Amelia Hoffeld

Communication Theory

9 August 2019

The History of the Diffusion of Innovations Theory & its Use in Advertising Today

Within the complex world of constant new ideas and innovations, various social networks, and overwhelming advertising material, it has become difficult to determine what innovation one will choose to adopt or not. Humans reason and choose to adopt an innovation based upon several criteria that rural sociologist, Everett Rogers, defined in his book, *Diffusion of Innovations*. Rogers (1983) defined diffusion as "the process by which an innovation is communicated through certain channels over time among members of a social system" (p. 5). The very premise of this theory is understanding why certain innovations are adopted and popular, while others are rejected, discontinued, and faded. Regarding his book, Rogers explained the diffusion of innovations in depth. This paper will provide only the key components and factors that contribute to the diffusion of innovations, its evolution and application made by other researchers, and the theory's relation and use in advertising.

In 1903, the first study of diffusion was noted by French sociologist Gabriel Tarde, who developed an understanding and recognition of the "S" shaped curve trend found concerning the *rate of adoption*. Following this, Ryan and Gross' (1943) influential study of hybrid corn in Iowa's agriculture gathered findings of diffusion research. Bryce Ryan and Neal Gross's findings "suggested the important role of interpersonal networks in the diffusion process in a system" and that "farmer-to-farmer exchange of personal experiences with use of the hybrid seed seemed to lie at the heart of diffusion" (Rogers, 1983, p. 33). Following this study, innovation and diffusion research has continued to grow in several fields, varying from educational, medical,

agricultural, technological, and communicational uses. These several other studies laid the groundwork for Everett Rogers to publish his book and proposed theory, *Diffusion of Innovations,* in 1962.

Rogers specifically called attention to the "newness" aspect of an innovation and how adoption varies in lengths of time. In the introduction, Rogers notes a failed diffusion campaign attempted by Nelida, a local health worker. The "Water Boiling in a Peruvian Village" campaign was the encouragement of changes in sanitation such as boiling water, controlling house flies, burning garbage, etc. This campaign specifically tried to explain the link between sanitation and illness within the community. Rogers (1983) explained, "three village housewives—one who boils water to obey custom, one who was persuaded to boil water by the health worker, and one of the many who rejected the innovation—in order to add further insight into the process of diffusion" (p. 4). Rogers (1983) acknowledges several factors that led to the failed attempt of diffusion including the wrong social group of housewives, distrust of Nelida and being an outsider, and being too "innovated-oriented" and not "client-oriented" enough (p. 5). Here, the reader is introduced to a few of the adopters and the various reasons for rejection and adoption of innovations. Rogers introduced his proposition that every social system or culture learns, works, and adopts innovations at difference paces concerning many elements.

The first element of diffusion, *innovation*, is not limited to a product or field. An innovation is defined as an idea, practice, or object that is perceived as new by an individual (Rogers, 1983, p. 11). The idea of something considered "new" is not limited to a time or place. Rogers recognizes five characteristics of an innovation that will contribute to the influence of adopting an innovation. The first characteristic, *relative advantage,* is measured by having the advantage, such as achieving an economic or performance goal or standard, reaching satisfaction

or convenience, or being more effective. *Compatibility* falls under the factor of being consistent with an adopter's lifestyle, beliefs, values, experiences or needs. *Complexity refers* to the degree of difficulty of understanding and use of the innovation. Rogers (1983) acknowledges simpler ideas may be adopted more quickly than an innovation that requires new skills or understandings (p. 15). *Trialability is* the factor that particularly influences an adopter by having access to experimenting with the innovation before use. Lastly, *observability* is the degree that individuals are more likely to adopt an innovation if they can witness or see the results visibly. Rogers notes that this factor contributes and can lead to group discussion and word-of-mouth communication, which can also result in increasing adoption. One example of observability is the Verizon advertisement that displays a U.S. map showing the difference in 3G coverage of Verizon versus AT&T. With this specific advertisement, an individual may be appealed to visibly seeing the available coverage results of both cell phone carriers.

Rogers identifies the second element of this theory: the exchange of information through *communication channels*. He explains that diffusion falls under a particular type of communication which specifically deals with communicating "new" ideas (Rogers, p. 17). One of the most common communication channels individuals use is social media. Following, sharing, retweeting, and posting are all forms in which one can communicate messages and innovations to each other. Rogers concluded that the diffusion process involves a knowledgeable and unknowledgeable individual of innovation and a communication channel connecting the two. Additionally, he proposed that the diffusion process is rooted in an individual's desire to imitate or model his or her network partners who have adopted an innovation. Rogers (1983) rationalizes that when two individuals are homophilous, there will be more effective communication (p. 19). He decided that when individuals are more alike, this could lead to a greater adoption

community. Although, one of the most distinct problems in the communication of innovations is that individuals are usually heterophilous (Rogers, 1983, p. 19). Therefore, not every person is going to be the same, but commonalities, such as social status or education, can help increase communication and adoption.

Rogers proposed the third element, *time,* which plays a critical role in the process of diffusion. This is one of the most complex elements of his theory because it deals with the *innovation-decision process as* well as *the rate of adoption.* The *innovation-decision process* acknowledges the stages in which an individual chooses to adopt or reject an innovation. The first step, *knowledge,* occurs when an individual is introduced to the existence of the innovation and its uses. *Persuasion* occurs when an individual seeks information about the innovation and forms an opinionated attitude about it. *Decision* is when an individual weighs the benefits and costs that could lead to rejection or adoption. *Implementation* is considered if the individual decides to adopt and put the innovation to use. *Confirmation* is when an individual evaluates and determines if the innovation is worth adoption. At this point, the process could lead to *adoption* or *rejection*.

Rogers consistently emphasized an important aspect of time, *the rate of adoption*, which is determining the speed at which an innovation is adopted. Regarding the rate of adoption projected graph, the "S" shaped curve determined that as diffusion begins to climb, more and more individuals will continue to adopt which concluded the "snowball" effect (Rogers, 1983, p. 23). Although, every innovation is different and each slope will vary. Some will be gradual and some will be steep. With this given information, Rogers (1983) found that the rate of adoption is typically "measured by the length of time required for a certain percentage of the members of a social system to adopt an innovation" (p. 23). These innovations are adopted based upon the

following characteristics listed above (relative advantage, compatibility, complexity, trialability, and observability).

An additional element that Rogers noted is understanding *social systems.* Rogers (1983) defined a social system "as a set of interrelated units that are engaged in joint problem solving to accomplish a goal" (p. 24). These social systems vary in all kinds of structures such as the residents of a community, the doctors of a medical hospital, or all of the consumers of the United States (Rogers, 1983, p. 24). Rogers implied that a social system acts as a boundary in which the innovation will diffuse through over time. Within these social systems, Rogers identifies that there are *adopter categories*, which are the different roles individuals will fall under regarding early or late adoption. Rogers concluded that *innovators* are eager, daring, and risky individuals that are willing to try new things. *Early adopters* are seen as "opinion leaders," which are respected individuals that can provide insight and evaluation after adoption. Rogers found that early adopters are considered to be the central position amongst the communication structure and process of diffusion. The *early majority of* individuals are not necessarily the opinion leaders; an early majority individual's process to adopt is longer than an innovator or early adopter. The *late majority of* individuals tend to be skeptical and do not usually adopt until the majority of others in his or her social system have done so. Lastly, Rogers concluded that the *laggards* rarely choose to adopt and base his or her decision to adopt upon traditional values or the past. Rogers extrapolated the complexity of the diffusion of innovations theory and its application over time and various fields of studies. He sought to explain the insight he concluded from his perception of people being exposed to innovation and proposed his elements of the process. The publishing of *Diffusion of Innovations* laid the groundwork for future researchers and studies to amend, expand, and test the theory in years to come.

In M. Lynne Markus's article, "Toward a 'critical mass' theory of interactive media: Universal access, interdependence, and diffusion" (1987), one is introduced to the factor of reaching a *critical mass* and the propositions of how this is achieved regarding interactive media on a community-level. Markus integrated the factor of reaching a *critical mass to* the diffusion of innovations theory. This is when an innovation may be valued as successful if it reaches adoption by a sufficient number of individuals who chose to continue to adopt. The theory of critical mass itself "seeks to predict the probability, extent, and effectiveness of group action in pursuit of a public good" (Markus, 1987, p. 496). Markus additionally recognized the importance of two variables of this theory that may affect the "S" shaped curve: the production function, which is a relationship between the public common good and an individual's contribution, and the heterogeneity of values, interests, and resources of an individual. In this article, Markus specifically applied these factors to the interactive media, which are the multidirectional communication flows such as voice messaging, electronic mail, telephone use, etc. (Markus, 1987, p. 492). She then concluded that universal access is achieved depending on one's readiness to receive communication and a community and resources' operational access and knowledge of interactive media.

Markus first proposed that interactive media usage within a community is "all or nothing," which implied that usage will completely spread to all of the communal members or not at all. Markus also proposed that "heterogeneity of resources and interest among the members of a community will increase the likelihood of universal access" (1987, p. 504). This is the assumption that diversity amongst a community may aid a community's growth and desire of universal access. Unlike Rogers focusing on the individual, Markus's several propositions were supported by much empirical research on media choice behaviors that focus on a community-

level analysis. Overall, this article addressed several meaningful points connecting the diffusion of innovations to technology adoption. In its entirety, it emphasized the importance of reaching a critical mass, looking past just an absolute number of critical mass and valuing a community-level analysis.

Social media has become one of the most prominent and preferred platforms for sharing daily news. The article, "Understanding news sharing in social media: an explanation from the diffusion of innovations theory," sought to relate how social media plays into the role of news sharing and its connection to the diffusion of innovations (Ma, Sian Lee, & Hoe-Lian Goh, 2014). The three authors conducted a survey to undergraduate and graduate students at a major university regarding the understanding of "people's perceptions of their positions within the online community, the relationships with their connections, the quality of news disseminated in social media, as well as their usage of social media to share news" (Ma, Sian Lee, & Hoe-Lian Goh, 2014, p. 604). The three authors concluded that by applying the diffusion of innovations theory, they determined several influential factors of social media such as tie strength, opinion leadership, and news preference. Regarding social media, the recommendation of certain connections and topics could lead to discussions and the feeling of closeness. This could eventually result in strong-tie relationships. Ma, Sian Lee, and Hoe-Lian Goh gathered that Rogers (2014) "suggests that news sharing behaviours may be different for opinion leaders, who are likely to be early 'adopters' of the news, then opinion 'seekers' who are likely to be the late adopters" (p. 599). Therefore, the authors concluded that these social media platforms should focus on identifying opinion leaders and learning how to satisfy those influential roles. Not only does this article shed a perspective on the investigation of diffusing news in the world of social

media, but it also provided ideas and information on how someone working in this field can apply this knowledge to future practices.

In Dan Horsky and Leonard Simon's article, "Advertising and the Diffusion of New Products," they extensively explained the connection between advertising and the diffusion of a new product by giving examples, expanding upon the roles of adopters, and providing equation models of product growth. Horsky and Simon proposed, "a firm that wishes to introduce a new product has to carefully design it to reflect consumers' preferences and to develop a well-thought-out marketing strategy" (p. 1). Here, both authors note that the key to diffusing an innovation at a more rapid pace can often be through advertising. Horsky and Simon emphasize that there are two key adopters of Rogers's theory in choosing to adopt a new product: innovators and imitators. When choosing to adopt a new product, innovators do not rely on others but imitators are influenced by others. For example, all over social media, well-known figures, such as a celebrity, are found to be endorsing a product. Located somewhere on his or her post, the word or hashtag stating "ad" can be found. This is a prime example of a celebrity being an innovator with his or her followers serving as imitators in later choosing to adopt the product.

Horsky and Simon additionally proposed, "the imitator will await the experience of others while the innovator will accept the producer originated information such as advertising and in-store product displays" (Horsky and Simon, 1983, p. 2). Companies will often encourage and reward the innovators to express his or her experiences about the new products. This is often shown on websites with videos of people sharing their "success stories" with reviews and links attached to various platforms. Since not everyone in the world is not an innovator, advertising must appeal to the imitators and the element of *trialability*. With several skincare products being

monthly payments, there is the appeal of "free trials" that advertisers emphasize. This allows an imitator to test a product before they commit to adopting it. Horsky and Simon additionally recognized why adopters are attracted to family names chosen for a company. The two authors concluded that a consumer or adopter finds a reassurance in choosing to support a family company. This exemplifies the aspect of *compatibility* aligning with a potential adopter's values and beliefs. Horsky and Simon deeply emphasize that the increase in word-of-mouth communication can lead to more adopters. This increasing rate of adopters could eventually lead to the social pressure of choosing to adopt an innovation (Horsky & Simon, 1983, p. 3). Regarding the adoption of physical products, Horsky and Simon noted that there are other factors besides advertising, such as sales force and price reduction efforts, that can play into a greater number of potential adopters. For example, a price reduction may relate to the element of *relative advantage* which may appeal to an adopter's economic budget. Horsky and Simon proposed various equations concerning the "Sales Patterns of New Products" and their graphs. Horsky and Simon (1983) concluded that negative or positive word-of-mouth communication is not as important as one would think; the "S" shaped curve is mainly dependent upon imitation (p. 6). With the support of their empirical research, these two authors concluded that an advertising firm could control the distribution of sales through the use of advertising (Horsky and Simon, 1983, p. 150). By researching and testing the diffusion of innovations theory, Horsky and Simon were able to acknowledge the effect of word-of-mouth communication, the drive behind competitors, and the importance of investing in advertising.

The diffusion of innovations can be applied to various situations and areas of life. For example, a volunteer desiring to initiate a new way of life in a different country may want to consider the adopter roles before interrupting traditional habits. In order to communicate and

implement something unknown, we must be cautious of the several factors behind a human's reasoning. With the overwhelming amount of information thrown at a single person, it can be difficult for any innovation to stand out. Today, there are several ways in which innovation can diffuse. Regarding my communication concentration in advertising, I found this theory to be useful in my understanding of how people adopt new ideas and advertising's role in the diffusion process, while also concluding my reasoning behind an incredibly strong and growing company. In order to be successful, I learned that advertisers must consider how and why an individual chooses to adopt one innovation over another. Additionally, this theory is useful in recognizing how adoption heightens with the use advertising and the brand a company makes for itself.

The technology company, Apple, exemplifies how a growing company that has reached a critical mass of the U.S. Over the years, Apple has appealed to the majority of adopter characteristics. With establishing Apple's first logo of horizontal colorful stripes, similar to IBM, it gave off the impression of a new, fresh, and better technological company. After branching out and broadcasting the Macintosh commercial in 1984, this company has continued to advertise how innovative and "hip" their products are. Apple's use of a simple typeface, sleek, packaging and the various age groups in their advertisements have implied the low complexity of their products. The trialability of Apple technology is exemplified through its advertisement of various accesses to Apple stores found all over the U.S. In these stores, individuals can try out the various products and communicate face-to-face with technicians for help. In addition to appealing to all of these characteristics, the majority of people have concluded their need to eliminate having a PC, cell-phone, and camera, and go with the most popular smart-phone than can do all of these jobs in one. This given example of a company, like Apple, exemplifies how much companies need to consider these characteristics regarding advertisements. It is

additionally helpful to note that one must market to each adopter group individually through different channels. If an advertiser is aiming for an advertisement to reach the late majority or laggards regarding a less technological generation, they may not want to invest in social media advertisements through newer communicative channels, like social media, but perhaps more traditional media such as newspapers or television advertisements. Regarding communication or any field, the list of uses for this theory could go on for pages. But, as technology grows, new ideas are introduced, influential media floods our lives, we must recognize if we choose to adopt for our benefit or the pressure from others.

Therefore, Rogers's (1983) diffusion of innovations theory emphasized the value of understanding how individuals cope with, adapt, and even reject the unknown. Each person plays a unique part in the rate of adoption and how we share and communicate new ideas and concepts. Even though this paper emphasized the role of advertising within the diffusion of innovations, Rogers does not limit innovation to products. Researchers from every field have discovered how this theory relates to their particular field of study. Markus's acknowledgement of reaching a critical mass within interactive media, Ma, Sian Lee, and Hoe-Lian Goh's deeper explanation of the diffusion of news sharing on social media, and Horsky and Simon's application to advertising today and diffusing new products, are all complex propositions that aid the reader into understanding the complexity and importance of Rogers's theory. Therefore, the diffusion of innovations theory highlights the importance of understanding human reasoning and values and the influence of new ideas.

References

Dainton, M. & Zelley, E.D. (2019). *Applying communication theory for professional life* (4th ed.). Los Angeles, CA: SAGE Publications.

Horsky, D., & Simon, L. (1983). Advertising and the diffusion of new products. *Marketing Science,2*(1), 1-17.

Ma, L., Sian Lee, C., & Hoe-Lian Goh, D. (2014). Understanding news sharing in social media. *Online Information Review, 38*(5), 598-615. doi:http://ezproxy.shc.edu:2084/10.1108/OIR-10-2013-0239

Markus, M.L. (1987). Toward a "critical mass" theory of interactive media: Universal access, interdependence and diffusion. *Communication Research*, 14, 491-511.

Rogers, E.M. (1983). *Diffusion of innovations*(3rd ed.). New York, NY: Free Press.