

Diffusion of Innovations as Illustrated by Today's Social Media Explosion: Did Rogers Know Best?

Marilyn L. Liebrez-Himes, The George Washington University, Washington, DC, USA
Robert F. Dyer, The George Washington University, Washington, DC, USA
Hamed M. Shamma, American University of Cairo, Cairo, Egypt

The explosive growth of today's social media and networking connections has far surpassed many predictions, and set numerous records or milestones. However, regardless of medium or technology, the diffusion of these innovations continues to follow Everett Rogers' classic design, "Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system" (Rogers 2003).

Essentially, Rogers noted that an individual is influenced to adopt an innovation by mimicking the behavior of another individual who has already adopted the new idea. This is also the basis for social learning theory which states that an individual's observation of the overt behavior of another individual often serves as a guide for the observer's behavior (Rogers 1983, 131-132). Rogers portrayed the spread of the innovation adoption as an 'S' curve, starting slowly with the innovators and early adopters, and then growing rapidly as the early and late majority adopted the innovation. The final tip of this S curve usually represented the lack of adoption by the laggard minority (Rogers 1962). The entire adoption process was illustrated by a bell-shaped curve, innovators and early adopters on one end, early and late majority adopters in the center, and laggards completing the final curve. Physical products, such as hybrid corn, were among the first examples used by Rogers to illustrate this adoption theory.

However, over the years while most product adoptions followed the same curves, the rate of adoption started increasing. A study at the MIT Entrepreneurship Center noted that the length of time needed to reach 25% of U.S. households from the time of invention was diminishing: automobile (1886) 56 years; electricity (1873) 45 years; telephone (1876) 36 years; microwave (1953) 31 years; television (1926) 26 years; internet (1975) 23 years; and the cell phone (1983) 14 years (Kaplan and Morse 2002). While some of these adoption rates could be explained by the Rogers' five characteristics of the products; relative advantage, compatibility, complexity, trial-ability, and observe-ability (Rogers 2003,

12-16), the growing technical aspects brought about other considerations.

Technological determinism was the term used by Rogers to describe the research of communication scholars, Harold Innis and Marshall McLuhan (Rogers 1994, 484-489). Technology determinism was the belief that changes in technology cause social changes in society. Rogers noted that McLuhan, who died of a stroke in 1980 just as the interactive communication technologies were being introduced, did more than any other individual in his lifetime to interest the general public in communication study (Rogers 1994, 489).

Geoffrey Moore brought out a variation of the adoption model in 1991, in his book, *Crossing the Chasm*. His premise was that the adopters continued to fall into the same five categories but that this flow from one adopter category to another was broken up, that there was an especially broad 'chasm' between the early adopters and the early majority. Moore termed it the difference between the visionaries and the mainstream customers who had a more pragmatic focus (Moore 1991).

This 'chasm' was explored by Malcolm Gladwell in his 2000 book, *The Tipping Point*, although Gladwell was not looking at the gaps as much as the reasons for the majority of consumers to move forward. His answer revolved around three aspects: the law of the few, the stickiness factor and the power of context (Gladwell 2000). One of his major observations underlying the Tipping Point was the power of the group.

Technology continued to progress in the early years of the 21st century, as online communications and transactions became easier and more convenient. By 2000, Geoffrey Moore had identified a different series of changes from Gladwell's observations. Moore essentially chronicled a major shift as attention moved from tangible products to information services. The Age of the Internet revised customer service to become customer interaction in the relationship building process (Moore 2000, 16-18). Rogers' himself noted that his diffusion of innovation research was the foundation for the diffusion of new communication technologies. He also noted that the notion

of critical mass was especially prominent in the case of the new interactive media (Lin and Atkin, 2002, 44).

Fast forward to 2008, where the presence of various social media sites and networking options are collecting additional users continually. The global marketplace of McLuhan has come to pass. Diffusion of innovations theory explores social networks and their role in influencing the spread of new ideas and practices (as noted by even Wikipedia, Social Networking., 12-1-2008).

One study by the Dartmouth Center for Marketing Research, University of Massachusetts, 2007-2008, found that Inc 500 companies more than doubled their own blogs in one year, and that companies using social networking went from 8% in 2007 to 49% in 2008, for just two examples (<http://ymedialabs.com/gblog/?p=60>).

Google, founded in 1998, by Sergey Brin and Larry Page, earns money from advertising on its search engine sites, as well as emails, online mapping, office productivity, social networking and video sharing services.

Some of the most productive social media sites have arisen only in the past eight years. MySpace (2003) recorded over 106 million account by September 2006 (Sellers 2006); LinkedIn (2003) is not only growing, but apparently has been profitable from the start, because the site charges corporate members who use the service to locate future employees (Business Week, April 10, 2006).

Facebook (2004) was started by Mark Zuckerberg while a student at Harvard University. The Facebook site had already registered more than 30 million users by 2007, making it the largest social networking site with an education focus (Phillips 2007). The recent political election in the United States carried a strong social media presence, with some pundits maintaining that Barack Obama's win was due, among other reasons, to his huge social media and networking presence online, in comparison to John McCain, his competitor (Quily 2008).

YouTube (2005) uses the slogan "Broadcast Yourself," and is one of the first sites providing a simple method for posting videos online that could be viewed by others easily and quickly. YouTube was purchased by Google in 2006, and is now part of the Google offerings, but has maintained its own brand name. Twitter (2006), a free social networking and micro-blogging service, has only existed for the past two years, but already services numerous educational and governmental agencies, including the website of the British Prime Minister. A recent uprising in Mumbai, India, utilized Twitter's services to report on the casualties and other activities connected with the uprising.

The diffusion of these communication innovations continues to move out around the world, collecting new users, and providing more ways for individuals to express themselves online as well as to respond to others. Key elements in the growth of these social media sites and networking connections can be found in the five product characteristics identified by Rogers more than 50 years ago now, but also in the benefit that these sites provide for individuals to be part of a group, yet maintain their own individual character and communications. Yes, it looks as if Rogers was right.

REFERENCES

- Business Week*. 2006. How LinkedIn Broke Through. April 10.
- Gladwell, Malcolm. 2000. *The Tipping Point*. Boston, MA: Little, Brown and Co.
- <http://ymedialabs.com/gblog/?p=60>. 2008. Comparison of Social Media Adoption Across Fortune 500 and Inc 500 Companies. September 22. Last accessed 11-29-08.
- Kaplan, Rich and Morse, Ken. 2002. MIT Entrepreneurship Center, Cambridge, MA.
- Lin, Carolyn and Atkin, David, editors. 2002. *Communication Technology and Society: Audience Adoption and Uses*. Cresskill, NJ: Hampton Press Inc.
- Moore, Geoffrey A. 1991. *Crossing the Chasm*. New York, NY: HarperBusiness.
- _____. 2000. *Living on the Fault Line*. New York, NY: HarperBusiness.
- Phillips, Sarah 2007. A Brief History of Facebook. *Guardian.Co.Uk*. Wednesday, July 25. Retrieved 11-26-08.
- Quily, Pete. 2008. Barack Obama Vs. John McCain Social Media and Search Engine Scorecard. November 5. Retrieved November 28, 2008.
- Rogers, Everett M. 1962. *Diffusion of Innovations*. Glencoe: Free Press.
- _____. (1983). *Diffusion of Innovations*. New York: Free Press.
- _____. (2003). *Diffusion of Innovations*. 5th ed. New York, NY: Free Press
- _____. (1994). *A History of Communication Study*. New York, NY: Free Press
- Sellers, Patricia. 2006. "MySpace Cowboys," *Money, CNN.com*. September 11. Retrieved 13 April 2008.