

OSINT on Rohingya Crisis (2016-2019)

Author: Jean Linis-Dinco, PhD

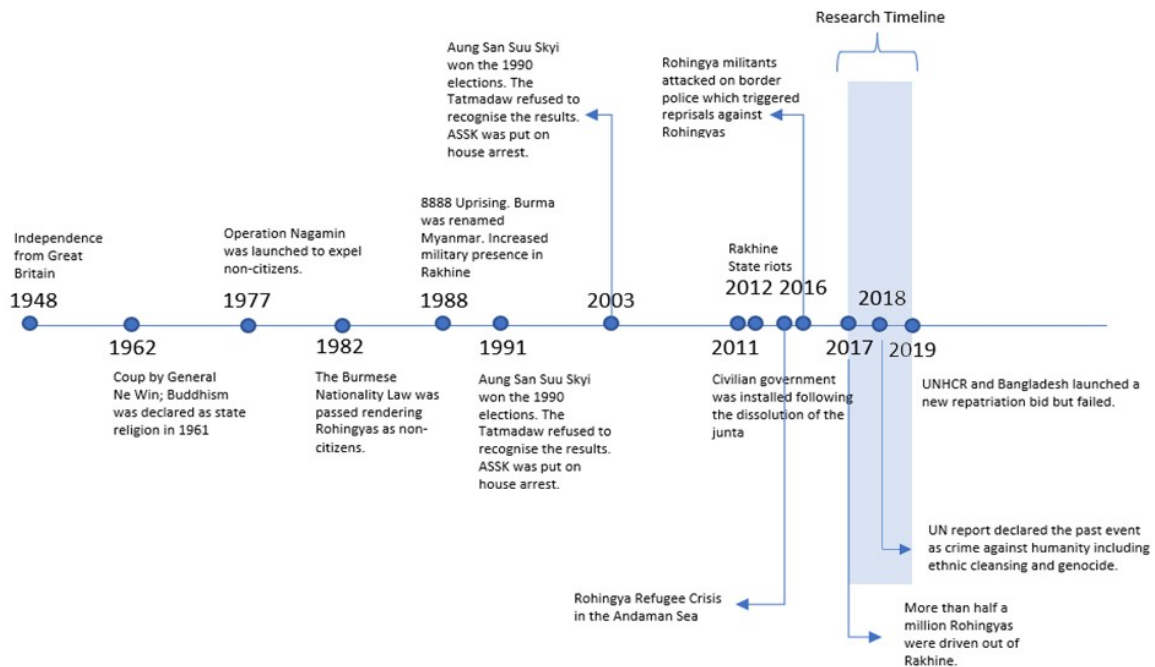
ABOUT THE REPORT

This report is conducted to analyse the propagation of hate speech against Rohingya people in India and Bangladesh following the exodus in 2017. The report provides insights, gathered through open source intelligence (OSINT). In accordance with the GDPR, all available personal data have been redacted or anonymised.

Introduction

Prior to the employment of the methods, significant events in the Rohingya crisis were mapped on a timeline. The rationale behind choosing this timeline is because it represented several significant events in the conflict, including the ARSA attacks of August 2017; the release of the UN FFM report; the publication of US State Department's Rohingya report, including the 25 August mass exodus of at least 750,000 Rohingyas from Rakhine; the arrival of refugees in Cox's Bazaar, Bangladesh; and the Indian government's deportation of Muslims back to Myanmar.

Timeline of the Rohingya Crisis



The period was divided into three categories to represent the stages of the conflict with reference to the 25 August 2017 events. The first phase is called the pre-crisis phase (01 January 2017–24 August 2017), followed by the crisis phase (25 August 2017–31 March 2018), and lastly the post-crisis phase (01 April 2018–31 December 2018). The pre- and post- prefixes in this study were added only as reference points to the 25 August 2017 events. It should by no means be assumed that this study claims that the crisis is over.

Methods

This work builds on a corpus which is composed of three datasets representing the three actors: the government, the media, and the social media users. This approach involves collecting data from publicly accessible sources, including official government websites and publications for press releases, speeches, and statements from India and Bangladesh, reflecting their governmental viewpoints. For media analysis, the study taps into open-source databases such as GDELT and Media Cloud, as well as traditional databases like LexisNexis and Factiva, to gather a broad spectrum of media coverage across international and local news outlets. Social media platforms are mined to gauge public sentiment, discourse, and grassroots narratives, capturing citizen responses and perspectives. Upon retrieval, the Rohingya and the Bengali sample were separated because the Bengali sample included false-positive. False positive included those related to Bengali music, Bengali food, and Bengali actors, among others. They were eliminated using a **keyword detection function** written in the programming language Python. If a tweet in the 'Bengali' dataset has at least one of the following keywords: 'Arakan', 'Rakhine', 'Myanmar', 'Burma', 'Muslims' or 'Rohingya', they were included in the study. This function was not administered on the Rohingya samples as the name Rohingya is unique and refers to only one group. Tweets coming from organisations, entities, and government officials were removed, as this study is concerned with online citizen frames. This methodology ensures a holistic view of the crisis from January 2017 to January 2019, focusing on the roles and perceptions of the selected countries due to their significant yet diverse stances on the crisis.

Geocoding Social Media Posts

To enhance the accuracy of analyzing social media discourse related to the study's geographical focus on India and Bangladesh, the tweets collected for this research underwent a critical geocoding process. This process aimed to authenticate the geographical origin of each tweet to ensure it aligned with the study's regional parameters. Leveraging Twitter's user-generated Account Location field, which allows for a broad range of free-form text entries to denote a user's location, presented a unique challenge due to the inherent variability and lack of standardization in the data provided.

To address this challenge, two sophisticated Python libraries were employed: **GeoPy** and **GeoPandas**. GeoPy was utilized for its robust geocoding capabilities, enabling the translation of free-form location texts into precise geographical coordinates or, at minimum, identifiable country names. This was particularly useful for parsing and interpreting the wide array of location formats users might enter, from specific addresses to more vague references.

GeoPandas complemented this process by facilitating advanced spatial data processing, allowing for the integration of geocoded data into a geographical information system (GIS) for further analysis and visualization. This integration was pivotal for mapping the tweets' origins and ensuring the spatial data's accuracy and usability in the study.

To streamline the data cleaning and processing efforts, a decision was made to prioritize the first location mentioned in a user's profile. This pragmatic approach was necessary due to the varied and often creative ways users describe their locations, ranging from precise to poetic expressions.

However, recognizing that not all location names are uniquely tied to a single geographical location—many cities and towns share names across different countries—the geocoding

results from GeoPy were accepted based on its algorithmic determination of the most probable location. This decision was made to balance the need for precision with the practical limitations of the data.

Locations that clearly did not correspond to a geographical location, such as those naming organizations, continents, or broad, transnational entities, were systematically excluded from the geographical dataset by assigning them a NaN value. This approach ensured that the final dataset used for analysis was as geographically coherent and relevant to the study's scope as possible.

This meticulous process of geocoding and data cleaning was foundational to the integrity of the study, enabling a focused analysis on the public discourse emanating specifically from India and Bangladesh. It underscores the complexities and the necessary rigor involved in working with user-generated location data on social media platforms, highlighting the importance of sophisticated tools and methods in the extraction of meaningful, location-specific insights from global digital conversations.

Topic Detections

I applied the Latent Dirichlet Allocation (LDA) algorithm, as implemented in the Machine Learning for Language Toolkit (Mallet), to detect topics in the datasets gathered. LDA operates on the principle of dimensionality reduction, aiming to distill a vast array of textual information into a manageable number of topics—each represented as a distribution of words that statistically co-occur in patterns indicative of specific subjects or themes. This method assumes a 'bag-of-words' (BOW) approach, which simplifies text analysis by disregarding the order and grammatical structure of words while still acknowledging the frequency of their occurrence. Essentially, LDA posits that a corpus can be deconstructed into a finite set of these topics, offering a model that reflects the probabilistic mechanics behind the text's generation, sans external input. For example, representing each BOW as a list object and attributing the respective python variable:

```
BOW_1 = [[('buddhist', 1), ('burmese', 1), ('capable', 1), ('could', 1),  
          ('decide', 1), ('future', 1), ('save', 1), ('well', 1)]]
```

Named-Entity Recognition

Named-Entity Recognition is instrumental in identifying, categorizing, and extracting entities such as people (PER), locations (LOC), organizations (ORG), and more from textual data. For the purposes of enhancing OSINT capabilities, this research leverages Python libraries such as SpaCy and TextaCy to perform an in-depth sourcing analysis through the extraction of entities within texts. Additionally, Quote Attribution Extraction (QAE) is employed to meticulously associate quotes with their corresponding entities. QAE differentiates between direct and indirect speech—direct speech being verbatim quotes encapsulated in quotation marks, and indirect speech being paraphrased expressions. This distinction is vital for accurately attributing statements to specific entities, a task that is further refined by examining the structure and context of the speech.

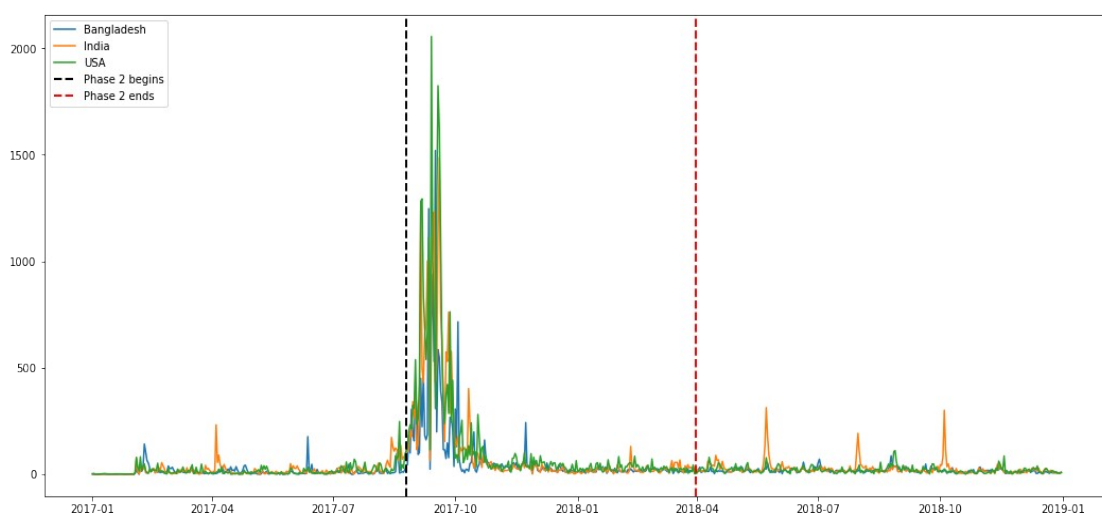
In this study, a rule-based approach to QAE is adopted, focusing on the straightforward identification of direct quotes through their encapsulation in quotation marks and

employing a more nuanced, qualitative assessment for indirect quotes by locating and evaluating the nearest reported speech verb. This methodology not only enhances the precision of entity and speech attribution but also significantly contributes to the efficiency and effectiveness of OSINT investigations, enabling a deeper understanding of textual data sources and facilitating the extraction of actionable intelligence from open-source materials.

Example:

1. Direct quotation: 'The illegal foreign immigrants will be strongly dealt with,' said Union Home minister **Rajnath Singh** in reply to a question about Rohingya Muslim refugees living in different parts of the country, including Jammu.
2. Indirect quotation: Terming Rohingya refugees as a threat to national security, India's Union Home minister **Rajnath Singh said** on Tuesday that the issue will be dealt with a firm hand.

Analysis



Ten frames were detected including Protest, Economic, Securitisation, Violence, Policy, Myanmar Domestic Politics, Aid, Victim, Blame/Responsibility and Human Interest. Table 4 illustrates the operationalisation of these frames. Figure 7 presents a series of word clouds that show the top keywords found in each topic. The relative scaling of the word cloud is set to 1. This means that the sizes of the words in the cloud are directly proportional to their frequency in the respective topic. I used descriptive statistics to examine the frequency of each frame in the whole corpus (see Figure 8). In general, the most frequently used frame overall within the entire corpus is the Securitisation Frame, with 20.45% of all the frames. This frame describes Rohingyas as a security issue and a threat to society, followed by Human Interest Frame (16.90%) and Aid Frame (12.23%), which focused on the humanisation of the Rohingyas and humanitarian aid, respectively. Next, 11.85% of the sample employed the Blame/Responsibility frame. Blame/Responsibility frames are used when an institution is being held responsible or

being blamed for the demise of the Rohingya people. The Protest Frame (10.88%) and Policy Frame (10.67%) were present in 20% of the samples. Finally, the remaining four frames (Violence, Victim, Economic and Myanmar Politics Frame) were each present in fewer than 7% of the samples.



Sources

To find out which sources dominated the traditional media and the citizen dataset, I performed two different techniques: Named-Entity Recognition (news) and URL analysis (tweets). A total of 17 types of sources were detected and cross-examined twice for validation (see Table 5). These sources included the following: Government, United Nations, Intergovernmental Organisation, Organisation, Citizen, Political Elite, Public Figure, Academic, Blog, Alternative Media, News Agency, Refugee, Insurgents, Enterprise, Religion, Journalists and Others. Figure 9 shows the frequency of sources for the whole dataset. These sources were further divided based on their officiality, which, according to Stenvall (2008) are elite sources that are used as rhetorical constructs. In line with the objective of this research, only the Government sources are classified as official sources. The remaining sources were classified under unofficial sources. Publications without sources mentioned are classified under No Source.

The findings support the existing research in media and communications that official sources are the dominant sources in traditional media discourse (Bennet, 1990). A total of 55.01% percent of the sources mentioned were delivered by official sources in the traditional media sample, while only 44.98% came from unofficial sources. The same sourcing pattern, however, was not detected in the citizen dataset, where unofficial sources (99.28%) were cited more than official sources (1.34%). About 6.47% of the sample from the citizen dataset did not cite any source.

In terms of the diversity of sources, the citizen dataset used more sources as opposed to the traditional media dataset with a ratio of 13:17. These findings suggest that citizen discourse has less constraints when it comes to sourcing unlike traditional media. This is because social media allows a diverse range of opinions to participate in a specific conversation; therefore, everyone is given an equal opportunity to be heard (Miranda et al., 2016). Sourcing bias in traditional media, on the other hand, is attributed to the societal inequalities that classifies official or elite sources as credible and powerful — which then make them primary definers of news (Schlesinger, 1990). For the traditional media dataset, the Government (54.99%) was the most cited source, followed by the United Nations (11.38%). For the citizen dataset, the most frequently used sources were News Agencies (42.82%) and Citizens (10.96%). Refugees were cited more in the traditional media dataset (9.39%) compared to the citizen dataset (0.17%).

Concerning the nationality of the sources, another layer of coding was conducted to extract this information from each source. For the traditional media dataset, entities such as 'Aung San Suu Kyi' and 'Min Aung Hlaing' were both categorised under Government (type) and Myanmar (nationality); 'Rex Tillerson' and 'Mitch McConnell' were put under Government – US; and 'Amnesty International' and 'Human Rights Watch' were categorised under International Organisation – US. For organisations with international presence, I used their headquarter address to represent their nationality. The United Nations and its relevant agencies, on the other hand, were classified under global. Meanwhile, for the Rohingya sources, I put Rohingya as their nationality because they are stateless.

For the online citizen dataset, the nationalities of the sources were taken from their respective websites. For example, if a tweet shared a link from Manila Bulletin, a news agency based in the Philippines, the nationality of the source was listed as the Philippines. Additionally, for tweets that sourced another Twitter user, I used the location of the sourced user for the nationality. The most common nationality found in the whole corpus was US at 34.15%, followed by India (23.78%), Unknown (15%), Bangladesh (8.50%), and UK (5.7%). In Figure 10, we see the segregated version of this result showing that India dominates the nationality of the sources in the traditional media dataset at 29.31%, while US dominates the nationality of the sources in the citizen dataset at 34.55%.

Results - India

First Phase

Overall, the most common words in the online citizen datasets are India, refugees, not, illegal, against, Muslim, crisis, Hindus, deport, country, killed. The securitisation frame (42.38%) dominated the Indian online citizen dataset during the first phase of the crisis, followed by a moderate usage of the human interest frames at 12.31% and responsibility frame at 9.80%. The Indian social media users presented far more frames than the Indian government and the Indian traditional media. Nonetheless, the top frames (securitisation and human interest) used by social media users are similar to the top frames used in the Indian traditional media dataset. Indian social media users, however, employed the responsibility frame more than the traditional media and the government. Due to the ethical considerations applied in this research, I can only describe the tweets and not quote them directly. The Indian online citizen narratives can be categorised into the following themes.

Frames	Citizen
<i>Aid Frame</i>	9.48
<i>Economic Frame</i>	1.93
<i>Human Interest Frame</i>	12.31
<i>Myanmar Politics Frame</i>	1.68
<i>Policy Frame</i>	7.41
<i>Protest Frame</i>	8.31
<i>Responsibility Frame</i>	9.80
<i>Securitisation Frame</i>	42.38
<i>Victim Frame</i>	1.54
<i>Violence Frame</i>	5.17

Illegal migration

During the first phase, the Rohingya crisis evoked anger among Indian social media users, particularly when the news broke out that the Government planned to deport at least 40,000 Rohingyas back to Myanmar. It should be noted that anger was not directed towards the fact that they were to be deported but because there were 40,000 'illegal migrants' living in India. Rohingya refugees were already living in the country as early as 2012 (Fareed, 2022). Krishnan (2012) estimated that there were at least 100,000 refugees from Myanmar residing in the northeastern parts of India. But it was only when the traditional media reported that Union Home Secretary Rajiv Mehrishi on 3 April 2017 said in a meeting that he was exploring ways to deport 40,000 Rohingyas back to Myanmar that it became a mainstream issue in India's Twittersphere. The deportation announcement came a month prior to the announcement that BJP's Ram Nath Kovind would run for president. Ram Nath Kovind who in 2010 was quoted saying that Islam and Christianity are alien to India eventually won the presidency (Iqbal, 2017). Consequently, the date 04 April 2017 gained the greatest number of tweets (104 tweets) that employed the securitisation frame. While there were no official publications that came out from the

government at this time, because the story was only a private meeting in New Delhi, news organisations including TOI reported it. The fact that this story received a significant amount of attention from Indian social media users, despite not having official publication from the Government, suggests that social media users rely on the information given to them by news organisations. This event demonstrates how news organisations in India remain as the main source of information for ordinary citizens with respect to various political issues taking place in their locale.

Threat and Terrorism

The first phase was marked by a heightened use of securitising language such as linking Rohingyas to the Islamic State and a call to launch an 'identify and kill' campaign against the Rohingyas. Another notable feature among these tweets that employed the securitisation frame is how the term 'refugee' is rarely used to describe Rohingyas. This follows Nerghes and Lee (2018) conclusion on the politics of terminology between 'undeserving migrants' and 'deserving refugee'. By framing the Rohingya as non-refugee, social media users create a reality where the deportation of Rohingyas would easily be justified. Rohingyas were often prefaced by the adjective 'illegal' while criminality and delinquency were overemphasised. The use of the term 'illegal' to describe Rohingyas mirrors the narrative from the traditional media and the government.

In addition to the creation of the Rohingya as an out-group, Indian social media users have also expressed discontent about their own government. A number of tweets mentioned a possible corruption in the government due to the high number of Rohingya Muslims in the country. Furthermore, I also found an uptick in the use of securitisation frame on 21 August 2017 (69 tweets) after the Indian Supreme Court suspended the deportation plans of the Indian Government following the submission of a plea from Rohingya Muslims living in India. Several social media users challenged the Supreme Court's decision by arguing that the foundation of the plea was inconsistent to the identities of the Rohingyas in India because they are illegal and are not considered refugees. Furthermore, several Twitter accounts noted that the Supreme Court decision was biased and based on the 'liberal ideas' spearheaded by the West and the UN.

Humanising the crisis

Surprisingly, 12.31% of the tweets employed human interest frames in the first place. Despite the lower number of tweets that employed the human interest frame compared to the ones that employed the securitisation frame, social media users have tried to humanise the Rohingya crisis by presenting anecdotes of suffering and struggles, such as the impact of the crisis on Rohingya girls who may end up being trafficked. The use of the human interest frame tends to come right after the peak of the securitisation frame. This finding suggests that some Indian social media users are passive advocates by directly responding to securitisation issues only after the topic has trended.

Second Phase

While the use of securitisation frames decreased from phase 1 to phase 2 in the online citizen dataset, the securitisation frame remained as the predominant frame in the second phase, followed by human interest frame at 12.43% and Responsibility Frame at 10.35%. During the second phase, the Indian online citizen narratives can be categorised into the following four themes.

<i>Frames</i>	<i>Citizen</i>
<i>Aid Frame</i>	9.00
<i>Economic Frame</i>	2.51
<i>Human Interest Frame</i>	12.43
<i>Myanmar Politics Frame</i>	1.70
<i>Policy Frame</i>	8.14
<i>Protest Frame</i>	9.02
<i>Responsibility Frame</i>	10.35
<i>Securitisation Frame</i>	39.61
<i>Victim Frame</i>	1.97
<i>Violence Frame</i>	5.20

Hate speech

While the use of the securitisation frame in phase 1 emphasised the deportation of Rohingyas and branding Rohingyas as illegals and criminals, phase 2 was more overt in terms of the use of securitising language. There were increasing numbers of tweets that linked Rohingya Muslims to Pakistan in the days leading to the arrival of Rohingya Muslims in India. As more Rohingya Muslims arrived on Indian soil, the framing intensified. This is similar how Indian traditional media shifted coverage from a heavy focus on illegality to linking Rohingya Muslims to Pakistan. The prevailing conspiracy theory in the online citizen dataset suggests that the Rohingya community would invade India as part of a plan devised by the Pakistan Government to turn India into an Islamic country. It was also suggested that the achievement of this plan would require the killing of Indian Hindus and Christians, often tied with the exorbitant use of hate speech against the Rohingya community, ranging from calling them terrorists, murderers of Christians and Hindus, and Rohingya even being compared to rats. As the Indian traditional media during the second phase of the crisis shifted its coverage towards a more overt securitising language, it reinforced the growing concern of Indian social media users that the perceived threat posed by the Rohingya community in the country was real.

After India launched Operation *Insaniyat* on 14 September 2017 aiming to provide relief assistance for refugee camps in Cox's Bazar in Bangladesh, Indian social media users expressed discontent and anger against their own government for using taxpayers' money to fund a community which they believe were planning to attack India. At the same time, the online conversation shifted towards the need to keep Rohingyas in Bangladesh and send the ones that had recently arrived on Indian soil to Muslim-majority countries such as Pakistan. Indian social media users who employed the securitisation frame also exhibited hate towards their government for having lax regulations that allowed the influx of Rohingyas into different cities in India. This stage was also followed by calls for more

restrictive immigration policies that could contribute to the development of exclusionary practices.

Human rights concerns

The use of the human interest frames were focused on the daily lives of Rohingya refugees living in Cox's Bazar in Bangladesh. Most of the stories told were just reflections of already existing reports from traditional media. While the human interest frame started low during the third phase, it peaked during the last week of November to the first week of December, which was marked by the visit of Pope Francis in the region. There were a small number of tweets from Indian social media users who were sharing stories of concern with regards to how Rohingyas were being treated by Myanmar and India.

Imbalanced reporting

A notable feature of tweets expressing these kinds of emotions was that users were often phrasing their tweets in a question form and trying to elicit emotions from readers. For example, one Twitter user asked why some crises get more attention from western media, while the Rohingya crisis was ignored. Emotion-driven framing is a strategy often used to appeal to public sentiments during times of crisis and political upheavals. Through the use of emotive language, Indian social media users questioned why the Rohingya crisis received less attention from the western media than other crises, including the Syrian refugee crisis and Palestine.

Blaming Suu Kyi

The responsibility frame also increased during the second phase of the crisis. Tweets that employed this frame blamed Aung San Suu Kyi for the demise of the Rohingya Muslims, but the majority of the tweets were mostly a repetition of tweets from the international press. The prevalence of the blame narrative can be linked back to the attribution of blame (Shaver, 2012) in which individuals and groups tend to assign blame and responsibility for negative events to a specific individual, and is often perceived in terms of causality, controllability and intentionality. In this case, the blame was on Aung San Suu Kyi, who people believed had the capacity to intervene yet decided not to.

Third Phase

During the third phase, the Indian online citizen narratives can be categorised into the themes shown here:

<i>Frames</i>	<i>Citizen</i>
<i>Aid Frame</i>	6.56
<i>Economic Frame</i>	2.77
<i>Human Interest Frame</i>	11.55
<i>Myanmar Politics Frame</i>	2.06
<i>Policy Frame</i>	6.50
<i>Protest Frame</i>	3.96
<i>Responsibility Frame</i>	2.44

<i>Securitisation Frame</i>	59.44
<i>Victim Frame</i>	1.87
<i>Violence Frame</i>	2.80

The Rohingya Other

At 59.44%, the securitisation frame dominated the third phase of the Indian online citizen dataset. There was a surge of anger, which was communicated using pejorative words, such as punishing Muslims and treating Rohingyas as if they were pests. This can be linked to the broader process of securitisation, which according to Buzan et al. (1998) necessitates the call for extraordinary measures to address perceived extraordinary dangers. The source of the anger, dissatisfaction and disappointment is derived from the Indian government's failure to deport the Rohingya refugees as promised, as well as a deep-seated fear of the unknown linked with the presence of a large number of refugees in the nation.

The literature dealing with issues of 'the Other' focuses on the concepts of 'othering' and the construction of us-vs-them social identities (Tajfel & Turner, 2004), further explaining the underlying forces behind these tweets. Tweets that connected Rohingya Muslims to Pakistan and claimed that they constituted a danger to Indian society are playing into the narrative of 'othering' and demonising a specific group, all of which may end in discrimination and violence against the targeted community. This is seen by the large number of tweets that called for violence against the Rohingya people in India. These tweets demonstrate how readily fear can be transformed into fury and hatred. Because their government was not expelling Rohingyas in large numbers, these internet citizens claimed they would take matters into their own hands.

Political Divide

There was also a subtheme within the securitisation framework that blamed 'liberals' in the government and Indian society for the presence of Rohingya Muslims in the country. The proponents of this subtheme believe that 'liberals' in the Indian government and society are responsible for the presence of Rohingya Muslims in the nation, and that they disregard the rights and concerns of the local Hindu population while offering more rights to the Rohingya. This argument has been criticised as an effort to scapegoat and assign responsibility to a certain group for a complicated and diverse problem. In addition to this, certain tweets that referred to the political divide between the 'liberals' and the 'government' demanded that the government officials marry a terrorist or adopt a Rohingya refugee into their families to solve the issue.

Sourcing

Type of sources in Indian social media users dataset segregated by phase (%)

<i>Type of Source</i>		<i>Online Citizen</i>			
		1	2	3	Overall
Official		0.24	0.4	0.36	0.36
Unofficial		97.6	96.4	67.37	91.12
	<i>News Agencies</i>	47.5	47.16	50.49	47.67
	<i>Citizens</i>	18.9	17.56	5	16
	<i>Social Media</i>	1.34	1.99	12.21	3.3
	<i>Others (Consolidated)</i>	32.1	33.29	32.3	33.03
No Source		2.06	3.23	32.27	8.52

The table above shows that out of the 36,954 online citizen tweets, 91.12% used unofficial sources including URLs linking to news agency websites (47.67%), citizen testimonials (16%), search engines (6.5%), and social networking sites (3.33%) such as Facebook and YouTube, among others (see Table 16). These findings support hypothesis 2. This means that Indian citizens obtain information about the Rohingya crisis mostly through the reports from traditional media, suggesting that the role of framing online is central to the online citizen's understanding of the crisis. This trend suggests that despite the proliferation of various alternative sources for information, Indian social media users continue to view established media organisations as authority when it comes to newsmaking. Here, we see how traditional media shapes the information ecosystem within which online discussions occur. This is evident in the way the Rohingya issue was discussed by Indian social media users, which is consistent with the portrayal of Indian traditional media. Social media discussions surrounding the issue have become extensions of what is presented in traditional media. The dominance of URLs that link back to hard news agencies supports the research of Fletcher et al. (2018), Grinberg et al. (2019) and Guess et al. (2019) that the reach of fake news stories online is heavily concentrated toward a small portion of the population. As the study of Nelson Nelson et al. (2018) shares, propaganda websites are visited and shared only minimally as opposed to genuine mainstream official sources. As Tsati et al. (2020) stated: 'Mainstream media are thus probably a significant amplifier and disseminator of false stories – even if they, for the most part, cover fake news with an intent to set the record straight and correct the fabricated information.' (p. 160)

Results - Bangladesh

Overall, the most common words in the Bangladeshi online citizen dataset are 'refugee', 'crisis', 'genocide', 'repatriation' and 'child'. Bangladeshi social media users principally used human interest (18.12%), followed by protest frame (16.03%), aid frame (15.96%) and policy frame (14.17%) during the first phase as shown in Error: Reference source not found. During the first phase of the Rohingya crisis, the three main narratives in Bangladeshi online citizen discourse included the following.

First Phase

<i>Frames</i>	<i>social media users</i>
<i>Aid Frame</i>	15.96
<i>Economic Frame</i>	2.76
<i>Human Interest Frame</i>	18.12
<i>Myanmar Politics Frame</i>	3.69
<i>Policy Frame</i>	14.17
<i>Protest Frame</i>	16.03
<i>Responsibility Frame</i>	11.15
<i>Securitisation Frame</i>	5.85
<i>Victim Frame</i>	4.02
<i>Violence Frame</i>	0

Humanitarian focus and individual stories

Tweets that employed the human interest frame were primarily made up of feature tweets that focused on the experiences of young children and women who fled Myanmar and crossed the border to Bangladesh. The consistent use of the human interest frame in the first phase by Bangladeshi social media users can be seen as a departure from traditional media framing in Bangladesh of the crisis, which relied predominantly on the violence frame. The use of the human interest frame proved to be a powerful tool in creating a sense of individuality for the often faceless depiction of refugees and allowed social media users to connect to the crisis on a more emotional level. The human interest frame was often used in conjunction with the aid frame, which mostly revolved around a call for prayers and humanitarian aid. Through the use of human interest frames, social media users were also able to generate a sense of urgency and need for immediate action to contribute to the relief efforts, while countering dehumanising notions that may have dominated in traditional media discourse.

Calls for protest and accountability

Another key finding in the online citizen dataset was the emphasis on the protest and responsibility frames, which were significantly underutilised by the Bangladeshi

government and traditional media. The use of the protest frame by the social media users during the first phase of the crisis shows that Bangladeshi social media users were not content to sit back and watch the refugee crisis unfold. Instead, social media users actively participated in the online discourse on Twitter with hopes of holding those responsible accountable for their actions. This divergence from traditional media and government framing highlights the ability of social media to provide an alternative point of view. The use of the protest frame is a substantial departure from the more neutral approach of the Government and the traditional media which often invoked the use of the policy frame in their reports and publications. Further, Bangladeshi social media users used the responsibility frame to highlight the specific role of individuals and institutions in the crisis. In particular, the Burmese government, and Aung San Suu Kyi, were often mentioned in the tweets using the responsibility frame. Several of these tweets, for instance, mentioned how Aung San Suu Kyi should be brought to the Hague for genocide concerning the Rohingya population. Furthermore, the term 'genocide' is used more often in both the responsibility and protest frames, which emphasise the idea that what is happening in Rakhine needs a more extreme and urgent form of justice. Through the use of these frames, Bangladeshi social media users express their dissatisfaction with the situation and call for action, while the responsibility frame allows them to criticise those who were not doing enough to address the crisis. This suggests that social media users were not interested in simply discussing the issue, but also in creating meaningful change.

Lesser focus on securitisation

Although the securitisation frame also emerged in the online citizen dataset, it was not as dominant as the other frames. This indicates that social media users in Bangladesh were more concerned with the humanitarian aspects of the issue as opposed to their Indian counterparts, who used the securitisation frame quite extensively. The frame choices of the social media users allowed them to raise awareness, elicit empathy, and demand accountability for the refugee crisis through their tweets and online involvement. This demonstrates the potential of social media in allowing individuals to participate in political debate.

Second Phase

During the second phase of the crisis, Bangladeshi social media users continued to rely substantially on the human interest (19.77%), followed by policy (17.16%), aid (16.08%) and protest frames (14.03%). During the second phase of the Rohingya crisis, the two main narratives in Bangladeshi online citizen discourse included the following.

<i>Frames</i>	<i>social media users</i>
<i>Aid Frame</i>	16.08
<i>Economic Frame</i>	2.56
<i>Human Interest Frame</i>	19.77
<i>Myanmar Politics Frame</i>	1.78
<i>Policy Frame</i>	17.16
<i>Protest Frame</i>	14.03
<i>Responsibility Frame</i>	10.99
<i>Securitisation Frame</i>	6.43
<i>Victim Frame</i>	4.31
<i>Violence Frame</i>	6.83

International Support and more practical solutions

Compared to the first phase, the use of the protest and responsibility frames underwent a slight decrease of 16.03% and 11.15%, respectively, in the second phase. The aid frame and the policy frame, on the other hand, saw an increase. The shift in the frame use could imply that social media users were more drawn to focusing on practical solutions rather than voicing concerns of protest and raising the issue of accountability. Given the new wave of 750,000 refugees that crossed the Bangladeshi border in August 2017, the shift in framing patterns from the first phase to the second phase by Bangladeshi social media users could also be seen as a coping mechanism for social media users as they acknowledged the intensity of the situation and the realisation that a long-term response would be needed to go beyond protests and calls for responsibility. The sheer scale of the crisis may have left social media users feeling helpless and unable to induce change.

The increased in use of the policy frame enabled social media users to participate in a conversation with the Bangladeshi government such as discussing the effectiveness of the government policies. The use of the policy frame allowed social media users to discuss the various strategies and measures being implemented by the Bangladeshi government and international organisations, which played a crucial role in addressing the crisis. Bangladeshi social media users at this phase exhibited an adaptive capacity where they adjusted their narratives to match not only the evolving nature of the Rohingya crisis but also the policies of their government. As the crisis continued and the number of refugees grew, social media users became more aware of the need for concrete policies and actions to address the situation.

In line with the focus on practical solutions, social media users, in using the policy frame, emphasised an appeal to the Bangladeshi government to implement a more humane policy approach to the refugee crisis, such as, 'Do not push them back to Myanmar'. There were also conversations about why the plan of the Bangladeshi government to relocate the refugees to an island would not be sustainable, citing potential environmental, logistical, and human rights concerns. The repatriation process proposed by the Bangladesh government also faced some criticisms from Bangladeshi social media users, with several tweets urging the Bangladesh government not to send refugees back to Myanmar where they could further face persecution.

Support for Prime Minister Hasina

There was an uptick in support for the Prime Minister from Bangladeshi social media users during the second phase of the crisis, with tweets repeating the words such as 'Mother of Humanity' and '#leadingtheworld' to describe the Prime Minister. While the overall tone was positive, there were tweets that expressed concern about the possibility of repatriating Rohingyas back to Myanmar with hopes that Hasina would not send them back to their country, despite that being the clear objective of the Bangladeshi from the beginning. A comparison was also made between Hasina and Aung San Suu Kyi, with Bangladeshi social media users being extremely critical of the latter and arguing that the Nobel Peace Prize should be awarded to the Prime Minister because she is 'the true hero of the Rohingya'. This comparison has further elevated the status of the Bangladeshi prime minister as a compassionate leader. Bangladeshi social media users also seem to take pride in their leader's international standing after her actions were received positively by the domestic press.

Third Phase

<i>Frames</i>	<i>social media users</i>
<i>Aid Frame</i>	15.42
<i>Economic Frame</i>	4.81
<i>Human Interest Frame</i>	30.50
<i>Myanmar Politics Frame</i>	2.20
<i>Policy Frame</i>	18.97
<i>Protest Frame</i>	11.83
<i>Responsibility Frame</i>	4.50
<i>Securitisation Frame</i>	4.64
<i>Victim Frame</i>	4.64
<i>Violence Frame</i>	2.44

Bangladeshi social media users continued to heavily employ the human interest frame (30.50%) and policy frame (18.97%) during the third phase of the Rohingya crisis. These frames were a consistent theme throughout all phases of the crisis (see Table 32). During the third phase of the Rohingya crisis, the three main narratives among Bangladeshi social media users included the following (see table above)

Bangladesh as leader in solving the crisis

Interestingly, the policy frame (18.97%) saw a significant increase from the previous phase, indicating a growing emphasis on the actions and policies of the Bangladeshi government and international organisations in addressing the crisis. This increase can be attributed to the ongoing urgency and complexity of the situation, with the number of refugees continuing to rise and the need for sustainable solutions becoming more pressing. The policy frame allowed for the discussion of the various measures and strategies being implemented by different stakeholders, such as the government's efforts to create safe zones for the refugees, repatriation, and the vital role of international aid organisations in providing support. The way the social media users have talked about repatriation changed from a critical approach during the first phase towards a more neutral one during the second phase, with some tweets even considering repatriation as the only way forward to solve the issue. This could be attributed to the favourable portrayal of the Prime Minister by traditional media. The delay in repatriation was also heavily attributed to Myanmar, which assisted the Bangladeshi government in avoiding criticism. By emphasising the policy frame, social media users were able to discuss the government's response to the crisis by providing their commentaries on Twitter. At times, Bangladeshi social media users also showed support for the government's policy concerning the huge displacement of Rohingya refugees in the country.

Finding solutions

The protest frame (14.94%) also remained significant, indicating that social media users continued to voice their dissatisfaction and demand action, while the responsibility frame (9.97%) saw a slight decrease. The significant use of the protest frame could be attributed to the ongoing urgency of the crisis, as well as the slow progress in finding lasting solutions for the refugees. In contrast, the responsibility frame (9.97%) experienced a slight decrease from the previous phase, possibly indicating that social media users were shifting their focus to the actions of the government and international organisations, instead of attributing responsibility solely to specific individuals or groups. This change in priority could also suggest that social media users were now more concerned with finding practical solutions to the crisis, rather than simply assigning blame.

Sourcing in Bangladeshi social media users

<i>Type of Source</i>	<i>Online Citizen</i>			
	1	2	3	Overall
Official	0.63	0.69	0.35	0.62
Non- official	99.10	95.93	76.71	92.89
News Agencies	46.02	52.23	53.41	51.67
Citizens	6.88	10.34	2.75	8.82
Social Media	5.08	3.26	12.48	4.82
Others (Consolidated)	42.02	34.17	31.36	34.69
No Source	0.26	3.36	22.93	6.48

Of the 24,077 online citizen tweets, 92.89% relied on unofficial sources including URLs linking to the websites of news agencies (51.67%), citizen testimonials (8.82%), organisations (5.3%) and social networking sites such as Facebook, Twitter and YouTube (4.82%), among others. These findings support hypothesis 2. These results point to the important role of traditional media in helping Bangladeshi social media users understand the dynamics of the Rohingya conflict, suggesting that despite the rise of social media as an alternative source of news, traditional media organisations still play a vital role in the information landscape. Another possible explanation to this is the level of digital literacy of the online citizen sample. Since the tweets gathered from Bangladeshi social media users are all in English, it is most likely that these users are more educated and more digital literate who may be better at navigating the online information landscape and recognising the limitations of social media as a news source. For Bangladeshi social media users, traditional media appear to be more important than individual users or social media influencers. For Bangladeshi social media users, traditional media appear to be more important than individual users or social media influencers. This is an important finding, and consistent with the findings of Wagner and Boczkowski (2019) that social media acts as a gateway to news sites. There is, however, a challenge for traditional media organisations, because news stories are often 'atomised' (Australian Competition & Consumer Commission, 2019, p. 297) or distributed into individual pieces of content such as headlines, images or leads. The full story is often cut short or summarised which can lead to loss of context and accuracy. The atomisation of news may have also pushed

social media users to seek the full story to obtain a more accurate understanding of the Rohingya crisis.