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Google and its power in shaping human knowledge

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Abstract

The process of information searching has been reshaped and constantly changed in this digital age. At present, people information searching practices rely heavily upon Internet search engines. Drawing upon Foucault's Concept of Power/Knowledge, this research study has provided insights into the new phenomenon of power in the age of Google. It firstly explores how search engines work, how page ranking operates, how search results are listed as well as analyses its power in shaping knowledge outcomes. The argument of this paper is that in the field of power represented by Google there is room for agency and choice. If Internet users exercise their own power in searching for information, the Internet users themselves can systematise their own search strategies. They can be certain of their ability to decide whether to trust information they found on the Internet. According to Foucauldian analysis, power is a relationship between search engines and Internet users. In this power relationship, the actions of the Internet users are very important. Therefore, Internet users should actively play a leading action in producing and exercising their own power. To achieve this power, information literacy is imperative. Internet users have to critically analyse and skeptically evaluate the online information they found and incorporate selected information into their knowledge base and value system. If this happens, a search engine will not occupy all the search space, yet all of the users will own their power in shaping the knowledge outcomes in this digital age.

Keywords**:** *Google, Internet search engines, Foucault, power, knowledge*

บทคัดย่อ

ในยุคดิจิทัลนี้ กระบวนการในการสืบค้นข้อมูลได้ถูกปรับแต่งและเปลี่ยนแปลงอย่างต่อเนื่อง โดยปัจจุบัน ผู้คนได้มีการอาศัยพึ่งพาอินเทอร์เน็ตเสิร์ชเอนจินในการสืบค้นข้อมูลเป็นอย่างมาก งานวิจัยเชิงคุณภาพเรื่องนี้ได้นำแนวคิดเรื่องอำนาจและความรู้ของฟูโก้มาเป็นกรอบในการศึกษาวิเคราะห์ที่มุ่งเน้นถึงความเข้าใจอย่างลึกซึ้งต่อปรากฏการณ์ใหม่ของอำนาจในยุคกูเกิ้ล โดยนำเสนอถึงการทำงานของเสิร์ชเอนจิน วิธีการจัดลำดับความสำคัญของเว็บเพจ วิธีการนำเสนอรายการผลลัพธ์จากการสืบค้นว่าเป็นอย่างไร อีกทั้งได้วิเคราะห์เจาะลึกถึงอำนาจของกูเกิ้ลที่มีต่อการเสกสรรปั้นแต่งผลลัพธ์ทางความรู้ของมนุษย์ อีกด้วย ซึ่งข้อคิดเห็นที่สำคัญอันเกิดจากการวิเคราะห์คือ ในสนามของอำนาจที่กูเกิ้ลได้สร้างขึ้นนั้น ยังมีพื้นที่สำหรับความสามารถหรืออำนาจของตนเองและทางเลือกเกิดขึ้น กล่าวคือ หากผู้ใช้งานอินเทอร์เน็ตเข้าใจถึงอำนาจของตนเองและจัดกระทำอำนาจซึ่งดำเนินอยู่ในวงจรของความสัมพันธ์ทางอำนาจนั้น ตัวผู้ใช้งานอินเทอร์เน็ตเองก็สามารถจัดระบบกลยุทธ์การสืบค้นข้อมูลของตนเองได้ พวกเขาจะมั่นใจถึงความสามารถของตนเองในการตัดสินใจที่เชื่อข้อมูลที่พบหรือไม่ได้ด้วยตนเอง ในแนวคิดของฟูโก้นั้น อำนาจคือความสัมพันธ์ระหว่างเสิร์ชเอนจินกับผู้ใช้งานอินเทอร์เน็ต ซึ่งในความสัมพันธ์ทางอำนาจนี้ การกระทำของผู้ใช้งานอินเทอร์เน็ตถือเป็นสิ่งที่มีความสำคัญอย่างมาก ดังนั้นผู้ใช้งานอินเทอร์เน็ตควรเป็นผู้นำในการลงมือกระทำอย่างกระตือรือร้นในการสร้างอำนาจของตนเองขึ้นมา ซึ่งการที่จะได้มาซึ่งอำนาจนี้ การรู้เท่าทันข้อมูลข่าวสารคือสิ่งที่จำเป็น ผู้ใช้งานอินเทอร์เน็ตจะต้องวิเคราะห์ข้อมูลที่พบทางอินเทอร์เน็ตอย่างวิพากษ์วิจารณ์ และประเมินข้อมูลอย่างมีข้อสงสัยร่วมกับพื้นฐานความรู้และระบบคุณค่าที่มีอยู่ เมื่อสิ่งนี้เกิดขึ้นอินเทอร์เน็ตเสิร์ชเอนจินจะไม่เป็นผู้ครอบครองพื้นที่ในการสืบค้นข้อมูลทั้งหมดหากแต่ผู้ใช้งานอินเทอร์เน็ตจะเป็นเจ้าของอำนาจในการเสกสรรปั้นแต่งผลลัพธ์ทางความรู้ของพวกเขาในยุคดิจิทัลนี้เอง

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1. Introduction

In the global information society, the Internet is a worldwide phenomenon that has revolutionised people's lives and has reshaped human information and searching behaviour in the twenty-first century. One significant facet of change is the Internet's role as an information resource in learning and the accompanying gains at all levels of knowledge. One outcome of the change is that the Internet is helping to extend traditional learning resources (Tsai, Liang, Hou, & Tsai, 2012). Since the Internet is the largest information infrastructure in human history, various forms of searching serve as the primary vehicles for locating information required from within this enormous resource.

The popularity and extent of the Internet can only be described as phenomenal as it is already made up of a total of 4.46 billion pages online (worldwidewebsize.com, 2015). Given the numerous and, as yet, uncontrolled number of publications being posted to the Internet, an Internet user has no scholarly refereeing system to attest to the quality of information or disinformation that is published on the ever-growing number of sites. The need to develop systems that are able to create order, to improve the organising of the large volume of information and to assist in getting access to them is extremely significant. An Internet search engine is one of those systems. It then functions as a housekeeper in a huge and messily chaotic house. An Internet search engine allows an Internet user to undertake more complicated searching by using natural language, keywords and Boolean operators; and it provides a variety of options for filtering information. The user enters a search query into a box and asks for the search to proceed. Most current search engines typically build their databases with the help of programs referred to as crawlers which "crawl" the websites looking for information to be included in the databases. These programs roam the Internet, gather resources for their databases and create the index of those resources based on a number of information retrieval techniques (Croft, Metzler, & Strohman, 2010; Witten, Gori, & Numerico, 2010). Yet at the moment this system still only provides a minimum amount of ordering in a disordered array of websites. Reliable information and accurate representations of online resources are perhaps indistinguishable from one another.

At present, search engines constitute a major and powerful source of access within the web and they have also become the symbol for the gateway to information on the Internet (Miller, 2014). Recent studies show that search engines play an increasingly important role in people's surfing of the web. When a user wants to look up information on the Internet, the user often goes to his or her favourite search engine, enters some search queries, looks on the search results pages, and clicks on the preferred web pages from amongst these search results. Given the quantity of information available on the Internet, the widespread use of search engines is not surprising. This study, therefore, has provided insights into the new phenomenon of power in the age of Google. It explores how search engines work and how page ranking operates. It also looks at how search results are listed and provides an analysis of its power to shape knowledge outcomes.

2. Literature review

2.1 Foucault: The concept of power/knowledge

Many of Michel Foucault's works are concerned with how it is that "we know something, and the processes whereby something became established as a fact" (Mills, 2013 p. 67). In the collection of essays entitled Power/Knowledge (1980), Foucault in thinking about the concept of the "institution" suggested it be considered in the wide sense of "that which is not said" (the aspect of society which is "non-discursive") as opposed to that which is said (discourse) (Jager, 2001 p. 32). In Foucault's terms, the analysis of power and knowledge covered not only discourse but also institutions. Foucault saw knowledge not as "universal or fixed, but as textual, situated, and culturally constructed". His philosophical writings position "truth as a product of knowledge and power" in a circuit of "exchange" (Foucault, 1980 p. 52).

In the Foucauldian sense, power encompasses the relations amongst "truth", the "body", and the "individual" (Rouse, 2005 p. 102). Foucault's concept of power refers to a phenomenon that has both positive and negative effects. Power may create, enhance or destroy, and deny. In other words, power creates new forms of behaviour, new modes of understanding, and new systems of meaning. Power encourages and restrains simultaneously (Foucault, 1978).

…Power is everywhere; not because it embraces everything, but because it comes from everywhere. And 'Power' insofar as it is permanent, repetitious, inert, and self-reproducing, is simply the overall effect that emerges from all these mobilities, the concatenation that rests on each of them and seeks in tum to arrest their movement… (Foucault, 1978 p. 93).

Foucault also identifies the aspects or units of power as being "the networks, the mechanism, [and] all those techniques by which [a] decision could not but be taken in the way it was". It shapes the relationship between different parts so that 'free' decision is predictable (Foucault, 1980).

Foucault was interested in disciplinary knowledge and the deployment of regulatory techniques. So he examined the clinic (or hospital) and noted how it created a space where patients (docile bodies) brought themselves to be gazed at and the information the elite (doctors) gathered was used to create new medical knowledge that represented and understood populations and people in particular ways (Foucault, 1980).

In Power/Knowledge, Foucault describes knowledge as being a conjunction of power relations and information seeking. For Foucault, power and knowledge depend upon one another. There is no power without knowledge and no knowledge without power. He states that "it is not possible for power to be exercised without knowledge, it is impossible for knowledge not to engender power" (Foucault, 1980 p. 52). For Foucault,

…power shapes what, when, where, and how events become articulated. New knowledge is formed and sprung forth from these events, or unique relations of power occurring in particular contexts at specific periods in time. Within this framework, some discursive voices are given authority and others are silenced… (p. 52).

He then characterises power/knowledge as an abstract force, which determines what will be known, rather than assuming that individual thinkers develop ideas and knowledge. So, how do power and knowledge relate to the Internet, particularly in relation to Google, the world's leading Internet search engine? We suggest that there is a power relation working between actors on the Internet. These actors are those that produce and publish the information, those that provide search services and those that search for the information. When these actors interact, power runs through the actions upon actions as a set of relation that circulates between these actors. This study thus employs Foucault's concept of power/knowledge to understand power relations on the Internet and to explain the role of Google and its power in the production of Internet users' knowledge.

3. Materials and methods

The research method of this study was documentary methodology, characterised as descriptive research similar to historical methodology. Essentially, the method of this study involved critical interpretation by means of study, reflection and generalisation of a selected and classified body of information secured from the available literary and research documents.

4. Results and discussion

In this section, we review our results and discuss a range of facets that make up power through the internet search engine systems. The details of each analysis are divided into four sections.

4.1 Indexing and page ranking construct the popularity/credibility of the information

Being indexed by search engines is extremely significant because the popularity of websites depends on the inclusion/exclusion mechanisms of search engines. Indexing is a major hurdle to clear for the creators of websites who strive for recognition by search engines. Traditionally,

> …indexing has adopted lexical method in which terms are associated with documents weighted according to their importance with regard to these terms. When a term is queried, the search engine retrieves all relevant documents based on a matching of the term and ranks these

> documents in a descending order of importance… (Xing, 2006 p. 39).

The success in the indexing procedures shifts the concern to ranking. To be noticed, a webpage has to be ranked among the top ten to top twenty list of "hits". Since most search engines display the ten or twenty most relevant hits on the first page of the search results, web designers "jealously covet those ten or twenty top slots" (Introna & Nissenbaum, 2000 p. 174). As Introna and Nissenbaum (2000) argue, search engines raise not only technical issues, but also political ones. Their study on the politics of search engines suggests that search engines systematically "exclude certain websites and certain types of websites in favour of others" (p. 169).

Internet search engines provide their search results pages to the online users through ranking schemes. The ranking is established by "means of algorithmic calculation", a mathematical term defined as "a group of operational rules corresponding to a necessary sequence". In other words, in terms accessible to the "common mortal", it's an "automated process" that yields a list of results (Jeanneney, 2007 p. 44). Most ranking algorithms of search engines use both the position and the frequency of keywords as a basis for their ranking heuristic methods. Accordingly, a document with a high frequency of keywords in the beginning of a document is seen as more relevant (relative to the keyword entered) than one with a low frequency lower down in the document (Croft et al., 2010).

Another ranking scheme is based on so-called in-link popularity. It classifies the results according to the criteria of frequency and density of links. The ranking of websites by popularity has been argued to provide a contemporary model of categorisation reflecting a "celebrity-satiated age" in which the quality and accuracy of information are often seen as less important (Brabazon, 2012 p. 161). Popular websites are often returned at the top of search results, while newer websites and unpopular websites are often returned lower in the list of search results. Online searchers tend to click on the top hit because they assume the search engine places the best hit on top.

Pan (2015) evaluated the location of a webpage's appearance in the search results to see if the popularity effect was true. He found that once websites appeared in the top spots in a search result ranking, they attract high clickthrough rates. Therefore, a website that is not indexed by search engines (or ranked at the bottom) is unlikely to be viewed by the majority of online searchers. Those top hits, on the other hand, have considerable exposure, resulting in significant opportunity in the circulation of the information, ideas, or products on these sites.

In this sense, popular websites are indeed getting more popular while unpopular pages are getting relatively less popular. The limited presence or total absence from search results of a website often misleads online users to believe that such a website, even if the website is of high quality, is not worthy of visiting or even that it is not available. It thus does matter whether a website is in the first few screens rather than much lower down in the order.

Recently, search engines have begun to integrate social media content into their ranking and returned search results (Ghose, Ipeirotis, & Li, 2012). They have also continuously updated their ranking algorithms based upon current research in order to protect from some websites which try to take over the top positions with illegitimate strategies (McCullagh, 2011). These practices hope to provide the most relevant results at the top so that online users might save cognitive effort, provide a smoother search experience, and increase search engine brand loyalty.

Nevertheless, even when a user is able to adequately construct a successful search, deciphering the quality of the search results can be challenging. According to Jarutas (2014), the quality of information on the Web is questionable based on at least two reasons. Firstly, Internet searchers have little control over publishing quality. Secondly, when assessing the trustworthiness of web pages, online searchers tend to base their judgments upon subjective criteria such as the visual presentation of the website, rather than rigorous criteria such as the author's qualifications or the source's review process. As a result, online searchers tend to make incorrect assessments of the trustworthiness of the web information they are consuming. Also, they are uncertain of their ability to make a decision whether to trust information they are not familiar with.

4.2 Online users and the principle of least effort

While the search engine divides, sorts, and ranks information on the Internet, it also influences the construction of knowledge with "the principle of least effort" (Zipf, 1949) for the online users. Thomas Mann (1993) summarises the problem of least effort by explaining that:

> …most researchers (even "serious scholars") will tend to choose easily available information sources, even when they are objectively of low quality, and further, will tend to be satisfied with whatever can be found easily in preference to pursuing higher-quality sources whose use would require a greater expenditure of effort… (p. 91).

Machill et al. (2004) argue that rankings effectively decide whether websites are seen or not and most online users have a "naive understanding" of search engines' business strategies. Users seem to prefer to think of search engines as "slot machines", returning "neutrally chosen hits" for given terms and relying for their "revenue on the common practice of data mining". Moreover, the majority of their participants frequently visit one site, that is to say the first hit (81 percent), or at most two sites (13 percent) listed among the search results (p. 330). Luther (2003) asserts that "Google has radically changed users' expectations and redefined that experience of those seeking information". She concludes that for many searchers "the quality of the results matters less than the process—they just expect the process to be quick and easy". Luther further comments that Google provides "good enough" answers by relying on algorithms that include the relevancy ranking of popular culture (p. 36).

Previous studies validated these arguments through surveys and experiments. Various studies confirmed that online users will pay more attention to the top results on search engines (iProspect, 2008; Pan et al., 2007), and recent studies revealed search results that can only be seen when a user scrolls down the results list are seldom clicked on (Höchstötter & Lewandowski, 2009). According to an iProspect (2008) study, 68 percent of search engine users click a search result within the first page of results, and almost all (92 percent) of search engine users did not go deeper than the first three pages of search results for information. Forty-nine percent of search engine users who continue their search process when not initially finding what they seek, change their search term and/or search engine after reviewing just the first page of search results. A full 91percent do so if they do not find what they seek in the first three pages.

It is clear that knowledge searching cultures are rapidly changing and learners now perform much of their search time online searching for information and will increasingly rely on the Internet when searching for information in the future. A number of studies have been undertaken exploring learner online searching. Learners are reported to regularly use electronic information technology and rely heavily on popular search engines, such as Google search engine to find what they desire. Griffith (2002) reports that the majority of his sample used a search engine (Google) as their "first port of call" when locating information. Griffith noted that phrases such as "tried and tested", "my usual search engine" and "trusted" were frequently given by the students when asked why they chose this source first (p. 13). Brophy, Fisher, Jones, and Markland (2004) reported that the majority of students went first to a search engine to help them find the information they needed. Their findings point out that students opt for the easiest and most convenient method of online searching and appreciate the time saving attributes of online resources. Urquhart and Rowley (2007) argue that the choice of approach for finding information used by undergraduates was governed by time factors and the convenience of the format. Van Dijck (2010) found that Internet users tend to trust search engines as neutral mediators of knowledge and are commonly ignorant of how meta-data enable engine operators to interpret collective profiles of groups of searchers. Sparrow, Liu, and Wegner (2014) contend that most online searchers understand more about how to find information than how to analyse, use, or select appropriate content.

In this manner, search engines should be a tool for disseminating facts and ideas rather than for providing learning materials. Many online searchers never learn how to analyse search results in terms of accuracy and trustworthiness, resulting in lower learning efficiency.

4.3 (Non)-sponsored lists: Being lured into the direct-to-consumer marketing world

The presentation of results on the search engine results pages heavily influences users' selection of certain results. Not only are the results from the general Web crawl of the search engine (organic content) on the first few positions preferred by the users, but also additional elements (such as advertisements) are placed around the core results list to profit from the typical user's selection behaviour.

An early piece of research suggests that online searchers struggle to distinguish search engines' algorithmic results from advertisements. Using results from an online user study, Marable (2003) found that online searchers trust search engines to present only "unbiased results on the first page", not realising that 41 percent of selections were sponsored search listings. When informed of the nature of the sponsored listings, participants reported negative emotional reactions. Search engines that were "less transparent" about paid search results "lost credibility" with this sample of online users (p. 5).

In addition, it continues to be apparent to search engine users that brand equity is depended upon by companies whose digital assets appear among the top search results. In the iProspect (2008) report, 39 percent of search engine users believe that the companies whose websites are returned among the top search results are the leaders in their field. Another 42 percent feel neutral on this question, with only 19 percent believing that top search engine rankings do not automatically denote an industry leader.

Leading search engines presented most of their advertisements with labels reading "Sponsored links" (Google), "Sponsored Results" (Yahoo), and "Sponsored sites" (Bing). At first glance, these labels might seem to be straightforward, however, there is evidence to doubt whether these labels are effective at conveying correct information to online searchers. The Pew Internet and American Life Project reported that online searchers "trust the search engines that they use, though they do not understand how these search engines rank and present links" (Fallows, 2005). About 92 percent of users of search engines have full confidence in the results of their search, and 71 percent of these users consider that information from this source is never biased in any way. Only 38 percent of online searchers reported any awareness of the distinction between sponsored results and organic links. Less than 17 percent report that they "always can tell which results are sponsored and which are non sponsored" (Fallows, 2005).

Höchstötter and Lewandowski (2009) investigated the composition of search engine results pages and found that Google tries to improve the presentation of results on the first results page and try to promote its own other collections, such as image searches and news searches. They argue the first page is not about pure web results anymore. Google favours some hosts in its (top) results. This is perfectly natural, as some hosts are good resources and should therefore come up in the results lists. However, it is at least problematic when for instance, Google clearly favours results from its YouTube service, one of its own subsidiaries to a disproportional degree.

The recent report from the Search Engine Land (Marvin, 2014) revealed several examples of Google testing various ad types in new formats including within Knowledge Graph panels. It found, for example sponsored listings showing inside car Knowledge Graph results, ads for streaming services including Google Play were spotted on the Knowledge Panel for movie results, a variation of a product listing ad appeared in the Knowledge Panel for a book and PLAs were spotted at the top of the page in the carousel interface. The report concluded that this trend of testing new ways to inject ads into the search results, using features that were originally designed solely for serving organic content, is likely to continue.

The plurality of the Internet means it has a vast mix of sites, including commercial, private, educational, government, social and philanthropic sites. However, the logic that underpins the searching and organisation of the Internet is that of the market: a focus on advertising, presence, high returns and maximising customer numbers.

4.4 The power of Google: Shaping the boundary of human knowledge

We employ some basic Foucauldian ideas to discuss the power of Google, the world leading Internet search engine, in the production of human knowledge. Sara Mills (2013) argues:

> …the process of production of knowledge takes place through excluding other, equally valid forms of classification and knowledge which were perhaps more relevant to the context. In this sense, Foucault argues rather than knowledge being a pure search after truth, in fact, power operates in the processing of information, which results in something being labelled as a fact. For something to be considered to be a fact, it must be subjected to a thorough process of approval by those in positions of authority… (p. 72).

> We, as Mills (2013) argues, should then be "very suspicious of any information which is produced" (p. 72).

Therefore, we suggest in this online information age, one can use the sense of power Foucault describes to think about and analyse the way in which a search engine works and its relation to users.

A common theme in Google's corporate mantra is the notion of objectivity. Through page ranking, Google claims to provide objective knowledge to its users. In fact, there is nothing objective about the Internet and our interactions with it, despite the sophistication of search engine algorithms. The role of Google is to filter billions of pages- excluding them. It provides for the online users a sorted list of the most "relevant" information for their search (Croft et al., 2010). This is a virtual example of Foucault's power/knowledge circuit (one that occurs billions of times each year). The circuit begins with the online users' need for information, and their search for knowledge in the sea of information on the Internet. Google, through its popularity and brand loyalty, is more often than not the actor on the Internet with which the user forms a relationship. By turning to Google, the user unwittingly links into a complex system that is paring down the diverse and overwhelming body of information to a set of knowledge that the designers of the system have ranked as "relevant knowledge"– knowledge that should fit the users' needs. In this way regarding Foucault's power/knowledge, Google has taken raw information and produced knowledge through a power relationship.

The enactment of power through Google's actions provides its users with a range of possible options (relevant) in response to their queries, while at the same time constraining their future search behaviours by not providing other (less relevant) sites. Those relevant sites at the top of the list or "hits" on the first few pages have considerable exposure, resulting in significant opportunity in the circulation of the information (worldwidewebsize.com, 2015). Google makes them relevant not because of the content of their pages, rather it is a position they hold in the Google page ranking algorithm. Nonetheless, we should know that Google could not do this without its users. Internet users also empower Google's actions through their use (actions). This circuit of exchange demonstrates Foucault's presentation of power in which power acts upon actions and is highly contextual and created through power relations.

For Foucault, knowledge is not universal, fixed, or objectives, but contextual and discursively constructed. Power and knowledge are inextricably related, and combine to produce "truth" (Foucault, 1980). Each time Internet users use Google to help them search for information, a power relation is formed. Every list of results displayed by Google for its user is an enactment of power. Google decides whose truth is relevant. This is a paradigm of Foucault's theory about how power produces truth. As Foucault (1980) argued "We are subjected to the production of truth through power and we cannot exercise power except through the production of truth" (p.93). Knowledge, truth and power, therefore, work together as a circuit of exchange in the world of Internet search engines.

Through the production of knowledge on the Internet, power is a technological, automatic, productive process that efficiently organises concrete behavior (Lustig, 2014). Power relations then are distributed and act upon actions. With a distributed sense of power, the relationship between Internet users, information, knowledge, and Google becomes apparent. Internet users, information, and Google work together through a circuit of exchange to create knowledge. Without the attention of its users, Google is unimportant; without Google, unknown information is nearly impossible to find among billions of pages online; without the exercise of power between these actors, the Internet users will not subjected to the production of knowledge outside their traditional learning resources. In this sense, the point of a Foucauldian analysis is that it moves away from the idea that Google "holds" power and instead frames the analysis in ways that suggests the Internet users are engaged in a complex network which has power effects. Therefore, it is not that Google is in control (an old-fashioned idea of power as top down), but that it assists in shaping the knowledge outcomes of the users. This suggests that power is a relationship– between the search engine (i.e. software engineers, advertisers, technology) and Internet users. In this power relationship, the actions of the Internet users are shaped, managed, structured through the technology of the page-ranking algorithm. So the Internet users are not controlled but their ability to act is shaped by (controlled by) the logic of the Internet search engine which is, in turn, shaped by the priorities of its designers.

5. Conclusion

By focusing on Google and its power, this paper addresses the issue of the direct and indirect manipulation of power exercised by actors involved in the circuit of exchange. This manipulation takes various forms and involves various actors, working to include, exclude online information in the network. Google plays a central role, as it provides tools for users to acquire information. Through its power, Google is assisting in shaping the knowledge outcomes of the Internet users. Therefore, the politics of online information as practised by Google, the dominant search engine today, is crucial.

While most users naturally let Google and its page ranking system guide them, we believe that in the field of power represented by Google there is room for one's ability or power to control resources and information within the network (agency) and choice. According to the Foucaldian concept of power/knowledge, power is not monopolised by a few; rather, it is an inevitable force among actors at different contexts. Power functions in the form of a chain. Therefore, we would like to see more Internet users understand the way their own power is constructed inside this circuit of exchange. Even if there are certain rules that must be followed when doing online searching, especially when employing search engines, Internet users themselves can have power to systematise their own search strategies. Internet users should exercise *their* power to decide by themselves which of the displayed links in Google page results they should click or ignore. They should be certain of their ability to make a decision as whether or not they should trust information they found on the Internet. According to Foucauldian analysis, power is a relationship between Google and Internet users. In this power relationship, the actions of the Internet users are very important. Therefore, Internet users should actively play a leading action in producing and exercising their own power. To achieve this power, information literacy is imperative. Internet users have to critically analyse and skeptically evaluate the online information they found and incorporate selected information into their knowledge base and value system. This includes the verification of the relevance, currency, reliability, completeness and accuracy of the information as well as identification of the author's purpose and point of view and author's credentials. After evaluation and analysis, when the Internet users find that information agrees with reason and is conducive to the good and benefit of one and all, then they are able to select the most appropriate of the various Web pages presented to them for the task of extracting trusted information. In the end, Internet users have to keep in mind that Google is just machine. It assists Internet users to find information and may assist in constructing human knowledge, but it itself constructs nothing. Internet users, in fact, do the construction of their own power and knowledge. Ultimately, the Internet users will gain greater ability and confidence in their information searching skills and their ability to empower themselves and to gain control over Google's influence and to direct it toward their own goals.

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