# Navigational Media: The Political Economy of Online Traffic

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## Introduction

By using documentary and archival evidence to analyse the historical development of search engines from 1994-2010, this chapter shows how search engines have used the development of automatically priced, widely syndicated, paid-performance advertising to become online media powerhouses although they neither originate nor control content per se. Despite predictions from some political economists of media and communications that the Internet would be controlled by large media conglomerates such as Vivendi, Disney, Time Warner, or Bertelsmann, these companies have been relatively unsuccessful in their attempts either to absorb or to compete with the search engines for a share of internet traffic or advertising revenues. The search engine conceptualisation of traffic distribution as the major revenue stream has implications as other services with large audiences and search-like elements, such as Facebook and Twitter, and even retailers such as Amazon and eBay, begin to have greater influence over the distribution of cultural products and other goods. Without a doubt navigational services will continue to gain influence as more and more content and goods are distributed by digital services and advertising money flows to the Internet and other digital platforms at the expense of traditional distribution formats. However, at the present it is still an open question as to whether and how navigational media companies and traditional media companies will compete.

This chapter examines the economic and historical basis of the largest online media companies – the Internet search engines operated by Google, Yahoo and Microsoft. In treating search engines as media companies, there is an immediate objection to overcome: search engines *per se* produce very little in the way of media content. Employees of these companies write no stories, film no videos, record no audio programmes and take no pictures[1]. However search engine companies are, by far, the largest venues for advertising online; and to consider online media

without understanding and analysing their role is to neglect the most central actors in the online media landscape. Given this, the task is to build a new analysis that can include search engines and other media entities that use search functionality and that still retains the sharp focus on the *implications* of the media industry on media content, while acknowledging that these entities produce little in the way of traditional media content.

This article is in the tradition of the political economy of media and communications. This is a tradition which juxtaposes the analysis of politics and economics of the media, as practiced by political scientists and certain types of economists (notably institutional economists) with a critical focus, questioning in particular the development of capitalism as it relates to other societal concerns (e.g., of freedom or justice). For some media political economists this means a concern with how well cultural products distributed through capitalist media outlets can serve to create a more informed citizenry, necessary for the functioning of a democracy. I would extend that to suggest that the political economy critique is essential in understanding how the capitalist media system interacts with non-capitalist and non-democratic systems; and further, to suggest that it is not simply our ability to be informed but also our human rights of self-expression and recognition by others that are implicated in the study of the political economy of the media.

In 1999, the political economist Dan Schiller, citing examples from search engines Yahoo! and Infoseek among others, argued that "[W]e must locate the internet within the evolving media economy. We must learn to see how it fits within, and how it modifies, an existing forcefield of institutional structures and functions." (Schiller, 1999). This article considers the ways in which traditional media and communications institutions have been involved in the search engine business and vice versa. It also considers how other large actors on the internet, such as social media networks and some e-commerce websites, such as Amazon and eBay, are involved in the trade in traffic. Thus, the chapter reveals how search engines have evolved over time to be a key part of the developing new media ecology.

Although much has been made by some scholars of the "newness" of online businesses in other areas (e.g., open source development), many attempts to characterise the economics of the online media industries have used traditional media industries as their base. For example, Carveth (2004) suggests that, in future, all traditional media content, including television, music, and print, will be distributed through the internet. Further, this "threatens the future existence of

older media because the audience will not be open (or even able) to "consume" in the traditional fashion" (2004, p. 280). However, he suggests that media conglomerations will adapt, migrating content online into a converged distribution platform. This analysis of online media economics suggests very little new about online media apart from a new form of consumption. Hoskins et al. (2004), whose volume concentrates on applying positive economic techniques to media firms, also see little new in online media: content production, advertising, and other characteristic activities of media production are analysed in a similar fashion in both online and offline media companies. These studies seem to suggest that the online and offline media industries are essentially the same, but for differences in distribution. While clearly there are similarities, this cannot be whole story, or why would traditional media companies, with many advantages in terms of assets and experience in the media business, have been relatively unsuccessful online? Other scholars, while acknowledging the newness of new media, suggest that new media will simply become an extension of the corporate philosophies of traditional media: "To the extent the Internet becomes part of the commercially viable media system, it seems to be under the thumb of the usual corporate suspects." (McChesney & Schiller, 2003, p. 15). James Curran (Curran and Seaton, 2003, p. 250) argues that the internet from the mid-1990s onwards entered a commercialised phase in which mainstream companies – in particular large media conglomerates such as Bertelsmann, Vivendi, Time Warner, News International, and Disney – began to dominate the Web, owning three-quarters of the most visited news and entertainment sites. The present study, by contrast, finds that large traditional media firms are conspicuously absent from the major online media.

This chapter is based on an analysis of financial statements prepared for stock exchange authorities, press releases, reports in the trade press, archived information on early search engine websites and interviews with senior search engine personnel which, together, were used to build up a picture of the financial and geographical organization and history of the search engine industry. This picture was supplemented with information from other sources such as ratings data, and scholarly publications on search engine technology. The total corpus was well over 1000 documents, including a large volume of corporate press releases (over 600). I also read, watched, and listened to interviews conducted with key personalities, for example, Mike "Fuzzy" Mauldin (Devlin, 1996), who created the Lycos spider; Sergey Brin and Larry Page, the founders of Google (Correa, 2000); and Matt Cutts (Abondance, 2002; Grehan, 2006), a Google engineer who often speaks publicly.

The study first gives a short history of the search engine business (for a more detailed history, see (Van Couvering, 2008). It then examines the centrality of traffic, or audience movement (as measured in clicks) in the search business. Next, it considers the workings of other high-traffic internet websites, including social media networking sites and retailing services. Finally, drawing on these analyses, it outlines the key elements of what this paper terms *navigational media*.

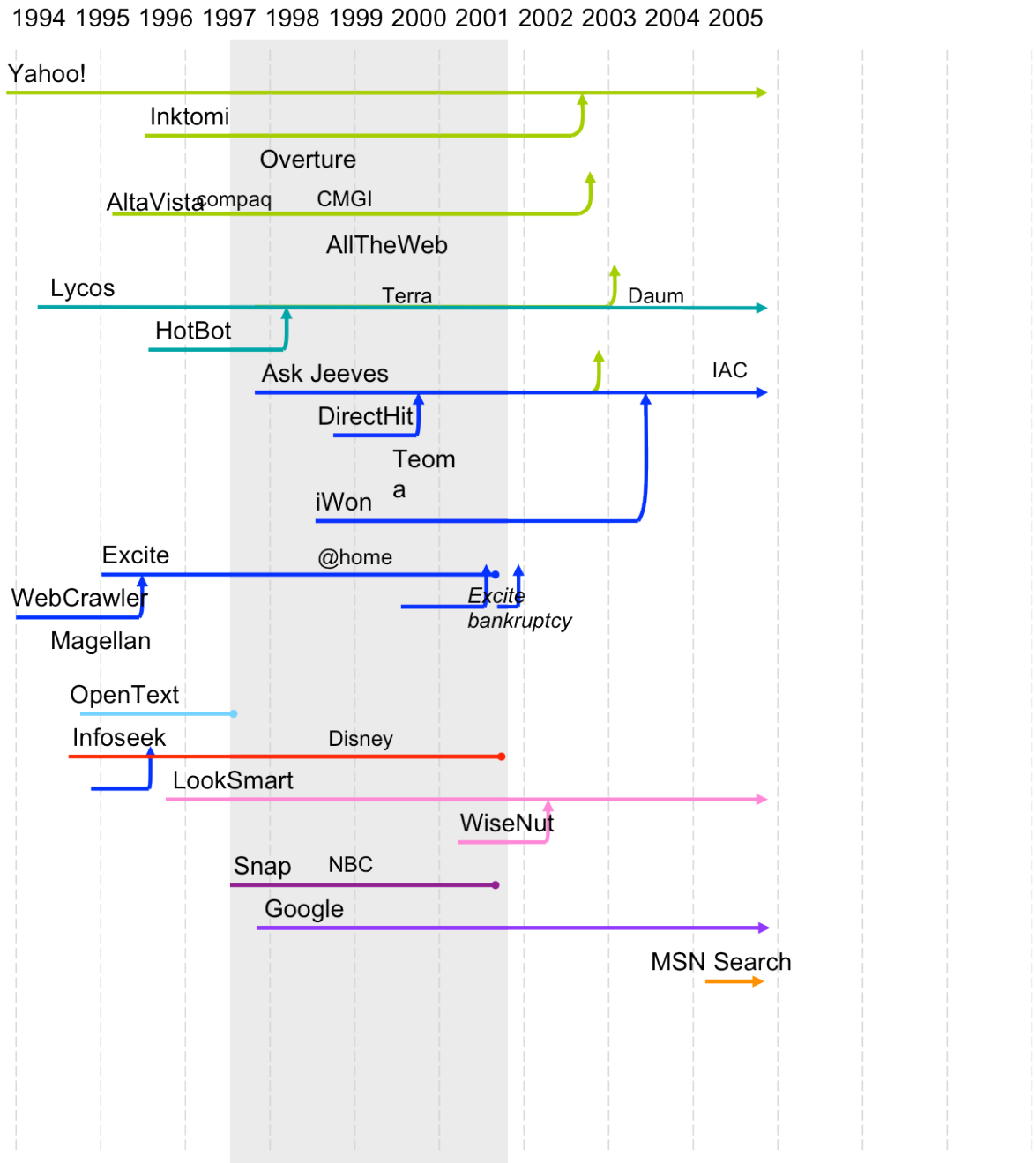
## The development of the search engine industry

The search engine industry has changed dramatically since its inception shortly after the creation of the World Wide Web in 1993. Figure 1 presents, in diagrammatic form, the development of the major internet search engines of the dozen years following the invention of the Web. The chart consists of three periods: first, a period of *technical entrepreneurship* from 1994 to late 1997; second, a period which was characterised by *the development of portals and vertical integration* from late 1997 to the end of 2001, in which major media companies and network providers attempted to buy their way into the search arena; and finally a period of *consolidation and "virtual" integration* from 2002 to the present day. While presented as analytically distinct, these three periods of course overlap to a certain degree; for example, it is certainly possible to find technical entrepreneurs in the middle period (Google and Overture are excellent examples), and attempts at consolidation in the early period (e.g., Excite's early acquisition of Magellan and WebCrawler).

The periods into which I have classified the short history of search engines are essentially based on shifts in revenue models and ownership, and give primacy to the economic history of search over its technological history. Clearly technological innovation is also important; and indeed, the shifts in revenue and economics closely coincide with technological developments and are related to pre-existing structures for capitalising on technology. But a history of technological "successes" is not sufficient to explain the dynamics of the search market, nor can it adequately characterise an industry that generated some $10.7 billion[2] in the US and €6.7 billion (about $8.8 billion) in Europe (according to the Internet Advertising Bureau); that is to say, just under half of all internet advertising.

Of the twenty-one search ventures listed in Figure 1, only five remained independent entities in 2010. Of these, only four produce algorithmic search results of the whole Web: Yahoo, Google, MSN, and Ask. Lycos no longer operated a search engine, but purchased search from Yahoo.

**Figure 1: Search engine mergers and acquisitions in the three periods of search history.**




*Source*: Data from company websites and press reports, compiled by author.

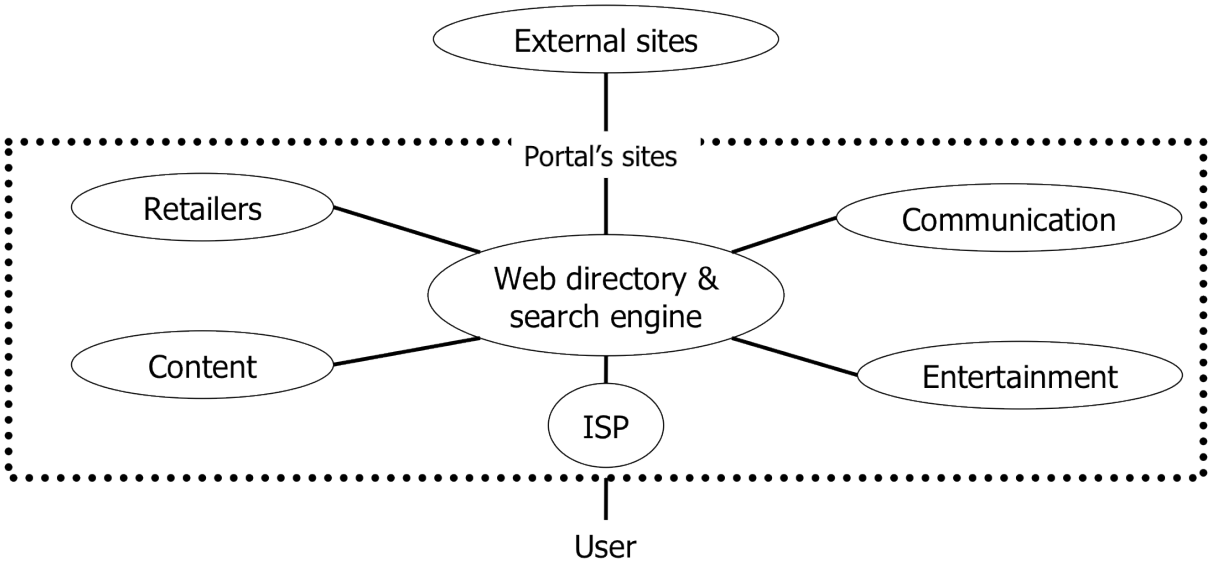
*Technological entrepreneurship (1994-1997).*

The first period of this history shows a competitive industry with multiple companies and different technologies and strategies for navigating the web, including both directories (e.g., Yahoo!, Magellan) and search engines (e.g., Excite, Infoseek). The pattern is one of technological innovation within research centres, primarily universities, followed by commercialisation, using advertising and licensing as business models and capitalisation through venture capital and the stock market. The centre of the industry was Silicon Valley, where a historical linkage between research, technology, and venture capital was already in place (see (Zook, 2005).

*Portals and vertical integration (1997-2001)*. The middle period of the short history of search engines online comprises the heart of the dot-com boom and bust period, that is to say late 1997 to late 2001. It is characterised by the change in focus from search engines to "portals" and the involvement of traditional media and telecommunications giants in the sector. If the first period of search can be characterised by technological innovation and the establishment of a vibrant, competitive marketplace for search technology, in this second period the search engines become focal points for a struggle to control the internet as a whole on the part of traditional media companies and telecommunications providers. Essentially, the strategy was one of growth through vertical integration in the content supply chain – that is to say, the conglomerates hoped to dominate existing portals by running their acquisitions more efficiently, exploiting economies of both scale and scope.[3]

Business texts of the time sought to promote this new kind of vertical integration, touting a concept called the "fully-integrated portal" (e.g., Meisel & Sullivan, 2000, p. 484). The vision of the fully-integrated portal was to control the whole user experience online – it was envisaged that users would leave the portal only rarely to visit external sites (see Figure 2).

**Figure 2: A fully-integrated portal**




*Source*: Adapted from Meisel & Sullivan, 2000, p. 480 by author.

Thus an important element that characterises this phase of search engine development, in addition to the acquisition of many of the search engines by larger conglomerates, is the downgrading of search within the portal; the search engine itself was no longer seen as a key competitive advantage for a portal, but rather as a simple requirement for doing business.

Recall that the vision of the fully-integrated portal was that this mega-website would be so engrossing (or "sticky," as the industry called it) that users would never want to leave. They would arrive through the website of the service provider, browse licensed content, use branded online email, and shop for purchases all within the confines of the portal. But search, of course, is the opposite of "sticky" – the whole point of a search engine is that users search for something and then leave the website. Search seemed like a giant firehose spraying precious audience everywhere on the Web but into the portal. In this period, many important early search engine companies (e.g., AltaVista, Excite, Lycos, InfoSeek) were purchased by traditional media or telecommunications companies (e.g., AT&T, Terra Networks (Telefonica), Disney, NBC) and developed into portals with significant corporate advertising. All of these were subsequently closed, as the dot-com money dried up with the crash of 2000 and parent company content overwhelmed search results.

AskJeeves and Google also made their debuts during this period, funded out of Silicon Valley and very much along the model used by early entrants in the first period. This period also saw the very important development of pay-per-click advertising, debuted by GoTo (subsequently renamed Overture). One of the only pioneers to survive this period was Yahoo, which was never acquired and continued to be publically traded.

***Syndication and consolidation (2002-?).*** The final period of the short history of search is one of consolidation and concentration. This is due to two interconnected dynamics. First, media and infrastructure corporations ceded search to technology companies and were content to buy their search from search providers. Second, the revenues generated from pay-per-click search advertising meant that the large players were able to buy their rivals. In this period, acquisition activity of search technology businesses has been by other search providers – in fact, almost exclusively by Yahoo. Funding during this period has been characterised not by large corporate sponsorships on portals (although some do exist, particularly on Yahoo! and MSN), but via pay-per-click payments from companies both large and small on text ads on search results pages and syndicated to small sites throughout the web.

The online ad market has grown strongly in this period, increasingly funded by growth in "paid search" advertisements, that is to say the type of cost-per-click advertisements pioneered by GoTo, linked to user traffic, whether on search engine sites or syndicated to other websites. This advertising has three key characteristics: 1) it is priced on a *cost-per click* basis; 2) it is *contextual*, linked either to page content or to the users' search term; 3) it is *syndicated* to other websites on a revenue-sharing basis (ie the fee is split between the owner of the website and the provider of the paid search service). Google and Yahoo have received by far the majority of the revenue from these ads. In addition, search services have been syndicated to a large range of ISP home pages. What these very successful syndication efforts have meant is that, effectively, Google and Yahoo have achieved a situation where, without needing to purchase companies, their advertising is carried across the Web through syndicated advertising and audience is directed to them though syndicated search engine functionality.

By the end of this period, entrepreneurial activity within search engines became focused on specialist search engines (such as blog search engine Technorati). The only significant new entrant during this period since 2002, in terms of whole-Web search, has been Microsoft, which

has started afresh several times with different search engine technologies (MSN Search, MSN Live, and Bing) hoping to reproduce Google and Yahoo!'s winning formula. An oligarchic structure has been firmly established, with search engines companies engaging in a range of agreements which syndicate both their results and their advertisements to a range of websites, ensuring a constant flow of traffic both in and out of the engine. The next section introduces the concept of *traffic commodity* as a key element of understanding the short history of search as given above.

## The Traffic Commodity

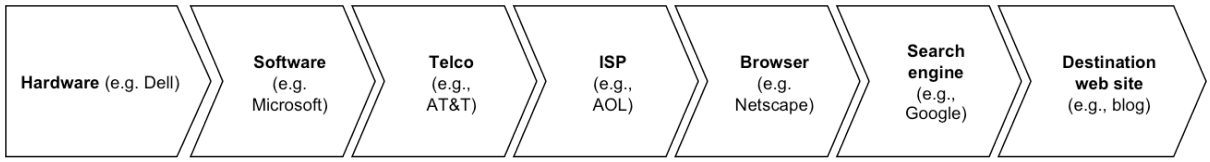
In order to understand the dynamics outlined in the previous section, we can use the vertical supply chain as a means of analysis. The vertical supply chain (sometimes referred to as the value chain) is a tool for analyzing an industry whereby activities are ordered in a sequence, which starts at the early stages of production and works its way through the various intermediaries until arriving eventually at the customer (Doyle, 2002, p. 18). Doyle has recently defined a vertical supply chain for media as consisting of three general phases: production, packaging, and distribution. Thus, the generic media supply chain is based upon taking *content*, that is to say, television broadcasts, news stories, pictures, etc., as the basic unit of analysis. Most traditional media companies have some element of vertical integration along this chain. So, for example, Time Warner owns production companies, broadcast networks, and cable television stations.

However, media companies operate in what is called a dual product market. On the one hand, they sell content to audiences, and it this is the content supply chain that Doyle references. On the other hand, however, media companies sell *audiences* to advertisers. On the internet, where audiences are extremely fragmented, this turns out to be a much more useful value chain to construct, since the problem is not so much getting content to your audience (a basic Web page being relatively easy to construct) but audiences to your content.

To construct a value chain for media audiences, we must begin by considering how audiences get on the internet. First, they must have a computer, and the software to make it run[4]. Hardware manufacturing and software providers are therefore the first two steps in the chain. Second, they must connect to the internet via some kind of an internet service provider whose signal will run

over telephone lines (or, possibly, cable lines). The telephone or cable company and the ISP are therefore the third and fourth steps in the audience supply chain. Fourth, they need a browser to access the World Wide Web. In the early days of the internet, the browser was seen as the crucial point for audience aggregation. When Netscape went public, it was this insight that drove its market price sky high. Finally, in order for the audience to get to their destination Web site, they may very likely need a search engine, especially if this site is small and has little brand recognition of its own. Figure 3 presents the audience supply chain in diagrammatic form[5].

**Figure 3: Supply chain for search engine audiences**



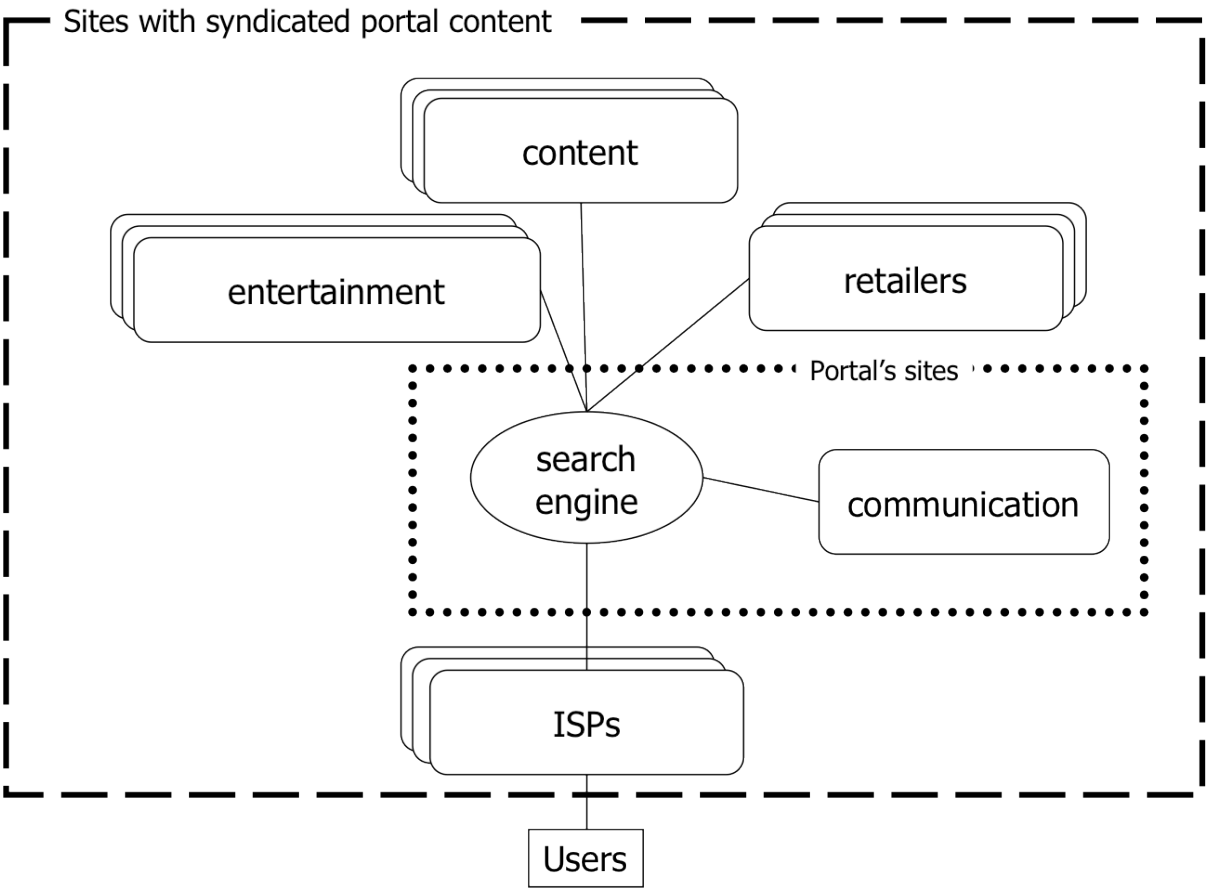

*Source*: author

This second period of search engine history, discussed above, is characterized by attempts at integration – both forwards and backwards – along this audience supply chain.

The introduction of pay-per-click advertising by GoTo (later Overture) transformed the search engine from a loss-leader in the portal business to a revenue generation machine. Of Google's 2009 revenue of $23.6 billion in US dollars, advertising, nearly all of it pay-per-click, generated 97%. However, this type of advertisement was more than simply a brilliant business idea: it was part of a crucial shift in the search engine business. No longer would the *audience* (the traditional media commodity sold to advertisers) be at the core of the search business. Now, the online commodity of choice would be *traffic* or the flow of visitors from one website to another. When audience was the main commodity sold, the key task of online websites was to gather and keep as many audience members as possible, with the ultimate aim being – however unrealisable – to own the whole internet. But as traffic emerged as a key commodity in its own right, sites which had as much traffic as possible – that is to say, as many people coming and going as possible – became the nexus of economic wealth. Search engines were the obvious choices, and the new economic possibilities led to a resurgence of technical competence and the technically complex search product as essential elements of the large online media players we see today.

In his book reviewing the state of research on political economy of communication, Mosco argues for an analysis of market concentration in media markets which focuses on something more than ownership. He suggests that "networks of corporate power" might need to be investigated through "forms of corporate interaction that build powerful relationships without actually merging businesses. These forms encompass a range of 'teaming arrangements,' including *corporate partnerships* and *strategic alliances*…" (Mosco, 1996, p. 189, italics original). In the analysis of the search engine industry, it is syndication of both results and advertising that enable the "networks of corporate power". Earlier efforts at vertical integration have been replaced by what we might term a "virtual" integration along the audience supply chain. In contrast to the fully-integrated portal, the new model might be conceived as a *syndicated portal*, as in Figure 4 below.

**Figure 4: The syndicated portal**




*Source*: author.

The differences between the syndicated portal shown above and the fully-integrated portal imagined by dot-com boom enthusiasts consist not merely of the qualitative difference between ownership and partnership, but also in the quantitative differences of having multiple ISPs, multiple content providers, multiple entertainment venues and multiple retailers attached to the portal. The lines between the search engine and its partners are lines of both traffic and money.

By using syndication both into advertisers and also into partners who are further up the supply chain such as ISPs, the new giants of search have developed a network that extends across the internet. No longer is it necessary to "own" the internet, as those who dreamed of controlling a fully integrated portal did. Rather, by means of "virtual" integration using technology to achieve syndication, Google and Yahoo, and to a lesser extent Ask and MSN are able to stretch their ability to monetise (or commoditise) traffic across the Web, without the need for ownership[6].

One implication of the traffic commodity, as characterised above, is that a range of media, particularly new media but also traditional media, may begin to function differently as they seek to capitalise on the new commodity.

## Search Engines and Social Media

Beginning from about the middle of the first decade of the 21st century[7], social media sites such as Facebook, MySpace, Twitter, Blogger, LiveJournal, Flickr and YouTube began to draw considerable numbers of page views and audience engagement (measured as time spent) to their websites. By the end of 2009, Facebook page views was reported to have exceeded that of Google's search engine in the UK (although just for a few days) (Schwartz, 2009). Given the large market share of search engines and their central place in the web infrastructure as discussed above, this is a fairly astonishing statistic, and the relation of these websites to search engines deserves some consideration. The rise of social media networks has implications for search engines but it is not clear whether search engines will end up competing with, co-ooperating with, or co-opting social networks.

Social media sites are diverse, but have in common an infrastructure whereby users create their own content within a defined technical framework, and also use the supplied framework to link directionally to other users, for example by "following" them (Twitter) or "friending" them

(Facebook)[8]. The content allowed can be widely varied, ranging from personal web pages (MySpace, Facebook), to dated updates (Blogger, LiveJournal), to small snippets including links (Twitter), to pictures and video (Flickr and YouTube). In many cases there is some overlap (updates via Facebook, for example), and third-party services allow people to aggregate connections via various platforms; indeed, some websites published programming interfaces (API's) to facilitate this connection. In some cases, for example, Facebook, technically savvy users can also create their own small applications using these APIs and distribute them to their contacts through the interface.

These sites are not strictly search engines, but many of them incorporate search facilities as an essential element to facilitate initial connections, and to enable users to follow topics as well as connect with other people. They also have other connections to the search industry. Some social media sites are owned by search engine companies: YouTube and Blogger, for example, are owned by Google, and Flickr is owned by Yahoo. Others are still independent (Facebook[9], Twitter), while still others have affiliations with traditional media (MySpace is owned by News, Inc.). While they may not be search engines, there are some areas where these sites seem to share features with the search engine industry, as I discuss below.

First, these sites share with search engines a reliance on outsourced and distributed content providers. Each of the sites listed above provided a technical interface but did not, per se, provide media content – texts, pictures, videos and even small applications – although these are what its users relied on it for. Instead, rather than rely on indexing technologies, as search engines do, users are positioned as active content creators and it is their content that formed the base upon which the social media site operated. Some of this content, unlike the content upon which the ordinary search services are based, is *exclusive* to the service in question, and this provides the service owners with an enormous asset. For example, a post on LiveJournal may only be available to other members indicated as "friends," depending upon the user settings; and a full profile will only be available to "connections" on LinkedIn. Social media sites are quite heterogeneous, so there is at least one important caveat to this: blog content (such as that hosted by Blogger or WordPress), unlike the content produced on other social networks, tends not to be as restricted to other members of the service, but is more freely available.

Second, the reliance on a network of distributed content creators gives social network providers a huge amount of frequently changing content, which is of great value to users, and thus a huge amount of traffic, which is of great value to advertisers. It cannot be stressed enough that most social networks have an *internal* traffic source (their members' content and links) and source of new members (members soliciting friends for new members) and are not as dependent on search engines for traffic as other websites. Like search engines, these services are free to users, and like search engines they typically make most of their income from advertising, although some, like LiveJournal, also charge for "premium" accounts with additional features. Advertising could be charged on a cost-per-click basis; but unlike search engines they could also target ads to a range of demographic or personal details, which had the potential to make each click more valuable. They also had a possible additional funding model, which was the sale of access to their user-created content, including profiles and demographics, to other companies for further commercialisation. In summary, the assets they have and might potentially sell to advertisers or other business partners include: traffic from their network to other networks; profile information about their users; information about their users connections and online habits; the content which their users create on their platform; and technical access to the platform (ie for developers to create platform content, itself potentially funded by subscription or advertising). They might also, conversely, sell services to their users such as protection from advertising on the users' personal pages, additional platform modules (eg games), or extended platform services (e.g., being able to message friends-of-friends directly). Having said this, at the end of 2009 there was no uniform business model.

Three examples help to clarify this: the cases of Facebook and Twitter, two independent providers of highly-successful social-networking websites, and Technorati, a search engine based on blogs. Facebook's funding model was to provide demographic- and interest-based targeted advertising on either a CPC or CPM basis. Although you could search for people or groups on Facebook, there was no generic search – ads were purchased by demographic and interest targeting, just as is the case with traditional media, but unlike the case of search ads, which are based on user behaviour in the form of clicks. Facebook's revenue stream was additionally heavily supported by Microsoft, which took a stake in the company in 2007. Microsoft's Bing search was integrated into the Facebook search pages, and only Bing was able to access information stored in Facebook's public profile pages. Twitter, by contrast, appeared to have no revenue stream at all other than investment. Speculation abounded as to how it would turn its

popular service into a sustainable business, with advertising being widely tipped (Tartakoff, 2010). In the latter part of 2009, Twitter took a step towards sustainable revenue by licensing the content its users create to Google, Microsoft, and Yahoo for indexing, for rumoured tens of millions of dollars per year. Technorati belonged to the class of businesses that are not social media but are made possible by social media. Technorati indexed only blog sites, and implemented special search features appropriate to the format, such as ranking by date order (see (Thelwall & Hasler, 2006). Technorati's funding model was also based on advertising and it announced in 2008 that it would begin selling syndicated advertising to its network of blogs (Arrington, 2008).

These three examples represent quite different ways of creating and monetising social media. With Facebook, the user's profile and interests are spelled out and this forms a large part of the content which users and advertisers value. Twitter takes the form of a newsfeed nearly devoid of other personal information apart from linkages between followers and followees. And yet, each of these two websites, in their different ways, has taken advantage of its proprietary network to include search on their own terms by charging for access to the content their users create, including content about themselves, which in turn generates traffic. Meanwhile, Technorati has followed in the footsteps of the major search engines, capitalising on the much more loosely defined and freeform social network of bloggers. In each case, the currency of traffic remains central, and central to understanding the business strategies of social media providers.

Finally, along with the value of traffic, comes the incentive for some users to try to manipulate the system for profit, as search engine marketers and advertisers do. Thus, there exist Facebook, Twitter and blog optimisation services, and Facebook and Twitter spam, as well as straighforward Facebook and blog advertisers, and hundreds if not thousands of profiles, Twitter feeds, and blogs and blog commenters which might be called spam, all dedicated to driving traffic to private interests.

The relation between the large search engines and these social media sites is complex. Since they have their own internal source of traffic, social networking sites can form a large proprietary traffic network with personal data that is not easily available to the search engine. They can also have search-like functionality in terms of driving traffic – many Twitter updates contain URLs, for example, so Twitter functions as a source of traffic to a range of sites, as do blogs, which

often contain links and references to other sites. Social networks are clearly valuable properties: the connection of large traffic volumes with personal data is irresistible to advertisers. But they cannot remain wholly separate from the Internet and increasing the size of the network and the volume of content and traffic must be of paramount importance to network owners. Here the search engines take on their role of connecting traffic through a range of disparate technical infrastructures. Zimmer (2008) calls this mixture of personal data and search technology "Search 2.0" and raises concerns about the clear privacy implications, implications that may well prompt governments to act to restrict it. Thus while search engines already owned many important social networking properties, an uneasy and slightly competitive relationship between the independent networks and the dominant search engines was in place at the end of 2009.

## Search Engines and Online Retail Websites

Social media sites are not the only large websites that have features in common with search engines. Online retail sites also employ search professionals and extensively use search technologies to enable users to find just the product they are looking for in a sea of merchandise. The largest retail sites on the Web, Amazon and eBay, are examples of this. The difference between The New York Times newspaper and Macy's department store are clear. Online, the lines between media company and retailer seem more fuzzy. There is some ambiguity as to whether a listing on eBay or Amazon marketplace should be considered as a sales distribution point or as an advertisement, especially when the retailer does not hold the physical goods themselves. Since eBay and Amazon both offer purchasing functionality, they are typically considered retailers. However, to understand their relations with search engines and other large internet players, it is also helpful to consider them as potential media entities. As with the content of the search engine listings or social networking profile pages, a large part of Amazon and eBay's marketplace content is not generated by the companies in question. Instead, individuals and small businesses list their goods and services. In this way, these companies act as platforms for buyers and sellers to interact, and, therefore, receive some of their value from the traffic which circulates in their network.

In 2009, Amazon.com was the largest retailer online, with $24.5 billion US dollars in revenue. Approximately 30% of unit sales in 2009 were derived from 3rd party sellers who use Amazon's websites to find a wider audience for their products. According to Amazon's annual report,

these sales are recorded as net and are usually lower-revenue, higher-margin products. Even a conservative estimation therefore gives several billion dollars worth of revenue obtained from third parties listing their products on Amazon. Amazon also operates a syndication programme to boost traffic and sales. In 2009, Amazon spent $680 million on marketing, mostly on sponsored search results, portal advertising, and its "Associates" (syndication) programme. Amazon does not pay Associates per click, but rather per sale on a commission basis of between 4-15% based on volume. Portal deals may be either commission or click-based (but probably click-based), while search engine sponsored results are click-based. Working backwards, if Amazon spent, for example, half of that marketing budget on Associates websites earning a 4% commission, it generated $8.5 billion (some 35%) of its revenues from sales due to Associates. This is merely an estimate, as Amazon does not divulge these figures and commission rates vary, but it does show that the syndication programme is likely to be highly important to Amazon's business.

eBay is a more extreme example of a retailer with search-like characteristics. The primarily interface to eBay is either by a search box or by a directory-like category listing. The results of the eBay search return content that a range of sellers (individuals, businesses and agents) have contributed. eBay holds no inventory of its own, acting primarily as a retail platform supplier for buyers and sellers[10]. The traffic it hosts within its network is extremely valuable. Its Marketplace segment, which includes its main auctions business plus a range of fixed-price arrangements and classified ads, generated $5.3 billion US dollars in revenue in 2009. In contrast to a search engine, these revenues are not due to advertising. The content contributed by eBay sellers leads directly to sales, rather than indirectly via advertisements; and in this it resembles early advertising-only search engines such as GoTo and Overture, with the important difference that the eBay platform includes a payment infrastructure. Thus, eBay's revenues are primarily generated by listings fees and final value fees (a commission on the known value of the sold goods). Using the audience value chain presented in Figure 2, eBay might be considered a search engine that has virtually forward-integrated with a range of retail destinations.

The retail networks represented by Amazon and eBay (and other similar websites) generate their own traffic, similarly to social media websites. Historically, these websites have relied on search engines extensively to generate an initial customer base (including a long-running Amazon deal with Excite and a similarly large and long-running Google spend by eBay). In the case of the

online retail sites, it is tempting to conclude that their core commodity is real, physical goods, not the intangible movement of traffic. But, as the cases above have shown, these sites derive much of their income from acting as intermediaries between audience members/buyers and sellers. As Google, for example, introduces similar marketplace-based services such as Google Check-Out, the difference between search engines and online retailers may perhaps be one of emphasis. In any case, search engines both co-operate with and compete with retailers, although the traffic flow at this stage, in any case, tends to be one-way.

## Conclusion: The Logic of Navigational Media

The chapter builds upon the insight that, because of the lack of traditional content production, in order to analyse the search engine industry as a media industry, we must examine at the *value chain for audiences* rather than for content (e.g., news stories or television productions), as is common in the analysis of traditional media (Doyle, 2002). Online, it is technically relatively simple to produce content and make it available, and many institutions and individuals do so. What seems considerably more challenging is to attract an audience. With the inversion of the supply chain we can begin to understand aspects of the history of search that are otherwise puzzling – for example, the failure of the large media conglomerates to dominate the search engine industry as they attempted to do. The value chain analysis shows us that the search industry is based on the creation and exploitation of a new commodity for media: *traffic*, or the movement (in clicks) of visitors from one website to another.

The further examination of the trade in traffic between and within search engines, social media networks, and large online retailers, suggests that a new media logic is in operation online. *Navigational media*, as I call this new logic, can be characterised by the following features. First, navigational media entities primarily produce *media platforms,* or automated arenas of exchange between producers and audiences. These are the algorithmic, technical aspects of the business, and are often considered to be its core competence (although less so in the case of Amazon, which also specialists in logistics). Second, these platforms operate across *complex content pools* that are large in size, extremely varied in terms of producers, and frequently refreshed. The content producers are sometimes referred to as a "community," especially in the case of social networks. The complexity of the content pool renders the automated platform a necessity, since manual discovery of information is too time-consuming and complex. Thus, the media platform

becomes the central way to mediate connections between audiences and producers. If the content pool is the network, audience traffic, enabled through the platform, are the connections within the network. These connections are used by navigational media businesses as a core, saleable asset, in the form of per-click advertising fees, referral fees, commission payments, etc. In order to broaden the content pool and increase traffic, the *syndication* of platform-based content, whether advertising or listings, is common. Finally, the value of traffic leads also often to the introduction of services to spoof, optimise, or otherwise *manipulate traffic* as part of marketing efforts by other actors than the platform provider.

Within this logic, a powerful platform provider relates to a range of relatively powerless content providers. One concern of political economists of media and communication has been the potential lack of diversity of media content when one powerful voice is heard. In the logic of navigational media, diversity of content is, to some extent, guaranteed by the very size and complexity of the content pool, but it is only guaranteed within the parameters of the platform. On a closed platform, such as a social media website, content may be quite rigidly controlled (for example, to 140 characters only in case of Twitter). On an open platform, such as a search engine, it is more varied. It is also the case that the platform controls (more or less tightly) access to the content pool, so that being banned from (for example) inclusion into the search index can be very serious for content providers, who may often include retailers as well as traditional media businesses or simply small producers of cultural goods such as bloggers.

A second implication of the model of the navigational media is the way in which traditional media companies and navigational media platforms relate. Throughout the short history of search, search engines have been embroiled with traditional media companies in disputes which, primarily, relate to the use of proprietary content as part of the platform's content pool, especially as search platforms have begun to aggregate certain types of content (e.g., news, books, scholarly articles, images, videos, etc.) for display in specialised search interfaces like Google News or YouTube. The content providers' consistent claim has been that it is unethical for the platform provider to harvest the content and sell advertising based on that content (for example Agence France Press, Associated Press, and the Chicago Tribune – see e.g. Goldman, 2007). The search engine's reply has been that they are taking only snippets of the content and subsequently providing the content originators with valuable audience for them to sell in any way they see fit; and courts in the United States have agreed with them, holding that search engine

snippets fall within the "fair usage" exception to copyright protection (Grimmelman, 2007, p. 27). Many of these suits have been settled out of court, sometimes with the search engine agreeing to pay some amount of money to the traditional media provider. But, increasingly, traditional media companies are adapting their practices to suit the search engines, with young journalists being advised to tailor their writing style to be search engine friendly (Niles, 2010) and some large media companies employing the services of search engine optimisers to review their entire website strategies (Kiss, 2008). Rather than the new media market being a mere extension of traditional media strategies or being co-opted by traditional media, navigational media platforms are having a profound impact on the business models and business practices of traditional media, particularly the press and the news business. The eventual configuration remains to be seen.

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[1] Of course, these are diverse companies, and they do produce newspaper-like products, such as Yahoo and Google news. This article, however, focuses primarily on the search service, which is the economic driver for these companies.

[2] All values are given in US dollars unless indicated otherwise.

[3] Economies of scale refer to the benefits that accrue for certain types of products when large numbers of them are produced. In media products, the cost of producing the first copy – for example, paying an author to write a manuscript, editing the manuscript, typesetting the book, proofreading the first copy, etc. – often far outweigh the costs of subsequent copies. This is even more true for digital content such as software, where copying and distribution costs are nearly zero. The technical definition is that economies of scale occur when marginal costs (the cost of producing a single copy of the work) are less than average costs – that is to say the average cost declines the more units are produced. Economies of scope refer to the benefits that accrue to companies who can re-use resources to produce a range of products. In media, you might see economies of scope when *Harry Potter* (the book) is used to provide the basis for *Harry Potte*r (the film) or *Harry Potter* (the DVD). Thus economies of scope technically occur when two (or more) products can be produced and sold more cheaply jointly rather than separately. Media industries tend to seek to exploit both economies of scale and economies of scope, and this in turn leads to conglomerates such as Time Warner, Disney, Viacom, News International and Vivendi (Doyle, 2002, pp. 13-15) which have holdings in radio, television, newspapers, cable television, and so on.

[4] Of course, today some audiences access the Internet without having a computer – for example, from mobile phones or PDAs. However, during this period, the computer was by far the most important means of access.

[5] Although this supply chain is presented horizontally, it is more correctly called a vertical supply chain. Integration along this chain would be vertical integration; backwards integration along the chain is also called downstream integration and integration forwards along the chain can be deemed upstream integration.

[6] It is also worth noting that although emphasis in the industry has shifted to paid search, Yahoo and MSN also retain more traditional "portals" with channels filled by advertiser content.

[7] Social network sites had been launched earlier, as boyd and Ellison's (2008) chronology indicates, but only began to be "mainstream" around 2003-4, with much activity happening in 2006, including the launch of Twitter.

[8] This definition differs only slightly from that offered by boyd and Ellison: "We define social network sites as 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. The nature and nomenclature of these connections may vary from site to site." (boyd & Ellison, 2008, p. 211). The definition in the text above is slightly broader in that it includes sites where the "profile" mostly consists of visual information, such as Flickr and YouTube.

[9] Facebook is not entirely independent, as Microsoft purchased a small stake in 2007.

[10] EBay also has other business segments, including primarily PayPal and (until recently) Skype. These are excluded from the present analysis.