

Research on the Impact of Social Networks on News Spread

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Abstract: The selected topic of this paper is to use the theories of social networks to explain how the news spread among people and how the digital technologies have changed the ways for the news to spread. This topic is selected when it is meaningful and valuable as the findings will be beneficial for studying interpersonal relations and psychological well-being, political participation and civic engagement. This paper tries to conduct a preliminary research to understand this topic, and it finds out that social network could promote the dissemination of news when people are connected in a social network and they exchange messages and news. The results show that online social network will promote the spread of fake news, which will cause big negative impacts on the society. Therefore, the arguments relevant to the selected topic have been surrounding the negative and positive roles of social network for social learning and the spread of news. This paper also calls for actions from individuals to act as moral polices, and stop the spreading of fake news, and promote healthy social learning, when individuals are the gatekeepers for fake news.

Keywords: social network, news spread, digital technology

1. Introduction

1.1. Research Background and Motivation

In modern digital world, social networks have become a necessary part in people's daily lives when social networks allow people to interact with their friends and relatives, and learn the latest information about the world. Different from traditional medias, social medias are two-way communications and the contents on social medias are created by the social media users. In another word, the social media users have transformed from media information consumers to media contents producers. Therefore, medias have changed the journalism when every one has the possibilities to act as a journalist to report what are happening around them. In particular, social medias provide opportunities for their users to build communities, which have shaped social networks. In the field of computers, an online community where netizens share information, exchange messages, and cooperate in certain joint activities, is referred to as the social network [1]. It is found that information and news are easy to spread in the social networks. It is possible for one person to share the news to many of their friends through the social community, and further, these friends could share the news to their community members as well. Under such a situation, the news could spread in a fast speed. Therefore, the aim of this paper is to use the theories of social

networks to explain how the news spread among people and how the digital technologies have changed the ways for the news to spread, to explore in the dissemination of the news, the influence of the social networks. In the first place, this paper will provide some background information about this topic and discuss why this topic is important to study. Next, this paper will conduct a literature review to research the topic, to study the existing findings and arguments relevant to this topic, and conduct a critical analysis of the contributions of this research on studying the selected topic.

1.2. Research Significance

The selected topic is of big significance when it is possible to help have a better understanding of how people learn from each other, and how the news spread among people, which will give insights to the professionals in different areas for their decision making, such as marketing sector, educational sector, and so on. The social network wherein a community of netizens exchange messages, share information, and cooperate in certain joint activities, would be the focus of this study. People in the social network are connected with each other when they share similar interests, have similar personal background, share the similar purposes for the joint activities, and so on. In this digital world, the social medias have provided good opportunities for people to enhance their social networks when people could build communities and exchange information with people from different places in the world.

For the professionals in the media industry, they hope their news could be transmitted to their target audiences, so as to achieve their communication goals. However, sometimes the well-developed news could not be communicated to the target audiences effectively. On the contrary, the fake news spreads like a real virus, which will result in a lot of negative impacts on the society. Under such a situation, it becomes very important to understand how news spread, and this research tries to use the concept of social network to understand the influence of social networks in the spread of news. It is believed that the findings in this research will give insights to the professionals in the media industry, to have a better understanding of how they could promote the spreading of news, so as to study interpersonal relations and psychological well-being, political participation and civic engagement, and promote the healthy development of the media industry [2,3]. In view of this point, it could be seen that it is valuable to study the influence of social networks in the spread of news.

2. Social Learning Theory

Renowned psychologist Albert Bandura propounded a theory where individuals learn by observing other persons with the intention to adapt his or her behavior according to the social contexts, known as the social learning theory [4]. Humans as social beings have an inherent desire to be accepted by others and thus tend to observe automatically the manner in which others behave and the resultant consequences, with the intention to adapt their behavior accordingly, explained Edinyang. People use social learning as a technique to improve themselves and achieve the desired outcomes as they could learn from another person who has been successful [4].

There are two types of social learning, including observational and communication. For the observational learners, they learn by observing others' actions and/or payoffs. For the communication learners, they choose to learn additional, useful information that helps them improve their decision. People share and exchange information, and they learn from each other by understanding these information. No matter what social learning types have been used, it has involved in imitation. People observe others, or learn something from the information shared by other people, in particular the successful people, and they try to imitate behaviors of these successful people.

Social learning has provided a natural way for people to learn. People do not need to set plans for their learning, but they could learn consciously and unconsciously [5]. In case this tactic is used intensely too often, for adapting what they perceive to be positive and successful behaviour, it could lead to severe inner conflicts, if these new behaviors are contrary to their own perceptions. At the same time, social learning may also result in unexpected obstacles, such as loss of innovation and high pressures as it is often not possible to imitate the behavior of another [5]. Therefore, when social learning is applied in the educational sector to promote active learning, the educational professionals also have their own concerns about the potential challenges that the students may face. However, it could not be denied that the social learning theory could give a new direction to study why news are easy to spread among people.

3. Impacts of Social Network in the Spread of News

3.1. The Concept of Social Network

A social structure consisting of various social actors who are connected through relationships of different strengths and densities' is termed as the 'network' [6]. The connections of a person with other persons in the real world or on a platform supporting communication and interaction like Twitter, Facebook, and others, is referred to as the social network, but it is more often used in the second sense when digital medias have provided more opportunities for people to create their identities online and get connected with people in the world. They share knowledge, share their ideas and their own works like images, photos, videos and so on, and they build a social network.

3.2. The Impact of Social Networks on Information and News Spread

There have been many studies that have exploring the influence of social network in the spread of information and news, but most of these studies have focused on internet-based social networks when digital social medias have been widely used in the educational sectors, and many other personal occasions.

Doleck, Lemay and Brinton have evaluated the efficiency of social learning networks in promoting knowledge seeking and knowledge disseminating [7]. They argued that an algorithm enables the knowledge disseminators and knowledge seekers to get connected over a certain topic or issue on the network, while introducing the algorithm models. As knowledge gets developed and could be shared amongst members of the group, social interactions lead to social learning, as per Reed et al. [7]. This means that social learning happens in the process of interacting with other people. It has been mentioned that human beings are social men, and they hope to be recognized by other people, and they also need to interact with other people. Therefore, people try to build social networks that support them to get connected with other people who share similar opinions. Algorithm on social media platforms have provided opportunities for people to build social networks when these social media platforms could keep track of people's footprints on the internet, and take advantage of these algorithm to help their users to get connected by recommending them contents and users who share similar interests, opinions, personal backgrounds, and so on. This study is relevant to the research topic when it has given implications to the researchers of how news are communicated and shared between people.

An opportunity to spread news and messages fast and wide is provided by the online social networks [1]. As could be observed, social media has become an indispensable part of the lives of the people, and many of the users have created accounts on different social media platforms. The social medias allow their users to build communities that users sharing similar interests, personal backgrounds, etc., could get together. Once one user share one piece of news in her/his community, it is possible for other users in the community to other communities they join in on different social

media platforms. Under such a situation, the news could spread in social medias through the online social network like a snowball, thus the news could spread in a fast speed. Humayun and Ferrucci have studied the roles of social medias in journalism and they found that the journalists have taken advantage of social medias to promote their news articles [8]. They further explored three dimensions of social media use, including motivation (self vs. organization), prevalence (sporadic vs. prevalent), and disruption (disruptive vs. normalization). This study has implied the roles of social medias in journalism and promoting the spreading of news when people use social medias for different purposes. Further, McGregor stated that social medias could help shape public opinions, thus journalists always use social media to represent public opinion [9]. This study could meet the principles of the social learning theory that people use social medias to learn opinions from others, and their personal attitudes and opinions will also be affected by the person they are learning from. Under such a situation, people get connected when they show similar ideas, and they will also share the news which could support their opinions to their peers with the aid of social media networks [6].

However, social networks have stimulated the spreading speed of misinformation in online social networks [1]. Fake news goes viral through social networks, which has caused big negative impacts on the society [10]. Rocha et al. have given examples that there were many fake news during the COVID-19 pandemic, which has resulted in uncertainties and social panic, and health problems of individuals, such as anxiety or psychological distress [11]. When the views of the members of a network are highly polarized or when they are highly connected, the false news would spread more faster and wider, since it is considered to be more credible, as observed by the MIT researchers. Because of the tendency of the people to retweet inaccurate news items, the false news travels deeper, faster, and farther, as illustrated by Dizikes. It is possible for people to make full use of their social networks to spread the false news in a fast speed.

The roles of social network in the spread of news are definite, but arguments are surrounding on its positive or negative impacts on journalism. Humans rather than bots have been found to be responsible for the spread of misleading or false information, by research. Although not considered to act as ironclad firewalls against the spread of false information and not required to act as moral police, the news outlets are considered as gatekeepers. These arguments give implications that all individuals in a social network have the responsibilities to act as moral polices that they need to evaluate the authenticity of the news before they share the news to their relatives and friends. They have created a social learning network, and they need to be responsible for others when they have to remind themselves that many others may learn from them and get the latest information from them.

4. Conclusion

The concept of social learning and how it is shaped within the social network could be understood in a better manner through this research. At the same time, these research work also have showed the arguments relevant to the positive and negative roles of online social network in the spread of news. Therefore, the findings in this research could be quoted in the research topic to study the influence of social network in the spread of news. It is possible to refer to these findings to support arguments in this research, and they also give insights to the researcher of where they could conduct a deeper research in order to respond to the research topic more effectively.

In particular, these research work also inform people of the gatekeeper roles of individuals in disseminating information and news. This will give insights for new research directions that researchers could explore the roles individual play in a social network and affecting social learning. In conclusion, this paper tries to study the influence of social network in the spread of news. By conducting research, this paper finds out that social network could promote the dissemination of news when people are connected in a social network and they exchange messages and news. However, this paper also finds out that online social network will promote the spread of fake news,

which will cause big negative impacts on the society. This paper calls for actions from individuals to act as moral polices, and stop the spreading of fake news, and promote healthy social learning.

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