another.

Datafication and the Religion and State Minorities Database

The Religion and State Minorities Dataset (RASM) is one of the only datasets available that details numerous variables defining relationships between governments and state/minority religious groups. The most recent iteration of the RASM covers 771

minority groups and 183 countries, spanning the years 1990-2014. The RASM markets itself as a way to aggregate and study the differential treatment of religious and state minorities. The RASM houses more than 175,000 data points with the caveat that a group must be .25% of the population of the state to be counted. It creates its own proprietary method with different categories of questions to assess academic, historical, and news articles to rate and score a country's treatment of a specific minority group on a scale ranging from 1-3 marking the severity of oppression. Constructing questions on treatment and oppression from graffiti to concerted attacks against a minority-owned business, the RASM lauds itself as the most comprehensive dataset on religious and state minorities (Fox 2011). The hosting platform for the RASM, The Association of Religious Data Archives (ARDA), asks the user to agree to several conditions before being allowed to download the data, including: "Association of Religion Data Archives was established to preserve data, to improve access and increase the use of data, and to allow comparisons across data files" (ARDA 2021). The existence of the RASM, then, must be understood as a dataset that immediately allows and asks the user to trust upon its ability to connect across other datasets and provide datafied information. In this chapter, I consider the creation of data within one database as well as RASM's reliance on archival, news, and humanitarian sources to define knowledge about minority communities that simultaneously depends upon erasure of gendered practices of placemaking.

Under the guise of objective quantitative analyses, political scientists and economists have used RASM data to evaluate the role of religious minority discrimination in Samuel Huntington's infamous "clash of civilizations" theory (Tol 2016); to assess the importance of an independent judiciary (Finke and Martin 2014); to measure attitudes

towards Muslim immigrants (Helbling and Traunmüller 2016); to designate the West as the most "religiously liberal" (Johnson and Koyama 2019);to… argue that Muslim minority persecution creates terrorists (Salya 2016). As scholars and the public regard the RASM coding of academic, historical, and news treatment of a country-specific minority group as a form of inherent truth, the world-building of the RASM is naturalized. Beyond datafying state and religious oppressions, the RASM focuses overwhelmingly on acts of discrimination or oppression that are public acts of violence against state and religious minorities or various forms of property. Importantly, the most popularly accessed version of the dataset on ARDA, which is the Religion and State Project Round 2, only has 4 questions within its codebook on women's relationship to religion and state oppression, defined narrowly as the ability to go out in public unescorted, the ability to wear clothing without restrictions, the weight of women's testimony in court proceedings, and an option to specify other restrictions not covered in the previous three options.

Beyond erasing gender as a necessary category for understanding how forms of state and religious oppression manifest, the codebook normalizes the fact that women do not experience enough public acts of oppression to render their experience significant. As Lila Abu-Lughod has argued, the erasure of Muslim women from conceptions of a public space fuels the harmful assumptions that Muslim women do not exist outside of the heavily patriarchal home environment (Abu-Lughod 2010). On the contrary, as both Leila Ahmed and Saba Mahmood have argued, Muslim women have had varied relationships with home, community, and family depending upon personal desires to conform to or protest religious and state leadership (Ahmed 1991; Mahmood 2009). As my mother's narrative emphasizes, the act of playing outside is not regulated by her relationship to

religion, but rather by Ahmadis' need to claim asylum in other countries to escape the

heavy regulations and local rules in Rabwah that shift with the shifting dangers posed by

the Taliban or other groups coming to cause harm. In other words, my mother's

relationship with Rabwah does not adhere to the oversimplified idea of Muslim women

relegated to the home or not; instead, my mother's memories underscore the fluidity of

space and place alongside her family members as they all sought refuge within the only

Ahmadi-majority town in Pakistan.

The RASM database recognizes the Ahmadiyya community as a major minority

group in several Muslim-majority countries that outlaw and suppress their religious

practices. The RASM also creates a specified category to quantify forms of state

oppression against Ahmadis. The RASM's reading of an oversimplified relationship

between the state, oppression, and a religious or otherwise minority group is not unique but

rather the culmination of over a hundred years of archiving, histories, and reporting. By

focusing on the production of gender, religion, time, and space within the archive to

connect it back to the devaluation of gender within datasets such as the RASM, I work

toward dismantling what Fuentes and Cookson describe as the "geographical gender data

gap"—the "largely aspatial" focus of collecting data on women's lives (2017). Yet, unlike

Fuentes and Cookson's claim that geographical data should include "gendered phenomena

that can and should be measured," I argue that Muslim women are continually produced as

silent and passive victims within datasets that, in the process of datafication, become

solidified as static measurements of gender, time, and space. Therefore, my analysis of

Muslim women centers the lens of critical feminist historiography through the concept of a

gendered data artefact to show how they are constantly pushing back, even within the limited representations afforded Muslim women.

The world-building story told by the RASM is one that emphasizes the objective power of state, interpersonal, or intergroup violence and harassment from the messiness of place, time, and identity. I argue that datafication continues the pattern of devaluing Ahmadi women in space and place by eliding the stories that inextricably tie race, gender, space, and place to religion and persecution. The impulse to "capture" the Ahmadiyya community stems from the physical capture of space, place, and people by government, military forces, local iterations of the Taliban, and/or groups such as Khatme Nabuwat (the finality of Prophethood) that exists in opposition to the Ahmadiyya community in Pakistan. Alongside the physical capture exists the capture of histories, time, and moments to universalize suffering and pain by journalists, academics, and humanitarian aid workers. I ask: What is the work of capture from archival sources to datafied entries, easily accessible through Google searches and internet repositories of Ahmadi information created officially and unofficially by Ahmadis? Through the works of feminist historiographical critique and feminist geography, I also ask how women contained within the archives that eventually become incorporated within datasets are haunting us with the gendered possibilities of reading their place and space?

The RASM is a direct example of how Big Data has become more accessible and a marker of organized knowledge. Yet, the way the dataset foregoes differentiations of gendered experiences within religious minorities is a sedimented fact that reaches back to the Indian, Pakistani and Ahmadiyya archives. The genderless world building is central to historical records of both headquarters of the Ahmadi community before and after the 1947

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partition between India and East/West Pakistan: Qadian and Rabwah. In the following

section, I analyze one report from the Ahmadiyya community written in 1947 about

Qadian and another report written in 2007 by the UK All-Parliamentary Human Rights

Group about Rabwah. Through feminist historiographical and geographical analysis, I

argue that both documents show the systematic devaluation of marking gender as a crucial

category in space, place, and the archive. In other words, the habitual foreclosure of

gendered placemaking practices creates the possibility for databases like the RASM to

subsume the category of gender entirely. At the end of my reading of each report, I re-read

the brief passive mentions of women through the argument that they serve as gendered data

artefacts. In my final section, I return to the concept of a gendered data artefact as opening

possibilities of reading stories across archives and news articles.

From Qadian to Rabwah: Building Worlds without Gender

The space of Qadian, India was the international and spiritual home of the

Ahmadiyya community from its founding in 1898 until the partition of India from East and

West Pakistan. Qadian served simultaneously as the birthplace of the founder of

Ahmadiyyat and the headquarters of the sect within a district otherwise marked by its

majority non-Muslim population (Khan 2015; Smith 1943). Even with the onset of mass

violence and intimidation during the 1947 partition, the Ahmadi community selected 313

volunteers to stay behind and guard the sacred space from being overtaken by non-

Ahmadis and non-Muslims, underscoring how important Qadian continues to be for

Ahmadi Muslims (Dost 1970; Khan 2015). With Qadian, the recorded existence of anti-

Muslim or anti-Ahmadi oppression does not begin with splitting of the Punjab Province in 1947 but marks a pivotal point for Ahmadis in the written and recognized world of historical archives.

Both the RASM and the report on Qadian build a world where the unstated primary actors within history-making moments are men in the community or the men attacking the community. In what follows, I analyze the 1947 report by the Ahmadiyya Community and then the 2003 report by the British Parliamentarian group. I trace the world built through the devaluation of gender and use a reading practice informed by feminist historiographical and geographical critique to highlight how gender is central to marking space, place, time, and identity.

"Qadian: A Test Case" is a 110-page report gathered by local leadership in the Qadiani Ahmadiyya community surrounding the days, weeks and months during partition. The stated purpose of the report is to "become a living test case" chronicling the difficulties of a Muslim community to exist in India within and beyond the process of partition (1947, 74). The report is methodically different from the RASM because it is a series of diary-like entries that create a story about the Ahmadi and other Muslim communities during partition in India. With the RASM, the coders involved with the process had the discretionary control over how to interpret academic, journalistic, and humanitarian information and then how to convert the interpretation into data. However, the world built within the Qadian report is a series of stories about a sacred space for Ahmadis that allows for a different context to placing the space. Yet, the stories still devalue the powerful impact of gender by only focusing on acts of violence perpetrated against women.

The report only mentions Muslim women when they are in proximity to death, sexual violence, and the home. Reducing the scale of women's actions and community impact to exclusively a home space or moments of violence and death has been a way to divorce women from the larger context of space, time, and history (McDowell 1993). As Chandra Mohanty argues through her concept of "cartographies of struggle," home spaces are not frozen in time and should be positioned relationally to history and to the production of race, gender, and class in space (Mohanty 55, 2003). In other words, the cartographies that contour Muslim women's existence within the report could create alternative relationships to space, place, and home that do not place Muslim women as aspatial and ahistorical passive objects. For Mohanty, the cartographies and possibilities of placemaking rely upon undoing the supposed transparency of space and instead contextualize how space and place are themselves imbued with and produced by oppositional struggles (Mohanty 2003). In the "Qadian: A Test Case report, after the first few pages explaining the increase in property theft and threats to life, the first mentions of girls place them side-by-side to property stolen: "Mohalla Darul-Shukr searched by Police and cash and jewelry worth thousands of rupees snatched away, as also five girls reported to be raped" (1947, 4). Here, the girls are positioned not only in relation to the home space, but also to stolen objects. While the harrowing everyday chronicled in the report is important to understand the space of Qadian during partition — one that generated constant terror and violence — the continual sidelining of the way women/girls actively existed in space produces Ahmadi Muslim girls as passive objects. Here, the marking of space in Mohalla Darul-Shukr (a neighborhood of Darul-Shukr) is particularly telling for its mentioning of the girls directly after the jewelry and rupees snatched by the police. The

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Ahmadi girls are not only placed in proximity to objects stolen, but their relationship to the space of Qadian is not constructed beyond this moment of sexual violence alongside stolen objects.

The world built here for Ahmadi girls is thus only marked at the act of sexual violence. Not only are the cartographies of struggle mapped here for Ahmadi women limited to extreme moments of violence, as Spivak (1993) argues with the "gendered trace," the presence of the extreme violence becomes a stand-in for the absence of the women themselves. To codify the representation of women-as-violence, as the process of datafication does, is to foreclose the haunted space within the archive and eventual dataset that women's presence always inhabits. As Avery Gordon argues, "haunting [is] precisely the domain of turmoil and trouble, that moment (of however long duration) when things are not in their assigned places, when the cracks and the rigging are exposed, when the people who are meant to be invisible show up without any sign of leaving…when the present seamlessly becoming 'the future' gets entirely jammed up" (Gordon 2011, 2). Here, haunting pushes against the consumption of Ahmadi women and girls through only violence without any chance for building a world alongside or outside of these harrowing moments of violence. Instead, the moments that would have allowed a different imaginary for them would be ones in which Ahmadi women and girls' lives are placed in relation to the production of race, gender, space, and time and simultaneously allowed to inhabit the haunted place within the archive—a place in Qadian replete with playing, storytelling, dancing, and other moments marking a gendered world beyond moments of violence. Indeed, as I argue, the systematic devaluing of gendered ways of place-making produces a

relationship between the Ahmadiyya Community and religious persecution that becomes patterned and replicated within the process of datafication.

As the report continues, it describes the impossible situation for Ahmadis in Qadian as Muslims from surrounding villages pour into the town and their homes become targets for local anti-Muslim militias, police, and military. According to the report, "besides its own population, Qadian has given shelter to 50,000 Muslims from the surrounding villages who have been fed and accommodated now for a month" (1947, 29). The report clearly describes a world in which the place of Qadian becomes an important refuge for Muslims in East Punjab. Amongst the recorded acts of bravery are examples of Ahmadi men arranging for safe transport and harbor for Muslim refugees, and sheltering and hiding Muslim women refugees from encroaching militias and soldiers known for kidnapping, harming, and stealing from people in Qadian. Yet, as Mohanty and McDowell's concept of "contested cartographies" reminds us, such designations of Muslim men saving refugees must be contextualized alongside the multi-scale production of women within the same space. The world built by the report is additionally an important recording of how the religious persecution of Ahmadis by fellow Muslims is minimized as they all became racialized as vulnerable and exploitable within their former East Punjab home spaces. At the same time, the world built for Muslim refugees in Qadian places Muslim women refugees in passive roles similar to the stories about Ahmadi Muslim women.

On September 25, 1947, the cousin of an ex-federal court judge in India and prominent member of the Ahmadiyya Community, Chaudhry Sir Muhammad Zafrullah Khan, who lived in his cousin's home, chronicled a series of confrontations with the police and military that lasted for several days. These confrontations ended with the police and

military taking ownership of the home and removing everyone. The overtaking of a home

space for Muslim refugees who had already been displaced from their home villages was

jarring for Muslims in the newly formed state of India. The newly formed India in East

Punjab, according to the report, consistently included the demolishment of homes and

removal of all forms of safety for Muslims seeking refuge.

On the first day of the confrontation, the cousin describes how ten military soldiers

arrived at the home near sunset and took over the "top-most roof and verandah of the first

storey" and demanded ten cots for sleeping (1947, 31). As he states, "at this time, I myself,

five servants of the house and many Muslim refugees with their women and children who

had come from the neighboring villages were living in [the house]" (1947, 31). That night,

"the soldiers kept annoying the women refugees the whole of that night" which led to

placing the women and children in two more central rooms where "the doors roundabout

were bolted from the inside for the sake of protection and men were put on guard in the

verandah" (1947, 32). Over the next few days, the soldier's captain would continuously

demand that the doors allowing entry to the room with the women and children be opened,

but the cousin would repeatedly deny the soldiers entry, allowing them instead access to

the personal belongings of the homeowner as well as of the refugees (1947). In this case,

the Muslim women refugees are once again placed in proximity to death and a home space

marked by their passiveness to the cousin, soldiers and situation. Here, the gendered trace

of the women, marked only through violence, allows for the epistemological consumption

of the women all the while marking the centrality of the women's bodies to the world built

by the "test case." However, I argue that the haunting presence of the women creates an

entirely different possibility of placing the women in relationship to the relational

production of race, gender, space, and time. Informed by both feminist historiographical critique and feminist geography, I use the gendered data artefact to mark the limitations of the archive and its eventual datafication and the gendered haunting of the archive. Here, a gendered data artefact is less about how to collect data better, but more about how Muslim women already exist as "the people who are meant to be invisible [who] show up without any sign of leaving" (Gordon 2011, 2).

The eyewitness narrating this story thus created a sense of the fear and his own resourcefulness in safeguarding all the refugees in the home. However, he did not mention how the women contributed, collaborated, or plainly resisted the increasingly jarring attempts of the soldiers to gain access to them. How did the women create a space of comfort for the children? Did they collaborate in deciding how to stay safe? How did they safely use the restroom? What were the essential, everyday ways they deployed to survive the impossible situations in which gender became central to the controlling and punishing of communities deemed to be out of place by the police and military?

These questions call attention to how Muslim women are produced as gendered data artefacts and push against the limits of archival records like the Qadian report. They thus refuse the "technological imaginaries" that consume women's place within the process of datafying and instead treat women's place within the process of datafication as "glitches" that reveal the inherent limits of datafication (Vora and Atanasoski 2019; Benjamin 2019). The intent is to animate the haunted subjectivities of the women at the core of the limited space of the archive and dataset. As such, the questions place in conversation the historiographical critiques of gendered trace and hauntings to undo the continual passive placement by police, military, community members, and archives of

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women whose bodies become crucial to controlling, policing and punishing religion, national identity, and borders. Once again, the systematic devaluation of gender as providing a different engagement with women, men, and the harsh environment of survival during partition leads to the relegation of women's experiences with persecution or Anti-Muslim violence as something exclusively out of sight from the public. Such a reductionist understanding of how central gender is to the spaces and places of Qadian allows for the sedimentation of gender to become a marker consumed within the RASM's categories on harassment or intergroup violence, completely foreclosing the massive shift of historical, geographical, and datafied understanding women's gendered placemaking practices provide.

Parliamentary Report on Rabwah

After Qadian, Ahmadis created their next spiritual home in Rabwah. After purchasing a small plot of land for 12,000 rupees located between Faislabad and Sargodha, the Ahmadi community built a village from ground-up, which has now grown to include a state-of-the-art Heart Institute, a few banks, two clothing stores specializing in burqas, and the graveyard where many elders of the Ahmadi community are buried. The status of religious persecution between the state, anti-Ahmadi groups such as *Khatme Nabuwat* (the finality of Prophethood)*,* and Ahmadiyya community grew more restrictive over time in response to national legislation. In 1974, Prime Minister Zulfiqar Bhutto, the father to the future first woman president of Pakistan, Benazir Bhutto, spearheaded an amendment to the country's constitution that designated Ahmadi Muslims as non-Muslim. In 1984, with

the enactment of Ordinance XX, the military regime of General Zia-ul-Haq made it a criminal offense for Ahmadis to call themselves "Muslim" or to practice Islam. Two years later, in 1986, the government of Pakistan incorporated Blasphemy Laws inherited from the British Raj era and introduced the punishment of either life in prison or a death sentence for the crime of religious blasphemy. In 2015, the government of the province of Punjab, which also includes Rabwah, introduced a legislation that banned all forms of publications from the Ahmadiyya Community.

The legal regime at the center of outlawing Ahmadis has continually created an impossibly unlivable space where murders, kidnappings, harassment, house burnings all go under-investigated and often casually dismissed by local police forces (Khan 2015). Faced with ongoing harrowing experiences with persecution, thousands of Ahmadis apply yearly for asylum in Canada, U.K., and Germany—all of which have established Ahmadiyya communities and support from governmental and political leaders (Rabwah Times 2019). Yet, the existence of Rabwah and the Ahmadiyya Community in humanitarian and governmental reports still place Ahmadi women only in proximity to death, violence, or the home. Below, I examine the 2007 report by the United Kingdom's Parliamentary Human Rights Group because their stated purpose is to understand the extent of persecution in Rabwah to determine whether to support asylum in the U.K. Once again, I ground my analysis in feminist geography and critiques of historiography.

The All-Party Parliamentary Human Rights Group (PHRG) in the United Kingdom is composed of Parliamentarians across all political parties who are "dedicated to exposing and ending human rights abuses around the world" (2011). In 2007, the PHRG set out to investigate why "an increasing number of Ahmadis, trying to escape the persecution in

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which they are trapped in Pakistan, have sought asylum in the UK, and although many have succeeded, our impression was that an increasing proportion were being refused" (Avebury, iii). Lord Avebury noted that the reason for the refusal stemmed from the belief that even though the applicant "might have had a well-founded fear of persecution, within the meaning of the Refugee Convention if he returned to his locality of origin, he would be safe enough if he migrated internally to the city of Rabwah" (2007, iv). The PHRG therefore decided that "a panel of experts" should visit Rabwah to determine its safety and to recommend if the UK should accept additional asylum cases from Ahmadis. The report is a sixty-four-page document that outlines the trips and meetings undertaken by the committee of experts. While the report does not provide a recommendation in the end because "the facts speak for themselves," it exhibits the same devaluation of gendered space and placemaking when describing the persecution of the Ahmadiyya community (Avebury 2007, iv).

While *Qadian: A Test Case* provided narratives that noted the continual violence Muslim women faced, the Parliamentary report exclusively centers men from the community and mentions women only a total of six times and four of which are a generalized rule or experience possible for Ahmadi women. In the report, the geographies of space and place are normalized as prescribed by community rules for women. There are no spaces for contested geographies to reveal how women experience and negotiate these restrictions. Instead, the geographies contained within the prescribed rules for women follow what feminist geographer Doreen Massey describes as "power geometry of time-space compression" (2005, 2). As Massey argues, "this point concerns not merely the issue of who moves and who doesn't, although that is an important element of it; it is also about

power in relation to the flows and movement. Different social groups have distinct relationships to this…some people are more in charge of it than others; some initiate flows of movement, others don't" (2005, 3). Here, the power-geometry of time-space compression divorces Ahmadi Muslim women from having existed in space and place at all and instead defines their entire movements through rules that restrict their movement.

The generalized rules prescribed for Ahmadi women in Rabwah start on page 16 of the report, which notes that "senior community members advise their community to stay indoors and women are told not to attend prayers" (2007). Then, on page 25, they write "there are families where the men live in Rabwah and the women do not," right after mentioning the bravery of those who choose to remain in Rabwah (2007). Again, on page 25, when describing the existence of Rabwah accommodations for displaced people in Pakistan for a few days, the report states that there are "separate accommodation for men and women" (2007). The lack of specificity in defining women's placemaking practices in Qadian in much of the report devalues how women, the category of gender, and place all interactively define a significant relationship underpinning every act of persecution of the Ahmadiyya community. The power geometry here is not only about erasing how Ahmadi women exist in space and place on a daily basis, but also how this knowledge about Muslim women is not necessary in understanding the relationship between religion, space, and, persecution.

The one instance when the mention of a woman is not a general mention is in an Amnesty International "Fact Finding Report" included in the index of PHRG's own report (2007, 45). In this report, the Pakistan-based Amnesty team investigated the status of several Ahmadi families who had left a small village after anti-Ahmadi riots destroyed

their homes and shops. The team interviewed a woman who is identified as "the mother of Tariq Mahmood" and describes her comments as follows:

> We are facing humiliating response from the neighbors and inhabitants of the town who not only use abusive language for us but also for our sacred religious personalities, however, we are patiently bearing this all." She said, they were feeling themselves completely unsafe since their kids couldn't sleep in the night due to continuous fear. She said they had lost all of their belongings and even no crockery was present in the home and in that devastating conditions they were unable to do any business. They estimated a loss of more than 20,000 rupees during the attack. (2007, 46)

While the woman is identified only in relationship to her son, her inclusion in the index of the British Parliamentary report through another report speaks to how the worlds she creates in her brief mention as well as the placemaking practices she performs are gendered data artefacts. As gendered data artefacts, this woman's story and the gendered worlds she builds are minimized. And yet, her inclusion in both reports, however minimal, speaks to how she is not just a "glitch." Her words provide a crucial understanding of how gender marks women's experiences and creates not only a gendered world of religious persecution, but also evidences how crucial storytelling is as a placemaking practice. The world she builds centers the worries of the children who are unable to sleep as well as feelings of humiliation of neighbors who abuse and ostracize them. In the portion directly quoted, she uses first person plural to emphasize how the world is not just about her own experience of religious persecution, but also about the "neighbors," "inhabitants of the town" and the "us" of her son and other family members. Even in this singular quote, the woman who is identified only in her relationship to her son creates a world for the reader, underscoring how the context of community, place, family, home and religion is inextricable from the reality of a gendered world her quote builds.

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Her world building relies on the impactful work of storytelling. She reconstructs the attack and its devastating consequences, which is how the larger Parliamentary report and the process of datafication consume her story. She actively creates and inhabits the space of her home. She melds the false public/private separation enforced in the archives and the RASM methodology and focuses instead on the entanglements between what happens to her home and what she feels in her community. In this case, gender allows for an entirely different world built that contrasts greatly with the constant association of Muslim women with home and violence. Her identifying marker as a mother is therefore not a label solely about a relationship to her son, but about her place in the center of a family and community. Her authoritative understanding of the space and place around her carries the pain and hurt of younger and older family and community members. Her words and brief story provide context for how women's practices of storytelling create relationships not only between antagonizing groups and the act of religious persecution. Instead, the practice of storytelling understands the multiple intersecting ways that relationships are tied painfully to space, place, and community.

Patterns of Gendered Data Artefacts

The world built in and through humanitarian, governmental, news and official Ahmadiyya reports that databases like RASM rely upon provides a place for Muslim and Ahmadi Muslim women only in relationship to death, violence, and the home. The continual work of placing Ahmadi women in such a constrained place marks the inability to encompass the full spectrum of how gendered religious persecution becomes sedimented

in space and place. I argue that the continual incorporation of Ahmadi women in the archive and various forms of reports creates data artefacts that continually reveal the limits of written records and that simply define the relationship between religious minority, the state, and community as public acts done by and against men. Using Vora and Atanasoski's conceptualization of "dissident technological imaginaries" and Ruha Benjamin's concept of "glitch," I argue that the existence of gendered data artefacts reveals how systems of power minimize gender and, in turn, how women's brief mentions still encompass a whole imaginary resolutely defining protest. In the previous section, I incorporated an Ahmadiyya report during partition alongside a British parliamentary report to read for the devaluation of gender and provide a re-reading of the data artefacts in the documents by focusing on the worlds the Muslim women built in just a few lines. In a few lines, or sometimes just a few words, Muslim women speak to the failed process of datafying gender as well as to the world-building process of resiliently existing despite constant attempts to undermine and erase gendered practices of placemaking. In this section, I expand on the possibility inherent in reading for and across gendered data artefacts. As I argue, the existence of these examples of gendered data artefacts emphasizes the limitation of knowledge based upon patterning stories into data for databases like RASM.

I speculate that Ahmadi Muslim women's stories told through interviews in news outlets or briefly excerpted in a humanitarian report become more than markers of oppressed Muslim women. Instead, they act as gendered data artefacts pushing against the limited ways of consuming, collecting, and capturing their existence within archives and reports. In reading the brief mentions of women as data artefacts, I read across two

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instances of Ahmadi women who undergo violent acts of religious persecution. In both cases, I read their stories as revealing the sedimentation of race, gender, and religion actualized through patterns in archives, news, humanitarian reports, and academic articles. While the datafication of worlds contained within archives and reports continues to devalue the importance of gender to religion and persecution, I consider two instances of Ahmadi women resiliently creating a place for themselves despite impossibly limiting spaces. In the first instance, I use the feminist historiographical technique of a data artefact to read with and against the first recorded case of anti-Ahmadi violence in a village near Sargodha that led to the deaths of women in the community. I read alongside the oral obituary from the Ahmadiyya community and news media reports to recognize how significant gender is to the process of world building and placing religious persecution. In the second instance, I read a news reporting of an Ahmadi woman who, after rounds of anti-Ahmadi protests and violence, is the last remaining Ahmadi in a township within Gujranwala. I use what would otherwise become data artefacts within the process of datafication to point towards the meaningful ways stories contextualized within space, time, and identity about Ahmadi women contain powerful revelations of the inextricable relationship between gender, religion, and persecution.

On July 27, 2014, the first recorded anti-Ahmadi attack that only claimed Ahmadi women's lives in Kachi-Pump, Arafat Colony, Gujranwala, Pakistan was over an edited photo posted to Facebook desecrating the holiest place for Muslims, the Kaaba in Mecca, and local non-Ahmadi rioters attributed the photo to an Ahmadi youth. At around 7pm that day after breaking his fast since it was the holy month of Ramadan, Muhammad Ahmad went to a nearby medical clinic to pick up some medicine. While there, he saw that his

cousin was being questioned by a group of people and approached them to ask what was happening. The group "started using abusive language and…it was clear that they had hatched a plan because they quickly resorted to beating up and [waving around] broken bottles" (Ahmad 2014). The situation escalated after Muhammad called his brother and uncle to join them in trying to assuage the aggrieved group. After Muhammad and his family members left, the anti-Ahmadi group grew and gathered into a rally outside of the doctor's office. The local organization of traders also announced, "that people should shut shops and gather and whoever did not shut shop did so at his own peril" (Ahmad 2014). Out of the eighteen Ahmadi family homes in the area, fifteen fled their homes within an hour of hearing of the trouble (Ahmad 2014). However, Muhammad's family and two other families chose to stay.

At 8:30pm, the rioters reached the homes of the three remaining Ahmadi families and started chanting anti-Ahmadi slogans, firing guns, and attempting to break down the front doors of the homes. Amidst the escalating situation, one of the Ahmadis who stayed behind was the local president for the Ahmadiyya community reported to the police who stated that they would escort the crowd away for questioning, but never followed through. The crowd grew to somewhere between 400-500 and, armed with hammers and guns, broke the electric meters and cut off cables. The local president took to the rooftop of a non-Ahmadi neighbor's home. At Muhammad's family home, while the eleven women and children were locked into one room, Muhammad and his uncle hid in an upstairs room. When the rioters finally broke through the front door of the home, they immediately attempted to gain entry into the room with the eleven women and children but could not break past the door. Instead, they sealed the door from the outside and broke glass from a

window facing inside the room. Underneath the broken window, the rioters set fire to miscellaneous items and "the toxic smoke filled the room through the window and from under their door. The barbaric extremists gestured with their hands and mockingly said goodbye to those in the room and left" (Ahmad 2014). From smoke inhalation, 55-year-old Bushra Begum and her two granddaughters, 6-year-old Hira Tabassum, and 8-month-old Kainat Tabassum, were murdered by a group of anti-Ahmadi protestors who raided their home space in which they sought shelter.

The harrowing scene created through a news article and a community retelling of the incident builds a world in which events inspired by and against men place women in danger, creating the first-known incident where the only casualties were Ahmadi women/girls. The story I retell here recreates the same problem as that of the community and news stories: there is detailed focus on the incidents leading up to the murders, but not much information around the lives of the woman and girls. Similar to the Qadian story, women are once again locked in a room with children and that room becomes the primary focus of aggression. Yet, placing the 1947 Qadian incident alongside the 2014 event allows for a reading of gendered artefact that opens new gendered worlds through their connections and overlaps. In 1947, in the case of the women sequestered to a room in Qadian, the women and children were non-Ahmadi Muslim refugees from the Muslim areas in North Punjab that had been demolished. In 2014, the women are sequestered to a room and targeted by non-Ahmadi Muslims. To read these two instances of gendered data artefacts together illuminates how space, place, and time creates a kinship amongst the Muslim refugees and the Ahmadi Muslim women who are otherwise read as existing in separate and antagonistic worlds. Across these two gendered data artefacts, the Ahmadi

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Muslim women and Muslim refugees are both written as passive victims in deadly stories; yet they also show how gendered placemaking practices in impossibly dangerous situations reveal another moment of connection across two groups often antagonistically placed.

The second instance of a gendered data artefact takes place on December 30, 2016, in a village named Dulmial, eighteen days after an Ahmadi place of worship was attacked by a furious anti-Ahmadi mob. The venue is now sealed with police officers deployed at the entry and exit points around the mosque. Most of the village's shops remain closed in wake of the attack and almost all the Ahmadi families living in the village, which numbered between 70 and 80, fled the village soon after the attack alongside the community members who participated in the attacks, fearing retribution from the police (Dhakku 2016). In his reporting for Dawn, a Pakistani newspaper, Anwar Dhakku describes one of the last remaining Ahmadis in the village, Maqsood Begum as follows:

> In this tense atmosphere, a 68-year-old Ahmadi woman walks the streets. Maqsood Begum refused to flee with her family members, despite their pressure: "Death is bound to come," she says, talking to Dawn at her house. "Why flee it? I told my family members that I could not leave my village as it is very dear to me. However, I sent my ailing husband even though he did not want to go." She spends her day tending to cattle, while her grandson — the 28-year-old does not share her faith — stays in her house during the night. (Dhakku 2016)

Begum's desire to stay in the village despite so many of her family leaving speaks to the "social fabric" at the core of Dulmial's Ahmadi and non-Ahmadi inhabitants: their close blood relations (Dhakku 2016). As Dhakku explains through Begum's family: "her parents and all other relatives are Muslim, while her husband and in-laws are all Ahmadi. She has four daughters, two of whom were married into Muslim families while the others were married into Ahmadi families. Of her three sons, one was married to a Muslim

woman while the others were married into Ahmadi families" (2016). The entanglements

between multiple divides continues with Begum describing how the same mob demolished

an under-construction Imambargah of the Shia community as well as a funeral place

belonging to the Ahmadiyya community (2016). In her final quote in the piece, she

describes an everyday experience her daughter underwent soon after the December 12th

attack: "on Thursday [Dec 22], my daughter went to buy vegetables from the village shop

but the shopkeeper refused to serve her,' says Maqsood Begum in anger and distress. 'All

of this has occurred due to the actions of some troublemakers" (2016).

Reading across the multiple ways gendered placemaking practices become marked

in the community/state archive, humanitarian reports, and now in news produces the

possibility of reading for patterns in stories rather than patterns in coded data. Here,

Maqsood Begum's quotes and storytelling push back against the erasures in not only the

first story in this section, but also against the work of isolating gendered data artefacts

across the news, archives, and humanitarian reports, which is a central effect of databases

such as the RASM. Maqsood Begum builds a world about her resilient home village and

her inextricable connection to the place where her own Ahmadi and non-Ahmadi family

has lived for generations. Even against the backdrop of the interview taking place mere

weeks after a furious anti-Ahmadi mob attack, Begum emphasizes how her identity of

being an Ahmadi Muslim woman is intimately tied to the place of Dulmial when she

states: "I told my family members that I could not leave my village as it is very dear to me.

However, I sent my ailing husband even though he did not want to go" (2016).

Instead of being placed as a scared victim in the story, Begum resolutely asserts her

desire to stay in the place where she practices religion, community, and family. Here,

Begum reveals how gendered placemaking is about nurturing the flexibility of gender roles in response to the context of place, community, and family when she underscores that she is the one who "sent her husband away even though he did not want to go." Begum creates a world in this one sentence that underscores how gender and gendered placemaking is constantly refashioned in response to and defiance of the constant onslaught of violence and terror of religious persecution. Such a relationship between gendered placemaking and religious persecution pushes against the complete silence from any Ahmadi woman in the first story where women are the ones who suffer a history-making series of murders.

Reading the stories across as gendered data artefacts builds a world that not only recognizes the impactful ways women exist in space and place, but also how gender itself is constantly built and rebuilt for men and women in moments of severe religious persecution. In other words, gender becomes a central category of analysis because the performance of gender shifts and transforms in ways that reveal the sedimentation of power in place. In both cases, public actions by Ahmadi men are not limited to acts of bravery centered around saving women or property. Instead, both cases include moments of vulnerability, seeking refuge across non-Ahmadi/Ahmadi divides or recognizing the similarity across forms of religious persecution. In the first instance, the local president for the Ahmadi community recognizes the crowd of hundreds is overwhelmingly focused upon causing harm and he seeks shelter at a non-Ahmadi neighbor's home. Such moments of solidarities incorporate within it a sense of vulnerability that defines gendered placemaking as something interactive and based in the act of providing and giving shelter.

In the second story, gendered placemaking once again moves beyond just gendering the protector as men in the Ahmadi community and the protected as women, but

rather the possibility of placemaking is rendered even more meaningfully tied to context, space, and place when a mob destroyed both, an under-construction Imambargh of the Shia community as well as the funeral place of the Ahmadiyya community (2016). Here, placemaking becomes about understanding how solidarities always emerge in moments of vulnerability and opposition to unjust state laws limiting support for and tolerance of different sects and branches of Islam. In other words, the place made through Begum's interviews in the second instance as well as the moment in which the president of the local Ahmadiyya seeks shelter in the first instance, both emphasize the ways in which marginalized communities are always placed in physical proximity to one another as well as the ways resistance and resilience is a community practice of placemaking.

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