



Analysis Of The Filter Bubble Algorithm In The Search For Information On The Internet

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ABSTRACT

This study is a descriptive study of the role of Filter Bubble in the realization of religious moderation. This study aims to examine the role that Filterbubble plays in inhibiting human understanding related to the concept of religious moderation advocated by the government through the Ministry of Religious Affairs. This study uses a content approach, that is, an in-depth discussion of the content of written or printed information in various sources that address the issue of religious moderation in the mass media or social media. In the course of this analytical activity, the author conducts activities to examine the tools, techniques, or procedures used to describe or characterize data sets or observations made. These activities include collecting data, grouping data, determining values, analyzing, and drawing conclusions. The effect of a filter bubble in the context of the information society in the age of cyber-religion has the potential to be an obstacle to the realization of religious moderation. This is because a comprehensive understanding of religion is required to realize religious moderation. At the same time, the filter bubble effect can prevent Internet users from the flow of intact information by isolating users in a "bubble" of information personalization.

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1. Introduction

We are in the age of digitization of information. According to data from We Are Social and Hootsuite (as of February 2022), Indonesia has a total population of 277.7 million people, of which 204.7 million are active Internet users. 80.1% of internet users use the internet to find information. The most popular search engine used by Indonesians is Google. [1]

These data reflect Castells' theory of the 'information society', which describes the characteristics of societies that revolve around the production, exchange, and consumption of information. The production, exchange, and consumption of this information is also related to religious information. This is explained in the theory of cyber-religion (religion in cyberspace/virtual), which explains the significant relationship between religion and the Internet, both as a medium and as a cultural space [2]

The Google company uses an algorithm in its search engine to filter the search results of information. This filter is used to filter Internet information/content based on the user's recent interaction with the web history (the user's track record in the Google ecosystem) and the user's clicks (click signals) to see what users like or dislike. Using the interaction data, the filtering engine then personalizes the information based on what the user likes. This personalization of information creates an information universe

that is "sewn" specifically for each user. Eli Pariser referred to this phenomenon as: Filter Bubble. [3] Filter bubbles can prevent the user from receiving information in its entirety.

On the other hand, from 2019, the Government of the Republic of Indonesia, through the Ministry of Religious Affairs of the Republic of Indonesia, is trying to establish the program of religious moderation to make Indonesian human resources harmonious and socially beneficial. The basic principle of religious moderation is fair and balanced. One of the prerequisites for this is the need for a comprehensive understanding of religion [4]

In this context, the existence of a filter bubble that isolates Google users from the flow of intact information can hinder the realization of religious moderation. For example, when a Muslim searches Google for religious information, the filter bubble effect may prevent them from receiving religious information in its entirety. This effect may also cause a Muslim to abandon his or her complete understanding of Islam (Islam kaaffah). To further investigate the effects of filter bubbles in realizing the problem of religious moderation, the author would like to research more about what is presented in a scientific study entitled "Analysis of the Role of filter Bubbles in Promoting the Realization of Religious Moderation"

2. Research Method

The method used in this thesis is a descriptive analysis with a content analytic approach, that is, research that is an in-depth discussion of the content of written or printed information in various references that explore the topic of religious moderation through mass media or social media. As part of this content analysis activity, the author examines the tools, techniques, or procedures used to describe or delineate data sets or observations that . Done. These activities include data collection, grouping of data, determination of values, analysis, and conclusion.

3. Result and Discussion

4. Filter Bubble

Etymologically, the term filter bubble derives from two English words, filter and bubble. Filter means "a device for removing impurities from a liquid or gas passing through it; a device for suppressing electric or sound waves of unneeded frequencies" [5] or "a device for removing impurities from liquids or gasses passing through it; a device for canceling electric waves or sounds of unneeded frequencies. Bubble, on the other hand, means "an air-filled cavity in glass, etc." or a cavity filled with air in glass or something else.

In English grammar, the term filter bubble belongs to the noun meaning "filter bubble." So, in this context, Filter Bubble can be interpreted as a bubble created by filtering activities of filtering devices.

Terminologically, the term filter bubble was first introduced by an entrepreneur and technology activist from the United States, Eli Pariser. [6] In his book, Pariser explains that the term filter bubble refers to the effect of creating a 'universe of information unique to each user' through the activity of filtering algorithms from technology companies such as Google, Facebook, Yahoo, and the like. [7]

Geschke, Lorenz, and Holtz define filter bubbles as the result of various processes in information search, perception, selection, and overflow. In this case, the filter bubble is seen as an escape from the abundance of information on the Internet through a process of information relevance. [8]

Pariser explains that the latest generation of Internet filter engines works by looking at something users 'seem to be doing,' things they have done, or things users like. A filter engine is a prediction engine that constantly creates and updates theories about who the user is and what the next user wants. [9]

Google's filtering system relies on a user's track record/interaction with its ecosystem and reads every click a user makes to determine what the user likes and dislikes. So Google's theory about its users is based more on what the user is. Google's filtering system is based on a user's track record/interaction with its ecosystem and reads every click a user makes to determine what the user likes and dislikes. So Google's theory about its users is based more on what the user is: you are what you click on.

Based on the 'theory' of who the user is, the filtering engines determine what type of search results/information best match the user's interests. So, each user gets different search results/information. The more different the character of the user is according to the filter engine, the more different the search results will be presented. In other words, the search results/information are personalized. Personalizing the information creates an information link that is specific to each user; this is the effect of the bubble filter.

Filter bubbles fundamentally change the way Internet users receive information. When a user thinks that the Internet displays all the information they need, the filter bubble is actually a technique that enhances the Internet by personalizing the information. Pariser also said that filter bubbles can be bad personally and socially. Personalizing information through filters can cause auto-propaganda or auto-indoctrination of a

person with their own ideas, increase the desire to always be in the comfort zone, and make a person vulnerable to the dark zone of ignorance

In the filter bubble, opportunities to learn new things and perspectives are limited. Even if it is too pronounced, the filter bubble can change a person's ability to decide how they want to live their life. This is because the personalization of information created by filter bubbles can create an artificial reality for Internet users. The illustration is as follows: [10]

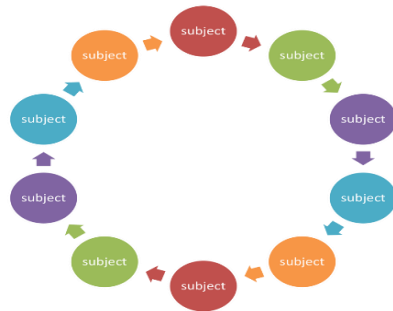


Figure 1. Internet reality

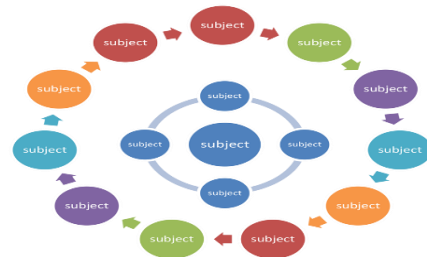


Figure 2. Engineering reality

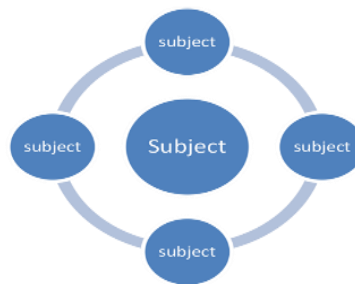


Figure 3. User-perceived reality

Symbol captions: 1) the circle is a representation of the user; 2) an arrow is a representation of the flow of information; 3) the line is the insulating representation that the filter bubble creates

5. Religious Moderation

Etymologically, moderation comes from the English "moderation," derived from the word "moderate," meaning "moderate in quantity, intensity, or quality, etc.; avoiding extremes; temperate in behaviour or expression; not practicing extreme views." [11] Or moderate in quantity, intensity, or quality, and so on; avoiding extremes; simple in expression; not practicing extreme views.

When the word 'moderation' is juxtaposed with the word 'religious,' it means that the perspective, attitude, and behavior always take a position in the middle, always act fairly, and are not extreme in religion. In the Islamic context, the term moderation is confused with the term wasathiyyah. According to M. Quraish Shihab, the popularity of the term wasathiyyah in formulating the concept of moderation in Islam is due to the fact that Allah affirms the nature of Muslims in the Quran [12]. Allah said, "And likewise, We have made you (Muslims) a "middle people" so that you may be witnesses to the deeds of the people and so that the Messenger (Muhammad) may be a witness to your deeds." [13]

Furthermore Quraysh Sihab gives the meaning of something that *wasath* must always be in the middle, so as not to 'slip' to one end; which in this context is *ifrath* or *tafrith*. For this reason, in realizing *wasathiyah*, efforts are needed to understand Islam as a whole.

Ibn Katsir rahimahullah explained, when Allah Almighty makes Muslims as *ummatan wasathan*, then Allah gives specificity to Muslims in the form of the most perfect shari'a, the straightest path, and the clearest understanding. [14]

HAMKA, When explaining the meaning of *ummatan wasathan* means middle people. *Ummatan wasathan* interpreted the position of Muslims as the best people among the two previous samawi religious people. Namely the Jewish and Christian umahs. The Jews were too inclined to the world, to objects and possessions. As for the Nasrasni people are so inclined towards the afterlife that they forget the life of the world. [15]

Muhammad Ash-Shallabi explained that *ummatan wasathan* means the best people. Namely, people who do not exaggerate religion (*ifrath*), nor deny religion (*tafrith*). [16]

Based on the various meanings of moderation described above, this is in line with the basic principles of religious moderation formulated by the Ministry of Religious Affairs of the Republic of Indonesia, namely: fair and balanced. That is, to always maintain a balance between two things, for example, the balance between reason and revelation, between the physical and the spiritual, between rights and duties, between individual interests and communal benefits, between necessity and voluntariness, between religious *ijtihad* and religious figures, between ideal ideas and reality, and the balance between the past and the future.

The application of this principle is then measured by four indicators, namely: 1) national commitment, 2) tolerance, 3) anti-violence, and 4) adaptation to the local culture. This indicator can be used to determine how high or low a person's level of religious moderation is. Religious moderation aims at not conveying extreme in religion. There is not only a conservative understanding (*ifrath*), but also a liberal understanding (*tafrith*). Religious moderation aims to mediate between these two extreme poles by emphasizing the importance of substantive internalization of religious teachings on the one hand, and contextualization of religious texts on the other hand

Religious moderation is expected to be a solution to the problem of the two extreme poles in religion. Religious moderation is expected to be able to organize religious harmony and harmony of social life and suppress religious conflicts so that Indonesia can find common ground among religious believers and preserve the integrity of the nation. [17]

6. The Role of Filter Bubbles in Inhibiting the Realization of Religious Moderation

In the context of the theory of the information society in the midst of the age of cyber-religion, it becomes clear what the characteristics are of the people who like to use the Internet to search for religious information via the Internet. Indeed, the Internet is seen as a "breath of fresh air" in the effort to revive religious passions, not least in the context of Islam. Gary R. Bunt said that the use of the internet has changed the way Muslims practise Islam, the way Islamic norms are portrayed in the wider world, and the way Muslims perceive themselves to others... [18] However, when viewed from the perspective of the philtre bubble effect that Google has as the preferred search engine in Indonesia, this state of affairs has the potential to become a threat to misunderstood religious understanding. Because filter bubbles prevent users from complete information.

In this context, the filter bubble can be an obstacle to the realisation of religious moderation. For religious moderation requires a full understanding of religious matters. What is meant by a complete understanding of religion is explained in Islam by the term *kaaffah*. God said: "O people of faith! Accept Islam as a whole."

HAMKA explained that there are two words in this verse that must be fully understood, namely *as-silmi* and *kaaffatan*. As for *as-silmi* (or *as-salmi*), it means Islam. *Kaaffatan* means all or everything. When *kaaffatan* is attributed to *as-silmi*, the intention is a call to convert to Islam as a whole, not half. If you have professed faith, then you should follow the entire guidance of the Qur'an and the guidance of the Prophet. This is also what Allah said when he died as a Muslim, which means, "O people of faith! Be devoted to Allah and do not die except in the state of Muslims."

Ibn Katsir explained that Islam *kaaffah* commanded by Allah Almighty, namely faith in Him and the vindication of His Messenger, to hold on to all the ropes of Islam and its Shariah, to obey its commandments, and to stay away from its prohibitions as much as possible. In line with this, Abdul Jamil Wahab also reminded that misconceptions about *kaaffah* Islam can actually trigger acts of radicalism in the religion. According to him, this happens among groups with Islamic fundamentalism. (*ifrath*) [19] Thus, a comprehensive understanding of the religion must begin with knowledge of the main sources of Islamic law, namely the Qur'an and the Sunnah. As the Prophet said, "I leave you two inheritances that you will not lose

as long as you hold on to both of them, namely the Book of Allah and the Sunnah of His Prophet" (HR. Imam Malik in Al-Muwatha')

In order to obtain adequate knowledge / information about Islam, complete and credible information is needed. Errors in understanding the source of this law, can lead to the act of ifrath or tafrih. This is precisely what is threatened to be canceled, due to the filter bubble effect.

Based on the data and information presented, we can explain that the filter bubble effect can prevent Google users from fully understanding religion through two conditions.

First, in the form of hyper-rituality. Media, such as the Internet, have an impact on a person's attitudes, behaviors, and thoughts. Thus, a person may view the reality of the media as reality itself. [20] This coincides with what Jean Baudrillard explains in his theory of simulacra. Simulacra is a situation that describes the condition of people of today's century who live under the influence of images, representations or symbols of an event (provided by the media), so that they replace the experience of actual reality. [21]

Yuval Noah Harari also mentioned that man is capable of creating and living in an 'imaginary reality'. [22] The artificial realities that this medium creates lead to a condition called hyperreality, i.e. a situation where there are many pseudo-realities, so that it is difficult to distinguish which reality is real. [23] When the religious context in the media is drawn into the influences of hyperreality, a state called hyper-rituality is created. Hyper-rituality is a state in which religious rituals transcend the nature of the ritual itself because of the many artificial realities of the ritual. In the context of hyper-rituality, reality has been artificially created and distorted from the real reality that is the standard - in the context of Islam, the Qur'an and the Sunna.

Second, echo chamber, which is the personalization of information caused by the filter bubble effect, actually the echo chamber phenomenon can occur more easily. An echo chamber is an environment where a person only finds information or opinions that reflect or reinforce their own opinions. [25]

Echo-chambers can trigger the occurrence of cognitive biases. An example of a cognitive bias is confirmation bias, which is the attitude of accepting information that supports beliefs or views while ignoring other information that may disconfirm beliefs or original views, even if they are true. [26] People with cognitive biases tend to consider objective facts to be no more significant than their personal feelings and knowledge. [27]

Based on some of these analyses, it can be explained that the filter bubble has an impact on the integrity of the information needed to understand the concept of religious moderation, which ultimately leads to several interpretations in understanding this matter.

7. Conclusion

The existence of a filter bubble effect in the context of the information society in the age of cyber-religion can be an obstacle to the realization of religious moderation. This is because in order to realize religious moderation, a comprehensive understanding of religion is required. At the same time, the filter bubble effect may inhibit Internet users from the flow of intact information by isolating users in an "information bubble" for personalization. The inhibition of religious moderation by the filter bubble effect can be described by two conditions: 1) hyper-rituality; and 2) echo chamber.

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