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The Internet and the Google Age: Introduction

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The Internet and the Google age: Introduction^{1 2}

Jonathan D. James³

Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge (Jimmy Wales, founder of Wikipedia).

1. Introduction

The World Wide Web celebrated its 25th anniversary on the 12th of March 2014, having radically transformed the way we socialize, work, shop and engage in politics. Central to the critical role played by the Internet is its access to information resources. Never in the history of mankind has there been such an opportunity to access virtual libraries on a plethora of subjects in real time. And search engines like Google offer an ever-increasing array of information. This, along with the constant improvements in technology, ensures that information sources and social networking opportunities via the Internet are “exponentially increasing” (Edwards & Bruce, 2002, p. 180).

Research by the Mccrindle Group reveals some startling statistics about ‘generation z’, those born between 1995 and 2009, and ‘generation alpha’, those born after 2010 (Mccrindle website, 2014). Worldwide, there are more than 5 billion Google searches per day (hence we are living in the Google Age)

1. I use the word Internet (upper case), to refer to “the world-wide network of computer networks [...] that operate using a standardized set of communications protocols called TCP/IP (transmission control protocol/Internet protocol). An internet (lower case) is a network of smaller computer networks” (The Linux Information Project website, n.d.).

2. Our focus in entitling the book *The Google Age* is to show the ubiquity of Google, the Internet’s largest search engine and not necessarily to focus on Vaidhyathan’s (2011) thesis in his book: *The Googlization of Everything*, a reference to Google’s “techno-fundamentalism” ideology (p. 3).

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and more than 500 million tweets¹ per day, mostly from but not restricted to generation z (Mccrindle website, 2014). However, the downside to this activity is the need for ‘googlers’ and ‘tweeters’ to sort treasure from trash (Tillman, 2003).

In this introductory chapter, I begin by looking at the Internet from an historical and communication perspective in an effort to understand its significance in the contemporary world. I then give an overview of the most searched topics on the Internet and identify prospects that have opened up and perils that lurk in the information highways of our Internet age. I conclude with a brief overview of the chapters in this volume of studies.

2. Historical overview and significance

It is important to view the Internet age historically, because every major technological revolution in the past has impacted communication. Communication scholar Innis predicted in 1949 that “it is difficult to overestimate the significance of technological change in communication or the position of monopolies built up by those who systematically take advantage of it” (Innis, 1949, p. 47).

The pre-modern world was characterized by face-to-face communication, thus most people were confined to family and village circles, and human interaction was the only means of communication. The invention of the printing press in the 15th Century, which later led to newspapers, brought a major change with ‘line by line’, propositional communication, written in words. The invention of the telephone, and then the radio, added new dimensions as communication was aurally relayed through sound waves. The invention of film and television

1. The word ‘tweets’ comes from the sounds made by birds. However, with the launch of Twitter, an online micro-blogging site, ‘tweet’ means an online post written by a Twitter user with 140 characters or less. The post usually gives a running commentary of what the person has been doing, their future plans, and other personal information either serious or trivial in nature.

married the senses of sight and sound and brought about another phase in the communication revolution¹.

Today, we have the Internet—probably the most exciting phase of communication, which is based on digital technology. In digital technology, data is expressed as a series of digits starting from the number ‘0’ onwards, whereby “text, graphics, audio and video can be easily transmitted over the Internet or computer networks” ([BusinessDictionary.com website, n.d.](#)).

What makes this contemporary Internet age different from the communication of previous ages? I have identified six characteristics.

2.1. Immediacy

[Mehrabian \(1967, 1971\)](#), while illustrating interpersonal communication, described immediacy in terms of how certain aspects of communication behaviour, especially non verbal aspects, can enhance physical and psychological closeness:

“People are drawn toward persons and things they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer” ([Mehrabian, 1971](#), p. 1).

Immediacy is expressed in terms of speed and psychological factors, allowing the meaningful exchange of information through email, Facebook, Twitter, Instagram, blogging and a host of technological platforms. Furthermore, virtual communities are being formed through common interests and desires. For example, social media sites allow people to join networks with relative ease and swiftness, a reality that was unimaginable in previous generations.

Adam Kramer, a social scientist and one of the many Facebook researchers working with Facebook said that in the past “he would have had to get papers

1. For a thought-provoking analysis of how communication technology shapes and is shaped by social processes, read [Flichy \(1995\)](#).

published and then hope that someone noticed. At Facebook, ‘I just message someone on the right team and my research has an impact within weeks, if not days’” (cited in [Albergotti, 2014](#), p. 25).

Just like academic research, news on the Internet is made available almost instantaneously ([MDIA1001 website, n.d.](#)). Today’s technology, located at our fingertips allows for breaking news and events to be posted online, seconds after they occur. According to De Wolk, “News is like bread – it is best served fresh and quickly goes stale” (cited in [MDIA1001 website, n.d.](#)). In keeping with this adage, more and more people are accessing news online because they want it fresh and fast. According to a UK-based study, Communications Market Report, “over 48 percent of 24-34 year olds use the Internet to keep up with news, and one in five trust that websites contain accurate and unbiased content” ([Ofcom website, 2010](#)).

This response is typical of how today’s generation get their news:

“On the day that King of Pop Michael Jackson died just over a year ago, I didn’t find out from reading the newspaper, nor did I find out from any online news website. I found out through the many status updates on Facebook and Twitter. I read more about it through links to blogs and websites that were holding their own cyberspace memorial service. I didn’t once question the authenticity of this shocking update; I somehow figured that if everyone was talking about it, it should be true” ([MDIA1001 website, n.d.](#)).

Contemporary journalism is built on the premise that news should be disseminated to the public as soon as possible and the Internet helps fulfill this as an immediate platform. However, does immediacy in regard to news and journalism come at the expense of accuracy? What is the priority among today’s generation z?

Another matter of concern is that the sense of immediacy that pervades the Internet age gives us little room to reflect and weigh up the pros and cons in any given situation because emails, Facebook invitations and the like come with the

expectation of instant responses. These, no doubt, are areas for contemporary researchers to grapple with.

2.2. Interactivity and participation

The Internet is by definition an interactive medium between networks of computer users (Rust & Varki, 1996), and the primary means for interactivity is the availability of user-generated content (UGC), which is described as:

“any form of content such as video, blogs, discussion [...] posts, digital images, audio files, and other forms of media [...] created by consumers or end-users of an online system or service and is publically [sic] available to other consumers and end-users” (Webopedia website, n.d.).

Jenkins (2009) asserts that the Internet makes it increasingly easier for ordinary citizens to publish and distribute information to multiple audiences. He uses a word coined by Toffler (1980), ‘prosumers’, to refer to contemporary individuals who have blurred the traditional lines between producers and consumers of content (Jenkins, 2006, p. 38). Hence Internet users are no longer just passive consumers because they can just as easily participate by being producers – YouTube being an excellent example of this.

And part of this shift in news journalism is the emergence of ‘citizen journalists’ –ordinary people who contribute to news making. Citizen journalism is a reference to the

“countervailing ethos of the ordinary person’s capacity to bear witness, thereby providing commentators with a useful label to characterize an ostensibly new genre of reporting” (Allan, 2009, p. 18).

Jenkins (2009) also introduces another term, ‘participatory culture’, to depict the way people create and share content that inspires the participants:

“Participatory culture is emerging as the culture absorbs and responds to

the explosion of new media technologies that make it possible for average consumers to archive, annotate, appropriate, and recirculate media content in powerful new ways” (Jenkins, 2009, p. 8).

With this shift comes a new sense of power for the everyday citizen hitherto reserved for the ‘gatekeepers’: professional journalists and broadcasters.

The 2004 Tsunami disaster was a significant time frame in the popularity and acceptance of user-generated content (Allan, 2009). The new genre of citizen journalism or “crowdsourcing” (obtaining data and information from the public) challenged traditional journalism throughout the world because the stories and footage about the tsunami used by media outlets were produced by tourists and ordinary citizens on site (Akagi & Linning, 2013; PeaceWork website, 2006). Media outlets were therefore dependent on ‘amateur’ content for their media coverage of the unfolding drama. Media scholars recognize 2004 as a turning point: “Never before has there been a major international news story where television crews have been so emphatically trounced in their coverage by amateurs wielding their own cameras” (cited in Allan, 2009, p. 18).

Since the tsunami, a string of media events relied heavily on amateur content: the 2005 London bombings, Arab Spring (2010 onwards)¹, Occupy Wall Street (2011)², Kony 2012³ and the Boston Marathon bombing (2013). Media analysts share these extraordinary statistics of the London bombings:

“On the day of the London bombings, the BBC received more than 1,000

1. A series of political uprisings that began in the Middle East starting with Tunisia and moving into Egypt, Syria, Libya and other nations.

2. Occupy Wall Street (OWS) is the name given to a protest movement that was launched in the financial district of New York City, USA in 2011. Organized by an anti-globalization and anti-consumerist group, the OWS slogan, “We are the 99%” refers to the unequal distribution of wealth in the USA compared to the 1% representing the rest of the world. The protests gained media attention both in the traditional media agencies and on the Internet and social networking sites. For a fuller treatment on this movement read, “Occupy Movement: Does the protest movement against inequality have staying power?” in CQ Researcher (2012). Retrieved from: http://www.sagepub.com/ritzerintro/study/materials/cqresearcher/77708_8.1cq.pdf

3. Kony 2012 is a half-hour documentary that exposes Joseph Kony –a warlord in Uganda allegedly “responsible for the enslavement of more than 30,000 children” (News.com website, 2012). The documentary was intentionally produced to get the attention of various Internet platforms such as YouTube in order to reach a global audience (News.com website, 2012).

photographs, 20 pieces of amateur video, 4,000 text messages, and 20,000 e-mails, all in the first six hours” (Anbarasan, 2007, p. 266).

The volume and presumed accuracy of information from the public has prompted the traditional media outlets like the BBC to change the rules of engagement and embrace community expression.

It is believed that during the Boston Marathon bombings, an iPhone photograph taken by a citizen journalist provided a clear image of one of the suspects which later led to the arrest of the perpetrator in question (Akagi & Linning, 2013).

The public participation phenomenon is both amazing and convincing, but there is a downside: self-mediation has entered the equation, and there is the possibility that truth may now be compromised.

In education, online learning, interactivity and participation are changing the structure of traditional education. There are several studies that show a nexus between a positive online environment and the overall learning experience (Rovai, 2002; Wegerif, 1998). Furthermore, collaboration with faculty and other students can be a strong impetus for learning (Johnson & Johnson, 1999). Online teachers are encouraged to provide a helpful online presence, together with useful content delivery (Palloff & Pratt, 1999). The relational dynamics in the online setting have indeed taken on a new direction with the launch of the *Open University* concept in various countries, which could lead to exponential growth in all aspects of education. The University of the future could be one without classrooms, walls and borders.

A study where students were assessed on the quality of articles they submitted online to Wikipedia for an Economics assignment revealed that the students’ writing quality improved (Freire & Li, 2014). Furthermore, significant improvements occurred in the overall discipline of writing with the inclusion of strong, primary sources and an overall willingness to follow up on feedback from Wikipedia editors (Freire & Li, 2014).

Nicola Johnson describes in chapter 7 how the Internet, by virtue of its egalitarian nature, is changing the traditional structures of information and knowledge, privileging a new echelon of ‘experts’ and IT gurus.

The rapid increase of Internet users and consequently, increased interactivity, have resulted in the amazing growth of business ‘start ups’ such as eBay, Facebook, Google and Amazon. These businesses are built on the principle of interaction. Facebook combined with Twitter have already enjoyed the reputation of toppling government regimes, introducing brands, creating campaign awareness and raising money for charities.

2.3. Visualization

Most web pages on the Internet use infographics, which is data presented in visual form. Ofcom in the UK report that the Google Image Search (“Google’s sister search site”) has become “a significant search engine in its own right” compared to Google’s own main web search, and “other general search engines such as Bing, Yahoo and MSN portal” (Ofcom website, 2010). YouTube, a vast online video channel, although not listed in the Ofcom study, is a massive platform for visualization. According to the Mccrindle Group, there are 4 billion YouTube searches listed worldwide per day (Mccrindle website, 2014). From Youtube you can learn how to do bungee jumping, play the guitar, or wear a sari. So this is not the usual classroom ‘sit and listen’ approach. It could be argued that the majority of YouTube users are seeking entertainment rather than education; nevertheless we recognize new vistas opening up for visual learners. Visual learner Aimee Boucher, now a visual teacher, shares her methodology:

“To help me support visual learners (and other learning styles), I use the strategy *teach around the wheel*. Teaching around the wheel refers to using multiple modalities throughout your lesson in an effort to present content using students’ preferred modality. Students develop a deeper understanding of important concepts when information is present using a variety of modalities” (Boucher, 2011, para 3).

Boucher (2011) then goes on to list specific web 2.0 tools¹ besides YouTube, that support and challenge visual learners: Glogster, Google Earth, Spezify, GoAnimate, Bubble.us, Prezi, Microsoft Movie Maker and Photostory 3. Flickr, yet another visual tool, is an online photo management and sharing site where a logged-on user can view photographs taken by people all over the world and also create online albums to share with others.

A noteworthy aspect of searching the web is the principle of Search Engine Optimization (SEO). SEO is the process of optimizing the chances that a particular site or image will appear first in a list of searched-for topics. For example, a search for ‘fishing’ reveals images of all things related to fishing (still photographs, videos, animation etc.) as well as text-based fishing material. Naturally, people are more inclined to click on sites that display relevant images. News-based organizations such as CNN, BBC and Al-Jazeera are alert to this and have therefore created facilities to link up-to-date images in all their stories. By optimizing their ranking and because of the popularity of images over text, these organizations are reaping the benefits of attracting Internet traffic in the process.

Skype video conferencing is another popular platform, enabling people from any part of the globe to talk to each other in real time.

Google Earth, originally called EarthViewer 3D “is a virtual globe, map and geographical information program that was created by Keyhole, Inc, a Central Intelligence Agency funded company acquired by Google in 2004” (Wikipedia website, Google Earth, n.d.). Here are some specific features of this incredible online facility:

“You can zoom and glide over stitched together satellite photos of the world. Use Google Earth to find driving directions, find nearby restaurants,

1. Web 2.0 is a reference to the upgraded technology of the Internet as opposed to Web 1.0 which is a “read only”, static version of the Internet. Therefore Web 2.0 is described as a “read and write”, interactive Internet. For more information see <http://oreilly.com/web2/archive/what-is-web-20.html>.

measure the distance between two locations, do serious research, or go on virtual vacations” ([About.com Google website](#), n.d.).

Real time visualizations, like Google Earth, are powerful purveyors of reality and its technological wonders are yet to be fully realized. They surpass the quality of infographics and point to the Internet as the “living organism that it is” ([Motherboard website](#), 2013).

2.4. Multiplicity of information sources

Whereas traditional textbooks remain a valuable source of information on any given subject, the Internet has multiple virtual ‘textbooks’ immediately on hand. And the information in these online texts goes far beyond textbook facts and figures to include the drama of real life experience, adventure and even experimentation. Online texts may not necessarily be written in a logical and sequential fashion following the traditional Euro-American models of epistemology. [Stahl, Hynd, Britton, McNish, & Bosquet \(1996\)](#) studied student learning experiences in the USA and found that using multiple-text sources are effective, but cautioned that users need to be taught the skills of using the vast array of materials effectively. [Stahl et al. \(1996\)](#) also revealed that users tend to choose short, well-constructed texts over lengthy documents.

Etáin Watson, in chapter 6 describes the effectiveness of Internet Search engines in advancing language acquisition and learning skills while Carmel O’Reilly illustrates in chapter 5 how Google searches are somewhat of a dilemma as there are both benefits as well as limitations, especially for students trying to sift through large amounts of information.

The most popular source of encyclopedic knowledge is Wikipedia, with its millions of articles that can be edited by any member of the public at any time. It is based on the concept that by using people’s “brainpower and harnessing collective intelligence”, the Internet can have a comprehensive encyclopedia that is constantly being updated ([BBC website](#), n.d.).

Wikipedia platforms exist in the following languages: Spanish, Dutch, French, Polish, Chinese, English (nearly 4 million articles) Japanese, Italian and Portuguese ([BBC website, n.d.](#)). Wikipedia claims to have more than 80,000 contributors and has approximately 400 million visitors around the world each month ([BBC website, n.d.](#)).

Wikipedia and other websites use the tool of hyperlinks –a reference to the web commands in the various sites that allow you to jump to a related site. Every web page is filled with several hyperlinks, with each one sending you to a related website, picture or file:

“Hyperlinking is the foundation of the web. As users add new content, and new sites, it is bound in to the structure of the web by other users discovering the content and linking to it. Much as synapses form in the brain, with associations becoming stronger through repetition or intensity, the web of connections grows organically as an output of the collective activity of all web users” ([O’Reilly website, n.d.](#)).

Whereas Wikipedia is a research encyclopedia for the common person, Google Scholar is a specialized search engine within Google Search to help scholars locate scholarly articles, theses, books, abstracts “from academic publishers, professional societies, online repositories, universities and other websites. Google Scholar helps you find relevant studies across the world of scholarly research” ([Google Scholar website, n.d.](#)).

Can every published work be conveniently catalogued in one website? This is the ambition of Google Books Library Project and Google World Catalog, a massive electronic catalog of the world’s library:

“We’re working with several major libraries to include their collections in Google Books and, like a card catalog, show users information about the book, and in many cases, a few snippets – a few sentences to display the search term in context” ([Google Books website, n.d.](#)).

2.5. Anonymity

Anonymity and pseudonymity are not exclusive characteristics of this digital age and, as can be seen in chapter 8, privacy is not guaranteed. An IP address¹ can be tracked, whereby the computer from which a certain post was made can be located, even though the actual user may not be that easily detected. However, by virtue of Internet technology it is easier for people to distribute anonymous and pseudonymous messages through email, chat rooms and blogging:

“Sites such as Chatroulette and Omegle, which pair up random users for a conversation, capitalize on a fascination with anonymity. They are examples of anonymous chat or stranger chat. Other sites, however, including Facebook and Google+, require users to sign in with their legal names. In the case of Google+, this requirement has led to a controversy known as the nymwars” ([Wikipedia, website, n.d.](#)).

[Palme and Berglund \(2002\)](#) give an example of the above phenomenon by using a simple case involving emails:

“[A] person sends an e-mail or writes a Usenet news article using a falsified name. Most mail and news software allows the users to specify whichever name they prefer, and makes no check of the correct identity. Using web-based mail systems like Hotmail, it is even possible to receive replies and conduct discussions using a pseudonym” ([Palme & Berglund, 2002](#), section 5, para 2).

The online encyclopedia, Wikipedia, is a collaborative effort of many individuals who can remain anonymous, although all articles require unidentifiable pseudonyms or IP addresses.

A [European Union Internet report \(1999\)](#) shows that EU officials are aware of the issues surrounding anonymity, that is, the need for anonymity (especially in

1. IP refers to Internet Protocol. To connect with the Internet, a unique series of numbers is provided to each computer.

several repressive nations) and its inherent dangers; this is a reference to people who use the Internet for illegal activities (cited in [Palme & Berglund, 2002](#)).

What is perhaps more important in the discussion on anonymity is the online experience of users: users are known to experience a sense of pleasure and euphoria that they are entering a new realm anonymously and are involved in activities such as chatting, searching, gaming or researching. Psychological research by [Suler \(2004\)](#) reveals that people say and do things in cyberspace that they would not do in face-to-face communication. Just as some people socialize with an ‘alcohol fix’, when others enter cyberspace they “loosen up, feel more uninhibited, and express themselves more openly” ([Suler, 2004](#), p. 323). This is called the ‘disinhibition effect’:

“It’s a double-edged sword. Sometimes people share very personal things about themselves. They reveal secret emotions, fears, wishes. Or they show unusual acts of kindness and generosity. We may call this *benign disinhibition*.

On the other hand, the disinhibition effect may not be so benign. Out spills rude language and harsh criticisms, anger, hatred, even threats. Or people explore the dark underworld of the internet, places of pornography and violence, places they would never visit in the real world. We might call this *toxic disinhibition*” ([Suler, 2004](#), p. 324).

2.6. Convergence¹

A mobile or cellphone today is more than a simple device for making phone calls from one person to another. It is also a camera and an audio-visual recorder that can transmit images, text and sound to any number of people who are on the net. In short, convergence has taken place, which is explained in the following way:

1. Harry [Jenkins \(2008\)](#) sees convergence as a cultural rather than a technological process. The prospect of every “story, image, sound, idea and relationship being retold across different media channels tells us something about what we value today in our culture” (section 1, para 1).

“Media convergence is the merging [...] of previously distinct media to create entirely new forms of communication expression. Convergence is at the heart of today’s digital media revolution and includes such technologies and software applications as the Internet and electronic commerce, smartphone technology, digital-film animation, DVD (digital video disc) music and high-definition television (HDTV), and video game systems to name only a few” (Gershon, n.d., para 1).

Digital technology is all about how data is transferred, be it text, images, sound and all the possible permutations. Instagram, an amazing new feature on Smartphones, is described as

“an online photo-sharing, video-sharing and social networking service that enables its users to take pictures and videos, apply digital filters to them, and share them on a variety of social networking services, such as Facebook, Twitter, Tumblr and Flickr” (Wikipedia website, Instagram, n.d.).

A prime example of convergence is Internet protocol television, IPTV, that is, the practice of watching TV on the Internet, a growing phenomenon with various brands in the market like Apple TV, FetchTV, Foxtel and GoogleTV offering this service (Brook, 2012). Research indicates that 30 percent of Australian residents in Sydney and Melbourne, aged between 25 to 54 years watch TV through the Internet (Brook, 2012).

If pre-modern culture was a ‘hearing’ culture and the modern world was a ‘reading’ and then a ‘seeing’ culture, the postmodern, Internet age, can be described as a ‘multi-sensate’ culture, where almost all the senses are called upon to engage in the activity of everyday living.

A recent report about the future of the Internet by the UK’s national innovation agency; Technology Strategy Board predicts the future Internet as

“an evolving convergent Internet of things and services that is available

anywhere, anytime as part of an all-pervasive omnipresent socio-economic fabric, made up of converged services, shared data and an advanced wireless and fixed infrastructure linking people and machines to provide advanced services to business and citizens” (MacManus, 2011, para 2).

Therefore, there is the likelihood that the Internet as we know it today will become more convergent, incorporating more diverse media and consequently increasing the richness of its characteristics. This will continue to challenge the traditional boundaries between private and public space, between home and work, and even between humans and non humans (robots).

3. Internet use and what people are searching

In all the morass of information, it may be helpful to pause and ask: what are people using the Internet for? Recent studies on what people want from the Internet show that users are “goal-oriented”: they are not aimless ‘surfers’ but rather they wish to accomplish something specific online, such as information or association with other individuals or groups (Carton, 2000).

The Pew Research Center study in 2000 (as part of its Pew Internet and American Life Project) disclosed that people who use the net regularly are more in touch with their circle of friends and family than those who are not regular Internet users (Carton, 2000). This finding is ‘fleshed out’ in chapter 2, where Facebook is described as a tool to connect friends and families in transnational locations. Some other significant findings about Internet users in the Pew Study are¹

- nearly 75 percent of users went online to search for information about their hobbies, or about purchases;

1. There is overlap in the usage, so the figures do not total up to 100 percent.

- 64 percent of respondents visited travel sites;
- 62 percent visited weather-related sites;
- over 50 percent did educational research;
- 54 percent were hunting for information about health and medicine;
- 47 percent regularly visited government websites;
- 38 percent researched job opportunities ([Carton, 2000](#)).

Pornography and religion seem to be two highly searched topics on the Internet. Whereas definitive studies in these two topics are not easily available, a few studies suggest that pornography is growing. As noted on [Webroot website \(2014\)](#),

- 25 percent of all search engine queries are related to pornography, or about 68 million search queries a day;
- 40 million American people regularly visit porn sites;
- 35 percent of all internet downloads are related to pornography.

The technology of convergence has made pornography more accessible: “data from the video porn website Pornhub –which had nearly 15 billion views in 2013– suggest that the adult entertainment sector is a leader in the shift to the mobile phone as well”, that is, people are accessing pornography on their mobile phones ([Online Services News website, 2013](#)).

Also noteworthy is that in 2013, the USA “earned the distinction of being the first country tracked by Pornhub to watch the majority of its online ‘porn’ on mobile phones because about 52 % of ‘porn’ consumption was on mobile phones in 2013, compared to 46 % in 2012, making this significantly higher than anywhere else” ([Online Services News website, 2013](#)).

Users of the Internet may not be aware of the place religion occupies on the Internet. The Pew, Internet & American Life Survey's Cyberfaith reported responses of 1309 church-based congregations across the United States:

“Nearly two-thirds of online Americans use the Internet for faith-related reasons. The 64% of Internet users who perform spiritual and religious activities online represent nearly 82 million Americans. Among the most popular and important spiritually-related online activities measured in a new national survey: 38% of the nation's 128 million Internet users have sent and received email with spiritual content; 35% have sent or received online greeting cards related to religious holidays; 32% have gone online to read news accounts of religious events and affairs; 21% have sought information about how to celebrate religious holidays; 17% have looked for information about where they could attend religious services; 7% have made or responded to online prayer requests; and 7% have made donations to religious organizations or charities” (Hoover, Clark, & Rainie, 2004, pp. i-ii).

Paul Emerson Teusner reveals in chapter 3 how religion is establishing a presence on the Internet as faith is mediated for a largely post-modern audience. In line with this, Michael Jaffarian, in chapter 4, takes an extraordinary snapshot revealing how computer technology has advanced the mission of the Church.

4. Perils

Studies by Buzzell (2005a) suggest that in comparison with other media such as theater, VCR and websites, Internet technology has made a difference in the access of pornography and accounts for its consequent higher use over recent years. Further studies by Buzzell (2005b) reveal the emergence of what he terms ‘hyperpornography’, a reference to how technology has “changed the variety, sophistication and means of the distribution of pornography to a wider market” (p. 112).

‘Sexting’, the practice of sending sexually explicit messages or images via cellphone or instant messenger has increased, not just among teens but also with adults (Hinduja & Patchin, 2010). The study shows that “the images are often initially sent to romantic partners or interests but can find their way into the hands of others, which ultimately is what creates the problems” (Hinduja & Patchin, 2010, para. 2).

Cyberbullying refers to individuals using ‘stand over’ tactics to disempower other people through the use of “digital technologies such as mobile phone text messages, emails, phone calls, internet chat rooms, instant messaging and social networking websites such as Facebook” (Ybarra & Mitchell, 2004, p. 325).

Cyberbullying is a fast growing trend and some experts “believe [it] is more harmful than typical schoolyard bullying” (Webster, n.d., para 1). Adolescent girls are named as the ones more at risk because they “are significantly more likely to have experienced cyberbullying in their lifetimes” (Hinduja & Patchin, 2013, p. 715).

Cyberbullying and sexting are not new social occurrences, but have gained attention due to the fact that in some cases these phenomena have led to suicides and the unceremonious fall from grace of some celebrities.

The Australian Institute of Criminology (2013) reveals that there is a marked increase in cybercrime over the last decade: “cybercrimes range from fraud, hacking, money laundering and theft, through to cyberstalking, cyberbullying, identity theft, child sexual exploitation and child grooming” (para 2).

The Infosec Institute, in their study of Cybercrime, reveals that close to 80 percent of cybercrime acts are based on organized activity (Infosec Institute Website, 2013). The study predicts, however, that with increased Internet penetration and skill development in users, new players not linked with organized crime could be attracted into Cybercrime as a business (Infosec Institute website, 2013).

According to Freedberg (2013), electronic warfare is the next phase of military research and development:

“With their eyes on future adversaries more technologically sophisticated than the Taliban, commanders want new capabilities to shut down enemy electronic networks and protect their own. It’s a challenge intimately interwoven with but distinct from the higher-profile field of cyber warfare... The [US] Army’s Training and Doctrine Command (TRADOC) is drafting a new field manual for ‘Cyber-Electromagnetic Activity’” (Freedberg, 2013, para 1-2).

The Internet is not without its dangers. However, on balance, it must be pointed out that ethical issues have always been around with or without technology so it is not technology *per se* that should be blamed for ethical problems. Today’s technology has the potential to magnify moral and ethical issues.

5. Chapter summaries

This book seeks to explain the new digital world, ‘warts and all’. It marvels at the benefits and notes the obstacles and threats involved in contemporary Internet usage.

Asia is poised to take the lead in the Internet revolution and so in chapter 1, Iremae Labucay zooms in on the Philippines (a nation whose citizens spend the highest share of time on Social Networking sites across world markets)¹ to seek an understanding of the particular patterns and habits of Internet users in this nation. The digital divide in the Philippines, as outlined in the chapter, is perhaps a reality in many developing nations around the world.

Social media and Facebook, one of the most successful business ventures of the Internet, is examined in chapter 2 as Anne Rice describes how it plays a role in

1. See <http://www.comscoredatamine.com/tag/philippines/>

maintaining family ties among the Irish *diaspora*. Interestingly, it also highlights the fact that in rural communities, by and large, the older males are unconnected to the Internet.

Chapters 3 and 4 pick up the point that was broached earlier, that religion is one of the most highly searched topics. Paul Emerson Teusner, in chapter 3, researches online religious advertising and how religious groups are repackaging the faith in ways that will attract members of generation z. Michael Jaffarian, in chapter 4, outlines in a narrative style, some astounding research breakthroughs that the Church has achieved in its efforts to reach the world through Internet technology.

The educational implications of the Internet are revealed in chapters 5 and 6 featuring French civilization (by Carmel O'Reilly) and Italian Studies (by Etáin Watson).

This is followed in chapter 7 with Nicola Johnson's use of the theoretical perspectives of French sociologist Pierre Bourdieu to explore how the Internet operates as a field, with several sub fields mediating knowledge and expertise and giving birth to a new set of non-hierarchical experts.

The book closes with chapter 8 which contains a summary of some of the ambiguities and pitfalls of the Internet age, such as how our privacy and confidentiality is impacted, and also how the Internet is looked upon with suspicion by certain nations with authoritarian ideologies. The chapter concludes with a quick snapshot of the Internet of the future.

6. Conclusion

We have progressed from several phases in the history of communication and technology –from an agrarian society to a manufacturing society and now, to a knowledge society where information has become the new currency of our time (James, 1992). Is it any wonder then that global agencies such as

the World Bank allude to the fact that information literacy is the new key to unlock empowerment and learning in the knowledge society: “Knowledge accumulation and application have become major factors in economic development and are increasingly at the core of a country’s competitive advantage in the global economy” (World Bank, 2002, p. xvii).

In essence, whether we like it or not, the Internet is here to stay –we are in the Google age. Furthermore, it seems likely that the future of our world depends on the Internet and all its offerings.

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