

muslims, media, machines

Countering Narrative and
Algorithmic Injustice Through
Community-Led Storytelling

**MUSLIMS, MEDIA, MACHINES: COUNTERING NARRATIVE AND ALGORITHMIC
INJUSTICE THROUGH COMMUNITY-LED STORYTELLING**

By

Maria Azam

BSc in Computer Science (Great Distinction), University of Regina, 2022

A CRITICAL AND PROCESS DOCUMENTATION THESIS PAPER SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF DESIGN

EMILY CARR UNIVERSITY OF ART + DESIGN

**EMILY CARR
UNIVERSITY**
of Art + Design

© Maria Azam, 2025

Acknowledgement

This research was conducted on the unceded, traditional and ancestral territories of the xʷməθkʷəy̓əm (Musqueam), Skwxwú7mesh Úxwumixw (Squamish) and səliłwətaʔ (Tsleil-Waututh) peoples (Vancouver, British Columbia) and on the traditional lands of the Treaty 4 Territory, the original lands of the Cree, Saulteaux, Dakota, Nakota, Lakota, and the homeland of the Métis Michif Nation (Regina, Saskatchewan).

This work, undertaken from Fall 2023 to Spring 2025, was completed at a time where we bore witness to brutal acts of settler colonialism, imperialism, and genocide against Indigenous peoples worldwide, including, but not limited to, the Congolese, Kashmiris, Palestinians, Sudanese, and Uyghurs. Much of this thesis project is charged by these crimes, known and unknown. This project is also an act of hope, exploring how we may build collective resilience and use our art and our technology to build just future(s). This work does not sit on its own, but in relation to and within the network of many other resistance and liberation movements worldwide.

Acknowledgements

Thank you Mama and Baba, you fierce lovers of education, for your unconditional support, guidance, and care throughout this journey. Thank you, and thank you to my siblings Ayesha and Muhammad, for cheering me on in pursuit of my dreams, and for teasing me along the ride. For believing in me when I didn't believe in myself. Thank you for being you.

Thank you to my lifelong friends, Ammara, Helin, and Minhal, for your excitement and generosity. You were always the first ones to say yes to testing my prototypes, participating in workshop trials, and hearing all of my ideas. Thank you for running with me in my pursuits, and for allowing me to run with you alongside yours.

An infinite number of thank yous go to my dear supervisor, Craig Badke. Your selfless generosity, critical mind, and deep care towards my work and the world at large are a beacon of hope. Thank you for your kindness, and for pushing me to be unapologetic. For being not just an ally in this work, but an accomplice. This project would not be what it is today without you. Thank you for taking this on with me.

Thank you to my cohort. It has been a pleasure to learn, work, play, and dream with you.

Thank you to all of you who have, knowingly and unknowingly, shaped this work into what it is today and me into who I am today.

Table of Contents

00.	Abstract	6
01.	Introduction	7
02.	Histories	9
03.	Narratives	21
05.	Algorithms	32
04.	Counter Narratives (Counter Spaces)	39
05.	Future(s)	54
06.	References	56

Abstract

Throughout the past 50 years in entertainment arts, Muslims have been othered, flattened from diverse communities to static characters, and linked to hostility, terrorism, and oppression. North American films and video games place Muslims in warzones, constructing them as mythical characters that must be virtually killed, thus propelling stereotypes and Islamophobia. Juxtaposing this are constructions of Muslims, especially Muslim women and girls, as helpless. In parallel, these stereotypes are replicated and amplified through machine learning and social media algorithms. Recent research shows that algorithms are also hallucinating new forms of violence. Large language models (LLMs), often employed by artificial intelligence (AI) and social media algorithms, display strong associations between Muslims and violence. This project explores ways to counter narrative and algorithmic injustice towards Muslims in digital media through community-led engagement and action. Through a series of participatory and co-creation workshops and engagements, held with Muslim adolescents aged 18 to 30 in Regina, SK and Vancouver, BC, the work sought to connect Muslim communities, build media literacy, and create and share stories and counternarratives. The resulting narratives were then disseminated in various formats, including the development of a web-based crowdsourcing storytelling platform. Co-creating and disseminating visual narratives for and with the Canadian Muslim community presents a culturally adapted participatory research method for interactive storytelling and social action. Ultimately, the project explores building a long-term practice of digital literacy and agency in the Muslim community, empowering Muslims to take ownership of their narratives to dismantle algorithmic and narrative injustice.

Keywords: Narrative injustice, algorithmic injustice, relational ethics, storymaking, participatory design

Introduction

Throughout the past 50 years in entertainment arts, Muslims have been othered, flattened from diverse communities to static characters, and linked to hostility, terrorism, and oppression (Sîsler, 2008). American and Canadian films and video games place Muslims in warzones, constructing them as mythical characters that must be virtually killed (Mirrlees & Ibaid, 2021), or who are helpless and oppressed (Alsutany, 2012), thus propelling stereotypes and Islamophobia. Whilst other narratives of Muslims exist, ones that do not reinforce these harmful stereotypes, the above-mentioned narratives have become dominant in film and television. While this problem of dangerous stereotypes proliferated through stories in digital media has been prevalent for over five decades, there is an emerging problem space in online media. Such stereotypes are replicated and amplified through computer algorithms – unintentionally, when social and political challenges are packaged into automated solutions that perpetuate discriminatory patterns, and deliberately, where algorithms exploit bias and stereotypes on social media to surveil, manipulate, and manufacture consent for violence. Recent research shows that algorithms are also hallucinating new forms of violence. Large language models (LLMs), often employed by artificial intelligence (AI) and social media algorithms, display strong associations between Muslims and violence (Abid et. al., 2021). Computer algorithms are becoming increasingly ubiquitous; they are deployed for decision-making in a variety of real-world tasks, and users can interface directly with LLMs through social media, chatbots, and internet searches. As such, these algorithms, and the biases that they hold, can pervade many areas of our lives from the large to the mundane. From facial recognition errors for security screening, to how applications are sorted for immigration, to who gets a loan, accepted into school, or who gets a job interview, algorithms affect many parts of our lives (Noble, 2018; O’Neil, 2016). The problem of dangerous dominant narratives is now amplified through algorithms that act almost autonomously.

Through *Muslims, Media, Machines*, I seek to explore how I, along with my community, can take a step towards understanding how narrative and algorithmic injustice impacts us, and how

we might counter these injustices. Through a collection of experiments in interaction and participatory design, I embark on a journey of *storymaking*, a collaborative approach to creating stories in multimedia formats, engaging the Canadian Muslim community as its anchor. I am building this movement in a three-fold approach that seeks to: (1) provoke thought and discussion from both people and algorithms; (2) build a collaborative storymaking practice for creating narratives and counternarratives; and (3) engage with the platforms on which narratives are disseminated.

My thesis work is divided into roughly two halves: one seeks to generate stories and counter narratives; the second seeks to understand, confront, and perhaps use or subvert the use of the digital media systems that circulate them to disseminate new stories that come from my community. I seek to confront the complex issues surrounding the narratives and media that create and circulate stories about us. Ultimately, I am interested in exploring how we can take a first step towards building a long-term practice of digital literacy and agency in the Muslim community, empowering Muslims to take ownership of their narratives to dismantle algorithmic and narrative injustice.

Among many things, I am a designer, developer, and animator. I am a dreamer. Most importantly, I am a storyteller. Throughout this thesis support document, I would like to write as a storyteller, highlighting the power of narrative by moving through critical and poetic styles of writing. I would like to invite you to engage with these critical and poetic stories with me.

02

Histories

This section sets up the significance of storytelling and the problem space of North American digital media. I highlight stories and histories about Muslims that transcend dominant narratives in media and colonization, respectively.

“The truth about stories is that that’s all we are.”

- Thomas King, *The Truth About Stories: A Native Narrative*, 2003

2.1 The Power of Stories

We are all collections of stories. We are threads tied, inextricably, to the stories that have been woven before us. The idea that each one of us has a personal relationship to stories is highlighted by the Indigenous novelist and activist Thomas King in his 2003 Massey Lecture Series *The Truth About Stories: A Native Narrative*. Drawing on personal anecdotes, Indigenous oral storytelling traditions, and reflecting on the representation of Indigenous peoples in literature and visual media, this work critiques North America's relationship to Indigenous peoples, and asks how storytelling can invite us to rethink these relationships. King reminds his audience that “the truth about stories is that that's all we are” (2003, p. 92). They are a part of us, and we are a part of them. They are all that will be left of us when we pass on. Stories are more than entertainment or retellings of lives once led — they inform understandings of the world. According to media theorist, cultural critic, and educator Neil Postman (1985), narrative serves as the main means by which individuals comprehend their experiences and surroundings. Stories have profound power in shaping public opinion and understandings of lived experiences. Exploring storytelling traditions of the past and the present can give insight into the multitudinous purposes and impacts of narratives.

In the Islamic tradition, the highest form of storytelling is that which exists in the Holy Qur'an. The primary scripture of Islam and God's word, the Qur'an establishes storytelling as a potent method of communicating meaning, establishing truth and justice, and relaying knowledge and history. The Qur'an builds on the preexisting culture of poetry and storytelling gatherings of Arabia at the time of its revelation and gives the practice of storytelling a specific purpose: calling to the Divine and establishing a way of life based on justice. The Qur'anic methodology of storytelling is clear and precise, and it utilizes parables to reveal lessons with depth and complexity, continuously commanding its readers to reflect (Al-Mutairi, 2024; Elshinawy, 2022).¹

At the height of the Islamic Golden Age (737 - 1095 CE), stories, along with art, architecture, mathematics, sciences, agriculture, innovation, philosophy, and democracy were at their peak (Ansary, 2009). Muslims of the time were leaders in the foundations of society and intellectual thought (including education, healthcare, justice, and arts and culture). Seeking mastery of specific artforms, including calligraphy, poetry, and recitation, elevated one's status, showing that Muslim societies of the time highly valued forms of creating and communicating narratives (Ansary, 2009). As a Muslim community, we stand on the shoulders of giants, of a rich society of philosophical depth and intellectual curiosity. We are uplifted by scholars who founded the first

¹ Highlighting the storytelling of the Qur'an is not equating or reducing it to a narrative itself, but learning from the use of allegory, rhetoric devices, and sophisticated forms of speech and writing that require contemplation to understand the power of storytelling. Additionally, the Qur'an was recited publicly and memorized before it was compiled into a written text, emphasizing the oral culture of the time and the act of collective contemplation.

universities in the world; Afghan warriors that defeated imperial powers for centuries; Palestinians who have and are resisting decades of occupation and settler colonialism; leaders of the American civil rights movement; and designers and inventors of surgical instruments, optics, the toothbrush, and coffee (Ansary, 2009). Our histories are vibrant.

Where did these narratives go? And where did new ones take their place along the way?

2.2 Where Do the Stories Come From, I Wonder?

Whilst a myriad of stories exists, some take hold as the dominant narrative. Who cements this as history, and, in the process, clouds other histories, is a direct result of power, whether intentional or unintentional. The prolific Nigerian novelist Chimamanda Ngozi Adichie (2009) describes this relationship between storytelling and power. Adichie reminds the audience that storytelling is inherently political; how, where, when, how many, and by whom stories are told are deliberate choices and so too is the choice to make those stories the definitive *single story* of a people. Her core argument on the power that stories hold is the anchor for my thesis, as the single story weaves through the cycle of narrative and algorithmic injustice.

2.2.1 Economy of Ideas and Mediums of Circulation

Political and media theorists in the last 200 years have considered how ideas have been wielded by individuals, media conglomerates, governments, and nations for power and passion, love and loss, grief and greed, fear and freedom. Nineteenth century German philosophers and political theorists Karl Marx and Friedrich Engels were well-known critics of capitalism who, in their work “The Ruling Class and the Ruling Ideas” (1976), interrogated the relationship between dominant classes and ideas that become dominant within a culture. They state that, under capitalist societies, the ruling material force, the class which controls “the means of material production,” of society is concurrently the ruling intellectual force, the class that “controls the means of mental production” (Marx & Engels, 1976, p. 31). Marx and Engels assert here that those who hold the reins of knowledge — and I might add, its freedoms, distribution, and access — have the power to influence the ideas and ideologies of communities and societies. In the global media climate today, it is becoming difficult to point to a single ruling entity, however, that holds this power. Traditional media (i.e., radio, television, print) is highly diversified across a spectrum of public and private ownership models and accessed through a variety of analog and digital means. These exist alongside a globalized network of social media, which exists across a variety of decentralized platforms as well as some of the largest monopolistic platforms in human history. Large portions of this media power are accessible and directly used by state actors, commercial broadcasters, and private companies (Bridle, 2018). Furthermore, with the access afforded by internet platforms, they are also available to influencers, trolls in comment sections, bad actors, bots, small and large language models, and the global network of users — groups and individuals, public and private, human and machine.

Many of these diverse actors play a role, but the dominant ones still hold power across both analog and digital media, and thus have profound influence over public opinion (Greenfield, 2018). Whilst other narrative influences exist, those that are repeated shape this public opinion (Adichie, 2009). This is exemplified through the depictions of specific communities online,

particularly those that are already marginalized. This includes, but is not limited to, Muslims as violent and oppressed (Alsultany, 2012; Mirrlees & Ibaid, 2021; Sîsler, 2008), which I will discuss in further detail in the following section.

2.2.2 Flattening + Othering

With respect to North American digital media since the 1960s, Muslims have been *othered* (depicted as an opponent or enemy of the protagonist or audience, or as exotic in comparison to them), *flattened* (reduced from diverse communities to static characters and given a monolithic representation), and linked to hostility and terrorism (Sîsler, 2008). Films and video games place Muslims in warzones, constructing them as mythical characters that must be virtually killed, propelling stereotypes and Islamophobia (Dodds, 2008; Mirrlees & Ibaid, 2021). Juxtaposing this are constructions of Muslims, especially Muslim women and girls, as helpless. They are oppressed by family members, conservative cultures, or religious or political leaders, to which they are unbeknownst and thus in need of educating and rescuing by (often) white, non-Muslims (Alsultany, 2012).

This recent representation has a longer legacy. The “Muslim as terrorist” stereotype did not begin after 9/11, but was built up for the preceding 30 years (Stahl, 2009). Then, it was easy to turn to after the attack. Following this moment, we begin to see a shift in television and film specifically showcasing a “good Muslim” opposite a “bad” one. The so-called “good Muslims” are often depicted as helpless women, who are victims of hate crimes and in need of saving, or as people who condemn the “bad,” violent Muslims (Alsultany, 2013). These narratives do not only create stereotypes, but they function to support new ones. Specifically, they work in parallel with other US-based and Canada-backed narratives, missions, and justifications for intervention and aggression or “aid” — those of spreading democracy, freedom, security, human rights, development, and civilization — that actually function to destroy people and places around the world, most often in the Global South (Dodds, 2008; Sharma & Nijjar, 2018; Stahl, 2007).

So you take my pigment
Without its past,
Without pain.

I: filthy.
You: saviour.

The same.
We are not the same.

- untitled, Maria Azam, 2020

2.3 What If We Simply Started Off with the Wrong Story?

In *Staying with the Trouble*, Donna Haraway reminds us that “it matters what stories we tell to tell other stories with... what thoughts think thoughts... what stories make worlds” (2016). Other cultural and political theorists echo Haraway’s notion that the stories we tell and are told inform how we understand the world; they argue that, by shaping our ideas, narratives shape our cultures too (Gramsci, 1985; Hall, 1981). In this thread, King (2003) invites us to ask: “Do the stories we tell reflect the world as it truly is, or did we simply start off with the wrong story?” (p. 26). This invites questions of what kind of world we could create with different stories than the ones that have been told about us, rather than by us, for us.

I have found that the previously discussed flattening and othering of Muslims in digital media, which tends to displace the rich stories and histories of Muslim communities in favour of misleading stereotypes, is so easily consumed by the heart, swallowed whole and pushed down without so much as a gurgle. In my own experience, it manifested in internalized colonialism and hatred. And it bred self-conflict. There came a critical moment where I had to confront myself and my internalized victimization. I feel a strong urge to respond to that manufactured legacy, and thus the distortion and destruction of my community’s longer legacies, that so fiercely impacts us and so intimately influences our identity.

As an emerging creative technologist, I innately responded to these dominant narratives from a place of conflict and criticism. This came from a need to prove my humanism and to seek approval. My work explored these ideas primarily through digital storytelling, and the narratives stemmed from poems that emerged from my writing practice. My early poetry was full of rage, whether for the other or for myself. In pieces like the short poem above or *A Letter to the Land*,² a digital story wrestling with my fierce disappointment in and abashed loyalty to my culture, I focused on othering others the way I was. I dug a hole to shove my terrorists and illiterates and damsels and naïves into, and I stayed in the trench with them, unwilling to hope that we could be better. Believing that maybe we were just as they said we were. Feeling as though I had to prove that we were not. But I did not know how to do so. And I did not know how to celebrate. I was so angry with those who started off with the wrong story, that I failed to see that I had too. In holding onto a version of my history that began only at its encounter with expansionist empires and dissolution due to colonization, in holding onto victimhood, that was all I could convey.

I had to decolonize my mind. I had to undergo a journey of seeking: How do I see myself beyond the dominant narratives? Can I see myself beyond them?

² Azam, M. (2021) *A Letter to the Land* [Mixed media short film]. <https://www.youtube.com/watch?v=djJHdOI34Co>

What is it in the strength of these mountains
that makes the hearts so weak?

The city of flowers,
it calls,
but it's blood
which floods these streets.

Smoke burns on the breath,
hatred woven in the speech,
the crumbs of a coward tangled in these beards,
flushed with the honey and lemon in your green tea.
If only these valleys would swallow me
the way you drink to my misery.

Knees and palms graze these fields.
Come to me,
so we may be one with our trees.

See, you corrupt this faith,
linger too long in your gaze,
foul the fragrance of jasmine
the way you never give --
only take.

The very women you vow to protect --
these rivers carry their tears,
carry their fears,
carry the cries of children men choose not to hear.

Tell me:
Where is your honour now?
And why do I long to be here?

- *A Letter to the Land*, Maria Azam, 2021

2.3.1 A New Trajectory

It was through working with other artists of colour that my practice expanded. Collaborating with Cyril Chen³, an experimental animator and filmmaker, and Ammara Syeda⁴, a documentary photographer and filmmaker, both based in Saskatchewan, I was introduced to Rania al-Harhi: a Palestinian-Jordanian writer and performer. She shared with us, through conversations cutting out over online video calls in the midst of the Covid-19 lockdown, what it means to find home when home is not a place, when home is violently stolen, when home is lost and with it any promise of return. Together as a team of poets, performers, and painters of the screen, we produced *Home of Diaspora*⁵, a mixed media short film exploring Rania's journey finding home. In her poignant film, she calls for justice through her art and servitude towards the land we are settlers on, along with like-minded artists indigenous to Saskatchewan. Whilst my previous work was born out of rage, Rania's work turns to grace. She recognizes the violence that dispossessed her and her people, embraces instead of shaming herself, and looks to building collective resilience with our communities.

2.3.2 Labour + Power

When artists of “marginalized communities” are invited by institutions to share our stories, why are we often asked to justify our identities? (Of note is the fact that, whilst developing *Home of Diaspora* with the CBC, there were multiple discussions with our producer about even using the words “Palestine” or “Palestinians” in the film and the associated article⁶.) While audiences of mass media perform work during their leisure time (Smythe, 2012), do they perform work in the ways that are necessary? Do they perform the work of consideration? Do they critically interrogate the stories that they see and the ways in which they are presented? Or does the digital audiovisual medium — as it becomes entertainment — create a passive relationship with media where we are recipients of these stories without much asked of us, limiting our engagement to one of consumption rather than deeper understandings and interrogations of the overwhelming number of messages we receive in a day (Postman, 1985)? Does the labour still fall to the creators or subjects of that media to ensure that our histories are depicted accurately and justly?

I would like to ask myself and my community to consider that we are not “marginalized.” Rather, we are a great people in both number and imagination. To resuscitate ourselves, we may begin with building literacies of our own histories, as discussed in Section 2.1. I would like to explore where there is a need for new narratives for today. Ones beyond victimhood and seeking acceptance, or of ones that perform labour. Ones of taking up space, being unapologetic, of justice and embracing our stories.

³ Chen, C. Portfolio. <https://cyril.art/>

⁴ Syeda, A. Portfolio. <https://amsyedaphotos.mypixieset.com/>

⁵ Azam, M. (dir.), al-Harhi, R., Chen, C., & Syeda, A. (2021) *Home of Diaspora* [Mixed media short film]. <https://www.cbc.ca/player/play/video/1.6638691>

⁶ Zeviar, A-M. (2022, Nov 05). “What is home when you're part of a diaspora?” *CBC Saskatchewan*. <https://www.cbc.ca/news/canada/saskatchewan/what-is-home-diaspora-creator-network-1.6630578>.

“Est-ce que vos films sont bien compris en Europe?”

“Ne. Mais mettez-nous bien ça dans la tête.

Moi, l’Europe n’est pas mon centre.

L’Europe est d’une périphérie de l’Afrique.

Voyez, ils sont restés plus de 100 ans chez moi,
ils n’ont pas parlé ma langue. Je parle leur langue.

L’avenir, ne, pour moi, l’avenir ne dépend pas des compris par l’Europe.

Je souhaiterais qu’ils me comprennent,
mais ça ne fait absolument rien.

Si vous prenez la carte de l’Afrique, géographiquement,
vous pouvez mettre l’Europe et l’Amérique,
il nous restera encore de la place.

Pourquoi voulez-vous que je me c’est tropisme?
Vous savez le tropisme?

Pourquoi voulez-vous que je sois comme le tournesol qui tourne autour
du soleil?
Je suis moi-même le soleil!”

- Sembène Ousmane, interview in *Caméra d’Afrique* (dir. Férid
Boughedir), 1983

2.4 Rewriting My Story (or Past Reflections in Future Worlds)

I have embraced the challenge of telling new narratives that take up space and are unapologetic in doing so. In this section, I reflect on three digital and interactive stories from my recent work.

2.4.1 my soul

This story is a personal one. It reflects on my inward experience of being outwardly, visibly Muslim. Growing up, this was something I was embarrassed of, wrestled with expressing, and reluctant to share with others. As I started to learn more about Islam in my late teenage years, I understood the beauty of it and why I wanted to choose this system of life. Islam is now an integral part of me, of my soul, and something I am proud of. The story of *my soul* is based on a poem I wrote to express this journey:

Why do you wear your Islam?

Why do I wear my Islam?

Should I have taken it off,
Washed it in lukewarm water,
Hung it up to dry,
Folded it ever so carefully,
Placed it in a drawer,
Left it at home?

Should I have left my Islam at home?
Should I have left my soul at home?

- *my soul*, Maria Azam, 2023

*my soul*⁷ is a 22-second animated short film in 2.5D that illustrates my relationship with Islam through asking the question, “Why do you wear your Islam?” It is subtitled by a poem I wrote based on this personal journey. The film is set in a three-dimensional sci-fi world, inspired by the shapes of Islamic architecture, a vision of a possible Islam-imagined future. It follows a two-dimensional hand-drawn character that squashes, stretches, and struggles with feelings of suppression and empowerment of its *deen*, its system of life.

⁷ Azam, M. *my soul*. 2023. Animated short film. <https://fullresgradstudios.ecuad.ca/mazam/project-3-discourse/>

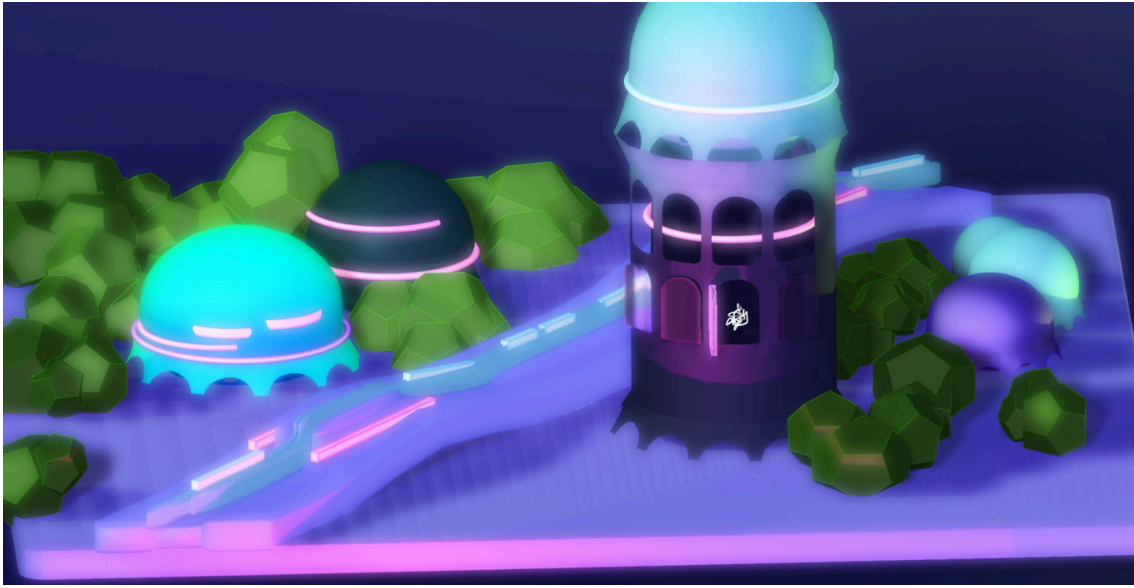


Fig. 1: Still frame from my soul.

After reading *Make It So: Interaction Design Lessons from Science Fiction* by Christopher Noessel and Nathan Shedroff (2012), I was inspired to conceptualize an Islam-inspired future world, using interactive animation as an interface for storytelling. I drew on the work presented in *Make It So* in two ways: (1) conceptually and (2) visually. Science fiction (sci-fi) is a realm in which we can create new characters, stories, and worlds, imagining futures that are unbound by real-world constraints. For me, practicing speculative design through sci-fi represents hope. I wanted to envision a future that was inspired by Islam, a future that was not devoid of spirituality, tradition, and heart, but infused with both old and new. In the western world that often equates secularism to modernity and freedom, I wanted to explore concepts of Islam, a way of life that is timeless to me, existing and prospering in the future instead of being erased and left in the past. I wanted this potential future world to frame my growth as a storyteller.

Exploring new narratives gives me hope. I find that my recent work stems from a more healed and hopeful perspective. It rejects having to perform the labour of explaining my history and identity. Instead of sharing personal identity as a visible Muslim and person of colour, it narrates personal experiences at the human level. Stories like *per aspera*⁸ (a visual novel following a character reaching for their dreams) and *Bedtime Stories*⁹ (an interactive digital story exploring childhood through the relationship between physical and digital worlds) return to deeply personal narratives.

⁸ Azam, M. *per aspera*. (2022). Interactive visual novel.
<https://drive.google.com/file/d/1djPMOuctm9NgVwKqPGTeg9ovxWz51ro5/view>

⁹ Azam, M. *Bedtime Stories*. (2021). Interactive digital story.
<https://drive.google.com/file/d/1QUS2sit6OVpuKxEMs9gLuxmeGA9qq2iA/view>

Stories like *my soul*, *Bedtime Stories*, and *per aspera* have enabled me to return to confronting myself, this time with an expanded view beyond the single stories I once told myself based on internalized western ethnocentrism. They allow me, as a Muslim storyteller, to create and share stories of Muslim characters who are not defined by their Islam. They allow me and us simply to be, without explanation, without apology.

Narratives

This section investigates how narratives are used to sway, manipulate, and manufacture conceptions of a group of people for political gain and justification for a wide range of actions and interventions around the world. We set up the term *narrative injustice* and present a series of storymaking workshops that seek to interrogate narratives and create new ones within the Muslim community.

“I will tell you something about stories, [he said]
They aren’t just entertainment.
Don’t be fooled.
They are all we have, you see,
all we have to fight off illness and death.
You don’t have anything if you don’t have the stories.
Their evil is mighty but it can’t stand up to our stories.
So they try to destroy the stories
let the stories be confused or forgotten.
They would like that
They would be happy
Because we would be defenseless then.”

- Leslie Marmon Silko, *Ceremony*, 1977

3.1 Narrative Injustice

Narrative injustice is the process and outcome by which stories disseminated in a variety of mediums perpetuate stereotypes and bias about specific groups of people and the nuanced ways in which these dominant narratives may contribute to real-world harms against these communities. In her lecture “The Danger of A Single Story,” Adichie (2009) asserts that these injustices typically arise by means of *single stories*. She defines single stories as stories which show a sole representation of a people repeatedly until that is what they become in the eyes of the audience, and by extension the general public. She asserts that single stories are dangerous because they produce, reproduce, and reinforce stereotypes; and these stereotypes are dangerous not because they are untrue, but because they are incomplete. Stories are inherently tied to power — how they are told, when they are told, where they are told, who they are told by, and how many stories are told are all dependent on power (Adichie, 2009). As similar stories about a group of people are told repeatedly, “as one thing, as only one thing, over and over again, that is what they become” (Adichie, 2009, 09:17). This creates stereotypes and “robs people of [their] dignity” (13:36). This is *narrative injustice*: the idea that stories can teach and reproduce social bias and stereotypes, and how stories can then perpetuate harm to people in the real world, specifically to communities that are already marginalized.

Whilst stories can promote laughter and healing, they may also be wielded to spread hatred and oppression. Stories are magical things, and they are powerful. We must be careful with the stories we tell.

“If you're not careful,
the newspapers will have you
hating the people who are being oppressed,
and loving the people who are doing the oppressing.”

- Malcolm X (el-Hajj Malik el-Shabazz)

3.2 If You Really Knew...

The following section is a series of design experiments in community-led storymaking all centred around the provocation *If You Really Knew...*. This looks at the creation and facilitation of a series of workshops aimed at generating narratives within the Canadian Muslim community. This workshop series gathered Muslim adolescents to address single stories through personal narratives. They sought to experiment with (1) ways in which we could share stories of lived experiences and (2) forms of accessible media that could demystify and activate the storymaking process.

My journey in building community power and resilience began with building community. I am beginning in the places where I already live and work and play and connect. I am beginning in my communities — Regina, Saskatchewan and Vancouver, British Columbia — to come together with the Muslim community in these places to build shared understandings and narratives. I am curious about what our current state of understanding and affect is with the historical narratives built up about us, without us. I seek to experiment with low barrier, accessible, non-intimidating, and low complexity methods for storymaking. This part of the project used a critical and exploratory approach to researching, aimed at engaging community members to first discuss and reflect upon the narratives affecting them and then use those understandings as the framework to create narratives and counternarratives of their own. Through this participatory research approach, I am exploring ways in which the young adult Muslim community wishes to engage in storymaking, if at all, and what types of stories they would like to see, make, and share.

PROMPT

3.2.1 If You Really Knew Me...

Workshop

Design

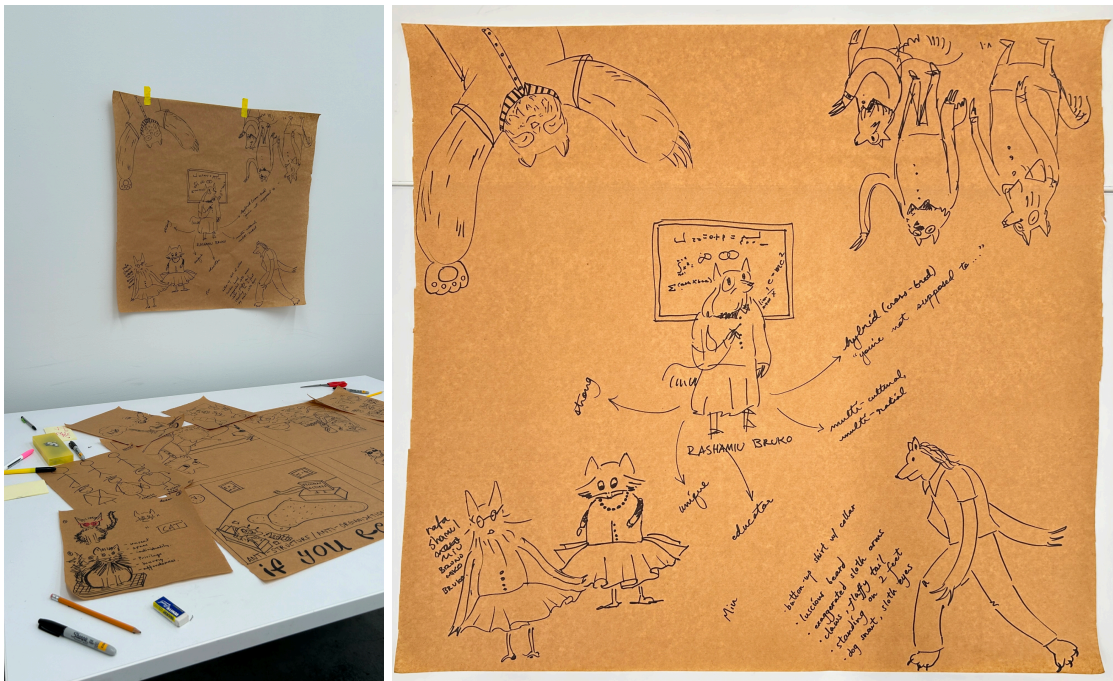
If You Really Knew Me... or *The Story is Mightier than the Stereotype* is a workshop that I designed to explore co-creating graphic narratives. The aim was to experiment with a simple form of visual storytelling to activate group discussion and tacit understandings of being stereotyped. This was done through using the accessible medium of comics, with materials limited to paper and markers, to dissolve intimidation that may often be presented by creative assignments (Barry, 2019; McCloud, 2006). I also chose this medium with the intention that the familiarity would be an easy access point to the participants, requiring less warm-up and instruction than more complex ones, and the mundanity of the tools would free up participant's cognitive capacity beyond the material outcomes, to surface tacit knowledge and lived experiences of being stereotyped due to racialization. The activities were designed in a scaffolded approach, each one building off of its predecessor. This was done to ease participants into the material process and guide them along the storymaking path in a short amount of time. In parallel, the complexity of the themes discussed increased in depth along with each activity.



Figs. 2 & 3: Participants sharing their sketches and ideas.

Facilitation

The workshop brought together four BIPOC adolescents in Vancouver, BC, which included myself in a dual role of facilitator and participant, to discuss racialized experiences. The session was divided into two core activity threads, individual activities and group activities, each with two sub-activities of their own. In the first thread, we represented characters through basic drawing skills. We began with sketching stick people, regarded as a universal, prototypical person, and giving them rough gestures and shapes that related them to our own personalities. Then, we built on these further by sketching symbol characters that represented ourselves or traits that resonated with us. Following each activity, participants would share their sketches with the group. We then moved onto the group activity, bringing all four of our individual characters to create a group character. This time, we focused intently on how to craft a whole, compelling character with a history to share. After many iterations on visual elements and narratives, we co-designed Rashamiu Bruko, a brilliant mathematician working as a high school teacher after immigrating to a new country. He struggles with his biracial identity, and he finds power in empowering his students and comfort in the quiet, sometimes quick, moments exploring his strengths.



Figs. 4 & 5: Workshop sketches and materials.

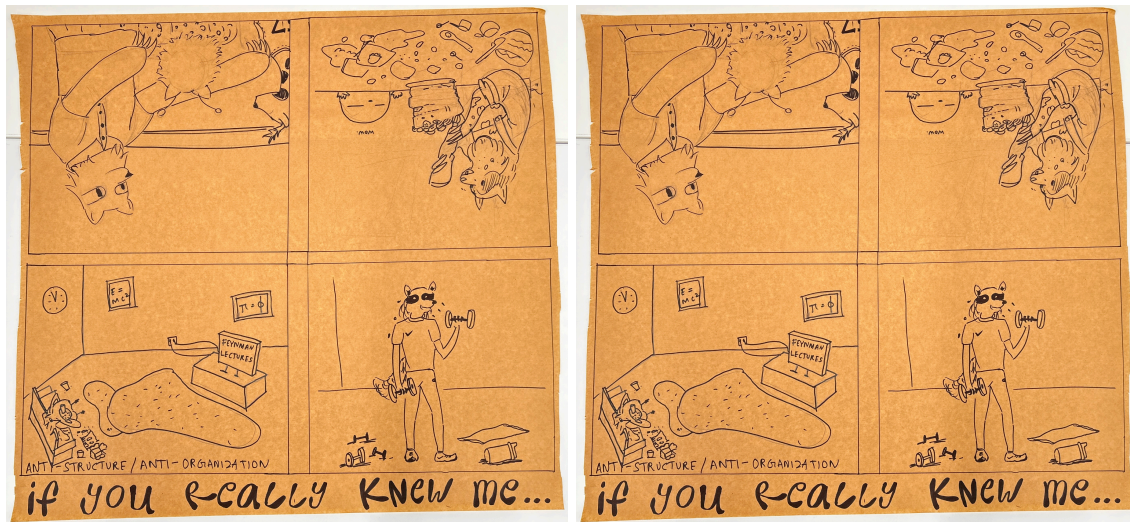


Fig. 6: Final graphic narrative workshop outcome.

Insights

Through these four activities, we co-created a four-panel comic highlighting different areas of an imagined character's life, animated by the participants' lived experiences. While the comic itself is lighthearted and humorous in nature, perhaps not directly combatting any stereotypes, it offers another perspective to the network of narratives, helping to expand on single stories. Perhaps the significance of what it offered was less by its outcome and moreso through its process. Throughout the workshop, the room was filled simultaneously with the silence of minds concentrated on developing their own characters and the laughter of sharing and re-creating them together. Participants shared their own childhood stories of overcoming adversity when illustrating their individual characters, and the workshop buzzed with excitement when the group created a shared character, debating every small detail. During and following the workshop, all the participants reiterated how comfortable they felt with the rapport created in the room and with sketching figures, even though some of them did not draw regularly. They commented on their enjoyment of the scaffolded nature of the activities and how they felt supported by the seamless structure. Most memorably, two participants shared their appreciation for the space cultivated by the workshop, a space where they could become vulnerable, discuss their experience with stereotypes, and navigate them together with peers who had similar experiences. *If You Really Knew Me...* offered participants the room to give space, shape, and voice to these experiences through story.

PROMPT

3.2.2 If You Really Knew *Muslims*...

Workshop

Design

If You Really Knew Muslims... touched on themes of representation in digital media. It was run with four Muslim adolescents in Regina, Saskatchewan, which included myself in a dual role of facilitator and participant. It built on the activity and prompting structure of *If You Really Knew Me*..., this time focusing directly on the experience of being Muslim. The workshop invited participants to reflect on personal stories, discuss their experiences with algorithmic and narrative injustice, highlight desires for the types of stories they would like to see, and respond to prompts through writing and collaging their own narratives.



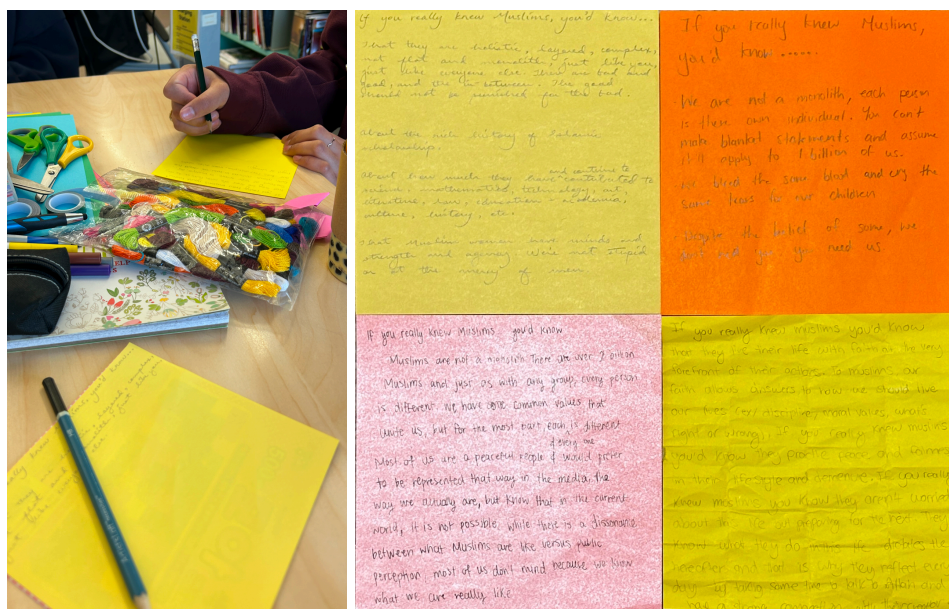
Fig. 7: Participants working on their “If you really knew me, you’d know...” collages.

Facilitation + Insights

The workshop was structured into three parts that progressed from personal to public as the activities unfolded. The first section, “If you really knew me,” was a short, cold opening to the gathering. It prompted participants to complete the sentence, “If you really knew me, you’d know...” by writing onto a piece of origami paper. The intent was to thrust ourselves into vulnerability and get our minds and hearts warmed up for the making to come. This activity was completely anonymous, and participants were invited to choose where their responses would live

once completed. They could crumple them up, throw them away, keep them in their pockets, or glue them in their diaries. Remember them. Forget them.

We then built on this activity, this time with a wider scope: “If you really knew Muslims, you’d know...”. Participants were tasked to respond to the prompt by completing at least three different versions of the sentence. The intent was to think about sharing what we would like others outside of the community to know about us. We then shared the responses aloud and discussed them as a small group. The responses were diverse, echoing the way participants described Muslims. They wrote about Muslims as individuals not to be flattened or painted as a monolith; people whose souls cannot be broken; the history of Islamic scholarship; and the diversity of our community. Some of the participants had parallel unexpected themes: they penned that Muslims neither need nor care for “representation.” They were content with knowing who they are, whether their humanness was recognized by others. They were not worried with how they are perceived in this life, because they are busy preparing for the next. And, addressing western media and its simultaneous negative depiction of Muslims but reliance on the Muslim community’s attention in order to boost engagement and increase profits, one participant wrote, “We do not need you, you need us.”



Figs. 8 & 9: Participant responses to the prompt, “If you really knew Muslims, you’d know...”

These first two activities provided material to reflect on in a group discussion about each participant’s individual past, present, and future and the commonalities between them. We reflected on them by discussing our experiences with algorithmic and narrative injustice. Interrogating the past, we discussed how we have seen Muslims depicted in digital media, with a focus on what we would like to see more of, less of, or done differently. Confronting the present, we reflected on how these biased narratives affect us in physical and digital spaces. Imagining

the future, we shared ideas on how we would like to see Muslims depicted in digital media, whether we need “representation” and what this means to us, and how we would like to take ownership of our stories.

Now that we had gone through the process of building personal and collective understandings of our media landscape and our places within it, our final activity was to create our own narratives. Participants were given a choice of prompts from the former exercises: either “If you really knew me, you’d know...” or “If you really knew Muslims, you’d know...”. They were then invited to respond to these one last time by sharing a narrative through prose and collage formats.

We concluded the workshop by reflecting on our collages and their relationships to the previous activities, especially the cold opener. It seemed that we began with vulnerability and ended with it too, resulting in four collages that were intimate in both nature and length.

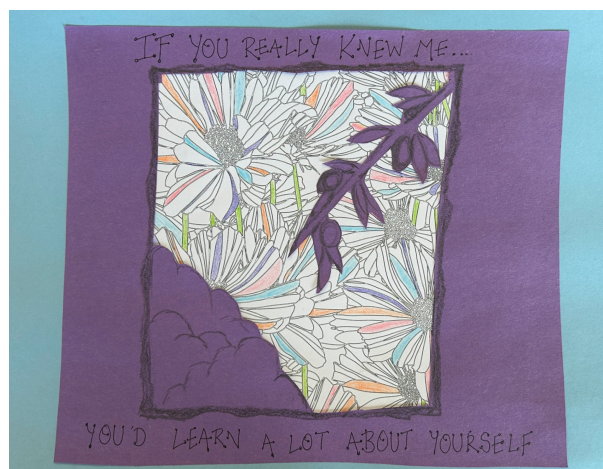


Fig. 10: “If you really knew me, you’d learn a lot about yourself.”



Fig. 11: If you really knew me, you’d know I care too much.



Fig. 12: If you really knew me, you'd know I'm still afraid of the darkness.



Fig. 13: If you really knew me, you'd know I'm a little lost in life but that's okay.

Insights

Participants voiced that they enjoyed the scaffolded nature of the workshops. That is, the workshops were structured in a similar way, where one activity would build up to the next, whether thematically or visually. They shared that they enjoyed the vulnerable questions that were prompted during the workshops. They mentioned rarely having chances to consider and reflect on their own experiences with media in such meaningful ways, both personally and with others. I was pleased to hear this, since I was originally unsure if my prompts would be too vulnerable for a workshop setting. It was my intention to cultivate a safe and critical space to examine our social and political relationships with digital media, and I am glad this was what resonated with participants.

3.2.3 Insights + Reflections

We emerged with diverse stories from the first and second installments of the *If You Really Knew...* workshop series, from graphic narratives to collages coupled with written prompt responses. While these stories are rich, sometimes humorous and sometimes poetic, they may not be the strongest ways to engage with the research questions and interrogate or respond to narrative and algorithmic injustice. In experimenting with different accessible, low-stakes and -cost materials, I sought to understand how to foster co-creative storytelling sessions that form counternarratives to narrative and algorithmic injustices. I would like to further explore ways of storymaking that can yield more concrete stories that directly respond to the aforementioned topics.

04

Algorithms

This section investigates how harmful narratives are amplified algorithmically and how this reinforces patterns of domination. Through a series of design experiments, I consider the trade-offs to be made in online and physical spaces where both connection and coercion occur.

“Technology is not the design of physical things.
It is the design of practices and possibilities.”

- Lucy Suchman

4.1 Algorithmic Injustice

Algorithmic injustice is the process and outcome of computer algorithms, intentionally or unintentionally, violating the rights of human beings (Birhane, 2021). Algorithms are a set of instructions that a computer follows to complete a task or solve a problem. As algorithms have become more sophisticated in the last century, they are increasingly being used to sort and predict social outcomes and to make social decisions that impact the real world. They have evolved from solving mathematical equations to being used to detect speech and faces, allocate medical care, predict crimes, identify suitable job candidates, manipulate users on social media, and even to kill (Noble, 2018; O’Neil, 2016). Furthermore, the increased use and deployment of artificial intelligence (AI) algorithms, which are technological systems modelled off the human brain and are designed to think and act rationally, increase risks of amplifying harmful biases. Recent research is beginning to uncover that large language models (LLMs), often employed by AI and social media algorithms, display strong associations between Muslims and violence (Abid et. al., 2021). Algorithmic injustice refers to how these software systems learn, produce, and reproduce social biases and stereotypes.

4.2 Code is Poetic

Interrogating algorithmic injustice is no easy task. Much of the inner workings of digital systems are hidden behind layers of sophisticated code and interfaces, inaccessible to the public as to how they work and how they affect us in our everyday lives (Latour, 1999). In *New Dark Age*, James Bridle (2018) suggests that, to confront the black-boxed world of digital systems, we must first do the work of building up key technological and social literacies as individuals and affected publics, before we can respond with any sort of understanding, sophistication, or agency. The following diverse set of experiments explore another side of the issue – the circulation of stories through digital media. The content circulated (i.e., narratives) is only one part of the issue. How media circulates ideas and how algorithms amplify and distort those messages is essential to understanding and countering algorithmic injustice.

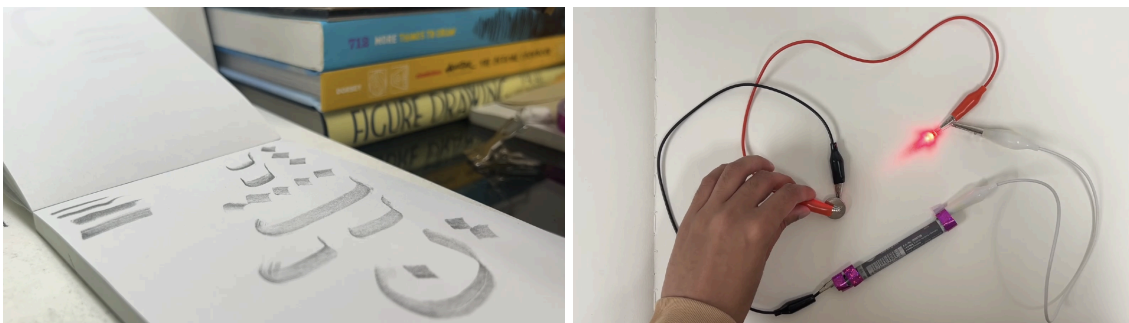
Social media has become an increasingly prevalent, and for many a seemingly inescapable part of social, political life, and/or economic life. With it has also come a great deal of concern for the quality and integrity of political and social discourse, with implications for the health of individuals and societies alike (Bravo et. al., 2019; Bridle, 2018; Costanza-Chock, 2020; Deibert, 2015; Deibert, 2019; Epps-Darling, 2020; Greenfield, 2018). We see the social connection, the community, the beauty that these tools offer us. They charm us. They allure us. They invite us into the machine's web. They benefit us too. They afford us the ability to test out performances of self, to seed relationships new and old, to discover information and cultures, to find like-hearted communities, to belong. They allow us, for a seemingly brief moment, to surrender to their bliss, held by arrays of influence and lulled to comfort by resting on strings of our carefully curated echo chambers. They allow us to escape, digital pacifiers for whenever we feel sad, lonely, or anxious. Empowered by the ability to manipulate bits of data to share with followers and followed, we become split and aggregated into data ourselves. Once included in this maze, encoded in it, we learn we are *excoded* (Buolamwini, 2017). We experience how the platforms exclude, harm, and destroy us. And we are once again reminded of those histories.

In this section, I confront the landscape of different media platforms through explorations in creative coding and tangible interaction projects. I consider the trade-offs of social media through embodied interactions. I conducted two poetic experiments in this space to explore what social media is and could be. In *Tangible Social Media*, I experiment with what digital media might look like if it were designed for embodied social interactions. In *The Choice*, I wrestle with the choice social media offers us: to opt in or to opt out.

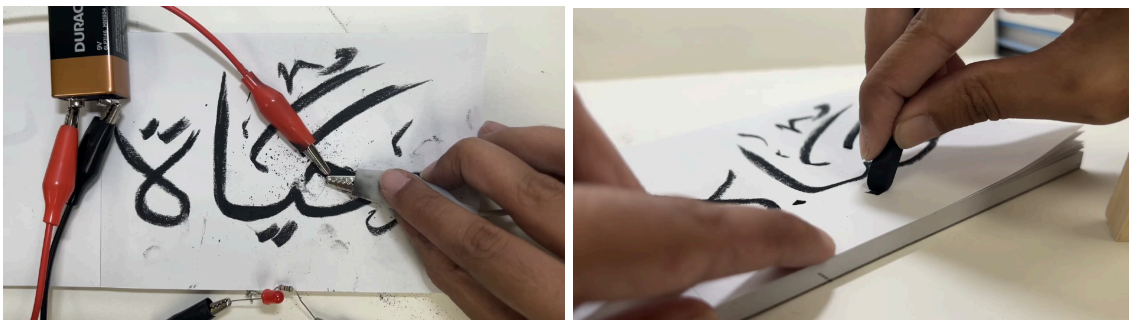
PROMPT

4.2.1 Tangible Social Media

Interested in exploring the structures and forms of interaction in social media in a more hands-on and visible way, I experimented with creating tangible interactions. I was intrigued by the idea of interrogating this space through Islamic artforms. Therefore, I began with experiments in testing the conductivity of Arabic calligraphy in different materials (graphite, charcoal, silver leaf, and india ink), with the intent to then animate the calligraphy as part of an electric circuit. This involved wiring batteries and lights together, using two ends of the conductive calligraphy material to close the circuit. Once the circuit was closed, it would light up an LED — at varying intensities due to the conductivity level of the given material.



Figs. 14 & 15: Experimenting with conductivity of Arabic calligraphy in graphite.



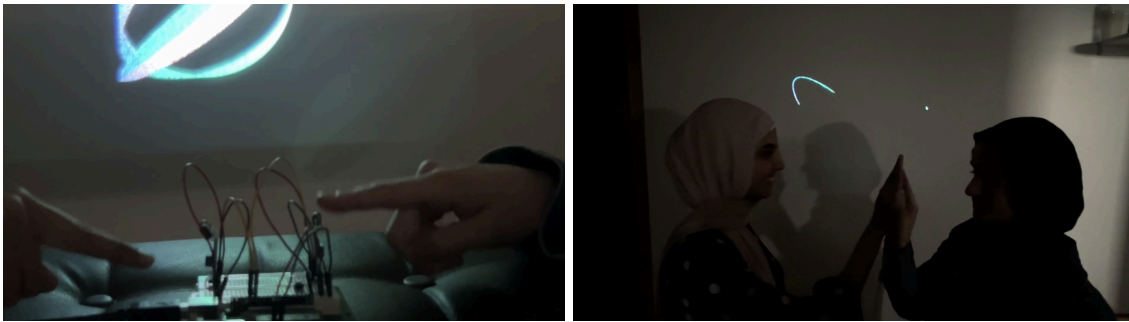
Figs. 16 & 17: Experimenting with conductivity of Arabic calligraphy in charcoal.



Fig. 18 (left): Experimenting with conductivity of Arabic calligraphy in silver leaf.

Fig. 19 (right): Experimenting with conductivity of Arabic calligraphy in India ink.

Interested in the form of the letters that danced on the crisp, textured paper and the function of an artist, or user, activating a circuit through touching them, I took this one step further. I considered how I might involve multiple users and social interactions between them to activate movement on a page or screen. This time, closing the circuit through the conductive material was done through touch. I expanded on the simple circuits in the above-mentioned experiments to two types of circuits, one which detected movement (*Fig. 21*) and one activated by human touch (*Fig. 22*). Both circuits processed user interactions to create a projection, and I wired circuitry to an Arduino Uno so that I could animate waves that resembled Arabic calligraphy on-screen.



Figs. 20 & 21: Two users interacting with the circuit and with each other.

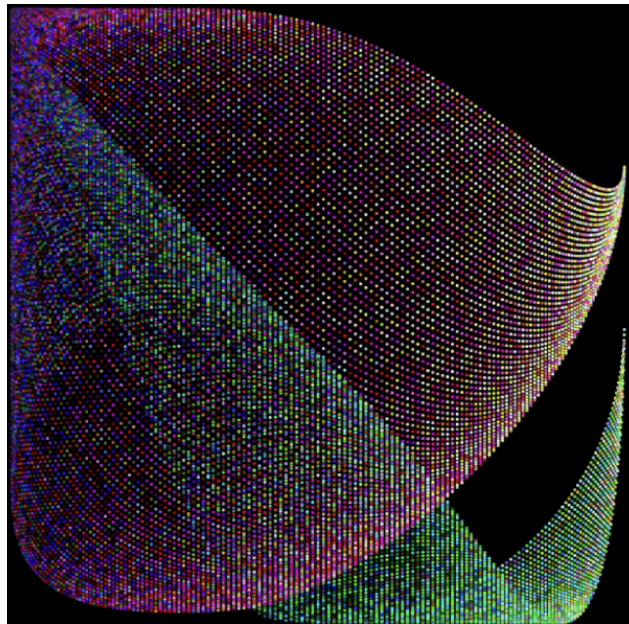


Fig. 22: Screen capture of a frame of the waves projected when interacting with the circuit.

Through this experiment, I expanded from tangible media to tangible social media. Two users, artists, friends, became the conductive material that would close the circuit together. This was done through IR sensors, which detected motion from each user at an end of a sensor to then animate particles on screen, and then through wires that were connected when friends touched, such as by handshake, high-five, or hug. Once players interacted with the circuit and with each

other, vibrant waves that mimicked the motions of the calligraphy were projected on screen. This short experiment artistically explored an embodied representation of the words “social” and “media”.

PROMPT

4.2.2 The Choice

The Choice is an abstract gamified representation of social media that I developed through creative coding. It is setup using a simple *pipe* architecture, a connection between two processes or commands such that the standard output of one process is the standard input of the other (*What is a pipe?*, Lenovo). I constructed a primitive representation of an algorithm that allows users to communicate from separate channels on social media. Each end of the pipe in this two-player game is a command terminal on a laptop. Each player sees a set of two black windows on-screen. Both players are instructed to click in parts of the world to communicate. As they do so, they populate circles of random sizes and colours at their mouse locations. Each player’s input is read by the other computer in this pipe, and it then appears in the same position and colour on the other player’s screen. Once the other player clicks in their own window, a connection is formed between both players’ circles, representing a new edge to connect these nodes into a network. As players populate increasingly more circles, representing the building of community on social media, enemy eyes are populated, overtaking the screen. Their gaze follows the mouse movement of the players, representing surveillance on social media.

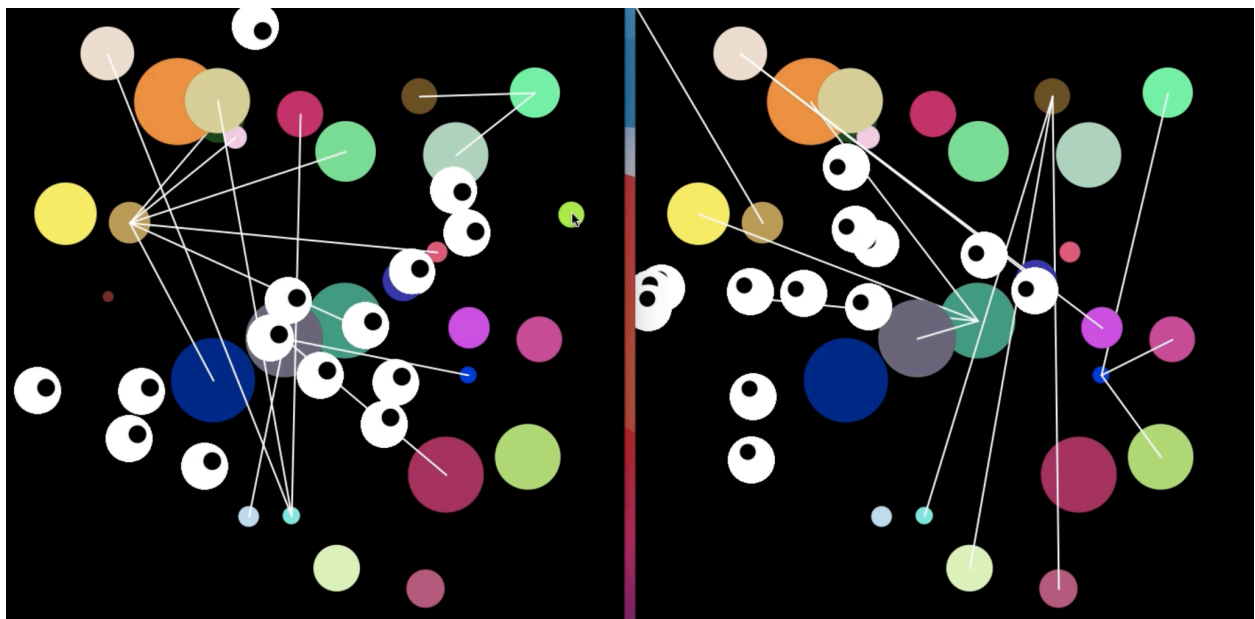


Fig. 23: Side-by-side view of both players’ screens at a point in time of playing “The Choice.”

I was intrigued by the idea of representing social media as a metaphor. I wanted to highlight the difficult choice that many social media users must make when deciding whether to keep or

remove their online presence and how to find a balance between protecting themselves whilst sharing online. Using simple point-and-click interactions as the main mechanism, *The Choice* offers a playful provocation into the seesaw nature of online communication platforms. This game does not seek to provide any solutions, rather to spark reflection on the dichotomy between privacy and community presented by social media.

05

Counter Narratives (Counter Spaces)

This section outlines a series of participatory and interaction design interventions that ask how Muslim communities can mobilize to counter dominant practices and platforms in which narratives are created and disseminated. I discuss the importance of movements to be relational, community-led, democratized, and decentralized.

“This is precisely the time when artists go to work.
There is no time for despair, no place for self-pity,
no need for silence, no room for fear.
We speak, we write, we do language.
That is how civilizations heal.”

- Toni Morrison

5.1 A Need for New Narratives and Spaces

We can opt out of sharing the stories of proving and performance. Of identity. Of definition. We can opt out of the labour, out of the matrix. We can counter instead of having to prove ourselves or explain the injustices to others. It is also *our choice and our power* to choose the stories we want to tell beyond the dominant narratives, and in the ways we want to tell them.

With the need for counter narratives arises the necessity for counter spaces. Whilst diverse stories by and for Muslims exist, the dominant narratives persist. Our narratives do not seem to be reaching wider audiences, and often, when they are, they are subject to further attack from online users in Instagram comments and subreddit forums. I would like to explore, along with my community, what types of spaces we can create to propel our own stories and movements.

In this section, I will draw on works of leaders in design justice and technology ethics research to discuss how dismantling narrative and algorithmic injustice requires a community-led approach. Then, I will present two key design outcomes of my thesis work which were the core results of the experiments in Sections 3 and 4.

5.2 Relational “Solutions”

In her paper “Algorithmic Injustice: A Relational Ethics Approach,” Abeba Birhane (2021), a leading researcher at the intersection of AI, human behaviour, and critical race studies, notes that conventional solutions to the issue of algorithmic injustice are (1) of a technical nature and (2) do not centre communities that are impacted disproportionately. To address this, she draws on Afro-feminist and enactive cognitive science theories to propose that solutions shift from a rational approach to a *relational* one - an intersectional approach to ethics that values personhood, justice, and diversity above technical prowess. Her paper is a call for scholars and practitioners in the field of digital technology to do the same, which supports my analysis that solutions to algorithmic and narrative injustice cannot not be technical solutions alone, rather they must be centred in community.

According to this framework, solutions are creative, technical, and social, *and* they are rooted in space (Birhane, 2021). Birhane (2021) argues that solutions must be *relational*. That is, they must begin with centering the individuals and groups that are most directly impacted, and they must consider the social, economic, political, and global context in which they build upon, contribute to, influence, and (re)produce. This interconnected way of thinking counters *rationality*, a belief that we can be objective, outside observers looking upon the work from afar, and that abstract, purely cognitive thinking is the most trustworthy form of understanding (Birhane, 2021). In the rational approach, oral and ethical values are kept separate so as not to “taint” objective or scientific knowledge (Birhane, 2021; Walker, 2013). Whilst algorithms are often praised for this rationality and efficiency in “solving” complex problems, automated and standardized solutions to complex social issues often contribute more harm than good (e.g., in allocating medical care, predicting crimes, selecting job candidates (Noble, 2018; O’Neil, 2016)). Social issues are reduced to mathematical problems with solely technical solutions approached with rational knowledge. Contrasting this, Birhane (2021) argues that the very concept of knowing is relational, where there exists a *knower* and a *known*. In computing, the *knower* group is heavily dominated by privileged classes, who are simultaneously “poorly equipped to recognize injustice and oppression” (p. 5). It is the so-called *known* group, often already marginalized communities that are disproportionately harmed by technology, who is better suited to recognizing that harm (Birhane, 2021). Therefore, solutions which begin with communities that are most directly impacted as their starting point may likely be more effective in addressing the harms that such a community faces. Embodying this approach, ethics in computing and interaction design can become an active practice rather than a “mere methodology for data science” (Birhane, 2021, p. 3). This acknowledgement allows us to shift towards long-term efforts. I recognize and admit that there may be no solutions. If any exist, they are not complete and reference to solutions moreso describes interventions or long-term practices. Resistance to narrative and algorithmic injustices, according to Birhane and

Costanza-Chock, requires an organized, community-led movement. This requires centring the community in participation and collaboration.

Through *Muslims, Media, Machines*, I am building this movement with the Muslim community in a three-fold approach through: (1) the prompts that provoke thought and invite written responses from people and algorithms; (2) the practices of creating narratives and counternarratives; and (3) the platforms on which to share/disseminate those narratives. Prompts were explored through poetic phrases and experiments that evoked responses from people and probed questions to and about algorithms. These created a foundation for the practices and platforms that became the core design outcomes of my work: the *Fables for Imagining* workshop series and the *an__dote* crowdsourcing storytelling website.

5.3 Fables For Imagining

Workshop

Design

The *Fables for Imagining: Critical Storymaking As Digital Literacy* workshop series sought to engage Muslim youth in critically interrogating digital media through storymaking. The workshops brought together Muslims aged 18 to 30 to interrogate our techno-social culture and its impacts on Muslims, through developing a series of fables.

Fables are one of the oldest forms of storytelling; sharing tales of moral inquiry and caution through archetypal characters to build shared wisdom, interrogate power, and navigate societal roles and responsibilities. *Fables for Imagining* explores how this form of storymaking can be used to interrogate our contemporary collective behaviours and modes of existence with a specific focus on questions of justice and democracy in a post-digital world. The project, developed by Gillian Russell, Craig Badke, and Frédérik Lesage (2022), is committed to engaging publics to rethink the present and interrogate the unknown. My approach adapted their framework to digital platforms and themes that directly impact the Muslim community.



Fig. 24: Participants from the Regina workshop read samples of fables from around the world.

Facilitation

In this series of workshops, I acted as a participant along with my fellow participants. This meant that I engaged with my community members in the role of a collaborator rather than an expert facilitator. We all entered this workshop with our preexisting knowledge and lived experiences surrounding social media platforms and representations of Muslims thereupon, and we sought to build a shared understanding and story.

I aimed to build on the approach presented by Hajira Qazi in her guidebook *Power & Participation* (2018), which explores democratizing participatory design and prompting designers to reflect on and challenge power dynamics in this practice. Although her work is garnered towards practitioners working with communities they are not a part of, I found her insights useful in working with members of the Muslim community. This was due to two key reasons. The first was that, as a Muslim community, we are incredibly diverse in culture, experience, “religiosity,” and knowledge; thus, my experience and understanding of being Muslim may be different from those of the participants. Secondly, despite being part of the same religious community, entering into the workshop space as a researcher may inherently position me with an unequal power dynamic compared to the invited participants. Therefore, I looked towards “Chapter 02: Pre-Engagement,” where Qazi (2018) invites practitioners to consider the stakeholders involved in a participatory engagement (including how they may be represented and exploited), understand the community involved, and structure the engagement in a way that empowers the community and their cultural practices. Due to this, I chose to position myself as a fellow participant with my community, as opposed to differentiating myself as an expert in the room. For me, this also meant scheduling workshops at times that favoured Islamic prayer and fasting schedules, and making prayer supplies and space available during the workshops, to best accommodate the religious priorities of those attending. I also included a spectrum of options for media consent, beyond a simple yes or no to be photographed or recorded, to support the participants’ varying levels of modesty, which is an important practice for Muslims.

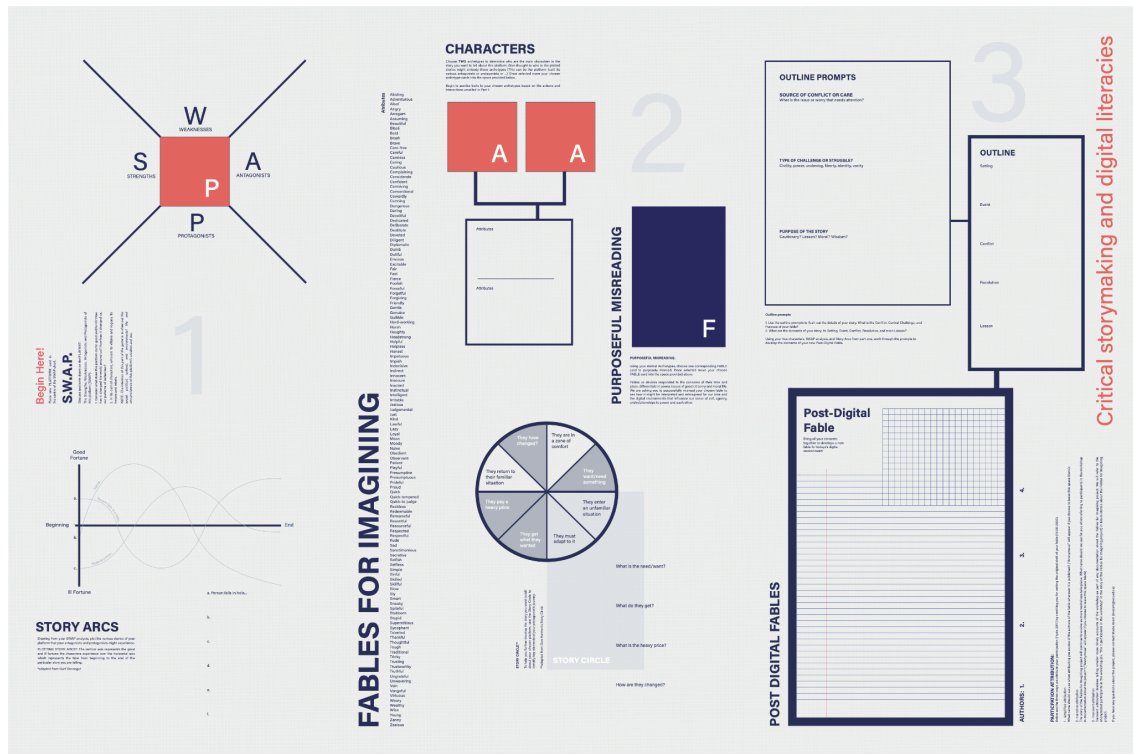


Fig. 25: The Fables for Imagining playmat.

The *Fables for Imagining* workshop framework setup by Russell et. al. (2022) is anchored by a *playmat*, a 31 by 46-inch poster which outlines the activities and prompts to be filled out by participants throughout the session. Russell et. al's (2022) framework comes with a set of Platform, Archetype, and Fable cards, where participants can choose which digital application they would like to interrogate, which characters they would like to include in their fable, and which fables they would like to model their fable on, respectively. I curated the selection of cards to those that would be most relevant to Muslims. For some iterations of the workshop, I also replaced the Platform cards with blank ones, so that we could fill them out with common stereotypes that we encounter in digital spaces and create fables that counter those narratives.



Fig. 26: Fables (F), Platforms (P), and Archetypes (A) cards arranged on the playmat.

I structured the *Fables for Imagining* workshops based on Russell et. al's (2022) three-part scaffolding of activities. The first section invites participants to explore their motivations in writing a fable. First, we deeply interrogated social media platforms through a Strengths, Weaknesses, Antagonists, and Protagonists (SWAP) analysis. This meant probing a social media platform and mapping out the various actors, from individuals to institutions, involved. I then introduced participants to the concept of Story Arcs, visual curves on an x-axis of time and a y-axis of ill or good fortune, to map key ideas from their SWAP analysis onto. We then moved into the second section, where we looked at the technical elements of our fable. This involved choosing two Archetypes, symbolic animal characters across different cultures, that would become characters in our story and the Attributes that they would hold. Then, we chose from a curated selection of multicultural fables that included the Archetypes we selected. We purposefully misread these fables to understand how they could be interpreted or adapted for the issues that Muslims encounter in our technosocial culture today. Mapping story arcs, drafting characters, and re-interpreting fables gave us the stepping stones to create our own fable. We then mapped the elements of our story through two forms of outlines (one circular, one linear), and moved onto the third and final section of sketching our Post-Digital Fable.



Fig. 27: Participants from the Regina workshop map out Archetypes and their Attributes on the playmat.



Figs. 28 & 29: Participants from the Regina workshop sketch out their Post-Digital Fable.

Insights + Reflections

Working through the issues that we experience in digital space together with the Muslim community was eye-opening and allowed us to build shared understandings. When I initially invited participants to the workshops, several of them were hesitant to join, commenting that they did not have much knowledge of digital technology. I recall multiple participants asking if they could complete reading material beforehand. I understood how they felt intimidated to interrogate topics of which they did not understand the technical background. At the same time, I

assured them that they had rich tacit knowledge on these platforms and stereotypes because of their lived experiences as Muslims, and that interacting with narrative and algorithmic injustices from the lens of a young Muslim was the only prerequisite. Once they joined the workshops, the participants quickly warmed up and became very passionate about delving deep into the activities.



Figs. 30 & 31: Participants working and laughing together at the Regina workshop.

Working with these participants was electric. They shared personal anecdotes, accounts of articles and current events that charged their activism, and diverged into many interesting tangents. A memorable moment was during the Regina workshop, where all of the participants who joined happened to be female. As I was setting up the supplies, they started to introduce themselves to one another, briefly touching on their education and careers. They spoke about their experiences being Muslim women in the professional space, and the pressure they felt to represent their religion with honour. They began sharing their fears, hopes, dreams, and lessons. They touched on their experiences of being visibly Muslim by wearing *hijab*, and on Muslim women role models in the city who paved the way for accommodations for Muslims in the workplace. Unexpected and unprompted, they fostered the workshop space to be one of vulnerability and learning from one another. Throughout the activities, the participants remarked that, while they had thought about their experiences with technology before, they had not had the chance to do so in a room with other Muslims. They were buzzing with multiple ideas of fables they would like to work on in their own time. When the workshop activities were complete, participants in many of the sessions were reluctant to leave, hanging onto threads of conversations. We entered with the intention to interrogate digital technology and dangerous narratives, but perhaps we left with something more. I am proud of the fables that we created, and I am even more grateful that we could cultivate these counterspaces for ourselves.

5.4 an__dote

Prototype



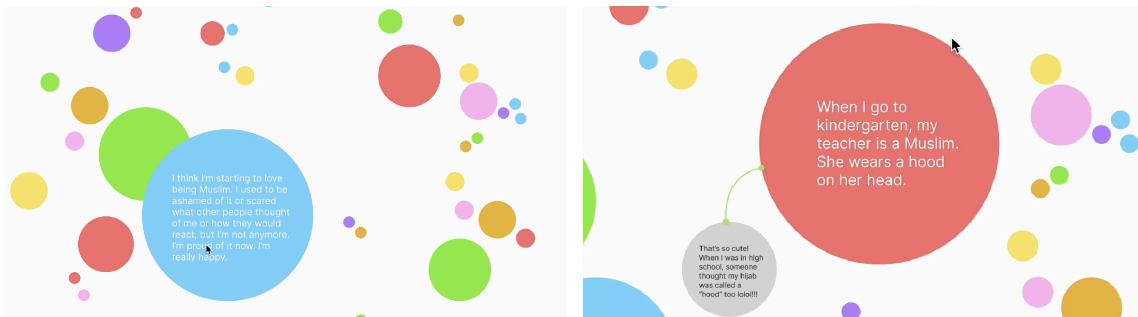
Fig 32: Home page of an__dote.

an__dote is a prototype of an online community crowdsourcing storytelling platform for sharing and engaging with stories by and for Muslims. The interface features a dotted map, populated by worldwide users with stories created in their corresponding geographic locations. It supports text-based and visual (photographs and videos) stories. Users can upload stories, along with information on what community interventions, events, or collaborations were held, if any; where the stories were created; and they can choose whether to credit themselves and their collaborators or remain anonymous. They can view other users' stories and interact with them through "like" and "amplify" features.

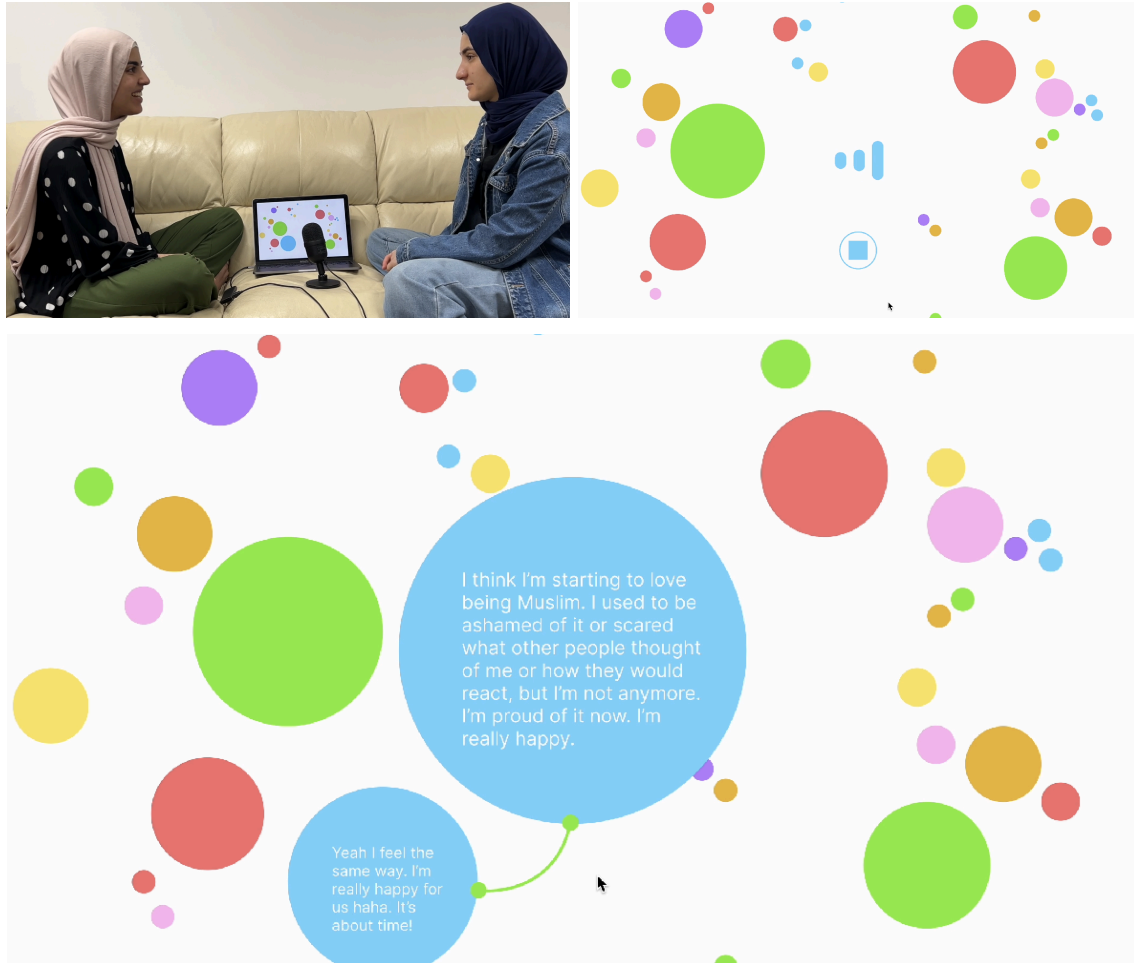


Fig. 33: Landing screen of an__dote (v1.0)

an__dote began as a series of short experiments in disseminating stories, capturing text-based stories responding to the prompt of “If you really knew Muslims, you’d know...” and capturing oral conversations through audio recordings and transcribing them into text. The original direction was to then tokenize these text-based stories and produce a dataset to train small language models (SLMs) on, in an attempt to explore how we might mitigate bias in natural language processing (NLP) algorithms employed by SLMs and LLMs. Upon discussing these ideas with Muslims in the community, many voiced that they would not want their stories to be used as data. They wanted neither their experiences nor fictional narratives to be scraped by AI algorithms, specifically due to the fear that AI better or more deeply understanding Muslims could result in algorithms exploiting that knowledge and using it against the Muslim community, further surveilling and harming us.

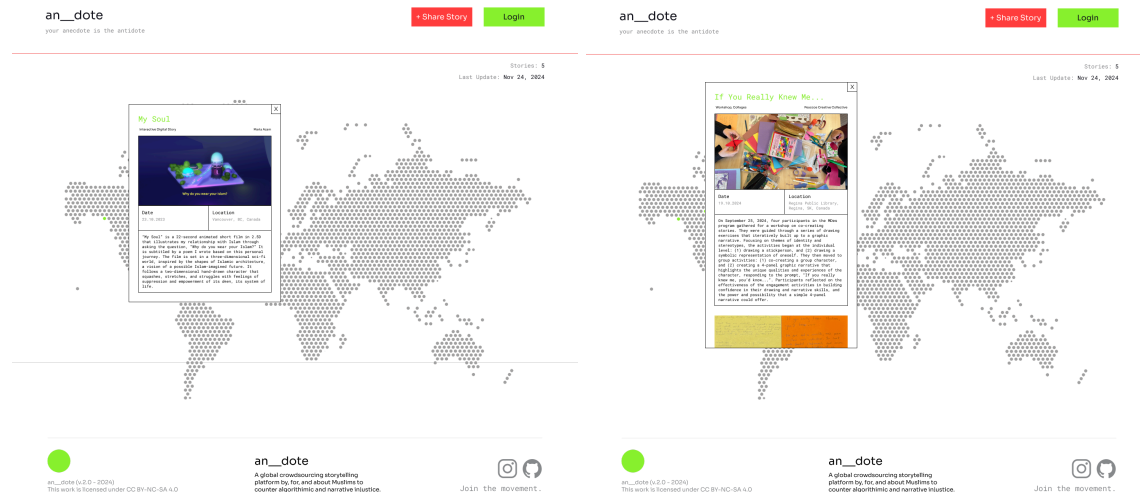


Figs. 34 & 35: Early iterations of an__dote (v1.1), featuring short text-based stories and user comment features.



Figs. 36, 37, & 38: Early iterations of an *an_dote* (v1.2) oral to text-based story recording pipeline.

Based on these early insights from my community members, and for the need to further disseminate the counternarratives created through the *Fables for Imagining* workshops, I continued iterating on the platform. There emerged a need to extend the counterspaces we had created in physical space through the workshops to a digital space that could reach the wider Muslim community. This sparked the change from *an_dote* being a story recording platform to one where Muslim users can upload their own stories, along with the actions, interventions, or engagements during which they were made, and engage with the stories of others.



Figs. 39 & 40: Stories uploaded to an__dote, accessible by clicking dots on the map.

Coming together as a local Muslim community is a necessary step to building literacies and collective power to counter harmful narratives. We can create our own spaces. These act as counter spaces to those that currently occupy our stories (i.e., the institutions that fund, produce, and write our stories for us, without our say). In creating our own platforms for narrative dissemination, we not only opt out of the dominant narratives through creating our own stories, but also the dominant medium by which they are spread. Our stories can move from criminalizing language in headlines and violence in video games to words that are sung aloud and visuals that are crafted by our hands.

It is necessary that these counternarratives reach beyond our local places and communities so that others outside of these spaces too can engage with them. This does raise two key risks: (1) there is no way to “verify” whether users uploading to an__dote are Muslim, nor would I like to do so; Islam is not an identity one is born into, akin to ethnicity, nor something that can be measured, such as a yes or no to having an illness or disability, rather it is a choice that a person can make and unmake at any time; and (2) because the platform is designed to be open-source, it invites the opportunity for bad actors and bots to engage, perhaps re-creating the risks that Muslims already face with publicizing their stories and encountering algorithmic injustice. There may be potential in future iterations to form a team of moderators to protect the safety of all those accessing and using the platform, or to encrypt the data so it restricts being trained by machine learning algorithms.

Despite these challenges, the ability to reach publics beyond the ones we can reach in local space is the intention through which an__dote was created. Its purpose is to disseminate the stories created in workshops and the practice of storymaking with the wider, global public. The platform is centralized, in that it offers a single hub where Muslims can gather in storymaking and

story-sharing online, and decentralized, in that Muslims from around the world can interact with it.

Future(s)

This section consolidates and reflects on the above four sections, with a specific focus on the importance of participation and building literacy with communities. It discusses the potential for amplifying existing work by Muslim storytellers and propelling future movements.

“The truth is, no one of us can be free until everybody is free.”

- Maya Angelou

“To refuse to participate in the shaping of our future is to give it up.
Do not be misled into passivity
either by false security
(they don’t mean me)
or by despair
(there’s nothing we can do).
Each of us must find our work and do it.

- Audre Lorde

Through *Muslims, Media, Machines*, I sought to explore how I, along with my community, can take action through design research towards understanding how narrative and algorithmic injustice impact us and how we might counter these injustices. Ultimately, I am interested in exploring how we can take a first step towards building a long-term practice of digital literacy and agency in the Muslim community, empowering Muslims to take ownership of their narratives to dismantle algorithmic and narrative injustice. Drawing on the writing of design justice and technology ethics researchers Birhane (2021), Costanza-Chock (2020), and Qazi (2018), I understand that there may be no “solutions” to narrative and algorithmic injustice. This thesis does not seek to propose any singular solution or state that this work has countered injustice. Instead, it seeks to take a step towards building a collective and long-term movement with the Muslim community.

The thread through all this work — its prompts, practices, and platforms — is collective literacy. Working with my community of Canadian Muslim youth, I seek to build up literacies of: the problem space, recognizing injustices, understanding narratives and algorithms, of how we would like to respond, of ourselves. Through this thesis, we have explored how to do this in participation and collaboration with each other. My community-led, bottom-up approach counters a western colonial top-down approach. This enables us to take anti-colonial approaches, perspectives, and narratives. It is not an end. It shows one path of how we may begin to weave our own futures by, for, and with each other.

So, once again, I return to asking myself and my community: What might this work open up for us? Where are the spaces? Were they already there? What are the stories we can now tell? Maybe they can, and perhaps they should, be the everyday stories without having to be tied to or proving or performance. And, most importantly, how might we continue a movement that can create or propel the existing momentum for these stories?

07

References

- Abid, A., Farooqi, M., & Zou, J. (2021). Large language models associate Muslims with violence. *Nature Machine Intelligence*, 3(6), 461–463.
<https://doi.org/10.1038/s42256-021-00359-2>
- Adichie, C. N. (Lecturer). (2009). *The danger of a single story* [Video recording]. Retrieved January 9, 2025, from
https://www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_story
- Al-Mutairi, M. A. (2024). The Beauty of Storytelling in the Holy Quran: Exploring and Analysing the Quranic Storytelling. *ResearchGate*.
<https://doi.org/10.12691/education-12-4-1>
- Alsultany, E. (2012). *Arabs and Muslims in the Media: Race and Representation After 9/11*. NYU Press.
- Alsultany, E. (2013). Arabs and Muslims in the Media after 9/11: Representational Strategies for a “Postrace” Era. *American Quarterly*, 65(1), 161–169.
<https://doi.org/10.1353/aq.2013.0008>
- Ansary, T. (2009). *Destiny Disrupted: A History of the World Through Islamic Eyes*. PublicAffairs.
- Barry, L. (2019). *Making Comics*. Drawn & Quarterly Publications.
- Birhane, A. (2021). Algorithmic injustice: A relational ethics approach. *Patterns*, 2(2), 1–9.
<https://doi.org/10.1016/j.patter.2021.100205>
- Bravo, D. Y., Jefferies, J., Epps, A., & Hill, N. E. (2019). When Things Go Viral: Youth’s Discrimination Exposure in the World of Social Media. In H. E. Fitzgerald, D. J. Johnson, D. B. Qin, F. A. Villarruel, & J. Norder (Eds.), *Handbook of Children and Prejudice* (pp.

- 269–287). Springer International Publishing.
https://doi.org/10.1007/978-3-030-12228-7_15
- Bridle, J. (2018). *New Dark Age: Technology and the End of the Future*. Tantor Media.
- Buolamwini, J. (2017). *Gender Shades: Intersectional Phenotypic and Demographic Evaluation of Face Datasets and Gender Classifiers* [MSc, Massachusetts Institute of Technology].
<https://www.media.mit.edu/publications/full-gender-shades-thesis-17/>
- Costanza-Chock, S. (2020). Design Values: Hard-Coding Liberation? In *Design Justice: Community-Led Practices to Build the Worlds We Need*. MIT Press.
- Deibert, R. J. (2015). Authoritarianism Goes Global: Cyberspace Under Siege. *Journal of Democracy*, 26(3), 64–78.
- Deibert, R. J. (2019). The Road to Digital Unfreedom: Three Painful Truths About Social Media. *Journal of Democracy*, 30(1), 25–39.
- Dodds, K. (2008). Hollywood and the Popular Geopolitics of the War on Terror. *Third World Quarterly*. <https://doi.org/10.1080/01436590802528762>
- Elshinawy, M. (2022, August 15). *The Unique Storytelling Style of the Qur'an*. Yaqeen Institute for Islamic Research. Retrieved January 28, 2025, from
<https://yaqeeninstitute.org/read/paper/the-unique-storytelling-style-of-the-quran>
- Epps-Darling, A. (2020, October 24). How the racism baked into technology hurts teens. *The Atlantic*. <https://www.theatlantic.com/family/archive/2020/10/algorithmic-bias-especially-dangerous-teens/616793/>
- Gramsci, A. (2012). (i) History of the Subaltern Classes; (ii) The Concept of Ideology; (iii) Cultural Themes: Ideological Material. In M. G. Durham & D. M. Kellner (Eds.), *Media and Cultural Studies: Keywords* (2nd ed., pp. 34–36). Wiley-Blackwell.

- Greenfield, A. (2018). *Radical Technologies: The Design of Everyday Life*. Verso.
- Hall, S. (1981). Notes on Deconstructing “The Popular.” In R. Samuel (Ed.), *People’s History and Social Theory* (pp. 231–235, 237–239). Kegan Paul-Routledge.
- Haraway, D. (2016). *Staying with the Trouble: Making Kin in the Chthulucene* (M. M. J. Fischer & J. Dumit, Eds.). Duke University Press.
- King, T. (2003). *The Truth About Stories: A Native Narrative*. House of Anansi Press.
- Marx, K., & Engels, F. (2012). The Ruling Class and the Ruling Ideas. In M. G. Durham & D. M. Kellner (Eds.), *Media and Cultural Studies: Keywords* (2nd ed., pp. 31–33). Wiley-Blackwell.
- Mirrlees, T., & Ibaid, T. (2021). The Virtual Killing of Muslims: Digital War Games, Islamophobia, and the Global War on Terror. *Islamophobia Studies Journal*, 6(1).
<https://doi.org/10.13169/islastudj.6.1.0033>
- Noble, S. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. NYU Press.
- O’Neil, C. (2016). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Crown.
- Postman, N. (1985). *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*. Penguin Books.
- Qazi, H. (2018). *Power & Participation: A Guidebook to Shift Unequal Power Dynamics in Participatory Design Practice*. Carnegie Mellon University.
- Russel, G., Badke, C., Lesage, F., & Thu, L. (2022, December 1). Fables for Imagining. *Imaginative Methods Lab*. <https://imaginativemethods.com/fables-for-imagining/>

- Sharma, S., & Nijjar, J. (2018). The racialized surveillant assemblage: Islam and the fear of terrorism. *Popular Communication*, 16(1), 72–85.
<https://doi.org/10.1080/15405702.2017.1412441>
- Shedroff, N., & Noessel, C. (2012). *Make It So: Interaction Design Lessons from Science Fiction*. Rosenfeld. <https://rosenfeldmedia.com/books/make-it-so/>
- Šisler, V. (2008). Digital Arabs: Representation in video games. *European Journal of Cultural Studies*, 11(2), 203–220. <https://doi.org/10.1177/1367549407088333>
- Smythe, D. W. (2012). On the Audience Commodity and its Work. In M. G. Durham & D. M. Kellner (Eds.), *Media and Cultural Studies: KeyWorks* (2nd ed., pp. 185–203). Wiley-Blackwell.
- Stahl, R. (Director). (2007). *Militainment, Inc.: Militarism and Pop Culture* [Documentary].
- Stahl, R. (2009). *Militainment, Inc.: War, Media, and Popular Culture*. Routledge.
- Walker, S. (2013). Design and Spirituality: Material Culture for a Wisdom Economy. *Design Issues*, 29(3), 89–107.
- What is a pipe? | Essential Tools in Network Programming*. (n.d.). Lenovo. Retrieved January 31, 2025, from <https://www.lenovo.com/us/en/glossary/pipe/>