Global Agenda

The Impact of Digital Content: Opportunities and Risks of Creating and Sharing Information Online

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Acknowledgements

Introduction

Human beings have had access to media – to tell stories, share information and connect – since the days of the first cave paintings. Gutenberg's printing press is widely credited with making mass communication possible, but it wasn't until the advent of social networks and ubiquitous computing that people would have the ability to interact with each other on a mass scale and circumvent centralized means of communication.

While most people tend to think of social networks as a phenomenon primarily of the past decade, they have actually existed in partial form for over 40 years. In 1973, in Berkeley, California (USA), "Community Memory", a coin-operated precursor of the online bulletin board, enabled anyone to publish public messages by typing them into a computer terminal (the first of which was located in a local record store).

The WELL, introduced in 1985 as the "Whole Earth 'Lectronic Link", has been widely credited as being the birthplace of the online community movement. In the United States, the National Science Foundation lifted restrictions on the commercial use of the internet in 1991, opening the door to its widespread use by industry and individuals.

What distinguishes social networks from their precursors, however, is that they are not only digital means of publishing messages, but also "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system".[1] By this first and widely adopted definition, Six Degrees, launched in 1997, was the first "recognizable" social network.[2]

As the 1990s progressed, entrepreneurs and industry awoke to the commercial possibilities of the internet. At the same time, users began to discover its potential for personal expression, and saw opportunities to create new types of businesses, initially in the form of blogging and communities that made use of and expanded their social graph.[3]

During the past two decades, increasingly available and accessible personal computers, widespread internet, access to mobile devices and, of course, economics, have removed many of the barriers to social networks around the world. From 2015, social networks have become ubiquitous, global in nature and a thriving business for individuals, industry and the platforms themselves. To understand this space, this paper will consider not only Facebook or the other US giants (Twitter, Instagram, LinkedIn and YouTube), but also other global players, such as Vkontakte in Russia and Sina Weibo, Renren and QZone in China, because understanding them is incredibly important as well. In addition, this paper includes chat and messaging apps in the definition of social media. Services such as Snapchat, WhatsApp, WeChat, Viber, Kik, LINE and KakaoTalk have such sophisticated functionality that they are already mimicking the traditional social media platforms.[4]
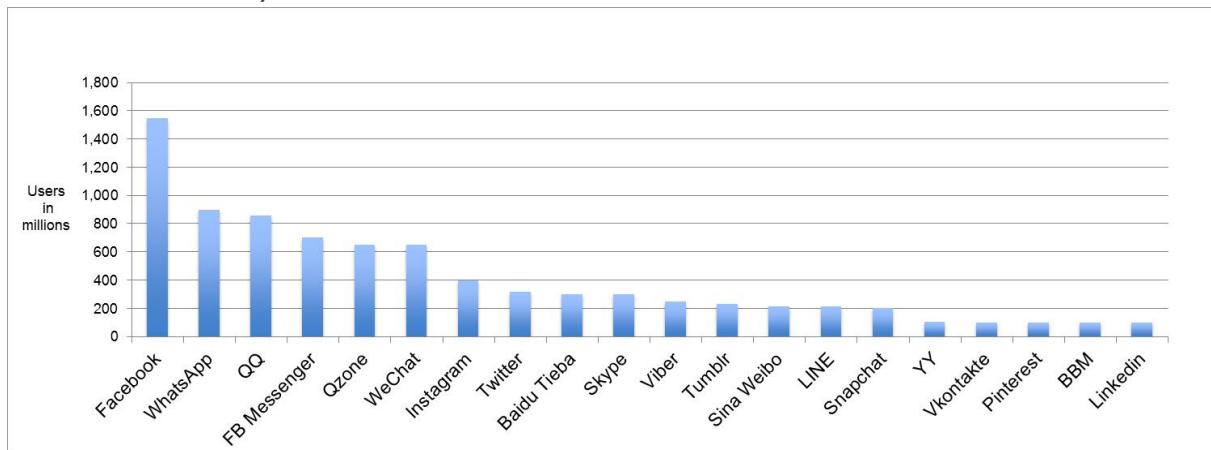
Social media offers both opportunities and challenges in how people communicate and interact. This paper discusses the current impact of different platforms on the "business" of social media, as well as the ethical and legal implications for stakeholders when sharing and using information online. The paper ends with a review of future trajectories for social media tools and networks, and how they have the potential to influence individuals, organizations and society.

Executive Summary

This paper examines the growth of social media platforms and the subsequent rapid surge in digital content shared online. According to Statista, which aggregates user information, 1.4 billion people used social networks around the globe in 2012; by 2016, this number will grow to an estimated 2.13 billion. While Facebook remains the dominant platform with just over 1.5 billion registered users (Figure 1), many other platforms and apps have considerable audiences.

Figure 1: Leading social networks worldwide, by number of monthly active users (as of November 2015)

Source: Statista[5]

The impact of this revolution on society is quite clear. Real-time "free" communication, within and across communities, has resulted in seismic shifts. Some of those shifts seem mundane, such as the ability of families and friends to connect over daily activities. Some are more remarkable, as in the use of social media platforms to organize protest movements and, in some cases, revolutions.

These platforms have surged in popularity, in parallel with the incredible growth of mobile phone technology. The sites are optimized for mobile use, meaning that in many developing countries, people's first experience with the internet has been on one of these social platforms. Facebook's initiative, internet.org,[6] means that many people equate the social network with the internet. As a consequence, this raises questions about the wider role of these platforms globally.

While peer-to-peer communication online has existed in some form for over 30 years, today's main social platforms are less than a decade old. Understandably, this incredibly rapid shift in digital technology has meant that core questions and challenges remain unresolved. Sustainable business models for many are still being worked through, court cases that could provide a legal precedent are rare, and cultural norms are developing around the ways people should or shouldn't "act" on these platforms.

A brief discussion follows of current technology trends among social media platforms. Where are we now? How fundamental is it that social networks and messaging apps are merging in terms of functionality? How are these platforms shifting from being simply communication technologies to becoming marketplaces for services? How are they turning into key portals for accessing the internet?

The "business" of social media platforms is then covered, examining three issues. First, how are the social networks earning revenue, and are those business models sustainable? Second, how are businesses themselves relying on social media platforms? And third, how have social technologies supported individuals to create businesses that would have previously been impossible – for example, YouTube celebrities or the jewellery maker who uses social platforms to build a brand and sell directly to consumers?

The paper then turns to ethics and privacy. The platforms are free to users because data is collected from them. This data is a key revenue generator, used to target ads or resold to other parties. What does this mean for a user's privacy? How many users are fully aware of the way their data is collected and used? This section also explores how publishers – whether news organizations, brands or advertisers – use the billions of pieces of digital content uploaded every day, such as Instagram photographs, Twitter videos and the loops on Vine. Most users post to their social accounts to keep a small number of family and friends updated. What are the ethics of third-party publishers embedding this type of content on their websites, or using it in their broadcasts?

Social media platforms raise complex legal questions. While platforms are headquartered in one country, whether the United States, Russia or China, the sites are used globally. How do national laws impact these global corporations? When individuals publish on these sites, who is responsible for uploading information that is false, defamatory or fuelling hatred? How does copyright law work in these spaces? And, who is the owner of copyright in a photograph uploaded by a person to Instagram?
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Finally, this paper concludes with some thoughts about the future. Where is society heading? How will these platforms evolve? A significant turn to visual content can be seen, with images, videos, emojis and hybrid visual forms dominating the social web. Evidence already exists that these forms are providing opportunities to overcome the barriers to digital technologies created by illiteracy. How will the Internet of Things impact daily life, when everyday objects are connected to these social networks? Will these proprietary walled gardens mean the end of the open web?

This paper considers the impact of social media platforms on society – where it is now and where it is headed. It synthesizes overarching trends, highlighting the opportunities as well as the challenges. Mobile and digital technologies are pervading every corner of the earth, whether through investment, infrastructure or even Google's Project Loon,[7] which connects people to the internet via a network of high-altitude balloons. With ever-decreasing prices of mobile phones and data plans, these platforms will continue to grow at an incredible rate. The paper outlines the key issues and explores what these changes mean for the global society.

1. Technology: Where Are We Now?

Social networks allow people to communicate in real time, build relationships and share personal information and data at an astounding rate. Significantly, social media platforms are no longer just about communication. Instead, they are becoming integrated tools allowing users to manage social, financial and legal transactions, whether for banking, shopping or arranging transportation. Another significant transition is the move from browser-based interactions on desktops to an information-sharing system driven by app experiences on mobile devices. This is leading to fears about the end of the open web, as the consumption of content housed inside these proprietary walled gardens becomes the norm. Finally, the growing popularity and increased integration of software that blocks advertising on mobile devices (commonly known as ad blocking) is creating the latest wave of disruption for publishers. Future experiences in the digital realm will be affected by mobile technology's rapid advances and social media's evolution from communication to provider of services, as well as by battles over how information is accessed, shared and distributed.

Accretion of data, single sign-in and identity management

Over time, individual social media platforms have adopted different ways for individuals to manage their identities. Some insist on "real name" policies,[8] while others, such as Twitter, allow users to adopt any name they wish. Certain companies have quickly taken advantage of these online identity management opportunities, allowing users a single sign-in across their own services as well as others by using their platform credentials. On top of that, when platforms expand their offerings to include new sectors – for example, Facebook's recent move into the enterprise market with the new "Facebook at Work" product[9] – they also further expand access to additional user data.

While individual apps might use the Facebook sign-in button to create better user experiences, they are only able to understand a user within the confines of a specific product. Facebook, on the other hand, has the full view of a single user across all online interactions where it was used for identity management purposes. This then leads to data accretion issues, with a very limited number of companies building up vast stores of user data inside and beyond their own platforms and apps.

Creation of new markets and limitations of old models

Patterns in digital media consumption are changing and evolving. This is giving rise to new markets and challenging old models, specifically when it comes to advertising, which is still a key revenue stream for most platforms. Although technology has made it possible for users to block ads, it also allows for collection of more detailed information about social media users. A recent World Economic Forum report titled *Digital Media and Society: Implications in a Hyperconnected Era* notes that "high-intensity digital media users are twice as likely as low-intensity users to click on online advertising. But, within the frequent-user group, Millennials are least likely to respond to online advertising".[10] From a marketing perspective, those able to personalize advertisements that communicate with consumers in a meaningful way will be in a much better position to engage these users. This then forces innovation within a well-established industry, which will focus on creating higher-quality advertising.

Social media platforms as publishers

The progress of internet publishing, which made it possible to upload and interact with multimedia content from anywhere (often dubbed "Web 2.0"), powered the social web. The new opportunities for individuals to become creators have underpinned the rise of social media companies. Initially, these companies were interested only in providing platforms for others; refusing to label their activities as publishing, the companies characterized them instead as enabling others to publish. In the past five years, however, as the penetration of smartphones in developed economies has shifted user behaviour to mobile devices, the intense competition for user attention has pushed social media platforms to converge their activities with that of legacy publishers.

In 2015 alone, Snapchat, Facebook, Twitter, Apple and Google all launched initiatives with news publishers to host journalistic and other content directly on their platforms, or to optimize their performance through tools developed by the technology companies. This has created a business dilemma for professional news publishers and raised larger civic-democratic questions about the nature of independent journalism. As publishing migrates into initiatives such as Facebook Instant articles, Snapchat Discover or Apple

News, it gives large technology companies, who are not intrinsically organized to prioritize the functions of the press, control over access and editing. How stories reach much wider audiences (through algorithms, which deliver a personalized rather than a broadcast experience), and who controls the access to platforms, are unregulated "black box" issues that need to be questioned.[11] Similarly, the technology companies themselves are beginning to ask what their role is in hosting all types of content – from ISIS propaganda videos to other forms of intimidation and hate speech. A new and significant challenge for the social web is to balance the demands of free speech against the removal and suppression of objectionable and illegal forms of expression.

Production of too much data

Social media has propelled both the active and passive (over)production of data. Platforms have created systems that ask for the specific, active contribution of data, such as when someone enrols for a new account or fills out required profile information, and passive contribution through the prompts that guide people on how they should be sharing information (e.g. "What's on your mind?"). This makes information sharing and, consequently, data collection easy, convenient and potentially thoughtless. In the unfettered quest to obtain and share information, both users (those contributing data) and enablers (those creating the means to share) must consider the practical and ethical considerations of current practices for sharing that are encouraged through social media. Questions to consider include: Does data add value? What is the purpose of collecting information? If information is being collected, how might it be used by, or affect, stakeholders? For all social networks, this data collection drives their businesses, in one way or another. Balancing the tension between data collection and privacy is a core theme of this paper.

2. Business Models

In this section, the "business" of social media is discussed, including a brief overview of the networks' revenue models, the ways in which businesses use social media and the business opportunities that social media provides individuals.

No universal formula exists for the commercial success of social networks. They are still relatively new, unequally distributed and used on different devices with different capabilities and within different economic and cultural environments. Currently, advertising remains the dominant means of revenue generation, but as the platforms move from being communication technologies to acting as service providers, new opportunities are emerging.

Industries such as music, banking, travel, retail, hospitality, consumer electronics, media and advertising have experienced seismic shifts. These changes have altered the relationship between businesses and individuals particularly within the last decade, creating new markets and even calling into question assumptions about what constitutes a business. Social technology has fundamentally affected nearly every aspect of business – whether sales, customer service, staff recruitment, internal communications, public relations or logistics.

Simultaneously, the impact of social networks on individuals from an economic perspective is just beginning. Entrepreneurs are leveraging the power of social media to create successful businesses on their own terms.

Social network business models

Most social networks currently depend on digital advertising as their main source of revenue. Yet, while advertising has been the dominant revenue source for the past two decades, this is not guaranteed to continue as social networks and their users mature. Today, networks derive revenue from subscriptions (LinkedIn), while others disclose revenues from reselling data (Twitter). Facebook recently announced that its virtual reality product, Oculus Rift, will be available for pre-order in the first quarter of 2016, adding a physical device to its roster of products and services.[12] Payments and electronic commerce also merit exploration, whether as sources of direct or indirect revenue. For example, Pinterest introduced a limited release of its "Buy" button in 2015. While the company does not receive direct revenue from

product sales, it believes that providing consumers with the ability to buy on the platform enriches the experience and makes it a more valuable property for advertisers.[13]

But these are specific and fragmentary examples. New business models are developing, as social networks become more ingrained in the fabric of business and culture, and start functioning as the gateway for products and services of all kinds.

Impact on commercial industries

The impact of social networks on commercial industries has been dramatic. Perhaps the earliest and most formative turning point was the "Dell Hell" incident in 2005, in which a single negative blog post about a Dell computer went viral around the globe (an unimaginable phenomenon at the time). The incident demonstrated the immediate and potentially devastating effects of social media for business.[14] Clearly, individuals' ability to connect and communicate with each other on a large scale could potentially disrupt traditional modes of communication in multiple and often unpredictable ways.

Emerging platforms, such as YouTube, Twitter and Facebook, enabled people to use their digital "megaphones" to complain about services they were receiving. In 2006, a Comcast cable repairman who fell asleep on a customer's sofa became an overnight YouTube sensation, for all the wrong reasons.[15] The balance of power, at least as far as media are concerned, had begun to destabilize, giving individuals unprecedented power to shift conversations about businesses and issues.

As some organizations waded cautiously into social media, focusing for the most part on communities and blogging, the global economic downturn in 2007 forced these early adopters to justify the value of participating and investing time and budget in social networks. Senior managers wanted to know: what is the return on investment (ROI) for using social media? And, just as important: what is the cost, if any, of ignoring it? The problem with the question about ROI was threefold:

1. "Return" is notoriously difficult to calculate, owing to the challenges of attributing revenue impact to social media activity

2. "Investment" is also complex to assess, as the time employees spend on social networks tends to be variable and fragmentary

3. Social media is not particularly good at generating direct revenues. Even though people may be influenced by their peers' attitudes and opinions, social networks are not typically the channel through which they purchase products and services (at least up to this point in time).

Beyond the elusive ROI calculation, however, several use cases for social media emerged that demonstrated a quantifiable value for business. *A Framework for Social Analytics*, a research report published by the Altimeter Group in 2011, documented how companies such as Novartis, American Express and Toyota derived value from social media (Figure 2).

Business Value	Description	Examples
Brand Health	Gauging attitudes, conversation topics and emotion around a brand.	Using social network data to identify risks or opportunities related to the brand, new product launches, product and service issues, executive changes or macroeconomic issues.
Marketing Optimization	Using social media to make the most of marketing strategies, tactics and budgets.	Using social network data to identify potential marketing or advertising opportunities, evaluate the success of existing programs, tune campaign performance and optimise the media mix.
Revenue Generation	Understanding the role of social media in revenue generation.	Using social network data to better understand customer and consumer attitudes and behaviors throughout the buying cycle, and, to the extent possible, measure the impact of social media on conversion.
Operational Efficiency	Using social media as a means to reduce risk and operating expense while engaging and retaining employees.	Using social media to monitor reputation, legal, regulatory and employee risk, and to find more cost-efficient ways of performing business functions. For example, Giffgaff, a mobile virtual network operator based in the United Kingdom, was able to do away with its call center, and now relies, entirely on its online community to perform customer service.
Customer Experience	Using social media to improve relationships with customers across social and digital channels.	Organizations increasingly use social media as a service channel. Those who excel in this area, DirecTV, for example, have found that they are able to identify "blind spots" in the business (local outages or other service disruptions) that would otherwise cause customer frustration.
Innovation	Using social media as a way to uncover product and service risks, as well as incremental and new opportunities.	Using social media to identify leading indicators or customer demand or revenue potential. In 2011, a popular global yoghurt manufacturer discovered that while sales of vanilla yoghurt far eclipsed all others, customers were returning to stores for pineapple, and discovering empty shelves because the flavor was in limited production*. Similarly, Starbucks' "My Starbucks Idea" website became a destination for fans who had ideas for new flavors or products, which the company would evaluate and, under the right circumstances, bring to market. * Carr, David F. "SXSW: How NetBase Knows What Women Want," *Information Week*, March 2012, http://www.networkcomputing.com/networking/sxsw-how-netbase-knows-what-women-want/d/d-id/1103306.

Business models and the individual

Since the advent of social media, everyday people – performers, artists, retailers, gamers, consultants and entrepreneurs of all kinds – are finding ways to build businesses based on social profiles. An October 2015 article in *Forbes* lists Felix Kjellberg, a Swede also known as PewDiePie, as "the top-earning YouTube star on the planet, pulling in $12 million pretax over the past year, all for providing expletive-heavy commentary as he plays videogames".[16] According to *Forbes*, most of the highest-earning YouTube stars are under 30 years of age, "only slightly older than their target audience members".

But the opportunities for financial success using social technologies are by no means limited to the entertainment field. Eric Mibuari, who leads the Financial Services Innovation group at IBM's Africa Research Lab in Nairobi, Kenya, is exploring ways to use social technologies to propagate access to financial services – particularly mobile money, mobile commerce and mobile credit – for individual entrepreneurs in developing nations.

The opportunities in retail, using Instagram for marketing and Etsy and/or eBay as a storefront, are no less compelling. A March 2014 article in *The New York Times* describes how individual entrepreneurs such as Beverly Hames, an owner of the vintage boutique Fox & Fawn in Brooklyn, New York, began using Instagram as a digital "display window". As of March 2014, sales coming from Instagram made up 20-40% of her daily revenue.[17]

Conclusion

There is little question that social networks have enabled transformations in markets and industry, as well as at the individual level. Increased access to mobile devices, improved connectivity, low development costs and other economic and social factors are making it easier to access the internet and to communicate and share with others around the world. At the same time, access continues to be unevenly distributed based on gender, socio-economic status and political issues. To thrive in this fragmented and dynamic market will require technology and process change, as well as shifts in organizational culture. Managers of leading companies that can balance these seemingly conflicting imperatives will help their organizations to be best positioned to succeed in the digital and social age.

A look at the future

As Facebook and others prepare to introduce virtual and augmented reality, and as the Internet of Things[18] becomes more established, the question will be less about which business models will rely on social technologies. New computing devices, inconsistent or missing privacy and data-collection standards, and the increasing use of predictive algorithms will have very significant impacts on business, culture, law and society.

"Social networks" and "social media" will eventually become terms representative of the current time, as "social" becomes a fundamental characteristic of businesses worldwide. Individuals will expect that the organizations with which they do business are accessible, irrespective of device or channel. At the same time, people, whether in Kenya or Kentucky (USA), will discover new ways of developing and delivering products or services using social networks.

3. Ethics and Privacy

This section explores the ethical responsibilities of (1) the social networks themselves, (2) those who use or publish content uploaded to social networks (whether news organizations, advertisers, marketers, academics or governments), and (3) the users of social networks.

As legal frameworks are evolving, so, too, are ethical norms. This is reflected by social networks continuing to update privacy policies and settings, by newsrooms making frequent updates to publishing guidelines on how they use material sourced from social media platforms, and by the continuous shifts in what is or isn't considered appropriate when individuals post on social media platforms.

Social networks are commercial entities, designed so that millions of people can simultaneously exchange information. Every day, the billions of pieces of published and uploaded content, such as status updates, videos and images, are monitored, analysed and aggregated by publishers so that the most useful or relevant can be republished by others on websites, television screens or billboards. Even though users are publishing to public networks, many users do not consider that anyone other than their close friends and family will see their posts.

Ethical responsibilities of social networks

Author and economist Umair Haque states in a recent post that "the problem of abuse is the greatest challenge the web faces today", using Twitter as his primary example. He argues:

> We once glorified Twitter as a great global town square, a shining agora where everyone could come together to converse. But I've never been to a town square where people can shove, push, taunt, bully, shout, harass, threaten, stalk, creep, and mob you … for eavesdropping on a conversation that they weren't a part of … to alleviate their own existential rage … at their shattered dreams … and *you can't even call a cop*.[19]

The abuse of users online, particularly women, has been raised on numerous occasions, whether on Twitter,[20] in YouTube[21] or in comments on Periscope.[22] As social networks are no longer seen simply as platforms and are emerging as publishers in their own right,

their responsibility to protect users from abuse will surely become clearer. And if Haque is right, it will become not only a commercial imperative, but an ethical one as well.

While these public actions play out, the decisions being taken by social networks on data collection, storage and distribution are fundamental and, for the most part, opaque. In some cases, the benefits of users making their social data available are clear – for example Lenddo,[23] which provides access to financial institutions when traditional sources of identity don't exist. However, the increasing trend of meshing individuals' social footprints with other data sources based on location, health and financial data has huge ethical implications. The collection and redistribution of personal data is one of this generation's most significant ethical challenges.

Active and passive data collection also raises questions. While many users are aware of the information they have logged with a social network, they are much less aware of the data being collected from them. The "passive check-in" is one example, in which location-based companies track individuals' movements and, if they remain in a business for a specific length of time, are publicly and automatically "checked in". Apps, such as Android's flashlight app that collects and resells location and contact data from mobile phones,[24] are other examples. Unless users read the small print very carefully, they would have no idea that a flashlight app is collecting any data at all.

As people's social data increasingly becomes their gateway to financial or health services, certain questions will arise more frequently: Who "owns" my data? How can it be used? Who has access to it?

Ethical responsibilities of using content uploaded to social networks

Publishers – whether a news organization, brand or non-governmental organization (NGO) – have two ways of "harvesting" user-generated content. One approach is to create a call-out, asking people to submit content either directly or by using a specific hashtag. In these situations, the terms and conditions are usually attached to the call-out, often including information about how the content might be used. The other way is to search for and discover content uploaded to social media platforms. This involves seeking explicit permission from those who created the

content. It bears repeating that simply copying user contributions is never sufficient, as many people think that whatever is on the web is free to take and use. The copyright belongs to the person who created the piece of content, not simply to the individual who uploaded it.

When seeking permission to use content, organizations must be honest with the user about when and how the content will be used, and whether it will be syndicated to other publishers or organizations. This issue of informed consent is increasingly important, as users become more sophisticated in knowing their rights.

Importantly, people need to be informed about the potential impact of their content being shared widely. Aid workers, many of whom are increasingly capturing photos and videos in the field, have very strict ethical guidelines; these require that subjects in the photos or footage are made aware of where the material could appear. While the idea of informed consent has been rooted in organizations working with vulnerable communities, it is something that all publishers should consider. Often, when publishers send a message to a user on Twitter or Instagram asking, "Can we use your pic?", the user will often simply reply, "Yes", without understanding what that means with regard to their photo or video being potentially resold to other outlets, or kept for perpetuity in an archive. Requests for permission should ensure that users are fully informed about when, how and in what context their content will be used.

Some argue that people who upload content to the social web should know that they have effectively published to the world and have no claims to privacy. A great deal of evidence, however, indicates that those caught up in media events are not aware that their content could be discovered and are significantly impacted.[25]

Ethical responsibilities of users

In September 2014, a journalist in the United Kingdom confronted a woman live on television to talk to her about anonymous, abusive tweets she had been sending for over four years to the mother of Madeleine McCann, a missing child. While at first defiant, the woman did admit she had been sending the tweets. Four days later, she was found dead (having committed suicide), and her son publicly blamed the television crew for playing a role in this.

While this is an extreme example, the author Jon Ronson has explored the impact on people when they're caught up in social media storms.[26] He calls these storms "idle entertainment" for many, while the impact of the people at the centre of them can be significant. That people quickly retweet, taunt and comment when they see others do the same demonstrates how easily a mob mentality can emerge and be amplified online. Behaviour that many would never deem acceptable "in real life" becomes mainstream during these social media storms.

One of the most significant complaints about the social web is the amount of false information available, and the speed at which it travels. Moreover, research shows that when corrections are published on the social web, they travel much less widely than the original "false" information.[27] Initiatives exist to educate users about the importance of checking the veracity of information or images before resharing them. However, the design of social networks means the temptation to share the image that looks too good to be true is far stronger than the need to run basic checks. Without a disincentive to discourage the sharing of false information, and with every incentive to share what is new, shocking or graphic, unverified information will continue to travel quickly, especially during breaking-news events when it can be most harmful.

Users are now publishers, but without journalistic, legal or ethical training. Users drive the social networks, and while they have ethical responsibilities, many are wholly unaware of what those are. Moreover, users may not have considered how individual behaviours, in large numbers, can affect the experience of any particular social network. This is why the design of social networks is so important. How easily can false information be retracted? How easy is it to report abusive behaviour?

Conclusions

The study of ethics teaches that standards emerge slowly over time, after consideration and discussion. Ethical standards are specific to certain regions or locations; what is inconceivable in Germany may be embraced in Brazil. A video considered too graphic to share on social networks in the United States might lead an evening news bulletin in the Arab world.

The issues raised in this section are especially fluid because even the most established social networks are only a decade old and already international in scope. Most users are still ignorant about how social networks collect and share their data; even if they do understand, they believe it is the price they have to pay to use these networks for free. Publishers are slowly learning what is and is not appropriate in terms of using content uploaded to social networks. Each ethical "transgression" and the subsequent furore help define the boundaries more clearly. With social networks moving away from their initial position as "simply platforms" to being editorial entities, they are learning about the associated ethical responsibilities.

For these ethical boundaries to be clearly defined, journalists, opinion leaders and academics have a responsibility to write about those cases that highlight specific ethical tensions, whether they cover user-to-user online abuse, a social network's abuse of data protection or a publisher abusing the rights of someone who uploaded an image. Ethical frameworks require not only that people be educated about the key issues, but also that plenty of space is available for discussion and debate. While these discussions are currently taking place in technology columns and on niche blogs, they need to move into mainstream spaces for the necessary conversations to occur.

4. Legal Aspects

The rapid worldwide increase in social media use, globally distributed social platforms and national legal structures have made it difficult, if not impossible, for the law to catch up with the huge implications of data that flows across networks and borders. This section therefore addresses three key issues: data ownership, data use and online behaviour. All are urgent and complex, and have highlighted the growing need for constructive debate as well as practical solutions.[28]

Issues related to data ownership

The question of data ownership is a complex one and involves multiple stakeholders, from social media users to platforms, third parties and many others. Data collection, data protection and privacy frameworks, and issues concerning data use, are the focus of this section. As stated, legal frameworks are often not equipped to deal with new technological developments, which can create problematic tensions.

Situations may arise where platforms can usefully exploit weak legal frameworks or lack of agreement among key stakeholders to forge ahead with new technologies and capabilities. A key example of this is the recent, rapid development in facial recognition software and the legally complex question of who owns a person's "faceprint". In the summer of 2015, talks between public interest groups and industry groups in the United States collapsed because of a lack of agreement on even basic boundaries for the use of this technology.[29]

On many platforms, users can now tag not only their own faces in images, but also those of others (such as Facebook asking: "Is this your friend John?"). This represents a powerful combination of artificial intelligence that relies on additional input from users. Tagging other people in this way also raises questions about consent and the ability of platforms to collect data on users through others. In the United States, social media users lack dedicated privacy commissioners to protect their rights. Moreover, current legal structures fall short with new technological developments, such as facial recognition, because laws are out of date or have not yet been tested.[30]

The Europe versus Facebook case[31] has generated much legal debate (through complaints filed with the Irish Data Protection Commissioner) that raises fundamental questions about the applicability of the law *in practice*. According to europe-v-facebook.org,

the case asks: "Are EU Data Protection Laws enforceable in Practice?" In highlighting European citizens' fundamental right to data protection, the case brings to light how technology conglomerates such as Facebook have been able to navigate this. It raises four key issues:

1. **Transparency**: Users rarely know what companies are doing with their data, including data they have deleted. Is it really removed, or is it still stored or even used by the company?
2. **Opt-in/Opt-out mechanism**: European privacy laws state that users have to unambiguously consent to the use of their data. Opt-out mechanisms that are hard to understand make this very difficult.
3. **Creeping data collection**: Through tagging, companies can gain access to additional data from users who have not explicitly consented to this use, contravening European data protection law. The law states that "only the individual user can consent to the use of his or her data".
4. **Data hoarding**: Problems are related to storing data without a clear business case, in the expectation that it may prove useful in the future. Data hoarding conflicts with ethical data-use principles as defined by the Information Accountability Foundation and other privacy advocacy organizations,[32] and is explicitly prohibited in South Africa under the Protection of Personal Information (POPI) Act of 2013.[33]

While the case against Facebook in Europe highlights the limitations of enforcing data protection laws in practice, other recent examples concern legal frameworks that are amended to deal with technological developments. In California, a proposed bill would extend the state's data privacy law to include and protect a user's geophysical location and biometric data. This follows concerns over flashlight apps that were found to be sharing users' geolocation data with third parties without user knowledge or consent, raising questions about the need for such apps to collect this data in the first place.[34]

These examples touch on the complexities of data ownership. In addition, they highlight legal limitations in both theory and practice, as well as important developments where lawmakers (often following public pressure) are trying to grapple with the implications of technological advancements. The next section addresses issues concerning the use of data.

Issues related to data use

On the other side of ownership, concerns about using social media content, derived in various formats, are relevant for multiple stakeholders. This section focuses on stakeholders who may incorporate user content in the United States and Europe; this is not meant to be a comprehensive legal guide because the creation, use and distribution of this content in different countries is based on independent legal definitions. However, several similarities exist across stakeholder groups (media, NGOs, corporations, government agencies) on how user content can be distributed and published.

Liability can become an issue on platforms and websites that support, incorporate or encourage the aggregation of user content on the site. As with the legal considerations of verification (described in the ethics section), site owners must avoid promoting potential copyright infringement within the content they are hosting, and ensure that proper policies and processes are in place should a request to remove content (a take-down notice) be issued. In the United States, editorial content that encourages the incorporation of user content from social media can be used without the platform being liable for the content, according to a 2014 article in the *Columbia Journalism Review*.[35] However, the article also points out that the US Supreme Court has not issued a broad-ranging decision on this matter.

Social media platforms can appear to provide an unending source of free content. However, just because this information appears on the internet does not make it accessible for unbridled use. When looking to incorporate user-derived content, people should be aware of applicable copyright licences and of the various terms of agreement that users have signed with social media sites. While some sites suggest that content posted by users is available for others to use under fair-use principles, other sites may have strict limitations on how content can be reused. Although sharing, embedding or reposting content outside of a platform might seem appropriate and easy to do, legal requirements exist on how materials owned by others can be used.

When using content created by others, it is safe to side with caution and try to obtain permission if licensing does not clearly allow for reuse. Fair use or fair dealing (country

dependent) are applicable in some situations when incorporating user content. In general, fair use and dealing provide certain exceptions to copyright restrictions that allow people to use content for particular purposes. The best way to learn more about the exceptions is by visiting websites (e.g. US Copyright Office) that have extensive guidelines on determining qualifying content.

In addition to the considerations outlined above, the following stakeholders may need to specifically consider industry-related topics in law that concern user-created content.

Non-profit organizations or community media groups with limited financial and staffing resources might consider taking and using content, primarily from sources such as Flickr, in instances where Creative Commons licences[36] are used. These licences allow for various degrees of use and incorporation, ranging from crediting the original creator to restricting commercial and non-commercial use, relicensing content under the same attribution, and remixing and reusing or using the content only in its original form.

Regardless of their legal structure, companies have an additional consideration regarding employees and the use of social media. Employers should ensure that employees, as representatives of the company, are aware of their responsibilities when using social media, whether for personal or professional purposes. As using social media has become prevalent in the daily working lives of many employees, setting professional standards for its use – without violating country-specific legal protections (such as Section 7 of the National Labor Relations Act in the United States[37])– could help to maintain clear boundaries and guidelines between employers and employees on the appropriate use of social media.

Issues related to online behaviour

Beyond issues of ownership and the use of social media data and user-generated content, the implications of behaviour on social media platforms have challenged not only ethical, but also legal norms. Current examples include cyberbullying, revenge porn, hate speech and threats of violent or terroristic activity, all of which require careful interpretation in the digital realm.

The recent legislation concerning so-called "revenge porn" is a final development worth

highlighting, and is related to issues addressed in the preceding section on ethics (specifically about public shaming and abuse of users online). Revenge porn often involves men sharing explicit content of their ex-girlfriends following a break-up. In the United States, 26 states have adopted laws making this illegal,[38] and a law banning revenge porn was adopted in the United Kingdom in April 2015.[39]

Another aspect relates to threats made online. A New York teenager was arrested in January 2015 for a series of social media posts, including emojis of police officers and guns, on charges that these posts "caused New York City police to fear for their safety".[40] Also in the United States, the Federal Bureau of Investigation has "pointed to Twitter activity – including retweets – as probable cause for terrorism charges".[41] This issue resurfaced recently in the investigation into Tashfeen Malik, one of the suspects in the mass shooting in San Bernardino, California in December 2015. Malik had "declared allegiance to the Islamic State on Facebook",[42] prompting US Democratic presidential candidate Hillary Clinton to call on Twitter, YouTube and Facebook to "help us take down these announcements and these appeals".[43]

Future considerations

As of October 2015, the 2000 Safe Harbor agreement between the United States and the European Union (EU) was ruled "invalid" by the Court of Justice of the European Union. The agreement was created to more easily provide a route for the flow of personal data from Europe to the United States. Questions arose, however, about who has access to the personal data of EU citizens. This followed revelations that the US National Security Agency has potential access to personal data stored by large technology companies, such as Facebook, that benefit from the Safe Harbor ruling. The EU and the United States are currently negotiating to determine a replacement agreement and have an agreed timing of January 2016. The court's ruling could set a precedent for data privacy watchdogs to question agreements governing the flow of data.

As data sharing via social media continues to accelerate, more questions will arise about data-sharing practices across regions and between individuals, corporations and governments.

5. Technology: Where Are We Going?

This section returns to the original discussion on the state of social media tools and technology to consider what the future might hold. Four trends identified include: (1) social media and market models, (2) shifts in how people communicate, (3) the potential implications of platforms as utilities and (4) the Internet of Things.

Social media and market models

Markets are moving to mobile communication, thus putting publishers with a mobile-first mindset in an optimal position. Many smartphone users have apps for every potential task (e.g. communication, banking, fitness tracking, catching-up on news), but most people use only a very small percentage of them on a daily basis. In China, the popular WeChat system is an example of how a basic tool for communication has taken on the role of service provider. It allows users, for example, to call for car service, schedule a doctor's appointment and initiate financial transactions, all within the highly curated space of one mobile application. The WeChat app has also re-envisioned the mobile device as an aggregator of collected data; a phone's camera not only takes pictures that can be shared with networks, but also acts as a data processor for tasks such as language translation. This trend can potentially be implemented across other social media platforms, affecting areas of the world that have become heavily dependent on mobile technology. A clear business model – that of connecting services through one app, linked to quick payment methods – especially underlines this development and could drive social media in this direction.

Shifts in how people communicate

In the *Internet Trends 2014* report, Mary Meeker, Partner at Kleiner, Perkins, Caufield & Byers, noted that 1.8 billion images were being uploaded and shared every day on Flickr, Snapchat, Instagram, Facebook and WhatsApp.[44] A combination of factors led to this development: the ongoing uptake and penetration of mobile phones, combined with a flurry of development in platforms and messaging apps that encourage and allow users to share images easily. More than that, this represents a shift to more visual communication in which images are being used to "talk",[45] with Instagram and Snapchat leading the way. Beyond still images, live-streaming services, such as Periscope, are further adding to this significant visual shift, as

is the increasingly mainstream use of emojis and other visual icons. To highlight this latter trend, the Oxford Dictionaries' Word of the Year in 2015 was, for the first time ever, a pictograph.[46]

Within the video market, new developments in content discovery are also worth highlighting, such as Amazon Prime Instant Video and Google's ChromeCast, which allow users to stream movies and TV shows.[47] YouTube plans to follow suit soon. Related to this is the important and unexpected wider trend of vertical screen viewing on mobile phones. For 2015, vertical screen viewing on smart phones and tablets made up 29% of time spent on screens in the United States.[48] In the Chinese market, Alibaba started rolling out the streaming-video subscription service, Tmall Box Office, in the second half of 2015; it will stream a mixture of third-party shows and original content produced by Alibaba. While China's streaming services are very popular, they are usually free. The move to a subscription model is an important development in this significant market.[49]

The *Internet Trends 2015* report emphasized how communication via mobile messaging is fundamentally changing online communication and, importantly, is opening up a range of important opportunities and possibilities for the future. Use of mobile devices and online mobile communication have evolved rapidly, from text to images, to video, to including all of the above today. According to Meeker, communication via mobile messaging is now:

- "asynchronous yet instant"
- "expressive yet fast"
- "engaging yet user controlled"
- "casual yet professional"
- "easy yet productive"
- "personal yet mainstream"
- "mobile yet distributed"
- "instant yet secure"
- "real-time yet replayable"
- "current yet evergreen"
- "accessible yet global"
- "simple yet 24x7"[50]

These new forms of communication reveal how digital technologies are changing more widely, and are important trends to watch and understand in the future.

Potential implications of platforms as utilities

Besides the trends already outlined, Google and Facebook are both becoming utilities, providing the internet to people who otherwise would be unable to access it. Facebook's internet.org has brought 15 million people online to date, providing them with "the incredible value of the internet",[51] mainly through its renamed "Free Basics by Facebook" product. Some speculate it may also soon include a banking service.[52] This initiative has received significant criticism, raising issues over net (network) neutrality, which can be defined as "the idea that Internet service providers (ISPs) should treat all data that travels over their networks fairly, without improper discrimination in favor of particular apps, sites or services",[53] as well as transparency.[54] This was alongside accusations of techno-imperialism, for the problematic ways in which technology and internet access are considered as key priorities ahead of basic services, such as access to sanitation and water.[55] When companies like Facebook cease to be communication platforms and become publishers as well as internet providers, this, in turn, raises important concerns about how they ought to be governed in the future (and by whom).

The Internet of Things

While the term "Internet of Things" has grown in popularity over the last half decade, the real concept of an internet of things – the notion of physical devices connected through their ability to share data – has existed since the 1980s. The specific idea was coined in 1999 during a World Economic Forum presentation by William N. Joy, a founder of Sun Microsystems and Partner emeritus at Kleiner, Perkins, Caufield & Byers, who presented the idea of "device to device" or D2D.[56] The Internet of Things (IoT) is moving beyond the interconnectedness of machines to smart-sensor integration. The addition of smart sensing will lead to an increased flow of information that will potentially affect almost every facet of people's lives. But to be transformative, the IoT will need to become integrated into social channels because communication among people is framed around their participation in various networks. The IoT has made this integration, for example, through the traffic app Waze, where sensors, geoinformatics and people socially interacting in real time have created a system

for monitoring and assisting one another in navigating through dense traffic. A final consideration of the IoT as it relates to social media is the potential for its components to be integrated into media companies, as part of a service-providing network (see the earlier discussion of WeChat).

This final section has highlighted how social media is changing market models in unexpected ways. In China, WeChat is becoming a service provider, a trend that could potentially be implemented across other social media platforms. A better understanding is required of the evolution of platforms and the implications of this development. In addition, this paper has noted the transformative nature of messaging apps, which have moved beyond sharing text, images or video to including all of these, together. Mobile messaging apps play a crucial role in understanding how digital technologies are changing more broadly. While the digital divide and lack of access to the internet are widely acknowledged as important issues for many, it is not clear that social media companies are best placed to address some of these global challenges. Important transparency issues arise and must be addressed when platforms become the de-facto way that new users gain access to the internet for the first time, within a walled-garden setting. Beyond these challenges, the Internet of Things pushes society firmly into uncharted terrain. This is exciting; at the same time, vigilance is called for to face potential pitfalls that this additional layer of connectivity brings to social media users.

Conclusion

Most social platforms are not yet 10 years old, but they are intrinsically woven into the fabric of everyday interactions. With the enormous numbers of social media users – Facebook's 1.55 billion,[57] WhatsApp's 900 million[58] and WeChat's 650 million[59] – user *behaviour* is, without question, of utmost importance. Particularly interesting, however, are the shifts being made by the social networks themselves. Social technologies are no longer simply communication tools: Twitter has launched "Moments"[60] and is actively moving from platform to curatorial publisher, Facebook is partnering with banks to improve financial transactions,[61] and chat apps are building automated "bots" to interact with users.[62] They are becoming service providers, whether through supplying news, financial transactions or shopping destinations. The lines between social networks and messaging apps are also blurring. Platforms that started as chat apps, such as Snapchat, WeChat or WhatsApp, are starting to morph into social networks.

As these platforms and networks grow, the amount of content uploaded daily is simply stunning. But this fundamental shift in human behaviour has taken place at such speed that our ethical and legal frameworks are still catching up. Copyright legislation is woefully outdated, with laws written before the internet was invented. When publishers use copyrighted content without permission, few repercussions result because users are ignorant about how social networks collect and share data, and resources are lacking to take any case through a legal court.

Ethically, the same applies; cases emerge, and the ethics play out online through articles discussing whether behaviour has crossed a line. Simultaneously, norms are changing. Whereas photographers previously had to ask permission to take photos in public places, acceptance now exists in most countries that a person's image can be captured and used anywhere. While significant cultural differences affect the tolerance of graphic imagery and the sharing of images of children, every region of the world is experiencing shifts in standards and norms.

The business models of the concerned companies are also not set in stone. Twitter recently laid off 8% of its staff[63] as it struggles to find a way to monetize content. Instagram is similarly trying to integrate advertising, and WhatsApp, while wildly popular, makes money from a $1 fee after a person has had one free year of using the app. The move from being communication platforms to serving as marketplaces for other goods and services will provide multiple opportunities for revenue growth and sustainability.

The future looks very bright for social media platforms – from purchasing virtual-reality technology to partnerships with financial institutions that look to bring on millions of people who previously had no way of accessing banks or credit. As millions leapfrog from desktops straight onto mobile devices, their whole internet experience will be via a social network or chat app.

Challenges exist, and the immediate future will certainly involve court cases that should help to settle current legal ambiguity around copyright and licensing. New ethical norms will also emerge as society works through issues such as privacy, the publication of graphic content and the protection of vulnerable communities. And though unlikely, new norms for online civility may emerge.

Despite the challenges, very significant opportunities are there for individuals using social technologies to start and maintain thriving businesses, for communities that can access services in previously impossible ways, and for those who can take advantage of possibilities emerging from limitless communication.

To borrow the words of the author William Gibson: "The future is here; it's just not evenly distributed yet."

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