

How google has used the internet to dominate today's advertising industry

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The Effect of Technology on Advertising through Mass Media and How Google has used the Internet to Dominate Today's Advertising Industry. Advertising is not a mass medium, but it relies on media to carry its messages (Vivian, 2003, p. 302). And just as advertising relies on mass media, mass media relies on technology to carry it. Looking at one without the other is hard to do, because their growth feeds off the progress of one another.

Advertising is a message business on the cutting edge of change in our culture. It not only reflects that change but is usually in position to take advantage of change (Wilson & Wilson, 2004, p. 345).

In the following paper I will be examining this change, along with the effect of technology on advertising through mass media. In addition, explaining how Google has used the internet to gain a competitive advantage in today's advertising industry. The concept of advertising dates all the way back to early civilizations, where in 3000 B. C, Babylonian merchants hired barkers to shout about their products in the market place to potential customers (Wilson & Wilson,

2004, p. 344). Modern day advertising would not be seen until the 15th century after Johannes Gutenberg developed movable type.

The invention of the printing press allowed mass production of printed word to be possible and in turn created the first media for mass advertising.

Advertising did not show up in the colonies until 1704 when publisher John Campbell of the Boston News-Letter ran an advertisement wanting to sell an estate on Long Island (Vivian, 2003, p. 302). Ever since then Americans can

hardly even turn the corner, turn the page of the news paper or turn on the television without being subject to the constant barrage of advertisements. Fostered by the growth and needs of the industrial revolution, Benjamin Day created the first penny newspaper called the New York Sun in 1833.

What made Day's penny newspaper so successful was just that, it only cost a penny. He recognized that he was not going to profit from the revenue of newspaper sales but rather the service he provided to advertisers. Even in the first issue Benjamin Day wrote, "The object of the paper is to lay before the public, at a price within the means of everyone, all the news of the day, and at the same time afford an advantageous medium for advertising" (Vivian, 2003, p. 303).

With the increasing number of newspapers and magazines by the mid 1800's, the opportunities and options for advertising were numerous. In 1869 Wayland Ayer opened the first advertising agency that created the template for modern agencies to follow. He speculated that merchants and manufactures would welcome a service company to help them create advertisements and place them in publications (Vivian, 2003, p. 304). By the turn of the 19th century there were advertisements for just about every product and service but many of the early advertisements were deceptive and exaggerated. For example, during this era many vendors advertised patent medicines that claimed to cure everything from cancer to baldness.

In reality these potions advertised and sold to millions cured very few and put even more people at risk because some contained high alcohol content,

morphine and cocaine (Wilson & Wilson. 2004, p. 346). As a result in 1906 Congress passed the Pure Food and Drug Act to control such advertising and in 1913 the Federal Trade Commission was formed to regulate untruthful claims in advertising. Due to this black mark on advertising's reputation left by the exploitations of greedy entrepreneurs of this era, many Federal Agencies and advertising codes of behaviors have been established since. These include the Federal Communications Commission, the Food and Drug Administration, National Advertising Review Council and the American Association of Advertising Agencies. The early regulatory agencies were put in place just in time for the next breakthrough in mass communication. Thanks to the contribution by a list of scientists and researchers like, James Maxwell, Heinrich Hertz and De Forest the radio was born.

It was not until 1922 radio stations started selling airtime to advertisers. It was not until five years later when network broadcasting began to emerge that the full potential of radio advertising reached with the formation of NBC and CBS (Wilson & Wilson, 2004, p. 346). Ironically most of the radio programs were not produced by the networks but by advertising agencies. By 1932, more airtime was spent on commercials than on news, education and religion combined (Gross & Fink, 2006, p. 27). One advertising agency capitalized on radio technology by creating a new type of daytime drama for Procter & Gamble's soap products. These dramas soon became known as soap operas (Wilson & Wilson, 2004, p.

346). Despite its popularity and success the heyday of radio was short lived with the introduction of television in 1930's. The early innovation of

television was lead by two major figures, Philo Farnsworth and electronic juggernaut, RCA head Vladimir Zworykin. Both developed electronic scanning technology for televisions; however, Farnsworth came out on top in 1930 when he won his patent. He would later become known as the father of television (Gross & Fink, 2006, p. 48). The growth of television would not take off until after World War II and it was not until 1948 television emerged as a mass medium.

Many of the early TV networks were offshoots of radio networks, among the networks to recognize the transition in broadcasting was CBS and ABC and NBC who is owned by RCA . By 1952, 15 million homes had TV sets and television advertising revenues reached 324 million dollars (Gross & Fink, 2006, p. 51). Most of the early TV content, much like golden era radio programming, was controlled by advertising agencies but during the 1950??™s that would begin to change. In order to gain more control of network programming president of NBC Pat Weaver, developed what he called the magazine concept. This format allowed advertisers to purchase insertions in programs while networks supervise and produce content.

As a result commercial television was born and by 1960 all three major networks used this format (Gross & Fink, 2006, p. 55). By the 1970??™s the communication act of 1934 was becoming out dated and as a part of the deregulations, the FCC lifted restrictions on how much advertising a station could program.

This opened doors for new types of programming including home shopping and infomercials, which are essentially total advertisements (Gross & Fink, 2006, p. 70-72). But during this same time period unbeknownst to print, radio or television a new medium was taking shape that once again would change the relationship between people, mass media and advertising.

The internet began as a military communication system, which expanded into a government funded civilian research network. In 1969 the U. S. Defense Department created a computer network called Advanced Research Projects Agency Network (ARPAnet). The Pentagon built the network for military contractors and universities doing military research to exchange information (Vivian, 2003, p. 222).

Soon the project was taken over and founded by the National Science Foundation (NSF) whose mandate was to promote science. The NSF instituted an Acceptable Use Policy, limiting any commercial use of the internet and encouraging researchers to only exchange e-mail or share files with people within their fields of expertise (Warner & Buchman, 2004, p. 449). The next name in the progression the internet can be mentioned among the most influential names in mass media. As Johannes Gutenberg was to the printing press, Tim Berners-Lee was to the World Wide Web. An Oxford engineer and researcher at CERN research facility in Switzerland, he developed protocol which allowed computers to communicate better over the internet which allowed any computer on the network to browse another's content. Many of Berners-Lee's contributions including hypertext markup language (HTML), universal resource locator (URL) and

hypertext transfer protocol (HTTP) still remain the cornerstones of the Web today (Vivian, 2003, p.

217). In 1994, once these key internet coding innovations were put into place, the NSF lifted the Acceptable Use Policy and the internet became a commercial medium. Between 1993 and 1996 the number of Web sites one could visit grew from 130 to more than 150, 000 (Warner & Buchman, 2004, p. 450). With the almost exponential growth of information on the Web and the cost of personal computers becoming more affordable, internet traffic was surging. As the web took off two major questions were being asked: First, how to organize and search all the information on the World Wide Web and second how to make a profit from it.

By the mid 1990s the use of the internet was no longer solely an instrument of academia and was now accessible to everyone, but this created a problem. As the internet continued to gain popularity and the frequency of the users increased the psychology of the user had shifted from exploration (what's out there), to expectation (I want to find something that I know is out there) (Battell, 2005, p. 61). With this problem and mounting frustrations came the introduction of search engines, web portals attempting to organize the information on the internet into something useable. Two different approaches were taken when creating the earliest search engines. There was the much more time and labor intensive directory method, which categorized websites by topic and relied heavily on human classification for quality of search. Then there was the automated

approach that entirely depends on computers and algorithms to compare the words of the query with those in database to find results.

Automated search engines have three core components. First is the crawl, which gathers every possible page on the web. Second is the index, the massive database created by all the information collected by the crawl. And the third comprises the user interface and search software, which takes the index and makes it available to the end user (Battelle, 2005, p. 45). Initially automated search was more expensive and complex, but as technology progressed and hardware was made more affordable this method of search became superior and fell into favor. By no means was Google one of the first search engines; actually they entered the game of search pretty late.

Before Google there were other search engines like Archie, Wanderer, WebCrawler as well as search engine and portal giants like AltaVista, AOL, Lycos, Excite, Yahoo and Netscape. In 1995 the standard for search engines set when microcomputer business Digital Equipment Corp. (DEC) wanted to show off the power of its new processor by downloading the entire internet and AltaVista was created. Within a year AltaVista, an automated search engine, had served more than 4 billion queries and by 1997 was the king of search serving more than 25 million search queries a day (Battelle, 2005, p. 51). But its reign would not last long, due to lack of managerial vision, company politics and DEC's loss of market share in the microcomputer business AltaVista would never reach its full potential. Over the years trading hands in many acquisitions, new owners shifted the focus from search to profit allowing AltaVista to be surpassed.

Another mega search engine at the time was Yahoo. What made Yahoo different than the rest search engines was that they used the directory method. The directory navigation of the internet was very logical, especially to novice users, breaking down the links into categories and subcategories making Yahoo very popular. But at the rate the Web was growing it was unrealistic to manually organize all of its information.

??? We had to make a business decision about search??|search as a standalone service was very capital intensive ??| the economics had not yet emerged to justify the investment??? said Yahoo??™s CEO Tim Koogle (Battelle, 2005, p. 63). Eventually AltaVista became the search provider for Yahoo. With the question of how to organize the Web being answered with literally dozens of companies out do so, the next question to be asked was how to make money off it Unfortunately for search pioneers like AltaVista, Yahoo, Excite and Lycos it was impossible to create a pure search service that that was economically viable. The market was still too immature and robust and business models were years from fruition (Battelle, 2005, p.

49). To grow they all needed more capital and more traffic. The solution was advertising. Taking a page out of the book of print media, search engines provided a service to advertisers as a venue to reach the growing number of internet users. ??? A few search engines, hungry for cash, accepted money from websites in exchange for placing their sites in the search results??? (Vise & Malseed, 2005, p. 87).

Another common solution many of the search engines turned to was the public market. With the influx of cash from being traded publically, a frenzy of acquisitions and mergers were made in a scramble to gain dominance in internet traffic. This veer from their core mission of search and new added pressure from stockholders to turn a profit was their downfall. As a result, these choices left an opportunity in the business of search for a couple a college kids that would revolutionize the internet. As the Web continued to grow by the late 1990^{??}™s, and more pages were assembled and indexed, search result quality was deteriorated (Girard, 2009, p. 14). Two Stanford PhD candidates Larry Page and Sergey Brin, were fed up with the inefficiency and bias of the current Condition of search. In their 1998 paper titled, ??? The Anatomy of a Large-Scale Hypertextual Web Search Engine, ??? ??? Junk results often wash out any results that a user is interested ??? (Girard, 2009, p.

14). The problem Page and Brin discovered was how search engines ranked the importance of the websites that appeared in search results. To determine link-rating some search engines relied on cumulative use. This method took number of visitors to the site and the duration the visitors spent on the site to measure the websites quality in regards to what was entered in the search. There were advantages but this method also had inherent flaws. Cumulative use did not take into account tabbed browsers with multiple pages open and a webpage could easily inflate their rank with programs designed to continually visit the site pushing their site up the search page (Girard, 2009, p. 14).

In contrast Page and Brin approached the subject more scientifically, instead of determining importance by number and duration of hits they decided to measure links by reputation. Reputation on the internet was determined by the number of links; the greater number of links on other sites the better the reputation. This formed the basis of Google's™ search algorithm. Larry Page cleverly coined this new method of link-rating, PageRank. It was a new way to search the Internet for information that returned prioritized results based on relevance.

It put search results in a logical order for computer users. For the first time, there was a way to do an Internet search and find useful answers swiftly (Vise & Malseed, 2005, p. 39).

In the fall of 1998 Brin and Page took a leave of absence from Stanford University to create Google Inc. and tackle their overly ambitious mission of organizing the world's information and make it universally accessible and useful (Girard, 2009, p. 11). Larry and Sergey were two very intelligent people; however, they did not do all this on their own. They were in an environment that fostered innovation and ingenuity at Stanford, which was also the alma mater of Jerry Yang and David Filo the founders of Yahoo. They were in prime location in the heart of Silicon Valley presenting them with connections and opportunities unlikely to be seen otherwise. Lastly, they impressed a couple of venture capitalists enough for 25 million dollars to get up and running. Originally the business idea was aimed at licensing the underlying search technology to a variety of other Internet companies and enterprises (Vise & Malseed, 2005 p.

84). But with the recent . com boom bust, Silicon Valley investments folding and the number of competitors not a lot of companies were willing to take the risk. This did not discourage Page and Brin, so rather than focus on licensing its search technology to businesses, they decided to concentrate on profiting by allowing advertisers reach their growing and loyal legion of users (Vise & Malseed, 2005, p. 87). At first they were reluctant, they believed that advertising corrupted search by tainting the search results showing a bias to the advertiser and not giving the user the information they were looking for. Anything that compromised the relationship of trust they had with their users would be unacceptable to them, even if it generated a lot of money for Google.

Their motto was simple don't be evil. While Larry and Sergey didn't care about getting rich quick, they didn't want Google to go under either. If the business could not sustain itself, they would not be able to fulfill their vision of making all of the world's information easily available to user without charge (Vise & Malseed, 2005, p.

85). It was not worth it to Brin and Page to compromise Google's philosophy in order to succeed which was: Focus on the user and all else will follow. Always taking great care to ensure search results will ultimately serve the user rather than our own internal goal or bottom line (Google.com, 2000). Treading lightly and consulting with many people about ads, Brin and Page decided to follow in the footsteps of another mass media titan, television.

Google would continue to keep search results free ??” just as television networks offered entertainment and news for free ??” and would look to make money by selling unobtrusive, targeted advertising to businesses on the results page (Vise & Malseed, 2005, p. 87). Just like writing all of their own software, building all of their own computers Page and Brin decided to sell advertising space themselves. Doing it themselves gave them total control, enabling them to avoid potentially dangerous conflicts and any perceptions that might damage Google??™s structure or brand name. This path also allowed Google to keep 100 cents of every dollar instead of sharing proceeds with an advertising agency (Vise & Malseed, 2005, p. 88). By the middle of 2000 Google was handling 15 million searches a day compared to the 10, 000 of a year and a half ago and all of this without a single dollar spent on company advertising.

??? They believed enough in the superiority of their search service to feel that the average user would be an eager advocate on their behalf, happy to tell a friend about the new tool they had discovered??? (Vise & Malseed, 2005, p. 95). Still many skeptics questioned if Google??™s ability to make it as a search business gave away results for free ads and refused to accept both banner ads and paid placement in search results. Within the next year the critics were silenced. In that time span Google was announced the official search provider of Yahoo, expanding its online profile by millions of additional users daily. Google became the world??™s largest search engine, with more than one billion pages in its index. To top it all off Google was

performing an astronomical 100 million searches per day, 10, 000 every second.

CEO Eric Schmidt even made a rather surprising prediction, estimating it would take Google 300 years to organize all of the world's information (Stross, 2008, p. 199). Along with unprecedented accomplishments as a search engine Google's advertising program was rapidly growing. Google accredited their strides in advertising to their unique approach of only running keyword-targeted text ads. That means you don't see the ad unless you're searching for information on that specific topic (Vise & Malseed, 2005, p. 99). In a sense Google had turned the advertising world upside down.

Advertising on Google proved to be an extremely efficient way for firms to reach potential customers. Google offered narrowcasting not broadcasting, in other words, it attempted to reach consumers at the point of purchase rather than bombarding ads in locations with the right customer demographics (Vise & Malseed, 2005, p. 118). This made both Google's online advertising and the advertiser's investment more effective and efficient in reaching target market.

Later Google introduced pay per click to their advertising repertoire. With Click-based ads Google only received money every time a computer user clicked on one of the ads it displayed. This feature made it easier for firms to measure effectiveness of ad campaign and gave more control over the prices they were willing to pay for them. But simply paying the most per click does

not guarantee a top tire position in the paid advertisement results. Google also ranks their ads based on two factors. First, the price the company is willing to pay and second, how frequently computer users click on the ad (Vise & Malseed, 2005, p. 117). This ensures the best result for the end user.

Putting the user needs before profit was one of the principles Google was founded upon, staying true to this decision treated them well in search and financially. The search engine generated \$440 million in sales and \$100 million in profit by the end of 2002. This signaled the start of a trend which Google had a major head start, as companies would continue to shift billions of advertising dollars from television, radio, newspaper, and magazines onto the Internet (Vise & Malseed, 2005, p. 120). In 2007, newspaper advertising, which accounts for about 80 percent of most U. S. newspaper revenue, fell 9.4 percent. Adjusted for inflation, ad revenues were 20 percent lower than their peak in 2000. Circulation had dropped about 2 percent each year after 2003 and some papers, including the Boston Globe, lost about a third of their circulation during those years (Auletta, 2009, p. 231). As more people went online to get there news, newspaper revenues and advertising decrease forced newspapers to discontinue many divisions and cut frequency of publication. This also forced newspapers to go online themselves, battling for readers with Google, Yahoo News and the Huffington Post. It was proven when newspapers go online that there is a net increase in readers.

The catch is that since it is online audiences spend less time reading the paper, pay less attention to the ads and advertisers only pay 5 to 10 percent

of what they do for the same ad in a newspaper (Auletta, 2009, p. 232).

Broadcast radio, with the exception of talk sports radio, was losing ground in 2008; revenues began to decline steadily in 2006 and accelerated since.

Many stockholders looked to sell their share but are unable to receive what they think is a fair asking price because investors see no growth prospect for the radio market (Auletta, 2009, p. 236). Satellite radio has faced similar problems.

Despite nearly twenty million customers and a merger between the two satellite providers, Sirius and XM Radio, they are still fighting to afford huge satellite, programming and debt costs. With the introduction of the Internet and its capabilities to provide the musical wants and need of listeners, radio has been plagued by the creation of MP3™s, digital music stores and Internet radio (Auletta, 2009 p. 236). As documented in this paper technology has been both friend and enemy to all traditional media business. According to an Annenberg Center study, the average American family classified as poor spent \$180 a month on media service ??“ mobile, broadband, digital T. V. ect??| – and that did not exist a generation ago. By providing consumers with all these choices, new technology inevitably disrupted traditional habits (Auletta, 2009, p.

238). Television would be no different and not spared from this fate. The audience that once belonged to broadcast television moved to cable, videos on demand, DVD™s, to YouTube and to video games. But with the viewers that are left, the creation TiVo and DVR™s allowed them to skip the ads

broadcasters relied on for revenue. To add to the dilemma, viewers watching the recorded programs were not being counted in the Nielsen rating in turn weakening ad rates. Also not in favor of broadcast television, statistics showed that those between the ages of fourteen and twenty-five were watching less T. V. and spending more time on the Internet and playing videogames (Auletta, 2009, p.

238). Technology is the catalyst of change that mass media adapts to and advertising takes advantage of. To be on the surviving end of mass media one must not get too comfortable by keeping an ever watchful eye on technology. Always look for new opportunities in developing mediums of communication and adapt to changes, because it is going to happen with or without you. Do not recognize advancements too late, because with each generation the reaction time is severed in half; just ask telegrams or BC radio. Not enough time has passed to establish if the relationship between technology and mass media is cyclical but one thing is for certain advertising will always be there knocking on the door of consumers. ?

ReferencesAuletta, K. (2009).

Googled: The End of the World as We Know It. New York, NY: The Penguin Press. Battelle, J. (2005). The Search: How Google and Its Rivals Rewrote the Rules of Business and Transformed Our Culture. New York, NY: The Penguin Press.

Girard, B. (2009). *The Google Way: How One Company Is Revolutionizing Management As We Know It*. San Francisco, CA: No Starch Press
Gross, L. S., Fink, E.

J. (2006). *Telecommunications: An Introduction to Electronic Media* (9th ed). New York, NY: McGraw-Hill . *Our Philosophy*. (2000). Retrieved April 15, 2011, From <http://www>.

[google.com/corporate/tenthings.html](http://www.google.com/corporate/tenthings.html)
Stross, R. (2008). *Planet Google: One Company??™'s Audacious Plan to Organize Everything We Know*. New York, NY: Free Press. Vise, D. A.

, Malseed, M. (2005). *The Google Story*. New York, NY: Delacorte Press.

Vivian, J. (2003). *The Media of Mass Communication* (6th ed). New York, NY : McGraw-Hill.

Warner, C., Buchman, Joseph. (2004). *Media Selling: Broadcast, Cable, Print, and Interactive* (3rd ed). Ames, IA: Blackwell Publishing. Wilson, J.

R., Wilson, S. R. (2001). *Mass Media / Mass Culture: An Introduction*(5th ed). New York, NY: McGraw-Hill.