Original Research Paper

A Model of Cyber Extremists' Rhetorical Structure Towards Protecting Critical Infrastructure

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Abstract: Much research at present focuses on the ways in which organizations secure their networks and information in the supply chain, ignoring the ways in which organizations construct and understand the core of the cybersecurity risks. Cybersecurity focuses more on defense mechanisms such as anti-virus software, malware protection, firewall and more on securing network and application. More research to understand extremist activity should be conducted by exploring the extremist corpus. It is a good strategy since the web is overloaded with multiple conversations or information since the dependency to the technology has been skyrocketing by people including by the extremist itself. The objectives of this study were to identify the types of rhetoric in cyber extremist's communication, analyze how the cyber extremists utilized the rhetoric in appealing to the audience, identify the stylistic devices used by the extremists and produce a model of cyber extremists' rhetorical structure. Therefore, new approaches to study the rhetoric of cyber extremists have been designed. It is the combination of Norreklit's methodology, Neo-Aristotelian criticism ideologist criticism which were deemed able to pry out the hidden literacy of the extremists. In this study the type of rhetoric that dominated the cyber extremists' communication was pathos. The category of pathos in the extremists' postings was more on negative feelings such as sad, anger and hatred. Using the Neo-Aristotle criticism, the stylistic devices used by the extremists were identified such as the metonymy, simile metaphor. The metonymy used was like 'Jihad', 'Mujahidin', 'Ansar' and 'Muhajirin'. The metonymy 'Penyembah' which referred to the opponents' obsessive materialistic behavior was seen multiplicatively in the extremists' postings. The simile stylistic devices such as the word 'Thagut' and 'terrorist' were used by the extremists as direct comparison. As a direct comparison, Meanwhile, the metaphor of death was used consistently by the extremist which can be seen as a scary technique for the opponents. Meanwhile, by using the ideologist criticism, the appearance that was used by most of the extremists was the desire to be seen as a peace ideologist and kind rhetor through the use of cold color such as blue and green with the nature design as the background of the blog. All the phrases were gathered, analyzed and integrated to ascertain the pattern based on the research methodologies to develop a model. A model of cyber extremists' rhetorical structure was developed and established towards protecting the critical infrastructure to ease any parties including the authority, expert and public to identify the possible extremists' styles as red flags during cyber communication such as social media communication.

Keywords: Rhetoric, Cyber Extremist, Cybersecurity, Terrorist

Introduction

The use of network infrastructure for cyber communication is increasing especially in the current 21st century. It has been skyrocketing since early 2020 due to the pandemic. Among the factors of the increasing usage of information and network technology as part of daily communication are due to the safe and fast medium. Recent statistics from statist international telecommunication union (ITU, 2021) has shown the numbers of internet users from (2005-2021) are increasing to 5 million where 4.7 million are the users of social media. It follows that it is understandable why cyber communication is a liability given that it has evolved into a favorite assault vector for individuals with bad intentions, especially extremists.

Usually, the security focuses on the extremist technical attack to protect the life and critical infrastructure such as the prohibition of dangerous items to certain areas, bomb scanner, CCTV, alarm, security check at borders entrance and others. These are being implemented as part of the standard response for protection controls and security measures when the destruction is visible and has the potential to instill an overwhelming sense of dread, panic and terror among people. The efforts of enhancing the security controls where mostly on the physical environment are the primary and the most favored aspect from the security measures (Moses and Rowe, 2016).

Similar to the physical world, the cyber realms have been concentrating on the network or application-level access control components. Cybersecurity focuses more on the protection such as firewall, anti-virus, password, intrusion prevention system and others in order to prevent the non-authorized party such as extremists from accessing the protected critical site. The demand causes many studies to emphasize more on developing a new method of protecting and securing the cyber world from being penetrated by the non-authorized party like the extremists (Gihan, 2023).

While the emphasis controls are mainly on the tangible and visible areas, primarily on the physical security and access-control in the cyber realm, it has resulted in ignorance on several crucial perspectives. Our cyber realms are laden with overloaded information whereby with a proper strategy and methodologies, a comprehensive picture of extremist activities such as recruitment of new members, plan of attacks, relationship background, businesses, daily routine and others are able to be obtained. Focusing on the extremist rhetoric is able to identify the core causes and information which are way more effective and efficient in saving lives and protecting the critical infrastructure.

Given the growing reliance on cyber technology, it makes sense to participate in the study of extremist information on the internet. Developing methods to understand the rhetoric such as terminological assumptions, violent metaphors and ethical conflicts are deemed essential to understand the extremists' background and upbringing. It can be used to determine the types of rhetoric approach taken by the extremists for their target audience. It is also possible to look at further patterns in the picture, color physical characteristics that the extremists use in their communication. The strategies used by the extremists to influence and propagate the agenda to the audience are vital to be identified by a public sector, private sectors and citizen as well, so that the prevention of the extremists' activities can be conducted during early signs. Without proper strategies and methodologies, it is difficult to obtain a comprehensive picture of extremist activities, hindering effective and efficient analysis of extremist information on the web.

This rhetorical analysis can be used as part of a component in crucial security measures; gaining understanding of the extremist activities root causes for protecting human life and the infrastructure. By focusing on the terminological assumptions, violent metaphors and ethical conflicts that are deemed essential, one can ascertain the types of rhetoric used in extremist communication.

Problem Statements

Literature on information technology indicates dependency on technology. Cyberspace has become an important physical space for communication, for various topics including economy and even politics (Reardon and Choucri, 2012). From the increasing dependency and reliance factors, the cyber world has become a target because it is borderless and inexpensive to access compared to other means, such as land, air, water, or even space. Nowadays, the websites are frequently hacked by people with bad intention and this dependency has become a liability, hurting the vital infrastructure and services that rely on technology. Most of the current efforts are preparing the layer of technology fences to ensure the infrastructure does not collapse during the attack. However, it would not stop the extremist activities from occurring. The extremists will always return with the improved attack techniques and therefore, greater study is needed to comprehend the extremist action by examination of the extremist corpus. As a result of people's increasing reliance on technology, including the extremists themselves, the web is flooded with numerous conversations and information posted by the extremists.

Consequently, the overloaded information in the cyber realm should not be ignored and it should be indicated that the corpus study is important to analyze all the

encumbered information. Any extremist action and material gleaned from the internet should be researched properly from the rhetorical perspective so that the rhetoricians can be advancing in growth. Moreover, the roles of sociologist and rhetor researchers in cybersecurity realms are deemed essential given that the web is laden with extremist information.

Hence, examining the discourse of cyber groups is deemed important in order to explore trends in security discourse from the past few years. The early discussion and analysis in the development of the subject of computer science are only marginally applicable to today's problems and do not address emerging issues like the corpus of cyber extremists. For example, studies like Myriam (2012) investigation into the rise of cyber-terrorism discourse as a reflection of physical acts of terrorism (like the 1995 Oklahoma City bombing) show that the language level studies that do exist for cybersecurity have focused almost exclusively on state and nation-level cyber-rhetoric and have not systematically examined the everyday business decisions that hackers (of all hat colors) are making. The fundamental strategy for cybersecurity efforts to comprehend the pattern and the language used on a daily basis should include the understanding of the pattern and the approach taken by the extremists and criminals. Understanding the core causes of the extremist activities are able to detect the early signs such as the educational background, past-trauma, culture and others (Yunos and Ahmad, 2014).

Research Aims

The aim of this study was to develop and propose a model of cyber extremists' rhetorical structure.

Research Objectives

The aim of this study proceeded through the following three (3) main objectives:

a) To identify the type of rhetoric in cyber extremists' communication
b) To analyse how the cyber extremists, utilize stylistics devices in the rhetoric in appealing to the audience
c) To develop and propose a model of cyber extremists' rhetorical structure

Research Scopes

The scopes of this project are as per followings:

1. The data samples were given by the cybersecurity experts namely cyber security Malaysia and government of Malaysia

2. Seven (7) extremists' social media were given as research sample
3. Most of the samples used blogpost and word press and only one sample used Facebook as their social media platforms. The total postings for the data sample were two-hundred and ninety-nine (299) postings
4. The total postings in the BlogSpot and word press samples are two-hundred and thirty-eight (238) postings from the years 2008-2011. All postings from four sample groups are taken which consists of eighty-five (85) postings. Meanwhile, two (2) groups are based on the keyword "Jihad" which consists of one-hundred fifty-three (153) postings
5. The total postings involved in the Facebook samples were sixty-one (61) postings from 10 May 2021 until 21 May 2021. The timeline is a major outbreak of violence that had occurred between the two countries before ceasefire took place on 22 May 2021. The posts published during the terror event were important to be analysed as recognizing the stylistic methodology and style used by the rhetoric during the critical event
6. The languages used for this study were the interplay between Bahasa Malaysia and English
7. The analysis was done for one extremist group only in which all their 11 postings dated from April-July 2008 were extracted. The language used by this group is Bahasa Malaysia

Research Novelty

This study offers a unique strategy by developing a rhetorical model of the extremist where the model identifies the rhetorical strategy used by the extremist to convey the messages to the target audience. It may help to detect the red flag of cyber communication by individuals or organizations.

The extremists' rhetoric is assessed by identifying the types of emotion, trustworthy sources as well as theoretical and logical strategy that were used to appeal to the message to the audience. The types of rhetoric styles such as metaphor, simile, analogy, antithesis, metonymy, hyperbole, or irony used by the extremist in conveying the messages are also identified and analyzed.

The study is able to determine the repetitive rhetorical phrases that have been used by the samples of extremists. The strategy used by the extremists in terms of personality shown in the social media are also assessed in this research. All these are able to identify the ideology strategies used by the extremists during the cyber communication.

The rhetorical perspective is able to protect the critical infrastructure by understanding the core origin through extremists' rhetoric including extremists' background and past experiences.

Cyber Activities by Extremists

Terrorism is commonly defined as "the purposeful act or the threat of the act of violence to create fear and/or compliant behavior in a victim and/or audience of the act or threat" (Quigley *et al.*, 2015). Cyber-extremists simply mean those who have the intent of terrorism using technology. The fact that they are using the web for channeling their communication to promote their ideology, facilitate internal communications, attack their enemies and conduct criminal activities is apparent. Recent studies have shown how extremists use the web to facilitate their activities. Weimann (2008) analyzes the extremist group, Al-Qaeda and finds that between the years of 1998 and 2007, thousands of websites, online forums and chat rooms were utilized by extremists and their sympathizers. The Internet has become the main tool of communication for them which makes up about 90% of usage. The internet is seen as a virtual firewall to help disguise the identities of individuals and subscribers have the chance to get in touch personally with extremist representatives in terms of asking for relevant information on anything including cyber extremists. Weimann (2004) finds that Al-Qaeda widely utilized the Internet to effect social change, instill fears or affect political decisions. The Internet is also used for fundraising, recruiting people, psychological warfare, propaganda and coordination of actions. In 2006, Weismann conducted a study using the "theater of terror perspective" and the theory of selective moral disengagement. While the "theater of terror perspective" ascertains that modern terrorism is attempting, through arranged messages, most media coverage available, the theory of selective moral disengagement is an analytical tool to investigate extremist rhetoric (Weimann, 2015).

Studies in technical analysis group 2004 as cited in (Chen *et al.*, 2008) identified five categories of extremist use of the web propaganda (to disseminate radical messages); recruitment and training (to encourage people to join the fighting and get online training); fundraising (to transfer funds, conduct credit card fraud and other money laundering activities); communications (to provide instruction, resources and support via email, digital photographs chat session); and targeting (to conduct online surveillance and identify vulnerabilities of potential targets such as airports). As cited in Chen *et al.* as well, a study of 172 members of the global Salafi Jihad, (Chen *et al.*, 2008) concludes that the internet has created a concrete bond between individuals and a virtual religious community. His study ascertains that the web appeals to lonely individuals by linking to people sharing one commonality.

Lack of Extremists Rhetorical Research

Since the 9-11 attacks, the interest in using information technologies to counter terrorism has been increasing. A study conducted by the U.S. defense advanced research projects agency shows that their collaboration, modeling and analysis tools speeded analysis (Kylie, 2019), but these tools were not tailored to collecting and analyzing web information. Although a number of web mining technologies exist (Aliguliyev and Niftaliyeva, 2015), there has not been a comprehensive methodology yet to address problems of collecting and analyzing extremists' data on the web. Unfortunately, existing frameworks using data and text mining techniques (Benros *et al.*, 2015) do not address issues specific to the dark web. Based on current knowledge, few studies have used advanced web and data mining technologies to collect and analyze extremist information on the web, where these technologies have been widely applied in such other domains as business and scientific research (Chung *et al.*, 2005; Masterclass, 2021; Chen *et al.*, 2008). Chen *et al.* (2008) devise a methodology incorporating information collection, analysis and visualization techniques and exploits various web information sources. However, it lacks qualitative measures such as persuasive appeals, rhetoric and attribution of guilt to the web site attributes.

A Rhetorical Perspective

Cybersecurity realms are relatively uncharted by rhetoricians and sociologists despite being laden with terminological assumptions, violent metaphors and ethical conflicts. Hence, a rhetorical analysis is deemed appropriate to gain insights into cyber extremists' realms of communication.

Norreklit's Methodology

Quigley *et al.* (2015) used Norreklit's methodology to analyze the rhetorical language used by cybersecurity specialists. Based on Norreklit (2003) rhetorical analysis of the argumentation in Kaplan and Norton's the balanced scorecard, he structures the analysis to the three categories which appeal to the audience, stylistic devices and argumentative model. The rhetorical categories cover comprehensive elements such as pathos-emotions, ethos-trust and logos-logic, categorized under appeal to the audience while there are many elements i.e., analogies, metaphors, similes, antithesis, metonymy, hyperbole, irony, etc., are categorized under stylistic devices.

Quigley *et al.* (2015) found the common type of appeal used in the samples was pathos-emotions where most of the articles prefer to generate fear to convey. There were two fear-themes in the samples, firstly regarding the possibility to cause catastrophe if the lack control of technology happens. While secondly, the samples always depict the technology as a tool of modern warfare. Examples of sentences and authors depict the fear to convey technology as warfare as per example Table 1.

Table 1: Examples of authors' depiction of fear to convey technology as warfare

Authors	Examples
Clarke and Knake (2010)	In anticipation of hostilities, nations are already preparing the battlefield.' They are hacking into each other's networks and infrastructures, laying in trapdoors and logic bombs-now, in peacetime. his ongoing nature of cyber war, the blurring of peace, adds a dangerous new dimension of instability
Coughlin (2010)	But there is also a growing body opinion within both military intelligences circles that future threats are as likely to take place in cyber space as on the battlefield
Nicholson *et al.* (2012)	It is understood that attacks and defense is used by nation stated take place over networks rather than by physical means such as army personnel, vehicles and barracks

For stylistic devices, most of the samples used metaphors, antithesis and irony. The predominant metaphor used in the samples was to describe a cyberspace like a battlefield as per previous table. While the antithesis was found in the four samples which the contrast between convention warfare and cyber-warfare only was emphasized by the researchers. Subsequent, the use of irony was found in the six samples and the reason of irony used was to argue.

Overall, Quigley *et al.* (2015) found the results as per expectation. The authors of the samples used their own experiences and knowledge to describe definition and mostly it is a conflation. It is concluded that the traditional management guru used to overdramatize the cybersecurity problem. The implication from the findings is the government should strengthen their role in collecting, validating and disseminating information and establishing the standard setting through policy.

The weaknesses of the Norreklit's methodology emphasize more on the argumentative analysis on the artifacts used in the warrant only. No direct analysis from the factor of the rhetor itself and the visual of the artifacts. However, the rhetorical analysis has covered the comprehensive argumentative factors to expose some science data which could be interpreted into an open interpretation by using the argumentative analysis model by Norreklit (2003).

This methodology was used in this research by analyzing the sample rhetoric used to appeal to the audience into three elements such as pathos, ethos and logos.

Neo-Aristotelian Criticism

Ibrahim *et al.* (2014) used the qualitative method through the Neo-Aristotelian criticism perspective in the analysis of Aminuddin Baki's torch movement speech.

Based on studocu.com, Wichelns stated that Neo-Aristotelian criticism is a rhetorical criticism tool that narrowed down speech into 12 key topics namely speaker personality, character of the speaker, audience, major ideas, motive of the speaker appealed, credibility, speaker judgment of human nature in the audience, arrangement, mode of expression, speech preparation, delivery and short- and long-term effects (Anonymous, 2018).

Ibrahim *et al.* (2014) focused on the metaphor elements only and would like to see how it could convey the audience through the speech. The metaphor highlighted was "Kita baharu mencapai pengayuh, orang telah sampai ke seberang" from the Aminuddin Baki's speech of torch movement in 1964 which emphasized on 'progress'. The metaphor is interpreted into four (4) themes in the research which are element, meaning, impact and comparison.

The oar is used as metaphor elements which it is an object that allows the movement of a small water vessel (Helvacioglu *et al.*, 2011; Ibrahim *et al.* (2014). The passenger needs rowing to create a circular movement with the oar to push the boat forward (Černe *et al.*, 2013; Sayed *et al.* (2014). On the other hand, it shows that the consistent positive actions (Row) must be deployed to overcome the challenges (water) within time to avoid delay. It is important to be on time.

Sayed *et al.* (2014) also opined that it is apparent that the Aminuddin Baki wished that the Malays to accelerate the progress and be competitive towards success. Aminuddin Baki aimed to spark a realization among audience in responding positively.

Subsequently, the researchers compared the metaphor with the famous quotation implied by Lao Tzu which is "the journey of a thousand miles begins with a step". The researchers agreed that both metaphors are trying to incorporate progress from the perspective of taking action.

This is a good approach of rhetorical analysis from the Malay's speech because metaphor is synonym with Malay culture and frequently used by the Malays to deliver messages especially in 1964. The research has succeeded in describing the situation and time of occasion, the influence of rhetor, the circumstances of audience, the expression and style.

This methodology was used in this research by the stylistic devices were identified to analyze the elements commonly used in the data samples.

Ideologist Criticism

Khadidiatou Ndiaye (ND) as cited in the book of rhetorical criticism: Exploration and practice from Foss, (2017) has used this methodology to explore the ideology of (UNICEF); (UNAIDS) and (UNFPA) through the websites. The analysis of the ideologist is by the arrangement of frames in the websites, colors and the

pictures. The use of pleasant and playful colors such as blue, red and oranges make users feel ease and limit the act of apprehending (Foss, 2017).

However, interesting conclusion is made where the three (3) agencies do not present as global as the pictures keep using the image of third countries as victims. According to Ndiaye, the organizations' more to appeal financial support rather than bring the world together. The research also mentioned about the agencies more concern of their image where the news updated more to interest the organizations rather than meeting the requirements of the needs or audience of the websites.

This Ideologist criticism has been chosen as part of methodology used in this research because of the similarity of the artifacts in terms of the digital medium.

Materials and Methods

Material Used

1) Extremists postings: The main materials used were the confirmed extremists whose profiles were given and shared by the Cybersecurity Malaysia and government of Malaysia. There were seven (7) extremist profiles where have made the two-hundred and ninety-nine (299) postings were focused on this research. The platforms of social media used by the extremist samples were Blogspot, WordPress and Facebook
2) Microsoft OneNote: Since meticulous analysis was required in this phase; the Microsoft OneNote was used as a tool to conduct the analysis. The tool helps researchers to conduct the analysis in flexible manner where the categorization in separate profiles can be conducted easily

Experimental Design

A content analysis was conducted to verify the current problems and situations regarding the extremist activities. Further information gathering was undertaken to identify the effective available solutions and find the unique perspective to protect the critical infrastructure from the extremist activities.

Various rhetorical methodologies were collected from the various sources to study the validation approaches to classify the rhetoric such as Norreklit's methodology, Neo-Aristotelian criticism, ideologist criticism, discourse analysis, Pho's model and Highland framework, cluster criticism, fantasy criticism, generic criticism, narrative criticism, pentadic criticism and generative criticism. The best and most pertinent methodologies with the current research were acknowledged and the shortcomings of the prior approaches were also noted where the details were not discussed here.

This information gathering phase was the first critical stage to determine the direction of the research. It helped to verify the current problems and situations in order to set the subsequent directions and moves by identifying the relevant methodologies.

The thorough comprehension from the information gathering step was used to identify the advantages and gaps. It was used to design a new approach to be used in this phase. With the ultimate goal of achieving the goals and objectives of the research as final deliverables, the new strategy should close the gaps and be relevant to the study's focus.

As a result, new methods for researching cyber extremist rhetoric have been developed. The combination of Norreklit's methodology, Neo-Aristotelian criticism and ideology criticism were to reveal the hidden and secret literacy of the extremists. The approach was to categorize the rhetoric of extremists based on how they appeal the message to the audience, the most common stylistic elements utilized and the public appearance used by the extremists.

The samples used were the confirmed extremists whose profiles were given and shared by the Cybersecurity Malaysia and government of Malaysia. Since the profiles shared were confidential and limited, the study used the given samples with restrictions explained in the research scope.

The design phase was important to ensure the method used was relevant with the samples data and able to achieve the objectives and aim of the research.

Procedures and Methods

From all seven (7) extremist profiles, the total postings of two-hundred and ninety-nine (299) were the focus of rhetorical analysis in this research. The platforms of social media used by the extremist samples were Blogspot, WordPress and Facebook. The meticulous analysis was required in this phase; therefore, Microsoft One note was used as a tool to conduct the analysis.

The analysis was conducted for every posting based on Norreklit's methodology, Neo-Aristotelian criticism and ideology criticism. A strategy to persuade the general population, often known as the "target audience" would be identified using the first approach of Norreklit's methodology. The words used in the postings were assessed to conclude whether the pathos (emotion), ethos (trust) or logos (logic) was dominating the whole postings.

The second method of Neo-Aristotelian criticism required all stylistic devices in each posting to be reviewed and assessed. The examples of the stylistic devices were analogy, metaphor, simile, antithesis, metonymy, hyperbole irony.

Meanwhile, the ideologist criticism focused on the appearance and design of the medium or known as an artifact used by the extremists. During the analysis, the identification of the elements used and formulation of the ideology with regards to the elements used in the social media platforms was discussed.

All results and conclusions from each posting were gathered to find the common pattern. This was the final phase to achieve the research aims where the model of cyber extremists' rhetorical structure was developed. The model should consist of the rhetoric types in the cyber extremist's communication, how the rhetoric types are utilized in appealing the message to the audience, the stylistic devices used by the extremist and the appearance shown in their social media.

Data Analysis: Group 1

The analysis was divided into three (3) Main sections namely (1) Invention and organization, (2) Rhetorical styles and (3) Surface ideology. In the first section of invention and organization, the three (3) Norreklit's elements of pathos, ethos and logos were discussed. The specific words and interpretation used by the extremists were explained in detail. The most dominating elements were determined to design the rhetorical characteristic of the extremists. In the second section of the rhetorical style*s*, the most common and frequent types of stylistic devices were assessed. The reasons for chosen stylistic devices by the extremists were deliberated carefully to understand the preferences of the extremists. In the third section of surface ideology, the appearance of social media was discussed. It included the colors, images and design used by the extremists to represent the group in the social media.

Invention and Organization

The posts were artistic which means the posts were created originally from the group and not by forwarding from other groups. Only two dates were used by the group to publish the message; nine (9) posts were published on 17 July 2008 whereas two (2) posts were published on 6 August 2008. The actual creation date can be obtained inside of the posts as per Table 2.

Table. 2: Posting creation date

Published date: 17 July 2008	
Posts	Creation date
1	N/A
2	N/A
3	early April 2008
4	15 MAY 2008
5	27 June 2008
6	6 July 2008
7	9 July 2008
8	17 July 2008
9	June-July 2008
Published date: 6 August 2008	
Posts	Creation date
10	24 July 2008
11	26 July 2008

It shows that the posts have been created earlier and the publication through a blog of Group 1 Media Publication is more to maximize the volume of reach points. It indicates that the group also poses other methods to disseminate the information other than this blog.

First Post

The group used materials from presentation slides to appeal to the message in the first post. The group used pathos as a major strategy to attract and maintain the audience. It started by the analogy of the word 'solat dan berpuasa seperti kita', deemed to be able to bring compassion and innocent emotion to the audience. The analogy means the group equates the life of civilians just like the life of the targeted blog audiences where they pray and fasting with some attached pictures of civilians praying, walking, chatting and living as well. The word 'Wahai Saudaraku' translated as 'dear my brother' was used to appeal to the same innocent feeling by calling family to the audience.

The other pathos that dominated the audience's emotion in the first post were sadness, anger and defensive mode. The audience was exposed to the pictures of murder, torture and injury by Thailand soldier to the civilians. The audience was. also informed about the murder and torture executed toward the civilians without a valid reason.

Another pathos element featured to the audience was the feeling of fear and obligation. The group highlighted the religious law by mentioning 'wajib' which means a mandatory task for the target audience to defend the civilians from tyranny to avoid becoming a sinful and irresponsible person. The group also used the element of reward by highlighting the phrase 'pintu syurga di pantai' which means the 'heaven door of pantai'. It was a metaphor to describe that the spiritual reward was available in the pantai area. It was used as a web address of the blog as well as to appeal to the same message repetitively. The spiritual reward was mentioned in the early slide and repeated in the end of slide as to appeal to the audience to join the group.

Some ethos elements were injected in the first slide as well such as the picture of holy scripture, the translation of one verse in one of the chapters and the picture of Usama Bin Laden and others that were also known as 'Jihadist'. 'Jihadist' is an Arabic word indicating a person who holds weapons to fight oppression.

Second Post

For the second post, the rhetor used ethos strategy where the nonbinding legal opinion from Abdullah Azam about 'Jihad' was attached. 'Jihad' in this context was holding weapons to defend the land from aggression. The ethos in the second post was important to support the religious law mentioned in the first post as to maintain the support and belief among the audience. The opinion from

the respected figure mentioned a few 'Jihad' locations such as Palestine, Iraq and Somalia, however the situation in the Pantai area was not mentioned directly.

Third Post

Whilst the logos strategy was used in the third post where the understanding among the audience was established by publishing the interview questions and answers series between the members of the group. The interview started with the pathos element where the same feeling as the first post such as sadness, anger and defensiveness dominated the message. The cause of the defensive fighting or 'Jihad' was clarified. The incident of killing and torture at the somewhere in the Pantai area to the civilians was explained to justify the group actions. The interview described the incident as usual cases to the man, woman, children, folks and schools of civilians including rape and burnt to death as well.

Another pathos element was the hatred of the group to some of the world leaders such as Bush US President for 2001-2009; Samak Thailand Prime Minister for 2008; Abdullah Ahmad Badawi Malaysia Prime Minister for 2003-2009. The figures were called 'Kafirin', 'Musyrikin' and 'Murtadin'. All words are from Arabic language where 'Kafirin' refers to the group who denies and conceal the truth of Islam while 'Musyrikin' means a group who worship beings other than Allah. 'Murtadin' Islam and this word was mentioned twice toward the Malaysian and Indonesian leaders in the interview sessions for separate questions.

The last pathos was the feeling of fear projected to the audience. The group mentioned that anybody who did not join them would be punished by the almighty and addressed as 'Munafiq' referring to the person appears as a Muslim in public but has rejected Islam in his heart. The group also insisted that joining the group was permissible without parent's permission.

The intention to free Al-Aqsa, the dream of Prophet Muhammad and the support to Usama bin Laden were also mentioned as ethos elements in the early interview series to persuade the audience to believe the nobleness of group intention. Ethos elements were also injected in the end of the interview by stating verses from multiple chapters in holy scripture.

Fourth Post

The fourth post used logo strategy to appeal to the audience. Five (5) points were emphasized related to the group's intention and vision. They mentioned that the group's objectives were pure, not involving nationalism and materialism. The group also mentioned that the fighting would continue to other places, that they prayed every night and memorized chapters in holy scripture. The group also highlighted that they were uninterested in secular and democratic countries like Malaysia, Brunei,

Indonesia and Egypt. The group did not want peace agreement, autonomy, power, weapons or money from 'Murtadin' leaders except for a win or 'Syahid'. Based on the previous posts, the win for the group was that civilians were freed from Buddha leadership and all people on earth started worshiping Allah. Whilst 'Syahid' is an Arabic word indicating death for his faith.

Pathos elements were used at the end of the post by appealing the audience to not expect perfection from the group but believe and emulate them who fight diligently. The rhetoric equated the group's enemies as similar enemies of Prophet Muhammad and called themselves as fighters for faith as per soldiers in Somalia.

Fifth Post

The fifth post was full of pathos elements. The rhetor appealed to the audience to join the group by mentioning the word 'Jihad' repeatedly, the actual path to get love from the Almighty and be united among Muslims. The rhetor urged the audience to join the 'Jihad' by holding weapons and not in preaching politics.

Sixth Post

Pathos elements in the context of anger were detected in the sixth post. It was a warning to the Malaysian government as to emphasize the anger feeling of the group towards the Internal Security Act (ISA). One of the members of the group that the Malaysian government detained under the (ISA) was not allowed to see his daughter when she was in a coma and was only let to see her after she had passed away.

Seventh Post

The group is in fiery mode by sending the threat to attack Malaysia. The rhetoric urged the Malaysian government to repent, stop making the group as enemies and release the prisoners if Malaysia wants to be safe. Holy scripture verse was used as an ethos element which used a similar strategy with other posts to persuade the audience.

Eighth Post

The subsequent post was a pathos element where the group gave some ideas to the audience on how to release their members in Indonesian prisons. Some serious ideas were stated such as attack, kept hostages among police, Indonesian government officials or American tourists and do some frequent attacks on Indonesian police and governments. The ideas were a response to indicate the group's anger on the captive news of their members.

The rhetoric also conveyed to the audience some guilt elements where the audience was advised to not stay silent and not live-in a wealthy lifestyle when others were less fortunate. The faith and 'Jihad' also mentioned by the rhetor. As usual, holy scripture verse

was used as ethos to build trust and credibility of the audience towards the group.

The rhetor also posted that they denied the ceasefire announced by the other group. It is an ethos post as the rhetoric explains it is a false group that admits loyalty to Thailand's king while it is against the group's principle.

Ninth Post

The objective of the ninth post was to appeal to the audience to join the rhetor's group. The post started by the ethos element to appeal trust where the rhetor explained about the unavailability of the group's video and audio due to security purposes. The rhetor also re-explains about the pureness of the group's intention in 'Jihad'.

Another element played in this post is pathos where the rhetor stated about the eleven (11) events where four (4) of the events appealed for the spirit and confidence to the group. Whilst the other events could appeal to the feeling of anger, sadness and defensive mode of the audience towards the Thailand government.

Tenth Post

The objective of the tenth post was similar to the ninth post which was to appeal to the audience to join the group. The rhetor started by re-highlighting the pureness of the group's intention as to appeal to the confidence and trust of the audience to the group. The last message was the information of the new war and the rhetor urged the audience to join them and be prepared for this operation.

Eleventh Post

The eleventh post was an ethos post where the rhetor denied the accusation made by the media about the civilians that were killed by the group. However, the rhetor admitted that the killing was only to the spy or 'Munafiq' and not to the believers of the almighty.

Therefore, most of the posts are pathos and ethos strategy where most of the emotions are appealing to the sadness, anger and defensive mode of the audience. Whilst the ethos posts are to gain trust of the audience that the group operation is according to the religion law. The whole contents are to persuade the audience to join the group especially for those who live outside of the Pantai area.

Rhetoric Style

The group loved to use stylistic devices to emphasize, clarify and create imaginary as persuasive techniques for the audience. Most of the rhetor's styles were metaphors, metonymy, analogy and similes.

Metaphor was the frequent stylistic devices used by the rhetor. As explained in the above section, the rhetor used the metaphor of 'Pintu Syurga di Pantai' in the first post and the web address that literally indicated 'the

heaven door of Pantai' as a technique to appeal the audience to join the rhetor's group in the Pantai by emphasizing the heaven reward. Another metaphor used to describe the reward of joining the group was 'Eni Merupakan Suatu Taman Bagi Mereka-Mereka Yang Merindukan Rabb Mereka'. The rhetor equated the fighting situation like garden as auxiliary meaning by changing the scary situation of fighting to a beautiful place as spiritual reward. The comparison between fighting situations and gardens was known as an analogy. It was a bold attempt that required firm support by religious justification and it has been used in rhetoric frequently. The rhetor also used the metaphor to uplift the terrified feeling such as 'Satu lagi Kuburan bagi Kafirin, Musyrikin dana Murtadin telah pon siap digali…' to describe that the rhetor's group prepared to attack and kill the enemies. The use of 'grave has dug up' in the metaphor to appeal to the fear by encouraging the audience to imagine the threat. The metaphor of 'seluruh matamata Padang kekufuran tertumpu tortuous kepadanya' which literally meant 'all sword points of non-muslims towards them' was used to describe the resistances faced by the group in the form of killing. The same strategy as above was used to encourage the audience to imagine the weapon to appeal to the terrified feeling. The similar intention was found in the metaphor of 'retaken' kesalahan itu pada diri kita sendiri kerana membiarkan darah mereka tertumpah'. The word 'We Let the Shedding of their Blood' in the metaphor encouraged the audience to feel the gross, pain and guilt as intended. 'Bangunlah wahai singa-singa Islam' was another metaphor to urge the warriors to join the rhetor's group by calling them as 'Dear Lions of Islam, please wake-up'. The use of the word 'lions' to represent warriors was helping to increase the spirit of the audience as it showed appreciation to the braveness of the warriors who join the group. 'Seluruh bumi tunduk kepada Pancetta' was another metaphor used by rhetor to illustrate that the fighting would continue until all people worship the Almighty. The rhetor used the word 'the whole earth bows down to Almighty' to show everything in the sky and on earth belongs to the Almighty. Another metaphor to urge the audience to take some action was by raising up the Shedding of their Blood' in the metaphor encouraged metaphor question such as 'sampai bila kita hanya berpangku tangan' indicating 'until or when we just sit in our hands only'. The last recognizable metaphor used by the rhetor was 'berperang dibawah lembayung bendera' where the translation was 'fighting under the crimson flag'. It was to describe that the group was loyal to their leaders by equating the leader as a flag to show the conquest group. The words 'fighting' and 'crimson flag' put forth the sense that the rhetor was loyal to the group although facing multiple war challenges. Apparently, the

metaphors used by the rhetor were mostly to help describe the good and awful things. The example of metaphors to illustrate the good things for rhetor's side such as 'garden', 'heaven's door' and 'lions' were used as techniques to emphasize the magnificence of reward and titles by joining the group.

Whilst the metaphor of 'grave', 'sword points', 'bloodshed' and 'just sit in our hands' were used to describe the horrific part by appealing to the fear and useless feeling among the audience or enemies. Almost no metaphors used by rhetor to describe other things except for illustrating the good and bad conditions.

Metonymy was another frequent style used by the group. The well-known metonymy used by the rhetor was 'Jihad' derived from the Arabic language, referring to the fighting with the faith. As mentioned in the early section, 'Mujahidin' was another frequent metonymy used by the group to call the members of the military men who are normally fighting with faith. According to this context, both words were metonymy and not directly translated from Arabic because the words were established from the belief and assumption of the group.

The group frequently used the religious terms as their verbs and nouns as a strategy to appeal trust among the audience that the operation is permissible by the religion. Based on Gunten and Zoltan (2008), metonymy is a cognitive process of one conceptual entity by including not just people's encyclopedic knowledge but cultural part of it. Other important metonymy was 'Muhajirin' and 'Ansar' where both were being used in the rhetoric repeatedly. 'Muhajirin' refers to the people who lived outside of the Pantai area but joined the rhetor's group. Whilst 'Ansar' refers to the member of the rhetor's group from the Pantai area itself. They were inspired from the famous story of Prophet Muhammad who moved from Mecca to Madinah where the people of Mecca who joined the movement were called 'Muhajirin' whereas the people of Madinah were called 'Ansar'.

Besides, 'Tok Na' was a metonymy for Thailand soldiers while 'penyembah-penyembah berhala' that indicated 'idolaters' was a metonymy referring to the Buddhist.

Most of the metonymy used by the rhetor were related to the Arabic words and religious terms. It is clearly a technique to appeal trust among the audience by the usage of Arabic words where it is able to appear as pious and credible.

Another style used by the rhetor was simile. As mentioned in the early section, the rhetoric used 'solat dan berpuasa seperti kita' as a technique to instill guilt feelings that equaled the victims to an audience. Other similes used were 'Tidak ada bezanya dari segi pahala seseorang yang berjihad di Iraq dengan seseorang yang berjihad di Pantai area', 'Tidak ada bezanya pahala seseorang yang syahid di Palestin dengan pahala seseorang yang syahid di Pantai area' and 'memerangi Tentera Thailand adalah umpama memerangi Tentera Amerika sendiri'. The rhetor equated the spiritual reward of fighting at Pantai area was similar to Iraq and Palestine known as noble 'Jihad' for Muslim. The rhetor also equated the fighting against the Thailand army similar to against American army. The equation helps the rhetor since America was known in its intervention into other countries and due to that, it was deemed an unfavorable country by the target audience. The rhetor also equated the rhetor's group as pious as 'Ansar' in Afghanistan by stating the analogy such as 'Peribadi mereka persis dengan golongan ansar di Afghanistan ketika mujahidin-mujahidin arab mula berdatangan kepada mereka dahulu'. All similes above used the similar strategy by equating the activities of rhetor's group to the acceptable situation for the target audience to manifest the sense and logic of the group's operation that the fighting with the rhetor's group was worthy and legitimate in religious law. Another simile used was the rhetor equating the Malaysia and Indonesia government to 'Thagut' by mentioning them as 'Karajan Thagut Indonesia' and 'Karajan Thagut Malaysia' in several postings.

This simile showed the group's uneasy feeling towards both governments. Besides, the rhetor also equated the Thailand government to 'musyrikin' by mentioning it as 'Karajan Musyrikin Buddha Thailand'.

Therefore, the group uses simile as a technique to convince the audience to accept the rhetor's operation by comparing it with the well-known acceptable standard among target audience. Whilst the similes as 'thagut' and 'musyrikin' are the rhetor's expression to certain governments and indirectly to persuade the audience to feel the same.

Surface Ideology

The main page of the blog of Group 1 was divided into four sections, one horizontal frame on top and three vertical frames. The blog welcomed the audience with minimal layout with almost no picture as blog design. The words of 'group 1 media publication' were placed on the banner with the blur image of green leaves as background. The biggest vertical frame was used for the posting section with the dark blue background and soft blue for font. The first top of the vertical frame was used for rhetor's profile with the light green background and font. A well-known headquarters group 1's flag was used for a profile picture with the notice attached that the blog was the main communication media of southeast branch group 1.

The other vertical frame was used for the link section of posting archives with the white background and the dark blue font. Overall, the cold colors of blue and green were chosen by the rhetor as the blog's theme.

Fig. 1: Surface ideology of group 1 media publication

The minimal design with the blurry image of green leaves and the cold colors suggests the rhetor tries to bring the serenity ideology where the message from this blog is innocent and peaceful. Most of the postings are merely by words with the less or no images indicating that the rhetor prefers to explain even though with the long posting. The design of the blog is shown in Fig. 1.

Results and Discussion

Summary of Result Analysis for All Data Samples

Invention and Organization

Pathos-Emotions Dominate as They Want to be Seen as Victims. Based on the analysis conducted on the seven (7) extremist profiles and the two hundred and ninety-nine (299) postings, the results show that most of the posts express pathos-emotion. Feelings such as sad, anger and hate dominate the post because the oppression stories such as torture, murder, injury and injustice cases that have been experienced at the group's side are shared diligently in the postings. Heartbreaking pictures such as torturous images are used at some of the postings which send pathos more than ethos in persuading the target of audience. The group wants to be seen as innocent victims. By sending pathos postings consistently, less argument is established with less demand on ethos and logos postings. The pathos is used as a basic strategy to ensure any subsequent agenda by the group is easily accepted and persuaded.

Among the words used by the rhetor to achieve pathos are "Wahai Saudaraku" in the Malay language where the translation is 'dear my brother' as part of Introduction. It persuades the sense of belonging and part of family to the target of audience. Then, the postings are continued with the oppression stories with the word regarding 'killed', 'tortured', 'raped', and others, fulfilling the postings. Multiple attack stories that faced by the group side are shared in the postings with the word used as "bring from home to prison", "home struck with rockets", and others, showing the pathos in term of sad, oppressed, etc., are dominating the postings and a way of persuading the target audience.

Table 3: The types of pathos-emotion

No.	Extremist profiles	Invention and organization (pathos-emotion)
1.	Group 1 (2 posts out of 11post)	Appealing the sadness and anger feeling from the audiences by describing and attaching the pictures of group's people that were tortured, killed and raped. Most of the final posts are persuading the audience to join the rhetor's group
2.	Group 2 (2 posts out of 4 posts)	Appealing the hate feeling to a certain religion. All religion. All group's who have been captured, slandered. and attacked
3.	Group 3 (7 posts out of 18 posts)	Keep persuading the audiences to join the fight against other religions by posting related to fighting benefits and terror activities such as martyrdom911 tragedies Denmark's attack Most of the posts are appealing to the feeling of guilt and some related to certain army and fighting motivation
4.	Group 4 (13 posts out of 125 posts)	Appealing the motivation spirit among the audience by posting the posts related to the beneficial of fighting frequently
5.	Group 5 (Combination posts)	Most of the posts in 2007 are uplifting the fighting motivation in positive vibes before the feeling of anger and sadness dominates the posts in 2008-2010
6.	Group 6 (2 posts out of 28 posts)	Appealing the guilty feeling from the story of the people who have been attacked without justice
7.	Group 7 (Combination modes in all 61 posts)	Appealing the anxious feeling as most of the have been posts are related posts are related to the attacks that Persuading people. group's received by the audience to see the rethor's side as victim and innocent

When the emotion controls the rhetoric, the word 'Jihad' is multiplicatively mentioned to convince the target audience to take action towards the oppression faced by the rhetoric. The pathos postings in term of certain emotions in each sample data are tabulated in the following Table 3.

As comparison to the study conducted by Quigley *et al.* (2015), the pathos-emotions dominate in the rhetoric samples by cyber security specialist as well, but more to generate fear to convey. The example of fear rhetoric as "This ongoing nature of cyber war, the blurring of peace and war, adds a dangerous new dimension of instability." It was concluded that the traditional cyber security specialist used to overdramatize the cyber security problem.

Similarly, Norreklit (2003) asserted that the accounting book does not mainly use logos strategy but also a quite extensive of pathos to create more debates and excitement.

Ethos-Trust Gained by Holy Scripture Verses

The group prefers to use the third party as independent sources to gain trust from the audiences such as the usage of certain verses from the holy scripture, third party's video, article, interview, etc. However, above all, the six (6) profiles consistently use the holy scripture verses to support the statements included in the third-party sources as independent posts. The holy scripture verses are able to gain trust since it is the main religion book for the target audience. However, as the authors have the same religion as the group, the holy scripture does not support any terrorist activity and collateral damages to the other innocent civilians. The translation of the holy scripture's verses to determine certain commandments requires interpretation skills to explain and understand. The skill requires certain knowledge which the group may put some verses not in the right context to misuse the verses. Authors believe all religions support peace and condemn extremism and terrorism activity.

In this study, the group uses the other strategies simultaneously to gain a stable ethos. The metonymy and simile styles in Arabic language are used frequently even though the main language in the rhetoric is Malay. The usage of Arabic language to certain terms among the non-Arabic background of the target audience able to interpret the rhetoric as pious and trusted. By the combination of the Arabic metonymy and simile and the use of holy scripture verses, it brings the stable ethos to the target audience. The kind of ethos-trust in each sample data as per tabulated in the Table 4.

Norreklit asserted that the ethos and logos can easily gain trust and confidence from the audience.

Logos-Logic in the Long Posting with Almost no Image

The six (6) profiles out of the total seven (7) have similar methods to send the logos-logic to the target audience. The long posting with almost no image is the preferable way as shown in the rhetoric. It shows that the rhetors believe that logical understanding is only achievable by taking time to explain and read. Any theoretical subject is explained diligently and details in the rhetoric. Among the subjects explained in the logos rhetoric are the clarification topic that is ruled by a recognized religious authority. With some subjects that are logically true for the target audience, it gives certain chances for the rhetor to stay the trustworthiness gained from the target audience.

This logos strategy is expected on the rhetoric of theoretical book. Based on Norreklit's study on the book of "The Balance Scorecard" regarding the historical data of the financial measurement in the accounting system, the book lack of cause-and-effect relationship.

Table 4: The types of ethos-trust

No.	Extremist profiles	Invention and organization (ethos-trust)
1.	Group 1 (6 posts out of 11 posts)	Although the posts do not dominate by ethos objectives, the rhetor consistently uses holy scripture verses as to support trust again
2.	2.Group 2 (2 posts out of 5 posts)	
3.	Group 3 (5 posts out of 18 posts)	
4.	Group 4 (All of 125 posts)	
5.	Group 5 (2 posts out of 52 posts)	
6.	Group 6 (Most of the posts are logos objectives but posts consistently using Holy Scripture verse)	
7.	Group 7 (Combination Modes but 1 post out of 61 posts can be group as ethos-trust)	Gaining trust by attaching in the incident location

The model used is hierarchical top-down, not entrenched in the environment and offers lack of theoretical innovative which is questionable as a strategic management tool whereby for the theoretical text, it is expected to use the logos more than the pathos.

Back to this study regarding extremists' cyber communication, the combination of truthful and not truthful rhetoric in the postings may also act as a strategy for the rhetoric to disseminate a certain agenda. It could be a reason that many postings related to truthful and logical rhetoric are used, to ensure the ethos-trust is always sent to the target audience. Hence, any terror related rhetoric can be accepted easily by the target audience even though the logos-logic rhetoric is at the unacceptable level when contemplating the postings. When the trust has been gained, the audience may accept the other subject easily. The numbers of logos postings used at each of the profiles are quite frequent as tabulated in the following table.

However, one profile from the data samples uses a different method where the edited videos and posters are used to send the logos-logic posts. The videos and posters highlight the key points only as the main part of logos rhetoric to the target audience. For this kind of strategy, the rhetorician believes that logical understanding is

achievable by highlighting certain key words to the audiences in a short time. The rhetor may send the effective logos to the target audience when the rhetoric is a mixture of sound effects, songs, videos and key points. The numbers and particular subject of logos-logic rhetoric in each of sample's data are tabulated in the Table 5.

Rhetorical Styles

Metonymy in Arabic language to look credible and persuade acceptance to the target audience i.e., *'Jihad'*, *'Mujahidin'*.

Metonymy is the object or concept that is referred to not by its own name, but by the name of something closely associated with it (Gunten and Zoltan, 2008). Since the available data samples are targeting a certain target audience, the metonymy that is used in the Arabic language is the most common style. The word in Arabic language can help the group to look credible because when people can speak well in the Arabic words normally known as pious especially for the non-Arabic background. In addition, the words chosen are mostly well-known terms among religious people such as *'jihad'* and *'mujahideen'*. The acceptance of the target audience could be easy on these metonymies because the meaning of these terms is related to good deeds in the theoretical perspective. However, the meaning of the terms and words used could be off-track, broad and varies compared to the actual definition because it depends on the logos perspective that has been brought up in the rhetoric. These metonymies are frequently used in the rhetoric of all the extremists' profiles. The summary of the metonymy used by the samples data as per tabulated in the Table 6.

Simile of 'Thagut' for Government and Simile of 'Terrorist' for Islam

Simile is a style used for direct comparison. Based on the samples, most of the extremists prefer to use the words *'Thagut'* and *'Musyrikin'* when mentioning certain governments. The same technique as Metonymy that the Simile is also preferred in the Arabic language. This simile shows the extremist's uneasy feeling towards governments which the definition of *'Thagut'* is for those who are against the rules of Almighty while *'Musyrikin'* is for the group who worship beings other than Almighty. The consistency of using this simile when mentioning a certain government is quite high among the extremists' profiles which give clear indicator that this kind of style is one of the extremists' rhetoric.

Meanwhile, one of the extremists use the words 'attack', 'terrorist' or 'rocket' parallelly when mentioning the nouns of *'Islam'* or *'Jihad'* such as 'Group ABC and Islamic Jihad leaders and terrorists' are repeated multiplicatively. This is the strategy to build constant perception by referring to 'terrorist' when mentioning 'Islam'. Both simile words of 'thagut' and 'terrorist' are used for the same strategy for developing persistent comparison to certain particular nouns. The summary of the simile used by the samples data as per tabulated in the Table 7.

Metonymy of 'Penyembah' Refers to the Obsessive Part of the Group' Opponent

Another metonymy preferred by the extremists are the word of *'Penyembah'* or in English translation are idolaters or worshippers. Different from the other metonyms that have been mentioned before, this metonymy is used in Malaysia language. The preferable words of *'Penyembah Dunia'*, *'Penyembah dirham'* and *'Penyembah Barat'* are mostly from the viral post regarding the testament letter (translation version) from a father named as Al-Khattab to his baby boy. The words refer to the obsessive materialistic behavior of the opponent side. The word has been used rarely among native Malaysians to refer to obsessive materialism. It gives clear indicators that this kind of style is one of the extremists' rhetoric from the samples data as per Table 8.

Table 5: The types of logos-logic rhetoric

No.	Extremist profiles	Invention and organization (Logos-ogic)
1.	Group 1 (2 posts out of 11 posts)	Explaining religion rules and attaching interview questions-answers series in detail
2.	Group 2 (1 posts out of 5 posts)	Explaining the knowledge related to the cancellation of the group's religion
3.	Group 3 (6 posts out of 18 posts)	Describing the respected figure, explaining the reasons behind Denmark's attack, explaining the establishment of the group in detail
4.	Group 4 (all of 125 posts)	Explaining the religion knowledge and the group related in detail
5.	Group 5 (Combination modes in all 52 posts)	Although no absolute objectives are shown in all posts, most of the posts are explained in the long posting as strategy
6.	Group 6 (26 posts out of 28 posts)	Explaining religion content related knowledge in detail
7.	Group 7 (6 posts out of 61 posts)	Different methods as others. No long posting is available. The logos-logic preferred to be in the edited video and posters

Table 6: The types of metonymy

No.	Extremists profiles	Rhetorical styles in metonymy where the words frequently used in the postings
1.	Group 1	jihad, mujahidin, muhajirin, ansar
2.	Group 2	jihad
3.	Group 3	jihad, murtadin, kuffar, mujahidin, ansari
4.	Group 4	jihad
5.	Group 5	jihad
6.	Group 6	jihad
7.	Group 7	N/A

Table 7: The types of rhetorical style of simile

No.	Extremists profiles	Rhetorical styles in simile 'thagut
1.	Group 1	kerajaan thagut indonesia kerajaan thagut malaysia kerajaan musyrikin buddha thailand
2.	Group 2	universitas milik thought di semarang
3.	Group 3	thoghut-thoghut arab
4.	Group 4	kekuasaan thagut
5.	Group 5	N/A
6.	Group 6	N/A
7.	Group 7	Group abc and islamic jihad leaders and extremists, Group abc and islamic jihad have fired Group abc and islamic jihad have launched continuous attacks

Table 8: The types of rhetorical style of metonymy

No.	Extremists profiles	Rhetorical styles in metonymy 'penyembah'
1.	Group 1	penyembah berhala
2.	Group 2	penyembah dunia, penyembah dirham, penyembah barat
3.	Group 3	penyembah dunia, penyembah dirham, penyembah barat
4.	Group 4	penyembah dunia, penyembah dirham, penyembah barat
5.	Group 5	penyembah dunia, penyembah dirham, penyembah barat
6.	Group 6	N/A
7.	Group 7	N/A

Table 9: The types of rhetorical styles of metaphor

No.	Extremists profiles	Rhetorical styles in metaphor
1.	Group 1	'satu lagi kuburan bagi kafirin, musyrikin, murtadin siap digali' The graves have been dug up for the rhetors' opponents 'letakkan kesalahan itu pada diri kita sendiri kerana membiarkan darah mereka tertumpah'. The rhetors' side let the shedding of their group's blood to encourages the feeling of pain and guilty
2.	Group 2	'selagi roh menempel di jasad' As long as we still live
3.	Group 3	'kubur tempat rehat ku' My grave is my rest place
4.	Group 4	N/A
5.	Group 5	'Ulama Yahudi fatwa halal darah umat Palestin' The respected figure in Jews allow killing the Palestianians
6.	Group 6	'Mereka memberontak kepada raja-raja yang dzalim yang telah menyedot darah mereka' They fight to the oppressed kings that have been sucking their blood
7.	Group 7	N/A

Metaphor Related to Death

The samples of extremists' profiles prefer to use metaphor when describing death. The objective looks like to maximize the death description as a horror thing to frighten the enemy. The frequent use of the death metaphors in the rhetoric is an indicator that the kind of style is the extremists' preference. The example of the metaphor words used are 'grave was dug up', 'bloodshed', 'grave is my resting place' and the details as per Table 9.

As comparison, the rhetorical style is also used as major role in the theoretical book of "The balance scorecard". According Norreklit's study, the analogy style is used to create more metaphors as main strategy for sending logos such as cockpit, airspeed, altitude, fuel, mountains, airspace, navigate which are associated with some activities in a daily office business. More analogies used such as Captain of the isolated ship which refers to CEO of business units, Sailors carry out orders as per instruction by captain which refers to managers that received orders from CEO. According to Norreklit, taking aviation metaphors appeal pathos primarily rather than logos. The metaphor is also extremely different in a business setting where the aviation industry is heavily dependent on machinery. Besides aviation metaphors, the book authors also use the metaphor of industrial age and information age to describe revolutionary concept which for Norreklit, it creates hyperbole, trying to image exaggerate differences while both ages have important tangible and intangible assets as well.

Surface Ideology

Peace Organization

Four (4) extremists out of the total seven (7) samples prefer to use the cold colors such as blue, green and earth colors as a color theme on their blogs. The groups also choose nature with simple design such as garden, lake, etc., as part of the blog design. This kind of appearance is hard to be detected as owned by extremists by the target audience. With the combination of cold colors and nature design, it shows that the ideology of the groups is wanted to be seen as a peace organization. This kind of innocent surface ideologies by the samples data are as per Table 10.

Brave and Conquer Organization

Meanwhile the other three (3) extremists out of the total seven (7) samples extremists choose to use bold colors such as black and red and conquer theme designs such as weapon, tank, flag and globe as the appearance of their blogs. It shows that the ideologies of the extremists wanted to be seen as bold and aim to conquer. This kind of appearance might influence the target

audience who are attracted to the conquer ideologist. The surface ideology as a bold organization from the samples data are as per Table 11.

As comparison, shocking result from the study from Khadidiatou Ndiaye which has used this methodology to explore the ideology of UNICEF, UNAIDS and UNFPA through the websites. The result shows the three (3) agencies do not present as global as the pictures keep using the image of third countries as victims. The organizations more to appeal financial support rather than bring the world together.

Model of Cyber Extremist Rhetorical Structure

The above results are the rhetoric characteristics that are used by the extremists in the cyber communication that is laden with terminological assumptions, violent metaphors and ethical conflicts. From the combination assessment that use the Norreklit's methodology, Neo-Aristotle criticism and ideologist criticism to the data samples, nine (9) criteria are identified as common rhetoric structure used by extremists in the cyber communication to convey the intended message to the targeted audience as per Fig. 2.

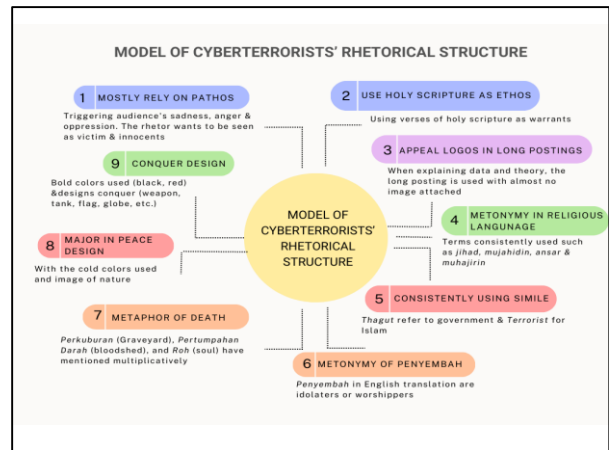Model of cyber extremists' rhetorical structure consists of:

1. Mostly rely on pathos-emotions in terms of sadness and anger due to the continuous posting to the target audience about the oppression faced by the group's people
2. Use holy scripture as ethos-trustworthiness source
3. Appeal logos-logic in long postings without image
4. Metonymy in religious language of target audience
5. Consistently using simile of 'Thagut or (out of religion law) to refer certain government and 'terrorist' to refer certain religion
6. Metonymy of 'Penyembah' or 'idolater'
7. Metaphor of 'Death'
8. Major in peace design
9. Brave and conquer design

Table 10: The type of surface Ideology to show peace

No.	Extremists profiles	Surface ideology
1.	Group 1	Minimal design and cold colors to promote serenity and peace
2.	Group 2	Minimal design and cold colors to promote serenity and peace
3.	Group 5	Minimal design and cold colors to promote serenity and peace
4.	Group 7	No aggressive and rough pictures of soldiers shown in the posts. They smile and act casually

Table 11: The type of surface ideology to show boldness

No.	Extremists profiles	Surface ideology
1.	Group 3	Minimal design but with weapon as image and black as background color
2.	Group 4	Minimal design but with gray, white black as background color and the small picture of gray globe holding a black flag
3.	Group 6	Brave message as the image of little boy throws the stone to the big tank and contra colors as red and green are used

Fig. 2: Model of cyberterrorists rhetorical structure

Revisiting the Research Objectives and Aims

To Identify the Type of Rhetoric in Cyber Extremists' Communication

The objective above is achieved by using the Norreklit's methodology which consists of three (3) categories. Based on assessment of the data samples in this research, the type of rhetoric category that dominates the cyber extremists' communication is pathos in term of sadness, anger and hate feelings since the oppression stories that have been experienced by the extremists' side are shared to the target audience continuously as basis and reason of the extremists' activities. Meanwhile for ethos category, the extremists always use verses from the holy scripture to gain trust from the target audience. Lastly, for logos category, the extremists use long posting with almost no image when elaborating some theoretical subjects. Therefore, this research objective is achieved.

To Analyze How the Cyber Extremist, Utilize the Stylistic Devices in the Rhetoric in Appealing the Audience

Using the Neo-Aristotle criticism, the stylistic devices used by the data samples are the metonymy, simile and metaphor. The metonymy such as '*Jihad*', '*Mujahidin*',

'*Ansar*' and '*Muhajirin*' are the rhetoric styles used multiplicatively by the extremists. The words mentioned in the rhetoric also in the Arabic language to highlight and differentiate the words as most of the postings are in the Malaysia language rhetoric. The extremists want to be seen as pious and credible especially for non-native Arabic speakers. The words are referring to good interpretation and quite well-known among religious adherents. This is the stylistic technique used to gain trust and support from the target audience in the Archipelago area. The metonymy '*Penyembah*' as referring to the opponents' obsessive materialistic behavior is seen multiplicatively in the extremists' postings. The simile stylistic devices such as '*Thagut*' and 'terrorist' are preferred by the extremist as direct comparison. '*Thagut*' which is also used in the Arabic language refers to the government who disobeyed the instructions by the Almighty meanwhile 'terrorist' is the rhetoric style used by a certain extremist to refer to the Islamic religion. Meanwhile, the metaphor of death is used consistently by the extremist as a scaring method to the opponents. The death metaphor that has been used such as '*Satu lagi Kuburan bagi Kafirin, Musyrikin, Murtadin siap Digali*' which in the English translation is 'the graves have dug up for the rhetors opponents' which referring as death is waiting for the rhetors' opponents. The explanation above shows that the second objective in this research is achieved where the stylistic devices in terms of metonymy, simile and metaphor in Arabic language that have specific words and intention are the techniques used by the extremists to persuade the message to the target audience.

Meanwhile, by using the ideologist criticism, the cold colors used such as blue and green with the nature design are used by most of the data samples as the background of the blog shows the extremists want to be seen as a peace organization. In this research as well, some of the extremists also want to be seen as conquerors and brave ideologists with the bold color such as red and black as well as the use of weapon, globe and flag images as the background of the blog. This also shows that the second objective in this research is achieved.

To Develop and Propose a Model of Cyber Extremists' Rhetorical Structure

A model of cyber extremists' rhetorical structure is developed after the types of rhetoric and the utilization of the stylistic devices used by the extremists are identified. All the rhetoric criteria used by the data samples are integrated to ascertain the pattern in order to develop a model. With this, the third objective in this research is achieved which also indicates the overall aim of this research is achieved as well.

Future Works

This section discusses the gaps identified in this research. This could be used as a potential area of the future improvement in the establishment of the enhanced model of rhetorical structure for the cyber extremists towards protecting the critical infrastructure. Several improvements for the future works are identified such as:

1. More extremists' profiles should be obtained. The cooperation with the experts should be improved further in order more numbers of extremists' profiles can be shared and used for the research
2. Various belief backgrounds of the extremists are obtained to develop the homogenous patterns in understanding the various types of extremists
3. More extremists' postings in English language are obtained since this language is the lingua franca. The result of the analysis would be more valuable to many people
4. Various languages in the extremists' postings should be obtained as well such as Hebrew, Hindi, Arabic, French, Mandarin and all world language
5. More platforms of extremists' social media are obtained such as Facebook, Tiktok, Twitter etc., to understand the latest rhetoric strategy used by extremists in the cyber world
6. Various extremists' rhetorical artefacts are obtained and analysed such as video, film, posters, images, songs, etc., to ensure various rhetorical approaches such as Feminist Criticism, Pentadic Criticism, Fantasy Criticism, Generic Criticism, etc., are used and combined in order to identify more rhetorical strategy used by extremists in the cyber realms

Conclusion

Group 1 prefers blogs as a dissemination medium since the blog was a popular social medium during 2008. However, the rhetor published the posting on two dates only, in July and August 2008 with the creation date earlier than the published date. It indicates that the group has its own method of propagation as well. The rhetoric aims at the archipelago people as a blog audience since the language used is Malay.

Ethos and pathos elements in the postings are the priority strategy for rhetoric. Ethos is to ensure the audience trusts the rhetor's content and pathos focuses on the feeling of sadness, anger and defensiveness to the situation of Pantai civilians. The whole intention is to recruit the new members from outside of the Pantai area to join the rhetor's group.

Three main stylistic devices are commonly used such as metaphor, metonymy and simile. All carry different objectives with the metaphor helps in describing the good and awful things such as garden, heaven's door, graves and bloodshed. Whilst metonymy helps in appealing trust by bringing the well-known religion terms and Arabic words to look pious and credible such as 'Jihad' and 'Mujahidin. Some similes such as 'taught' and musyrikin' are used as

rhetor's expressions to certain parties as well as to appeal to the audience to feel the same.

The minimal design with the cold colors like blue and green shows the rhetor tries to bring the serenity ideology that the content from this blog is innocent and peaceful. However, the group prefers to explain with the long posting with the less or no image as support.

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Author's Contributions

Osman Khairunnisa: Participated in all experiment, coordinate the data collection, data analysis and contributed to the written of the manuscript.

Jano Zanariah: Participated in all experiment, coordinate the analysis and contributed partly to the written of the manuscript.

Ahmad Rabiah: Designed the research planed, organized the study and reviewed it critically.

Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved. There is no conflict of interest:

1. The data samples of extremists' profiles have been given by the security experts from the authors' own country
2. Security experts have given consent to the authors to use the given extremist's profiles as data samples for research and education
3. The authors did not find the data samples on their own
4. The data samples consist of threats and real-cases received by the authors' own country and the affiliations might influence the analysis
5. The data samples do not represent any specific religion, language and region as the authors believe every religion, language and region supports peace and condemn extremism and terrorism
6. The extremist profiles are named as (anonymous)
7. Some personal data are changed to protect privacy matters

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