Rohingya Refugees and Human Security: An Analysis of Social Networks on Social Media X (Twitter)

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Abstract

The purpose of this research is (1) to explain the safety of the Rohingya people in fighting for their lives. (2) To map virtual digital opinions related to human security on Rohingya refugees on social media X. Based on the analysis of social media network X, this study seeks to investigate the complex network of public conversations surrounding the Rohingya crisis on social media platforms. Data from X We collected 2,144 Tweets. The results of this study reveal (1) the Rohingya refugee community has experienced serious discrimination and persecution in Myanmar, effectively stripping them of their citizenship. The digital public has considered the 2017 military crackdown as an ethnic cleansing campaign. (2) Social networks and discourses on Rohingya refugees in X show different characteristics, such as network characteristics, for example, fragmented, centralized, or distributed. These prominent figures in the digital arena include many key actors, such as humanitarian organizations, community leaders, journalists, and netizens.

Keywords: Rohingya, human security, social networks, X, social network analysis.

Introduction

The Rohingya ethnic group in Myanmar has attracted the attention of the global community because of the plight of those who experience systematic and structured persecution and is the largest stateless group (ISI, 2020; UNHCR, 2023). Their massive exodus to various countries threatens their security and survival in the future.

The Rohingya are one of the Muslim ethnic minorities from Rakhine State, Myanmar. This community group is not recognized as citizens, experiences physical violence and discrimination, is restricted in movement and social activities, education, work, and marriage and is even indicated to experience genocide. (Nature, 2017; Anwary, 2020; Bakali, 2021; Dussich, 2018; Mohajan, 2018; Siddiquee, 2020; Zakaria, 2019).

The mistreatment received by the Rohingya occurred almost throughout Myanmar's independence which considered that the Rohingya were not part of Burma's national identity (Harrison Akins, 2018). After the military offensive in Rakhine State, in 2017 many Rohingya

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were forced to flee their homes, seeking refuge in border states such as Bangladesh, Malaysia and Indonesia (Mallick 2020). UNHCR reported that in mid-2020 an estimated 1.9 million refugees came from Myanmar, and 1.6 million were Rohingya. Nearly 1 million Rohingya refugees and asylum seekers have been registered by UNHCR, including 860,000 in Bangladesh, 101,000 in Malaysia, 18,000 in India, and a small number in Indonesia, Nepal, Thailand and other countries. An estimated 600,000 Rohingya are still living in Rakhine State, of which 142,000 are internally displaced (UNHCR, 2021).

As refugees who are scattered across various countries and have no citizenship, human security is an important instrument for the Rohingya to obtain guarantees of human rights that include dignified survival, their ability to access resources, and socio-economic and political conditions. However, this concept is a challenge for the Rohingya as refugees, because most countries consider refugees to be a threat (Freitas, 2002; Jackson & Atkinson, 2019). Even some countries such as Australia have made strict policies to prevent the entry of refugees (Odutayo, 2016).

Human security is a study that developed after the Cold War. This study marks a reaction to the concept of realism that places the state as the main actor in determining the realization of security (Lahiry, 2020; N. K. Singh & Nunes, 2016). The political rivalry between the American bloc and the Soviet Union has created *Bipolarity* In the form of the deployment of military force as an effort to achieve national security by avoiding external threats. The collapse of the Soviet Union and the disintegration of its satellite states have raised problems in international relations, namely a wave of refugees and other violence that threatens individuals (Datzer, Darko, 2021; Rees, Carter, 2022; Suzuki et al., 2021). Including conflicts between countries and violence that occurred in countries in the Middle East, Asia, Africa and other countries in other parts of the world have contributed to the problem of international refugees. (Moorthy & Brathwaite, 2019). In addition, humanitarian problems that plague the world and become global issues such as poverty, hunger, terrorism, the sale of children and women as well as human rights violations and others encourage the strengthening of human security studies.(Francesca vietti, 2013; Yousaf, 2018).

Thus, the study of human security is very important for the condition of the Rohingya community because of the need for protection and continuity of life as refugees and non-citizens (stateless). As stated in the 1951 Refugee Convention, a refugee is defined as a person who experiences fear of persecution due to race, religion, nationality, or membership of a certain group or political opinion outside his country and does not want to be protected by his country (UNHCR, 1951).

Some of the following research results related to human security show that this concept is a debate that, according to the author, is important to study in understanding the human security problems experienced by the Rohingya

Cecilia Jacob (2014), sees human security as a political concept promoted by powerful countries to institutionalize an alternative vision of security in political communities. This research reconceptualizes human security with a sociopolitical approach to civil protection in Myanmar. The reconceptualization of human security as a politics of protection is carried out because political institutionalization and discursive spaces are still hampered where the practice of protection is still debated.

In line with this, Lahiry (2019) In his study, "The Changing Narrative of Security Discourse:

From State Security to Human Security in South Asia," he concluded that although there have been advances in human security in some areas, the Human Development Index (HDI) South Asia shows that human security is still somewhat bleak because various crises still need to be addressed.

Nishikawa (2020) through his study entitled *Human Security in Southeast Asia: Viable Solution or Empty Slogan?* discussed the concept of human security and its relevance to the discourse and management of security in Thailand in conflict management. Based on this study, applying the concept of human security still uses the state's point of view. This means that the country identifies the existence of a threat. According to him, human security requires the identification of threats from the perspective of people. This can be seen from the policies carried out by the Thai government in dealing with the conflict in South Thailand. Although the government has implemented several policies oriented towards human security approaches, the cases of violence in Southern Thailand show that community groups in the region are considered a threat to the government.

Next Singh (2015) in his study entitled "*Contextualizing Political Security in South Asia*", highlighting human security in South Asia about political security which includes: *first*, political security is a broader canvas that includes human security in addition to state security. Political insecurity is the source of unattainable social and economic security for humanity and an existential threat to the state in general. *Second*, communities and countries in the South Asian Region are experiencing a syndrome of political insecurity. *Third,* undemocratic and fragile political structures further complicate security scenarios by hampering the stability of state organizations in the South Asian Region. *Fourth,* the increasing legitimacy deficit is because the government often ignores the people who are already displaced in various ways. The study further states that the source of political insecurity is exclusive nationalism, which has made the state ideology the most contentious thing and can undermine the foundations of countries in South Asia, leading to a crisis of legitimacy.

There is a huge amount of scientific research regarding social media and the public domain in the digital space. In connection with this scientific study, we underline some important contributions made by the digital public. According to Azis (2024) The idea of a networked public space states that individuals in the networked information economy can transform their interactions with the public space by taking on the role of creator and main subject, thus facilitating the democratization of the internet.

Bakali (2020) acknowledging the beneficial and detrimental impact of technology, coining the term virtual space 2.0 to encapsulate activities such as the dissemination of political opinions on various social media platforms. This phenomenon is considered a mode of engagement in online discussion forums, representing the essence of the digital public space that exists between social media participants and the wider public.

Data WeAreSocial (2024) revealed that social media is the most widely used form of communication globally due to its powerful ability to digitize various modes of communication, which include interpersonal and mass communication. As per a global investigative report, individuals allocate an average of 6 hours and 35 minutes to social media engagement, with interaction with others being the primary goal for using these platforms. As of October 2024, the number of social media users has reached 5.80 billion, representing 60% of the total global population.

Despite the fact that digital technologies facilitate almost all types of communication, including text, video, and synchronous and asynchronous exchanges, individuals' strategies for communicating through social media remain significantly shaped by the social context in which they participate (Chen et al., 2017; Lindgren, 2013; Rogers, 1976, p. 34). Previous research has shown that individuals use social media in very different ways, depending on their social and cultural background. Social media appears to exert an influence primarily on the superficial level of behavior, having minimal impact on the deeper behavioral dimension; rather, it serves as a record of the various interactions that individuals engage in their waking lives (Bruns & Highfield, 2013; Ke et al., 2016; Miah et al., 2017).

Irom and Gibbons Research (2023) has revealed the use of social media in reporting on Rohingya refugees can significantly affect audience empathy. The relationship between media and empathy is complex depending on how media technologies are used to tell the stories of Rohingya refugees, and this is important to provide a meaningful understanding of Rohingya refugees. Social media also plays a role in political participation, as Demirhan studies (2014) which highlights that platforms like Twitter can facilitate citizen involvement in disseminating information. Social media allows each individual to produce a variety of content so that it is able to encourage interactive communication that traditional media has not had.

Therefore, this study wants to emphasize how security threats, human safety, and struggles for the lives of Rohingya people are analyzed using social networks. This paper will present an in-depth investigation of the various obstacles faced by the Rohingya population, especially regarding threats to their security and the preservation of human safety. The study will investigate the entrenched systems that exacerbate their suffering within the social media platform X.

This includes political oppression, social exclusion, and horrific economic conditions. It will further dissect how these elements are intertwined within a complex network of local and global players, illuminating the intricate nature of their struggle for existence and dignity. By exploring historical narratives alongside current circumstances, this analysis aspires to highlight the persistent spirit of the Rohingya community amid relentless hardship while calling for increased awareness and joint action from the international arena.

The most important significance of this study lies in the introduction of social network analysis in the realm of social media use X related to security threats, human safety, and the struggle for the lives of Rohingya people, thus triggering a paradigm shift in social media research, underlining that a systematic and relative perspective must be recognized as the right methodology to examine dynamic social interactions.

Social network analysis, which examines online interactions on a very abstract and simple level, empowers researchers to quantify the complex processes underlying social media use in dynamic and ephemeral social contexts. Academic and practical implications regarding the incorporation of social network analysis into the field of Rohingya human security in the digital space.

To clarify this study, we raise two research questions (RQs), namely RQ1: What is the threat to human security in the Rohingya in fighting for their lives? And RQ2: how is the mapping in the digital space related to the human security of Rohingya people on social media platform X? The purpose of this research is twofold, namely (1) to explain the security of people in the Rohingya in fighting for their lives. (2) To map digital opinions related to human security on Rohingya

refugees on social media X (Twitter).

Literature Review

Human Security

Security is a term related to the perception of a society towards the conditions in the environment in which they are located. This perception is very decisive for declaring safe or unsafe conditions carried out by actors in the environment. Actors can be countries (*state actors*) and non-state (*Non-State Actors*) (Mahyudin et al., 2017, p. 24). Etymologically the concept of *Security* can be interpreted as a state of being free from danger, free from fear (*free from danger, free from free*). Buzan, Waefer and de Wilde (1998) states that security is about survival, that is, how an issue raised becomes an existential threat to the object of reference.

 Next Buzan and Waefer (1998) stated that security is not only about the state but is related to the collectivity of human beings, which includes the military, economic, political, social, and environmental fields. The military is concerned with the offensive and defensive capabilities of the country; the economy is related to the ability of people to access resources, finance, and markets to maintain welfare; Political security is related to the stability of the country, the system of government, ideology, and legitimacy.

Meanwhile, community security is related to the sustainability of the cultural, linguistic, religious, customary, and national systems. The environment is related to the maintenance of the environmental ecosystem as a place of residence and the sustainability of human business places (Lee & Scheibe, 2020; Williams, 2008).

The concept of security was echoed at the United Nations Millennium Summit in 2000 by the then UN Secretary General Koffi Annan. Security is interpreted as freedom from shortcomings and freedom from fear and emphasizes the importance of the social and economic needs of the community and avoiding political and military threats that have been the focus of security studies.

The debate in defining human security enriches the framework of the concept of human security. Some of the human security perspectives that have been developed by UNDP, Canada, and Japan thus show Western and Asian thinking (Acharya, 2001). The concept of human security developed by UNDP is the result of a study from the United Nations Development Program (UNDP) Development Report in 1994. Commission *Bruntland* and Commissions *Brandt* and the Global Commission of Governments analyzed to strengthen the security paradigm shift from state security to people's security, and this subsequently gained recognition of non-military threats.

The idea of human security developed by UNDP strengthens human security by focusing on meeting human needs which include economic security, namely guaranteed basic income, food security, namely physical and food access, health security, which is free from disease and infection, environmental security, namely access to clean water supply, air and soil systems that are not degraded, personal security, namely security from threats and physical violence, Community security is the security of cultural identity and political security is the protection of human rights and basic freedoms.

The concept *of Human Security* formulated by Canada criticizes the concept of *UNDP's human security*. This concept is too broad and associates it with negative development impacts, while

human security is the result of the doctrines contained in the UN charter, the Declaration of Human Rights, and the Geneva Conventions. Meanwhile, Japan developed a comprehensive concept of human security, which includes everything that threatens human life and honor from human rights violations, organized crime, drug trafficking, refugees, victims of conflict and abuses, as well as problems motivated by structural violence due to economic underdevelopment.

Therefore, *human security* is an important discourse in the study of international relations when faced with the individual's efforts to be free from conflict and to live a good life as he chooses, with dignity and without fear (Raju, 2020). Concept *Human Security* also became an interesting discourse in line with the end of the Cold War and the collapse of the Soviet Union. The disintegration of the satellite states of the Soviet Union gave rise to a wave of refugees and other violence that threatened individuals (Datzer, Darko, 2021; Rees, Carter, 2022; Suzuki et al., 2021).

Interstate conflicts and violence in countries in the Middle East, Asia, Africa, and other countries in the world have contributed to the problems that arise for international refugees (Moorthy and Brathwaite, 2019). In addition, humanitarian problems that have swept the world and become global issues such as poverty, hunger, terrorism, the sale of children and women, as well as human rights violations and others, have encouraged the strengthening of human security studies (Francesca vietti, 2013; Yousaf, 2018).

Shariful Islam (2019), through his writing entitled *Understanding the Rohingya Crisis and The Failure of Human Rights Norm in Myanmar: Possible Policy Responsesstated that the failure of human rights norms in the Rohingya crisis is due to several factors, including: first*, Myanmar does not comply with international human rights norms in addressing the Rohingya crisis due to the country's prevailing domestic political structure. *Second*, the interests of major countries such as China and Russia and influence, and thirdly the lack of political opportunities at the national, regional, and global levels.

Based on the results of the study, the author is interested in getting a more comprehensive explanation of how Rohingya human security is constructed through the social media platform Twitter (X).

Social Media

Social media is the most widely used mode of communication globally due to its powerful ability to digitize various forms of communication, from interpersonal exchanges to mass dissemination of information (Ansar, 2024; Bruns & Highfield, 2013; Doan & Gulla, 2022; Juwita, 2017; Tähtinen, 2024).

As the comprehensive WeAreSocial (2024) report shows, individuals dedicate an average of 6 hours and 35 minutes to social media engagement, with interaction with others being the primary goal for such use. As of October 2024, the number of social media users has reached 5.80 billion, accounting for 60% of the world's total population of 8.1 billion (Atemp, 2024).

Even though digital technologies facilitate almost all forms of communication, including text, video, and synchronous and asynchronous exchanges, the strategies used by individuals in social media communication remain heavily influenced by the social context in which they participate (Leighton, 2021; Lindgren, 2013; Tayouri, 2015).

Previous research has shown that individuals engage with social media in a variety of ways depending on their social and cultural backgrounds. Social media appears to exert its influence primarily on a superficial level of behavior while showing minimal impact on the deeper behavioral dimensions. In contrast, social media serves as a digital repository of various interactions and opinions expressed by individuals and entities in the real world (Bail, 2022; Cinelli, 2020; Kubin, 2021).

The use of social media includes interactions between users, which include individuals and various entities. Analyzing different types of interactions provides valuable insights into how these interactions form social networks, bridging micro-level perspectives with macro-level considerations of social interactions, as well as the structural characteristics of social networks formed through diverse types of interactions, such as strong or weak bonds that connect individuals, centrality structures that show individuals in social networks that tend to lean around a single focal point,   and transition structures (Duffy, 2019; Valdez, 2020).

This implies that individuals within a particular social network often seek to expand their connections beyond the boundaries of their existing network. The analytical approach used to examine the relationships between individuals or other entities in a social system is referred to as social network analysis. By utilizing social network analysis, researchers are equipped to conduct investigations into social media through a dynamic and systematic lens that may more accurately reflect the complexity of reality (Esfahani, 2019; Himelboim, 2017; Skyler J. Cranmer, 2021; Tabassum et al., 2018).

Methodology

This research is covered with a sociocultural approach and an interpretive paradigm. By using the social media network analysis research method. This study uses qualitative data and quantitative data. Data from this research will be obtained through several methods that include content analysis to find out the content of 'Human Security and Rohingya' content by conducting data mining through the X social media platform (Twitter). This is to obtain an overview and perspective from the public in the digital space, as well as literature studies to obtain data to support research.

The process of collecting data using content analysis is carried out using the NodeXL software tool from the Social Media Research Foundation. The graph represents a network of 663 Twitter users whose recent tweets contained "Human Security And Rohingya", or who were replied to, mentioned, retweeted, or quoted in those tweets, taken from a data set limited to a maximum of 2.000 tweets, tweeted between 01/01/2016 00:00:00 and 20/12/2018 11:00:25.

The network was obtained from Twitter on Thursday, 30 January 2025, at 04:17 UTC. The tweets in the network were tweeted over the 3249-day, 2-hour, 11-minute period from Wednesday, 09 March 2016 at 09:06 UTC to Thursday, 30 January 2025 at 11:17 UTC. There is an edge for each "replies-to" relationship in a tweet, an edge for each "mentions" relationship in a tweet, an edge for each "retweet" relationship in a tweet, an edge for each "quote" relationship in a tweet, an edge for each "mention in retweet" relationship in a tweet, an edge for each "mention in reply-to" relationship in a tweet,   an edge for each "mention in quote" relationship in a tweet, an edge for each "mention in quote reply-to" relationship in a tweet, and a self-loop edge for each tweet that is not from above.

Result and Discussion

In examining the digital landscape of platform X (Twitter), this section reveals that cross-border digital interactions shape the narrative of the Rohingya diaspora. This section also describes how transnational identities are formed and negotiated in the online realm. The research shows that social media platforms catalyze the evolution of the Rohingya diaspora and the formation of their identities by creating 'imaginary communities' of resistance, cross-border advocacy networks, and diaspora-centric media production.

This article also investigates the transformation of online activism, highlighting the emergence of marginalized voices in the digital realm that long for homeland, justice, and citizenship rights. This investigation offers an invaluable perspective on narratives emerging from the fringes. It illustrates how X's new media platform empowers ethnic minorities and marginalized groups to forge their diaspora identities through the art of online mediation in a global space.

As shown in **Table 1** below, we have collected some tweets and mentions, replies to, and quotes from X (Twitter) from actors (vertex) from many countries such as Malaysia, the United States, Australia, Pakistan, Europe, India, Saudi Arabia, and others. The digital public in X is generally concerned about the ethnic cleansing efforts of the local ruling regime without any intention of respecting the humanity of the Rohingya refugees.

Mapping Social Media Digital Opinions About Rohingya Refugees

Analysis of X data that we processed using NodeXL software found some findings related to security threats, human safety, and the struggle for the lives of Rohingya people, including:

Dominant Narrative

Our analysis has shown the emergence of several prevailing narratives in the public discourse surrounding the Rohingya crisis on X (Twitter). The main narrative that emerges is (1) Human Rights Violations. Most of the tweets centered on human rights abuses faced by Rohingya refugees, including brutal violence, tragic massacres, and widespread forced displacement. (2) Global Accountability. Many tweets advocated a global intervention to protect the Rohingya and ensure that those responsible for human rights abuses are held accountable. (3) Loving humanity. Humanitarian issues such as the refugee crisis, food scarcity, and access to health care dominate the discussion. (4) Political Dynamics. Political issues also play an important role in the dialogue, with many tweets analyzing the involvement of Myanmar's government, neighboring countries, and international bodies in this ongoing drama.

Influential Figures

Network analysis has highlighted several influential figures who have been crucial in shaping the public conversation about the Rohingya. These figures include: (1) Humanitarian Organizations. Entities such as UNHCR and MSF are critical in spreading awareness about the Rohingya crisis and galvanizing international support. (2) Journalists and Media. Mass media, including mainstream channels, international outlets, and national and global online platforms, play a key role in reporting on developments in Rakhine State and shaping public sentiment. (3) Activist Contribution. Human rights advocates and civil society leaders are critical in fighting for the rights of the Rohingya. (4) Government Involvement. The governments of Myanmar, Bangladesh, and other countries involved in the crisis are also important players in the digital public dialogue on X.

Interaction patterns and mapping

Network analysis reveals a rich tapestry of interactions among various stakeholders. Groups of Twitter users rallied around a common belief, reinforcing each other's narratives. In addition, diverse cross-group interactions often spark dynamic debates and deepen the digital polarization of opinions about X.

Implication

The findings of this study bring several significant implications: (1) The Power of Question Media. Various social media platforms, particularly X (Twitter), have emerged as an important arena for the public to exchange information, raise awareness, and expand support to those affected by the Rohingya refugee crisis. (2) Community Advocates. Community activists are crucial in promoting Rohingya rights and influencing policy reforms. (3) Disinformation Challenges. The spread of misleading information and propaganda presents significant obstacles in efforts to understand and address the Rohingya refugee crisis. (4) Capacity for Mass Mobilization. Social media platforms have the potential to galvanize global support for Rohingya refugees.
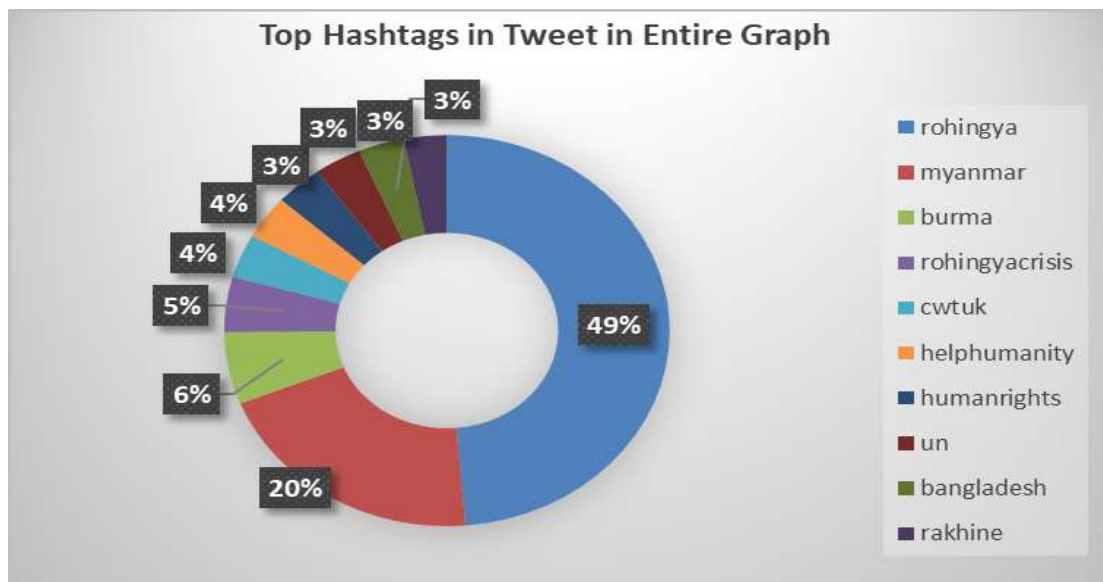

Figure 1: Percentage of top hashtags with trending topics of Rohingya Human Security in X 2016-2019. (source: processed by researchers, 2025)

A hashtag is a word or phrase indicated by a symbol (#). Hashtags are commonly used on social media platforms to categorize content to make it easier for others who are interested in similar topics to find. **Figure 1** shows how Twitter users are using hashtags to discuss issues, organize conversations and raise awareness about the humanitarian crisis the Rohingya are experiencing. The hashtag 'Rohingya' dominated by 49%, highlighting the Rohingya-centric issue showing how their suffering, displacement and struggle are. The hashtags "Myanmar" and "Burma" indicate the geopolitical context, the source of the crisis's country of origin. The Myanmar government's actions against the Rohingya community as actors of persecution and accusations of genocide were central topics of discussion.
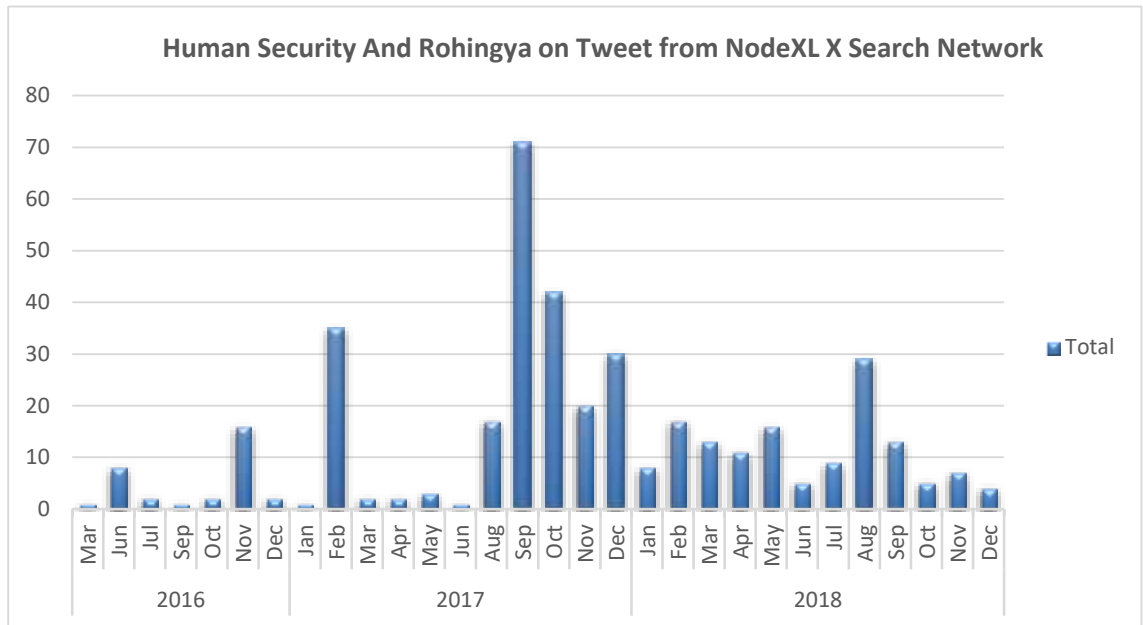
Figure 2: Graph of the number of Tweets on trending topics 'human security and Rohingya' in X. (source: processed by researchers, 2025)

Figure 2 this is a graph showing data related to tweets about "Human Security" and "Rohingya" from the NodeXL search network. This graph presents information in the form of a bar chart depicting the total number of tweets containing both terms over a period of time, from March 2016 to December 2018. An in-depth analysis of the meaning of this data can be explained as follows: (1). Time Period and General Trends. This chart covers the period from March 2016 to December 2018. In social media data analysis, time distance is an important factor because it helps us understand the context and changes that occur in society. From the chart, it can be seen that there is a significant fluctuation in the number of tweets from month to month.

(2) Peak Activity in September 2017. One of the striking things about this chart is the peak of activity that occurred in September 2017. This month, the number of tweets reached its highest number, which was around 70. This peak could be related to a major event involving the Rohingya community, which at the time was experiencing a major humanitarian crisis when many Rohingya fled Myanmar to Bangladesh due to violence.

(3) The context of the Rohingya crisis. To understand more deeply, it is important to investigate the context behind the peak of this activity. The Rohingya crisis has become a global issue that has received widespread attention from various international organizations, the media, and civil society. As news of violence and oppression against the Rohingya spread, many individuals and groups began using social media platforms to voice them. This explains why the number of tweets containing "Human Security" and "Rohingya" soared during that period.

Table 2: Number of Relationship 'Tweet' Dates in X. (source: processed by researchers, 2025)

Row Labels	Count of Relationship Date (UTC)
2016	**32**
Mar	1
Jun	8
Jul	2
Sep	1
Oct	2
Nov	16
Dec	2
2017	**224**
Jan	1
Feb	35
Mar	2
Apr	2
Machine	3
Jun	1
Aug	17
Sep	71
Oct	42
Nov	20
Dec	30
2018	**137**
Jan	8
Feb	17
Mar	13
Apr	11
Machine	16
Jun	5
Jul	9
Aug	29
Sep	13
Oct	5
Nov	7
Dec	4
Grand Total	**393**

Table 2 The above shows the number of tweets about 'Human Security and Rohingya' related to 'relationship' from 2016 to 2018. From the data, it can be seen that 2017 had the highest number of tweets, which is 224, which shows that it was the most active period for this topic. In contrast, 2016 recorded only 32 tweets, with June recording the highest number of 8 tweets. In 2017, February recorded the highest number of tweets with 35 tweets, indicating a surge in interest or an important event affecting the topic of relationships during the month.

On the other hand, March and August in 2017 also showed significant activity, with 17 and 13 tweets, respectively. Entering 2018, the number of tweets decreased to 137. Nonetheless, June remained the highest number with 29 tweets, which shows that despite the decline, the topic of relationships still remains a concern. Overall, from 2016 to 2018, the total number of tweets recorded was 393. This data reflects fluctuations in public interest in relationship themes, with a clear decline in 2018 compared to the peak of activity in 2017. This can be an indicator to analyze social trends and social media users' behavior towards relationship themes in that period.
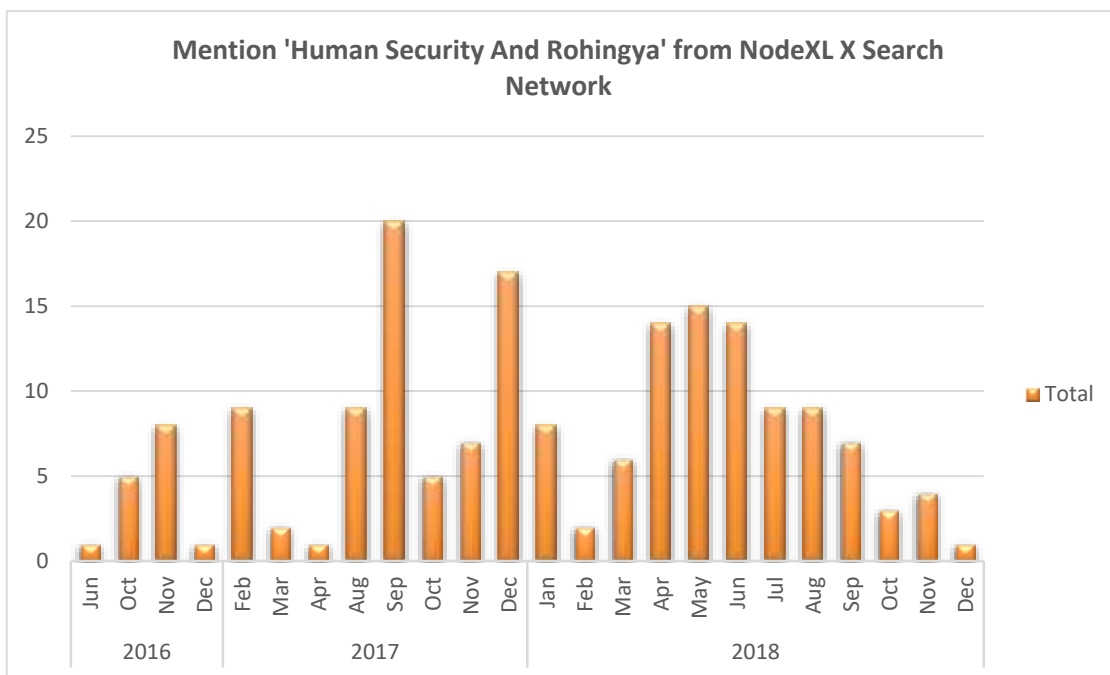

Figure 3: Graph mentioning 'Human Security and Rohingya' on X.

(source: processed by researchers, 2025)

Figure 3 above presents data on mentions related to "Human Security" and "Rohingya" taken from the NodeXL search network. This chart shows trends over time, from June 2016 to December 2018. We consider this data to be critical to understanding how issues related to human security and the Rohingya community are discussed in the context of social media.

(1) Monthly Analysis. From the graph, it can be seen that April 2017 recorded the highest number of mentions, which was almost 25 times. This surge may have been caused by significant events that occurred at that time, such as conflicts or crises involving the Rohingya community.

These events often attract the attention of international media and the wider public, leading to an increase in conversation on social platforms. In contrast, the period that showed the lowest number of mentions was June 2016, with only one mention. This shows that at that time, the Rohingya issue may not have been widely discussed or public attention to it was still minimal.

(2) Fluctuations during 2017. After the spike in April 2017, the graph shows a significant variation in the number of mentions from month to month. For example, May 2017 also showed a fairly high number of mentions, about 20 times, before falling again in June. This decline could be indicated by fluctuations in public interest or there may be changes in relevant news or events. However, after June, the number of mentions increased again in August 2017, which again could have been triggered by important events, such as the Rohingya refugee crisis that occurred at the time. The event attracted global attention and caused a lot of discussion on social media, leading to a surge in mentions.

Table 3: Number of Relationship 'Tweet' Dates in X.

Row Labels	Count of Relationship Date (UTC)
2016	**15**
Jun	1
Oct	5
Nov	8
Dec	1
2017	**70**
Feb	9
Mar	2
Apr	1
Aug	9
Sep	20
Oct	5
Nov	7
Dec	17
2018	**92**
Jan	8
Feb	2
Mar	6
Apr	14
Machine	15
Jun	14
Jul	9
Aug	9
Sep	7
Oct	3
Nov	4
Dec	1

Grand Total	177

(source: processed by researchers, 2025)

Table 3 above can be explained: Row labels show the temporal framework presented in month and year format, where the interaction occurs. The Relationship Count denotes the aggregate number of interactions that occurred during each specified time frame. UTC, or Coordinated Universal Time, refers to the standard temporal measurement used to record the occurrence of interactions. The analysis of this table produces a visual representation of the dynamics of interactions in various temporal dimensions. For example, it can be observed that the frequency of interactions experienced a noticeable increase in 2018, especially in December.

These observations show an increase in engagement or interest related to the subject matter being examined during that period. The use of this table serves to conduct trend analysis that distinguishes upward and downward movements in activity over time. Seasonal Analysis: Identify seasonal trends in interactions, such as increased activity during certain times of the year.

Comparative Analysis: Examination of activity levels among diverse groups or categories. If this table summarizes the number of tweets on X related to the Rohingya crisis, one can conclude that public interest in this issue jumped significantly in 2018, with special emphasis in December. This phenomenon may be attributed to important events related to the Rohingya crisis during that period, which may include judicial rulings or declarations from political authorities. This table provides important insights into the nature of interactions that evolve. Through this data scrutiny, one can gain a deeper understanding of the trends, patterns, and variables that govern activity on a particular platform or network.
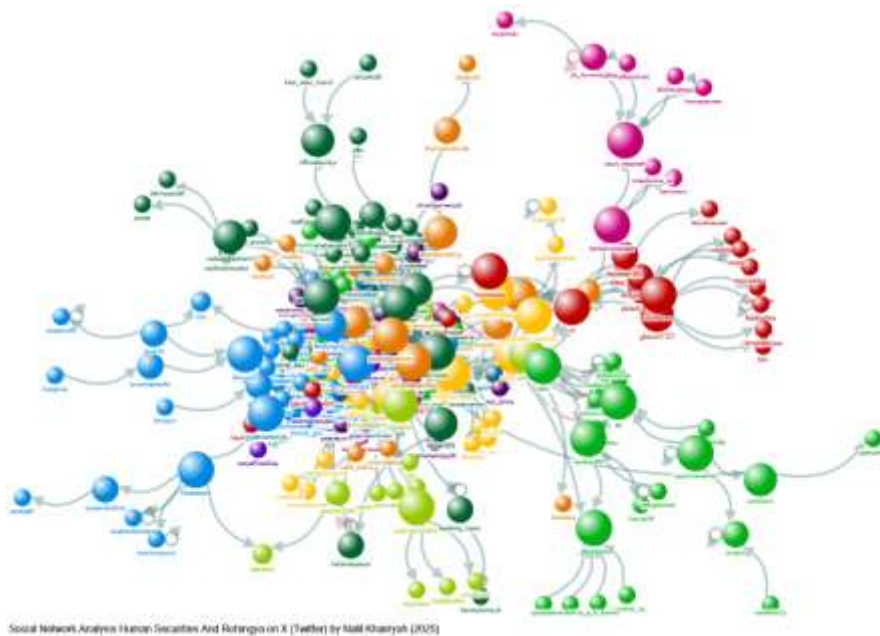

Figure 4: Social media network interaction on accounts in X related to the theme 'Human Security and Rohingya'. (source: processed by researchers, 2025)

Figure 4 Above is a visualization of a social network depicting the interaction between Twitter accounts related to the issue of "Human Security" and the Rohingya". Each dot or "node" represents a user account that discusses the plight of the Rohingya people. While the line connecting them shows interactions such as retweets, mentions, or replies. The different colors on the nodes reflect a specific category or theme, aiding in identifying groups of users with similar interests or focuses. For example, accounts related to the human rights of Rohingya people are marked with a certain color, while those related to political issues can have other colors.

Node size also indicates influence, with larger nodes representing accounts with more followers or interactions. This visualization highlights the existence of clusters, where certain accounts interact more intensively, creating a dynamic community of discussion. In this way, these images provide insight into how important issues can connect individuals from different backgrounds, as well as how information and opinions can spread on social media platforms. This is very relevant for understanding the dynamics of communication in the context of complex humanitarian issues.
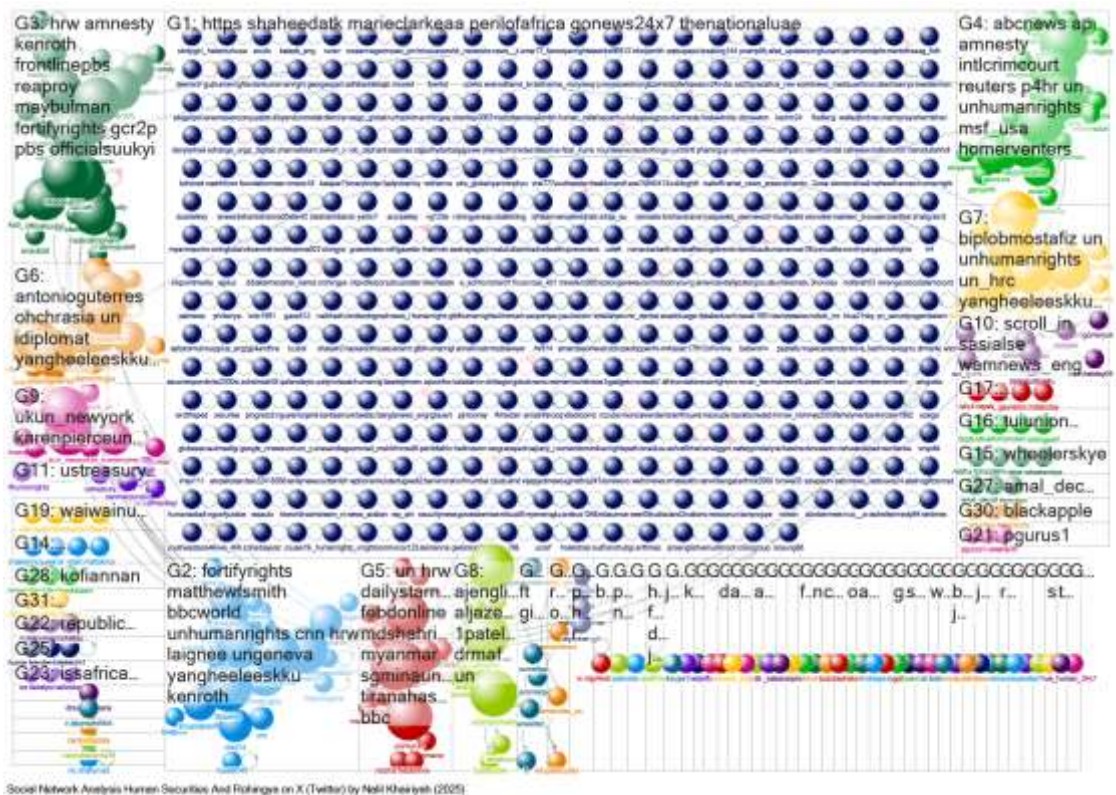

Figure 5: Cluster analysis of the Clauset-Newman-Moore algorithm model on social media using NodeXL (source: processed by researchers, 2025)

Figure 5 The above shows the two main parts of the Clauset-Newman-Moore (group/G) algorithm model cluster in X related to the analysis of social networks on Twitter related to the issue of "Human Security" and "Rohingya." The analysis we did using the NodeXL tool explained that the left part (G1) shows a visual representation of various user accounts, with

their profile pictures connected through a line. It describes interactions between users, such as retweets and mentions, that create a communication network about the issue. Each account could potentially represent a different perspective or information regarding the Rohingya situation and human security.

The right section (G2 to G4) details some of the key accounts involved in these discussions, including human rights organizations and the media. These accounts have a significant influence in disseminating information and raising awareness about the Rohingya issue. By visually displaying accounts and interactions, this image provides a clear picture of how information on humanitarian issues can be spread on social media. It also demonstrates the importance of collaboration and communication between accounts to build a broader and deeper narrative regarding the challenges facing the Rohingya community. This visualization highlights the complex social dynamics in the dissemination of critical information on social media X on these humanitarian issues.

The prevailing virtual opinion that emerges within these networks often revolves around discussions about human rights abuses, the struggles faced by individual Rohingya, and urgent calls for global intervention. The most frequently talked about interaction patterns are depicted in the following figure:
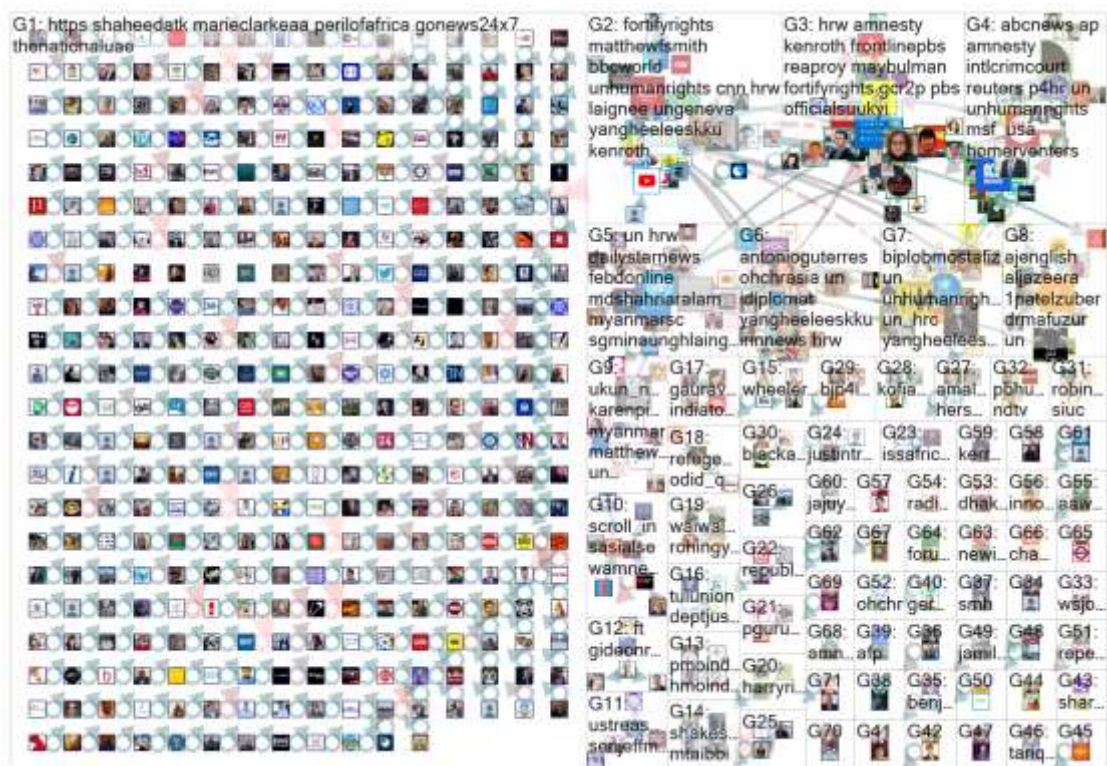
Figure 6: *Visual analysis of human security and Rohingya networks using the Harel-Koren fast multiscale algorithm model.*

Figure 6 The above can be explained in the context of social media which is one of the elements of human security. The social media context of the Rohingya issue is a complex topic involving various elements, including politics, human rights, and human security. When there is news or major events related to the Rohingya, such as expulsion from Myanmar or the condition of refugees in neighboring countries, there will be a spike in mentions on social media. Social media is becoming an important platform for discussing these issues, as it allows individuals and organizations to disseminate information and raise awareness.

The left part is a cluster or group (G1) displaying various Twitter user profile pictures, which are connected through lines to show interactions, such as retweets and mentions. Each account contributes to the discussion around the Rohingya issue, creating a dynamic and diverse communication network. The right section (G2 to G4) presents a list of important accounts involved in the conversation, including human rights organizations and the media.

These accounts on X play a key role in disseminating information and raising awareness about the challenges faced by the Rohingya community. Through this visualization, we can understand how information moves between users and how collaboration between accounts helps build a broader narrative. The images we present above highlight the critical role of social media in shaping public opinion and raising awareness of humanitarian issues, as well as demonstrating the importance of connections between individuals and organizations in the fight for human rights.

Conclusion

(1) The Rohingya refugee community has experienced serious discrimination and persecution in Myanmar, effectively stripping them of their citizenship and hindering their essential access to services such as health services and education. The 2017 military crackdown has been viewed by the digital public as an ethnic cleansing campaign, with horrific reports of killings, beatings, mass sexual violence, and the burning of entire communities. Several countries, including Canada, France, Gambia, Malaysia, Pakistan, the Philippines, and Turkey, have recognized the crisis as an act of genocide.

(2) This analysis of the narrative of social media network X using NodeXL has mapped the digital opinion surrounding the Rohingya crisis that the discourse network about the Rohingya in X shows different characteristics, such as network characteristics, for example: fragmented, centralized, or distributed. The leading figures (eigenfactors) in this digital arena include many key actors, for example, humanitarian organizations, community leaders, journalists, or netizens. The central themes that emerged in this dialogue included key topics, for example, human rights violations, refugees, and humanitarian aid. One of the shortcomings of this study that we realized was the representation of the sample.

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