

How Newspapers Became the First Social Networks:
Comparing Print and Web Technologies

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Introduction

In 2007 we are witnessing a drastic alteration of how people communicate and spread information from one place to another. The Internet has simplified our lives in terms of economics, education, entertainment, and even how we interact with one another. The emergence of newer technologies such as blogs, instant messages, and social networking systems has changed how people use computers as well as the Internet itself.

All of these technologies fit under what is now called Web 2.0, the second generation of web technology. These Web 2.0 technologies are being placed everywhere from university websites to international news outlets. The purposes of these technologies are to give readers a chance to discuss topics with other readers in an instant. This was not possible in the early years of the Internet. The Web evolved from its former system where public and private was clearly defined into a system where the lines between public and private are nearly invisible.

This trend is not restricted to the Internet; it is across every medium today from television to video games. This trend is also not limited to current time; many other mediums in our past have gone through similar stages, but where did it begin and what was the first social network? This paper will discuss the belief that the lines between public and private began to fade with the introduction of the public newspaper, and will discuss how the newspaper became the first “social network.” It will describe how the advancements of print and the Internet are similar and allowed the public and private world to combine with one another to form completely new spheres for debate. Finally, it

will also discuss the similarities between the developments of print and of the Internet and how they changed the way people would acquire information.

The Public Sphere and Print Technology

In 1962, Jürgen Habermas wrote *The Structural Transformation of The Public Sphere* (1991), this book examines the “public sphere.” The word *public*, in terms of the public sphere, means: “open to all...as when we speak of public places or public houses” (Habermas, p.1). The public sphere was not concerned with the opinions of just one person, but of a group of people each relying on one another. This public sphere came from the former “representative publicity”, that is the “publicness” of a noble figure in society (Habermas, pp. 5-7). These noble figures had the power to gather audiences to show off their lordships, as this was something that is publicly represented (Habermas, p. 7). In the 17th century, the early public was then “compromised [of] both court and ‘town’ ”(Habermas, p. 31). This “town” was the “life center of civil society...[and] built a bridge between the remains of a collapsing form of publicity (the courtly one) and the precursor of a new one: the bourgeois public sphere...” (Habermas p. 30).

In the mid-17th century, the public sphere began to transform into this new bourgeois public sphere. Habermas calls this new sphere the literary public sphere. The institutions of discussion were no longer the “towns”, but small coffee and chocolate houses, *salons*. These *salons* became “centers of criticism” and by the 18th century many of these *salons* had groups of regulars. These regulars were the “intellectuals,” or the “experts” of discussions (Habermas, pp. 32-33). These “experts” discussed politics,

literature, and art. What caused this change in the public sphere was the development of better communications networks in the 1600s.

According to Paul Starr's *The Creation of The Media* (2004), before 1450, information was difficult to come by in numbers--as well as expensive to obtain. Many manuscripts were handwritten in monasteries and can only be afforded by those of some status or wealth (Starr, pp 25-26). However, the introduction of the modern printing press in 1450s allowed for cheaper and faster duplication of manuscripts. These early printed books were "large, cumbersome folios written in Latin primarily for the clergy, the universities, and high officials" (Starr, p. 26). Even though printed books were far cheaper than hand-written manuscripts, "by 1470...the same text cost between 50 and 80 percent less in print than in manuscript," they were still fairly expensive due to the high distribution costs stemmed from the primitive methods of transit and lack of postal systems (Starr, p. 26).

Before 1600, communication systems were highly under-developed, "news and other information circulated by word of mouth, via privately carried letters...and in occasional pamphlets and other printed works [books]" (Starr, p. 24). This underdevelopment severely hindered the spread of information not only in terms of the speed of sending information, but in terms of the cost, quality, and quantity of the information.

A private courier can only handle a specific amount of letters; if too many are taken by one courier, then the courier will be slower in sending the information, so limitations must be set by the courier on how many letters can be taken. Frequently the

information arrives at its destination, it is out-of-date already, and hence no real “back-and-forth” discussions can occur. One must also think about the spread of any information through word of mouth--something will always get lost in translation. Using pamphlets and other printed materials would greatly reduce the problems of spreading information via word of mouth, but the lack of a real postal system still hindered the speed of transit.

Ironically, in the late 15th and 16th centuries, some European countries had postal systems. The French system dates from the late 1400s and the English system from 1516, “though in both cases these initial services were established only for official use and had limited reach” (Starr, p. 31). Beginning in the 1600s, both systems began to open up to the public and both gradually modernized their services with regular pick-up and delivery schedules as well as linking with other networks in other countries (Starr, p. 31). Finally, the technology had existed to spread information cheaply and rapidly, and what came from these advancements was the newspaper.

The Rise of The Newspaper

As postal systems finally modernized, so did the methods of communication. Although *newsletters* were known in the late 1500s, they were targeted towards aristocrats and military news:

In Cologne in 1594, a volume of mainly military news, *Mercurius Gallobelgicus*, began appearing on a semi-annual basis, earning it the designation of the first *news periodical* (emphasis mine), but a semi-annual volume in Latin plainly belongs to a different species from the *newspaper* (emphasis mine). With these qualified exceptions, if news was printed before 1600, it wasn’t periodical; and if it was periodical, it wasn’t printed (Starr, p. 32).

The majority of the public did not have access to these periodicals, and those that did have access to it were receiving it just two times per year. Debate was severely hindered by this and the next step was to shorten the period of delivery and get the information to the actual public faster than before.

The first weekly periodicals were printed in the German cities of Augsburg, Strasbourg, and Wolfenbüttel in 1609 (Thompson, 2006, p. 114). These weekly-published papers gathered foreign news and re-printed them for their readers, these were known as “corantos” (Thompson, p. 114):

The news which made up the corantos was often supplied by postmasters, who collected news in their regions and then forwarded it to the major cities. A single individual could then assemble and edit the postmasters’ reports, printing them in the form of short paragraphs with details of the date and place of origin of the information (Thompson, p. 114).

Because of these short paragraphs, and variety of news origins, the papers were translated into other languages and can be spread to almost any number of other countries. Now, because there was no one language for the news, and because the stories were short and simple, almost anyone could read them. Because so much information can be sent at one time, and the news was in fact coming from the post offices themselves, circulation could be increased greatly.

Early newspaper circulation in the 1600s was still fairly low, only a few hundred copies of newspapers were printed. It took changes in printing restrictions in England and other countries to boost circulation¹. “By 1750 London had five well-established

¹ Since the 1586 England had strict licensing and censorship of printed materials, a Star Chamber established these restrictions and set specific censorship for each type of publication (Thompson, p. 115)

daily papers, six thrice-weeklies, five weeklies and several other cut-price periodicals, a total circulation between them of around 100,000 copies per week” (Thompson, p. 115). Printing restrictions were changed due to the public demand of information and changes in political powers. Once these restrictions were lifted, printers were free to print more of a variety of things. What caused so many printers to circulate newspapers as opposed to books was the fact that printers knew that the public wanted news on a daily basis. Printers knew of these salons and felt they could capitalize on it; news became a commodity.

Printing was not the only industry making money on newspapers; the government also profited. Government run postal systems started charging newspapers per page and per advertisement. The Stamp Act of 1712 was an attempt for the government to control and profit from the news industry. It took another hundred years for these taxes to be lowered and eventually abolished (Thompson, p. 115).

These newspapers allowed groups of people to witness events at almost the same time; and those who could not read the papers often heard it in public readings (Thompson, p. 115). News became a link between public and “private” issues (such as politics), and people had the opportunity to debate in real, back-and-forth discussions. It was no longer a privilege to discuss politics; it was almost necessity (Starr, p. 24). With the development of what Habermas calls the political public sphere² there was a breakdown in political privacy, political opinions and views, and people began to accept political differences (Starr, p. 24).

² A more mature, open public sphere than the former literary sphere

Salons became beacons for information, and if anyone wanted the latest news or debate they would know where to go. Because newspapers were very portable, people could branch out from these public places and take debates home with them. The lines between public and private debates began to disappear with newspapers. Debates with friends at salons became debates at home with family, and vice versa. If one became an “expert” in a specific debate, people would often return to them and bonds would be made. Groups would link with other groups; families could link with other families. “Readers know that others are also seeing it [the news] at roughly the same time, and they read it differently as a result, conscious that the information is now out in the open, spread before a public that may talk about the news and act on it” (Starr, p. 24).

Finally, much more up-to-date news was available to anyone who could read, in any variety of languages. German papers spread to other countries in the 1620s, England received translated news from in 1622 from Dutch papers, and France even had two papers appearing in 1631 that arrived from other areas (Starr, p. 32). As previously stated, this was the time in which the public sphere began to change itself. Because the news was more up-to-date, people began to debate recent topics in the salons. Not only were the topics recent, but also because of the widespread circulation and the amount of languages that the news was printed, news became obtainable by anyone regardless of social status. The public sphere disregarded social status within the salons and replaced it with status based on better arguments and discussions, the “experts” gained their own “status” within the public sphere (Habermas, p. 36). These experts became the spokespeople for the public, someone who knows the public opinion on a subject and can

voice many opinions at one time (Habermas, p. 41). Social networks began to form between people and groups, complete with leaders and followers. Some of these leaders even printed their own publications on matters that were most important to them.

Social Networks within Newspapers and the Public Sphere

Using the term “social network” here should not be confusing when speaking about newspapers and the public sphere. Today we think of a social network as an internet-based phenomenon, a system of users collaborating online. The term “social networking” does not mean linking *users* online, in *Social Network Analysis: Methods and Applications* by Stanley Wasserman and Katherine Faust (1995) it is simply the linkages between open “units” or nodes (pp. 4-5). This means that any open group is a social network. The relationships between them allow information to flow between them through their links, once a blockade is in place, information cannot travel and the network becomes a closed network. The literary and political public spheres have always relied on these links, without them there would be no social networks.³

Each social network must have a common bond between its nodes. German sociologist Ferdinand Tönnies writes of these bonds between people and groups in social networks. He calls these bonds the “*gemeinschaft*” and the “*gesellschaft*.” The first term describes bonds between “one’s family” (Tönnies, p. 7), that is: personal, direct bonds with people. The latter term is described as “public life—it is the world itself” (Tönnies,

³ This is especially visible when referring to Paul Starr’s description of the public sphere: “...the sphere of openly accessible information and communication about matters of general social concern” (Starr, p. 24).

p. 7), that is: indirect links in society, tangible links. Therefore, social networks can be drawn from any community; directly by association or indirectly by nature.

No other medium before newspapers has created this great social network of discussion. Book discussions created small groups closed off to those who could not afford or read the books. With the addition of printing restrictions, and lack of modern postal services for public use, books created groups, but not so much networks of groups. Status was still very strong in these groups, and the information was only as up-to-date as the books.

Once the literary groups opened to public opinion and allowed anyone to enter debate they became social networks, information was freely distributed and obtained by anyone in the group or other linked groups. Just as the public sphere relies on the opinions of the group as opposed to individuals, social networks rely on the opinions of multiple groups, not one single group.

The First Internet

The Internet, as it is today is a vast network of users, computers, and websites all of which are conveniently accessible via a computer terminal anywhere on earth. However, this vision of the Internet has only recently occurred. The Internet as we know today grew from a 1960s project by the United States Department of Defense called the Advanced Research Projects Agency Network (ARPANET). An article in *Congressional Digest* (2007) states that ARPANET came from the work of Paul Baran, a RAND researcher who was working on a classified contract with the United States Air Force, the

purpose of this contract was to “identify ways to strengthen the Nation’s telecommunication infrastructure so that it could survive a nuclear strike” (p. 35). His ideas were to create a distributed network of information in which all information was never centrally stored, but spread about on different points of the network. This was the beginning of what we know as the Internet.

The United States was not the only country designing these communications networks. According to Janet Abbate in *Popularizing the Internet* (2006), “[by] the mid 1970s, state-run networks were being built in a number of countries, including Canada, Germany, Norway, Sweden, Australia, New Zealand, and Japan...In addition to these national networks, there were several efforts to build multinational networks across Europe...Some of these networks were, like ARPANET, designed for research and education; others provided commercial network services” (Abbate, p. 323). Although networks were being designed in other countries outside of America, most of these networks remained unlinked.

Because ARPANET (and others alike) was government funded and controlled, heavy restrictions were placed on its use. The network was only available to more elite and knowledgeable crowds; government agencies, universities⁴, and research institutes. Another reason for the slow growth of the Internet from 1968 to 1981 was that early computers were not designed for personal or home use. When the first personal computers were introduced, they were very expensive; many lacked the tools to connect to the network (modems), and the connections to networks themselves were expensive.

⁴ Stanford, UCLA, and the University of Utah were three of the first linked institutions (Congressional Digest, p. 35).

Finally, in 1987, the National Science Foundation (NSF) aided the United States in the creation of a “civilian replacement for ARPANET” (Congressional Digest, p. 37) and in 1990 ARPANET was decommissioned and the modern Internet, the World Wide Web (Web)⁵, was born and in 1991 commercial restrictions on it’s use are lifted (Congressional Digest, p. 37), and the Web becomes a “public” area.⁶

Comparing Web to Books in the Public Sphere

This public area called the Web is much like that of the first public sphere, the literary public sphere; information is available but the means of obtaining the information are still closed off to most. It will be another 10 years before the “political public sphere” of the Web arises. This is due to technological advancements which lower costs of equipment and connections, as well as an increase in the speed information can be obtained and sent (bandwidth).

The first generation of the Web, Web 1.0, can be compared to the book in terms of the public sphere. Both the book and the Web were advancements of a parent technology; the book was an advancement of print, the Web was an advancement of the Internet. These were huge steps in creating a larger public sphere, but they both were constrained by costs and literacy. Much like the book, the Web came out of the government’s removal of restrictions on a parent technology. Removing these restrictions allowed for information to flow much easier, but the only ones that were getting this information

⁵ Although this term was around in 1989, it was only a theory developed by Tim Berners-Lee (Congressional Digest, p. 38).

⁶ The word public is in quotes because I use the very loosely at this point.

were people who could afford the high costs of equipment and connections--mainly the wealthy, educated, and government/business types. Once again, the public sphere was closed off to only the upper-class people of the world.

Although these people had access to the information, most of the information on the Web was static information. This information could be out-of-date by several days or even months. Static web pages were setup in order to give information, not to spark debate and create community. Books were much the same way for the most part; the information found in books was static, and often by the time it reached the readers was out of date. Books were to inform, not to create communities. One method of communication was still available in the Web 1.0, e-mail.⁷ E-mail was an instant method of contacting a person, a huge step in communications; however, e-mail was not public. When a user e-mailed another user this information is sent behind closed doors and no one from the public will see this information. E-mail was instant communication, but it was not creating public opinion and debate, the term *instant* back then was not the same instant, as we know today.

Another issue with the Web was that information was difficult to transmit. Bandwidth on the Internet was restricted due to the types of connections used on its backbone; the connections could only send so much information before it would slow down. Websites were severely limited on the types, and amount of things that can be put on it--the larger the files (images, music, etc.) the longer it would take to send and receive them. This is reminiscent of the couriers before the 1600s; quality and quantity were

⁷ E-mail was developed in 1972, but this was the preferred method of communication with Web 1.0

both factors, as was speed. Web communication networks were in need of a modernization, but in 1995 private organizations like America Online and CompuServe began to provide dial-up access at low costs (Congressional Digest, p. 38). Still, only 5% of American households had Internet access (Bower, p. 282). In 1996, the first cable Internet service was offered (Congressional Digest, p. 38). This new service allowed for people to have fast Internet connections, much like large businesses have, in their private homes. However, these services were still more expensive than the typical modem connections. Much like the early postal systems, costs were still too high to effectively send information. It wasn't until 2004 that the Internet came out of the literary public sphere and into the political public sphere. The broadband revolution began, and in 2002 more than 50% of American households had Internet access (Bower, p. 282), that number has increased since then to about 70%. According to the website *Internet World Stats*, in 2003 the number of broadband subscribers in the United States rose from 26 million to roughly 39 million (Argaez, 2003). The number jumped again to 49.6 million in 2005 (Argaez, 2005). What caused this sudden jump in broadband usage were newer technologies, technologies that we now call Web 2.0 technologies.

Comparing Web 2.0 and the Newspaper

Web 2.0, a term coined in 2004 by O'Reilly Media (O'Reilly, 2005), is the second generation of web technologies; these technologies include blogs, BitTorrent, wikis, and Facebook. What these technologies allow is for instant updating of information as events happen. Not only is the information instant, it allows users to interact with one another

and debate in real-time on the web. An entirely new stratum of communication was created, and the Internet finally became not only a social network, but the largest social network in history.

Web 2.0 can be compared to the newspapers of the 1600s in many ways. First, the newspaper came from people wanting more up-to-date information than was already out there; books contained vast amounts of knowledge but they were usually outdated by the time the public could get them. Newspapers gave people a continuously updating means of gathering information, newspapers changed everyday, and debates changed everyday. Web 2.0 can be seen in the same light; people wanted more up-to-date information than what the Web 1.0 could offer as well as a method to debate with people on these events. Web 2.0 allowed people to literally watch news unfold and comment on it as it was happening.

Web 2.0 brought with it online social networking systems (SNSes). SNSes allowed people to link to one another by means of real-bonds (family, friends, etc.), or by indirect bonds (interests, etc.), the “gemeinschaft” and the “gesellschaft.” Some examples of SNSes are Friendster (2002), MySpace (2003), Blogger (2003), and Facebook (2004). Although these were each separate systems, each was open to the public, so a user of MySpace could have accounts in any number of these SNSes. These were like the salons of the past, people would gather in these centralized areas and interact, converse, and debate on various topics, all within the public's view.

Much like the printers of the 1600s, technology companies notice this growing trend of social networking online and started to create their own (or buy already existing

networks).⁸ Again, like newspapers London in 1750, there were many places to get information, and SNSes and user input became a commodity, just as news did in the 1600s. SNSes were not the only places utilizing these new technologies for profits.

USA Today, the United States' most circulated daily newspaper, launched a comment system on their website in March 2007 (Kornblum, 2007). This comment system allows for readers of the online newspaper to start debates with other readers of the same article, much like a newspaper article debate in a salon. "The hope is the intelligence of the crowd will help inform the news in the long run..." (Kornblum, 2007). People are stripped of status on these systems, and the only way to gain approval is to have a good argument.

Not only are news outlets using comment systems, political candidates are using SNSes now. The first candidate to have a blog on his website was Howard Dean. Dean's blog allowed comments from visitors and by September 2003 Dean's blog had roughly 30,000 visitors per day (Gill, 2004, pp. 4-5). Politics had realized that SNSes were now the easiest, and fastest method to get information to the public. Finally, people young and old were discussing politics in public; political differences were accepted once again into the public sphere. The walls between the public and private spheres of the Internet and politics were once again invisible.

As people became more connected their lives became more public. Users post daily in personal blogs, and do much of their personal business online. Much of these blogs are publicly accessible, and much of the blogs are comment-able. So now, people's

⁸ Google purchased Blogger in 2003; Newscorp purchased MySpace in 2005. Microsoft launched Live Spaces in 2004, etc. (Boyd and Ellison, 2007)

lives can be debated and commented on in the public. When a user posts in a blog about their life, the line between their private sphere and the public sphere disappear and become one, the blogosphere. Blogs are moderated by their owners, the “experts of the blog”, and are usually focused on specific topics of fields. This blogosphere is one of the salons of today.

Tools have been created to aid bloggers in gathering more information in less time. One of the first, and more popular methods is RSS ("RDF Site Summary", also known as "Really Simple Syndication"). RSS is a technology in which users can tell a program, a RSS reader, to get the information from any number of websites that allow syndication. These readers then populate the information in small summaries for the reader to view. This tool is very much like that of the corantos of the 1600s. Both allowed readers to get their news from any number of sources, and read summaries as opposed to long articles. Tools like this allow people to get more information in less time than before; thus, they can be knowledgeable in any number of topics for debate.

War has always been a source of political and technological change. Following the 9/11 attacks in 2001, the blogosphere began to grow at a tremendous rate. And in 2003, as United States and British forces moved into Iraq the blogosphere once again grew (Gill, p. 3). People were interested in the war, and wanted to voice their opinions regarding it. *War Blogs* were created and the genre of debate shifted from technology to politics. Newspapers also reported on wars in foreign nations, and people read as the wars unfolded. War was also the reason for many publications such as newspapers and pamphlets. Thomas Paine published his famous pamphlet *Common Sense* in 1776; the

reason was to inform the public and to start a revolution. *Common Sense* sold over 150,000 copies and reached an audience several times larger than that in a single year (Starr, p.67). War politics was forever changed, the public was always watching and always aware.

Another technology that has advanced since the early days of the Internet is chat. Internet chat is an instant form of talking to someone across any distance through his or her computer. The term *instant* used here means just that, immediately. In order for both users to chat, both users must be available and online at that moment. This is the ultimate in back-and-forth debate online. Chatrooms allow any number of users to chat instantly to one another; these chatrooms are another form of virtual coffeehouses for people to debate news and public opinion topics. Each chatroom has moderators, these are the “experts” of the groups, and they moderate the flow of the chat. They gain this status by proving themselves in debates and providing helping information and comments to those chatting in the room. Moderators change depending on topics and rooms, but this is just like the salons of the 17th century; there are groups of regulars, and there are experts in specific fields.

Conclusion

Looking back at early technology its no wonder why people were reluctant to speak of politics, religion, and art; they knew nothing of much of it. Books gave a glimpse inside the art galleries of the world, they helped people imagine what foreign places were like, but they knew nothing of current lives, or events. Reading a book prior

to print required much education, money, and time. Those who were able to afford these books still had no idea of the events unfolding at the present. Print revolutionized the spread of information, but information was not solely reliant on print. What was needed were better communication methods; something that everyone could use regardless of status. When modern postal systems arose from the first private systems, information finally had the legs to travel distances that it couldn't before. New methods of news printing arose and the newspaper came to the public.

The newspaper was the spark to light the flames of debate in the public sphere. More people were reading, more people were talking, and more people wanted to listen in. This constant flow of news started a tidal wave of innovation in how we get our news, even today. Out of the newspaper came reporters, classifieds, reviews, news agencies, news magazines, websites, and even blogs. People crave information and debate, and the newspaper was the first medium to deliver it to the masses on a daily basis. Just as Web 2.0 changed our technology today.

Without the new technologies of Web 2.0, the Internet would still be a vast network of closed doors. When the Web changed, so did our knowledge of the world. Exactly like newspapers, Web 2.0 gave people the chance to get up-to-date information everyday. With innovations such as broadband, and cheaper computer equipment the doors of the Internet opened up. The “literary public sphere” of the Internet matured and created the “political public sphere” of the Internet.

The newspaper was the first technology to erase the lines between public and private, and it gave hope to other technologies down the road. This one innovation

showed the public that it can be informed, and that its voice is heard loudly. These public debates started from within the salons brought about revolutions in art, society, politics, and other technologies.

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