Living in Exponential Times and the Personalization of Our Data Streams

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INTRODUCTION

We Live in Exponential Times

Welcome to the 21st century. Have a question? Need information? Go online and chances are you will find an answer within a few seconds; and it will cost you nothing. Many years ago, when books were rare, knowledge resided in very few hands. If you wanted information you would go to your priest or perhaps the elders of your tribe. Years later, the wealthy could afford handwritten books, becoming holders of knowledge too. The printing press and public libraries changed everything. Knowledge became more affordable and accessible. However none of this comes close to the access and affordability of knowledge today. At our fingertips we have access to the ideas of scholars and experts from around the world. We can hear the opinions of hundreds and thousands of people like and unlike ourselves on topics as diverse as world events or the best products to buy.

What does it mean that anyone can publish with the click of a button? With access to so much information, how to do we know who to give our limited attention to? Where do we go to find the information we want and need? As Fisch, McLeod and Bronman (2008) declared in their viral video, *Shift Happens*, we are living in exponential times. This article will explore information overload in the 21st century and how it is affecting our society, with particular attention to the benefits and dangers of knowledge curation, and the personalization of our data streams. Finally, questions will be raised regarding implication of these issues for education and society.

BACKGROUND

The Democratization of Knowledge

Knowledge is no longer solely the domain of experts or professionals. The Internet, once a resource for passively accessing information, now makes it possible for anyone with an idea or opinion to reach a potential audience of millions. This democratization of knowledge has given power to the people in ways never imagined by Marx or Freire. One of the most compelling uses of this new ability to instantly broadcast personally experienced events can be seen in politics and journalism. The way we get our news has changed forever, as individuals can now videotape news events as they happen and instantly upload them to the web. The terrorist attack in Mumbai, India, in 2008 was first reported by Twitter and Flickr users. Likewise, news of the attack leading to Osama bin Laden's death in May 2011 was first "leaked" when an IT professional living nearby tweeted about unusual helicopter activity.

Social media has done more than disrupt how we receive our breaking news, however; it is also an active player in political activities. Social media has been credited with the downfall of Philippine president Joseph Estrada in 2001 (Shirky, 2011). In the 2008 US presidential election, Barack Obama successfully leveraged social media to support his campaign. Kosuke Tsuneoka, a Japanese journalist held hostage in Afghanistan for five months in 2010, was released two days after he tricked his captors into letting him access Twitter. Protesters in Egypt used social media to organize and publicize the uprising in 2011. In June 2011, a Facebook campaign successfully pressured Israeli

dairy companies to limit prices on cottage cheese. In the summer of 2012, the Israeli social justice movement used Facebook to organize protests. Occupy Wall Street followed suit a few months later using social media, especially Twitter, to organize protests around the US.

The role social media is playing in world news and events has led to a revival of grass-roots democratic values. The ability of everyone to be a producer of information and media, where before we were just consumers, has given rise to the notion of renewed power to the people. Social scientists are busily engaged in studying this phenomenon. Clay Shirky (2010) explores sharing via digital technology in his book, *Cognitive Surplus*. He argues that the "low cost and low hassle" of the Internet has enabled us to pursue basic human needs such as creating, sharing and connectedness. However, participation does not necessarily involve civic value. Some participation centers on communal value, focusing on the group of participants. Other participation in digital social networks centers on civic value, something for the benefit of all in society, not just participants. Regardless of purpose, the sharing of knowledge and opinions on the Web has vastly increased the volume of information available to any individual with an Internet connection.

In many ways, Wikipedia is an exemplar of 21st century democratization of knowledge. Jimmy Wales founded Wikipedia in 2001 in order to give everyone on the planet "free access to the sum of all human knowledge" (Mangu-Ward, 2011, p. 252). Influenced by Friedrich Hayek's market process theory, Wales is a profound believer in decentralized information and free market self-regulation. He believes in the power of the open community to police itself. The Wikipedia community knows there are errors and even vandalism; however they are also able to make corrections immediately. In spite of obvious weaknesses, much of the knowledge-base on the web seems to be quite reliable. A special investigation carried out by Jim Giles (2005) for *Nature* magazine found that Wikipedia was nearly as accurate as the *Encyclopedia Britannica.*

Socrates's Nightmare

Now that every individual has the power to instantly publish his/her message to a potential audience of millions, we are faced with an information explosion with several important implications. If anyone can be a disseminator of knowledge and publish an analysis of a situation or an evaluation of a product, how do we know how trustworthy the information we are accessing is? This situation has emphasized the importance of being critical consumers and evaluating information sources. Researchers at the New Media Literacies project (http://www.newmedialiteracies.org/), begun at MIT and currently housed at the University of Southern California, identified judgment as a key skill for the 21st century. They define judgment as the act of evaluating the trustworthiness of information sources.

Issues of quality raised by the democratization of knowledge go beyond simple accuracy of information and reliability of sources. A growing number of web resources are non-textual. The Internet is an increasingly popular source of music, art and self-expression. Andrew Keen (2011) calls technology that gives everyone the ability to publish opinions and art "Socrates's nightmare." Acknowledging democratic ideals, he describes the new web as a fusion of "60s radicalism with the utopian eschatology of digital technology" (p. 243). However, just because anyone can express themselves to a potential audience of millions, Keen argues, doesn't mean they should. He opposes the cult of the amateur artist. Keen even goes so far as to warn that this free expression of the people can actually be dangerous for culture and the arts. With the removal of the professional curator of art, how can the connoisseur reach a masterpiece without wading through the ever increasing pieces of the hobbyist?

eCommerce and Branding

The web is not only a place where information and art hang out. Businesses have been harnessing the Internet to advertise their brands and increase sales. Everywhere we turn, a store or service is asking us to "like" them on Facebook or subscribe to their Twitter feed. According to Eric Qualman (2013), author of Socialnomics, social media is no longer a choice, it is a necessary part of doing business in the 21st century. Costly social media consultants help businesses build their brands, giving advice in areas such as how long a blog post should be or when the best time to send a Tweet is. The challenge is that the sheer quantity of information out there is making it ever harder for

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