



Breaking the Conventional Rules of Social Grouping and Echo Chamber Phenomenon

Shazia Anwer¹

Abstract

Social media has developed the phenomenon of echo chambers. This paper provides a descriptive analysis of this idea and the mechanism behind virtual echo chambers. Primitive societies were formed on the basis of physical space, shared commitments, enduring goals, and ruled-based orders. On the contrary social media-based virtual societies primarily focus on shared preferences. Virtual societies hinder people-to-people connection and the basic requirement of shared physical space to formulate a society. The current pandemic has triggered this phenomenon. The paper aims to provide the impact of virtual societies based on virtual communications on actual tangible societies while playing with the human mind social media platforms are manipulating with hemophilic patterns and creating societies that are vulnerable to human emotions. Polarization theory explains the process of the formation of echo-chamber and its functionality about influencing the vast majority toward one direction. Echo chambers impact the individuality of human nature and restrict the reasoning and evaluation process. Echo-chamber primarily rely on Filter Bubbles thus adhere low moderation and directed control which leads to falsified communicative webs. Individuals having no shared commitment and collective goals group up purposefully and they become the source of hybrid culture with predominant non-commonalities, they not only misunderstand but also misrepresent the reality. Moreover, they also suffer from the Digital Fragmentation Syndrome (DFRAG) a prevailing cognitive disorder. The aim of this research is to highlight bad mental effects and cognitive syndromes emerging out due to the virtual communicative webs among non-physical societies on social media. The methods we will be using to explore the problem are two distinct methodologies. First, by using bibliometric methods and secondly, examining social media activity by intermediary organisations. The main findings include the physiological syndromes, psychological syndromes, DFRAG (Digital Fragmentation),

¹ Ph.D. Scholar, Semiotics, and Philosophy of Communication Charles University Prague, Czech Republic. Email: shaziaanwer@yahoo.com

effects of virtual socialization especially during the pandemic and socially-impacted syndromes.

Key Words: *Social media, Post Pandemic, Social grouping, Virtual Communication, Echo chamber, Filter bubble, DFRAG*

Introduction

Ongoing pandemic has diverted the researcher's attention even more toward the unguided massive use of technology especially communication-related technologies. At one end it triggers the debate about lack of street wisdom in current and upcoming generations due to dysconnectivity with the physical aspect of socialization and on the other end, it sprouts the apprehension regarding the decisively manipulative ability of virtual socialization.

The art of living took a paradigm shift over the recent years, day to day activities that are considered key factors in social maturity are diminishing, from few minutes of interaction during buying bread to having intimate relationships everything somehow excludes direct face-to-face communication. The main social traits such as discussion and dialogue in a physical environment are becoming things of the past. The self-isolation, social deprivation, and lack of street wisdom is creating virtual societies having no shared ideas, no collective wisdom, and no direct physical co-existence. This descriptive paper will provide the overview of three key terms; echo chamber, filter bubble, and digital fragmentation syndrome, and will try to establish the connection among them by providing their functional mechanism. Four case studies are also provided to make this phenomenon clearer and more understandable.

Physical and Virtual Grouping

Social scientists believe primitive socialization and living in groups that transform into societies was a cognitive phenomenon exclusively based on basic human survival by keeping themselves safe from hunger and fear, and for the purpose of reproduction. Shared goals help to develop collective consciousness and each member shares his/her collective wisdom and contributes with emotional relevance. The emotional relevance is not necessarily dominated by a single emotion, on the contrary, there is a mixture and a combination of human emotions, and they are key factors to set societal norms and higher-order long-lasting schemas for the greater good. *Humans are so attached to forming groups that they seem to create group solidarity, and conflicts between groups (1)*. Browsing the history of evaluation of society, the archeological findings

suggest that human being formed groups for their survival to fight against beasts around them and for hunting purposes. When more than two persons started working collectively, prehistoric groups were formed. With the passage of time, connections were formed within several groups and then social evolution started, therefore the foremost unit of the society is the group socialization among groups that provided a basis for the society. The classical definition of social groupings indicates that a social group must have some degree of social cohesion and a group is not a simple collection of individuals rather they share concerns, principles, interpretations, social background, and affinity ties. Classical groups have common motives and goals; an accepted division of labor; established status relationships; accepted norms and values with reference to matters relevant to the group. Humans, as we all know, are strongly motivated to form and join social groups (1).

The world has been changed by online and social media platforms for all times to come. Google was founded in 1998, Facebook in 2004, YouTube in 2005, Twitter in 2006, and Instagram in 2010 and they changed the communication system. Virtual groups are formed through technologies mostly used for communication purposes. Virtual grouping took place when more than two persons were connected for sharing ideas with each other without being together at the same geographic location and this contribution of technology has coined the term of a “socio-technical” system (2).

It could be said that conventional telephone started creating a virtual grouping when multi-people telephonic conversations or what you can say Conference call started. The earliest conference call took place in 1915 when Graham Bell talked to his assistant Watson and then several dignitaries joined the call including the mayors of San Francisco and New York and the then President Wilson.

Bell Labs started teleconference around 1956 (3). In the early 1960s, American Telephone and Telegraph (AT&T) started experimentation for teleconferencing and the device “Picturephone” was invented and was publicly exhibited in 1964 at the New York World’s Fair. It required three phone lines to manage video and audio, with a picture appearing on a very small screen. The early 70s saw the introduction of Internet Relay Chat (IRC) and it was the real beginning of the establishment of virtual groups where several persons had been sharing their ideas with each other, responding to ideas, debating the issues, and got feeling that they were sitting in front of each other’s while they were sitting at different geographical locations. Then IRC Grouping became popular when people started forming different groups with a common interest. It was the birth of today’s Instant Messengers that we use even today. Since then, several

labels have been proposed for this kind of interaction and grouping including the “digital”, “virtual”, or “online” and “public domain”.

About 53% of the world’s population (4.2 billion people) use social media, according to the International Telecommunication Union (ITU). As many as 4 billion people use social media on a monthly basis, and many have multiple accounts. (3).

Social media platforms, websites, blogs, and microblogs all fall under the umbrella term “digital public sphere,” which refers to a communication space made possible or supported by online or social media. In their study “Shaping Abortion Discourse: Democracy and the Public Sphere in Germany and the United States,” William Anthony, Myra Ferree, Gerhards, and Rucht show that the participatory public sphere advocates rational, civil, and consensus-oriented deliberation. While political and social topics are frequently brought up, conversations can also get down to the most intimate of personal characteristics. Because of this, the public sphere is a place where narrative, emotional, confrontational, or even disruptive communication can take place (5). It is understandable that virtual socialization has transformed the process of information acquisition which then led to a different course of opinion formation.

Echo-Chambers

It is believable that the phenomenon of Echo chambers is as old as the tradition of “Long Live the King” and Aristotelian theory of Communication promoted rhetoric and his style of message deliverance where communication is one-sided, and any particular message is delivered by formulating alike echo chamber. A virtual echo chamber is like King’s Hall where “Long Live the King” is echoed

While introducing online echo chambers, Peter M Dahlgran writes in his book “Media Echo Chambers, Selective Exposure and Confirmation Bias in Media Use, and its Consequences for Political Polarization” says media environment has altogether changed during the last twenty years and people now select media in order to live more private, like an *echo chamber* where the only voices people hear are similar in nature (6).

According to Chantal Mouffe's book “On the Political,” social media users tend to isolate themselves from opposing views and conflicting ideas in the public sphere because algorithmic curation of content based on past activity (cf. filter bubbles) keeps them from engaging with those who share their viewpoints. This, he writes, is the fundamental assumption behind the concept of echo chambers.

According to the Routledge Companion to social media and Politics, published in 2015 (5), algorithmic curation creates a situation similar to "homophily," which is the human tendency to interact and associate with similar others and selective exposure. This is related to the avoidance of challenges and the pursuit of reinforcement, both of which lead to the consumption of information that is ideologically aligned. When you're surrounded by people who think like you, you develop a tendency to seek out, select, and interpret information in ways that reinforce your own preconceived notions. The "filter bubble" is the mechanism that allows for the occurrence of echo chambers. Users are increasingly exposed to ideologically-aligned content because of algorithmic content curation, which has created a filter bubble.

Authors of "A Systematic Review of the Literature" are Rosa Borge and Ludovic Terren. Catalonia's Universitat Oberta de Catalunya argues that social media have the potential to create an open and autonomous space for communication among people, but this potential is not realized when there is no (or little) exchange of opinions, no rational debate between opponents, and therefore there is no common ground or shared concerns. (7).

Filter Bubble

While explaining his terminology, Pariser says when we are in a filter bubble, algorithms seclude us from information and perspectives we have not accessed previously, therefore the risk of missing important information that we have not read is greater than we expect. Eli Pariser says that the algorithms that arrange advertisements of your choice start to organize our lives. He believes that search engines are prediction tools for calculating who we are and what we will do and what we want next. *"Together, these engines create a unique universe of information for each of us — what I've come to call a filter bubble — which fundamentally alters the way we encounter ideas and information. (8)"*

Eli Pariser explains that when we visit a website, we may think we are getting the same content as everyone else, but this is not the case. He explains that whenever we go online, algorithms keep tracking what we like to click on and provide us content based on our likeness, algorithms continue to be showing us content what presumably we will like and keep on storing the information for our future preferences predictions. He says this process can lead to the creation of a filter bubble" (8). Filter bubbles offer environments where online users are inclined to prefer information following to their worldviews while ignoring to find dissenting information and this situation form polarized groups that are sharing the same narratives (8).

The human intellectual process goes through different stages including opinion formation; opinions lead to decision-making, judging, and evaluation. Social media has a cynical property of a filter bubble which control all virtual socialization and create a cluster of individuals with extreme opinions therefore every individual is influenced by the system how social media operates. This shift is changing basic principles of narrative construction and social perception and consequently inflicting policy-making, political communication, and the evolution of public debate, especially on polarizing topics and when polarization is high, misinformation quickly proliferates (6).

Therefore, an echo chamber while reinforcing an opinion within a group can move the entire group toward more extreme positions. Extensive research titled “The echo chamber effect on social media” (9) investigated 100 million pieces of content concerning controversial topics from Gab, Facebook, Reddit, and Twitter while focusing homophily in the interaction networks and bias in the information diffusion toward like-minded peers came up critical analysis including group formation with a lesser amount of tolerance for an opposite opinion. “..... *Indicates the existence of a hybrid culture with predominant non-commonalities where individuals not only misunderstand but also misrepresent reality when there is no shared collective knowledge or when they do not share a common location or time in that particular space.* (9).

As a result of the fact that social media do not necessitate group formation based on shared commitment and shared goals, any decision or narrative built has a greater chance of being false and deceptive. Users are being flooded with information that is unnecessary and irrelevant to their current reality because of inorganic controlled groups and societal formations. Humans are being transformed into a species where oral wisdom is no longer passed down from generation to generation, and where algorithmic knowledge is taking the place of human collective wisdom. This artificial phenomenon is threatening the human intellect.

Digital Fragmentation Syndrome (DFRAG)

As mentioned earlier living in the virtual world is like any addiction. Once someone is addicted to social media then it would become difficult to understand how extensively and intensively their lives, their relationships, and their personalities are controlled and forced by the virtual sphere not only in the world of work but also in other relations. The social media-related divorce rate had been very high in the last two decades as the form of intimacy has been changed thereafter. Intimate relations have gone beyond the simple medium of the telephone and it seems that intimacy no longer

requires the use of senses, such as touch and smell. In simple words, the virtual sphere is controlling humans from their intimate emotions to political narratives (2).

Living in the virtual world, disconnected from reality, and addicted to social media can lead to a syndrome known as DFRAG (digital fragmentation syndrome). DFRAG is a state of mind where the human experience of time, space, and consciousness is constantly fragmented through digital interactions. *When humans constantly lose sight of who they are, where they are and what their conscious goal is, we believe this leads to serious biological, psychological and social symptoms (10).*

Imran Rashid and Soren Kenner in their book *Offline--- Free Your Mind from Smartphone and Social Media Stress (10)* indicate that the most common symptoms of extended exposure to digital pollution include:

Physiologically

- Sleep disturbances. Sleep is of lower quality, and there is less of it.
- "Skin hunger" causes psychological symptoms due to a lack of other people's touches or hugs.
- Rewiring of the nervous system. Changes the way your brain works over time; especially dangerous for children.
- Stress levels have increased. Substantial increase in the levels of physical stress.
- The body's level of stress hormones reflects a decreased ability to recover from stress.
- Less physical activity as a result of screen time.
- Less sex and intimacy.

Psychologically

- Mental acuity is reduced. Overwhelmed thinking and decision fatigue.
- The ability to control one's impulses has decreased. Impulsiveness has risen to a new level.
- Problems in making decisions. Numerous "automated responses" have increased.
- Lack of concentration. Maintaining focus is difficult.
- Increase in reactive behavior. Proactive behavior has decreased.
- Imagination and creativity are stifled.
- Slump in self-confidence. Low self-control.
- Self-doubt or low self-esteem: You begin to believe that your life isn't interesting enough.

Socially

- Reduced ability to empathize. Having a hard time empathizing with other people.
 - Less social interaction.
 - Moving into an online sphere from a real world.
 - Polarization has risen. There has been a rise in "tribal" behavior that is negative.
 - An increased feeling to be left alone. It's a fear of isolation.
 - An increase in antisocial behaviors.
 - Social cohesion is eroding.
 - Falsification of facts. Cognitive Dissonance. Echo-chamber effects.
- Diminishing of societal coherence.

Virtual Socialization and Pandemic

The covid-19 pandemic forced humanity to get isolated for almost two years now, people have gone through massive behavioral changes have broken many clichés. Fast-paced world cannot be stopped therefore finds its survival into the virtual world. From education to business, trade to commerce and even foreign affairs and foreign policies every aspect finds its refuge in the virtual world. The above-mentioned negative aspects of the virtual world can lose their face in comparison to the utmost utility of the virtual phenomenon. Making the world as it was, may not be possible even after the end of pandemic but the demand of the time is to understand the strength and weaknesses of being virtual and proper preparation to deal with Artificial Intelligence (AI) and virtual realities by keeping humanity intact. Once again childhood proverb "fire is master and the slave at the same time" seems appropriate now we can teach ourselves that the internet is the master and the slave at the same time. *The use of social media appears to have increased during the coronavirus outbreak, as have the impacts social media have on people (11).*

Case Studies

The following case studies have been provided to make the claim more relevant that breaking the conventional rules of the social grouping and creating echo chambers is a dangerous trend. It can be understood as inorganic control grouping because of filter bubbles. Public lynching and moral policing is becoming the new norm. All these cases are true examples of when a cluster of like-minded people start running towards one direction they are capable of destroying anything coming in their way.

Case 1

Mashaal Khan (13) (a Pakistani student killed by the mob in Bacha Khan University Mardan 2017) Lynching incident triggered from social media platform Facebook is one of many examples where social media has created an echo chamber of hate, deceit, and mistrust in the shortest possible time. The most dangerous part of the incident is hidden under the chain reaction, a reaction when the echo chamber was not fully formed, and the alleged messages could be deleted, and the chain could be broken but in no time repeated and consistent appearance results in fully high pitch acoustic chamber. This case started with the social media platform Facebook where according to the killers, the deceased posted objectionable material.

Now this page is inaccessible². He was killed with sticks and bricks and over 20 to 30 persons are seen in videos and this lynching was live broadcast on Facebook. The objectified post by Mishaal Khan appeared on Facebook on 11 April 2017 and within seventy-two hours this post had become the victim of the filter bubble and kept appearing on the pages of the users who want to comment, dislike, abuse, and curse him. The automated algorithm can never get the hidden intentions behind their required commodity “attention”. In an effort to gain maximum attention filter bubble clusters up haters and they created an echo chamber where everybody was shouting in one voice, kill Mashaal. It was too late when someone can burst the bubble and un-intensify the echoes.

Case 2

On May 10, 2017, rumors of child-lifting gangs operating in Jadugoda in East Singhbhum district of India surfaced on WhatsApp. People were asked to be vigilant and keep an eye on outsiders in their areas. On 18 May 2017, four Muslim cattle traders passing through Sobhapur village were lynched to death by a violent mob in Raj Nagar area under the pretext of child traffickers. The same day, three men were lynched in Nagadih under Bagbera police station under the same pretext of child-lifting. Those killed at Raj Nagar were Muslims and three killed in Nagadi were all Hindus (14).

The echo chamber was built on WhatsApp by triggering the human safety mode. It gets so saturated that at a point everyone could have been a potential trafficker. The virtual echo chamber framed unknown individuals as targets. By “unknown” triggered the fear phenomenon against anyone whom we do not know. Being cautious is not a bad thing but a collective thought crafted by the WhatsApp echo chamber that all strangers are potential criminals gave the wrong signal and became a source for so many killings.

² <https://www.facebook.com/mashal.khan>

Case 3

Another incident appeared in Maharashtra's Palghar district on 16 April 2020, when three men got killed under the pretense of being kidnapers (15). Local house protection groups circulated a message regarding precautionary measures in the apprehension of unknown child traffickers, which in days created an echo chamber filled with noises related to personal domestic safety and filter bubble bundle up the information discussing threat about unknown/stranger. That resulted in the killing of three stranger's unknown to the local population.

Case 4

A situation was created by a similar platform in Hyderabad a man was lynched to death after a mob accused him of being a child abductor on July 14, 2018 (16). There are several cases reported in India where social media platforms played a pivotal role to instigate people for lynching and igniting the desire for mob justice. Some of the horrific incidents include the killing of seven men in Jharkhand (May 2017), Palghar lynching (April 16, 2020), Karbi Anglong lynching (8 June 2018), and Hyderabad Man lynching (July 14, 2018) has been discussed here. The majority of the attacks took place in remote areas where men, women, and even children were lynched when fake information was spread against them through social media platforms.

Conclusion

It is clear now that Echo Chamber is a primitive concept, even from ancient times propagation and manipulation through consistent repetition spread over via like-minded individuals to the masses. Why physical Echo chamber is not as effective as the virtual one? The answer could be low moderation and high polarization.

Physically, rumors, misinformation, propaganda travel in a slow pace also the chance of breaking the chain effect is very high. Let us take an example that we come across a false/fake opinion engineered to malign a person's reputation whom we personally know. After receiving the information contrary to the fact, we will deliberately break the chain reaction by not becoming part of it, however, in virtual realities popular narrative spread like fire and having no knowledge about the actual situation we all become part of that echo and intensify it.

The second thing that has been explained earlier is that we are not the perpetrator rather we are victims in this situation. Virtual societies only intensify the magnitude of already spread echo but virtual society members have no part in creating an echo chamber in the first place.

Virtual society members become victims of the big tech companies who engineered algorithms to use social media users' "attention" as a commodity. It is surprising to know that human attention is worth millions, in order to get one second of attention malicious algorithms are being operated beneath the surface of virtual socialization. These algorithms collect all inclinations about its user in order to provide the most relevant information next time. Researchers call this mechanism "Filter Bubble" an unseen filter that scans all the information related to its user and creates a bubble leaving no scope for diverse opinions and choices. This bubble-like phenomenon prevents new choices, novice opinions and unknown encounters, in simple words, the user is trapped inside the bubble with the most familiar option.

Hypothetically this filter categorizes individuals as types, for instance, type A will always receive type A information and type B user will always get type B information on a priority basis. This inhuman practice deprives user A from information B resulting in reinforcement of fixated ideas. What is appropriate or right for user A will always be right because he is not provided the alternative viewpoints. That is why an echo chamber created in virtual society is quicker, more rapid, and effective. No alternate facts can penetrate into it due to the filter bubble encircling it.

Virtual echo chambers engineered by filter bubbles are not based on shared opinions and collective consciousness rather it represents one side of the picture extensively and repeatedly by hiding the other side. This unnatural phenomenon alters the human mind and behavior by inflicting them with digital fragmentation syndrome DFRAG. The current ongoing pandemic situation has made the world even more virtual. This is the best time to explain that virtual realities can never substitute physical co-existence, how we cannot become the victims of the echo chamber, how we can save ourselves from DFRAG require a collective effort and state-level firm regulations.

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