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How can a political economy
framework illuminate the practices
and contradictions of Google?



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Introduction

Google has emerged as one of the largest and most powerful media institutions of the 21st century. Through the use of a political economy framework, this paper examines key power structures and relationships within the network communications industries. It reveals a number of tensions and contradictions regarding Google's practices that have significant environmental and social implications.

This research will explore the history of political economy theory and its emergence as part of critical theory and the work of the Frankfurt School theorists. It will evaluate the strengths and limitations of applying a political economy framework through a review of contemporary critical media and communications research. This will be followed by a case study that will apply a critical political economy analysis to Google. As this paper will go on to discuss, political economy approaches to media analysis emphasise both holistic and historical reflections on the behaviours and effects of media institutions. In keeping with this tradition, chapters one and two will provide an extended literature review; exploring a history of the framework; its evolution and current use within critical research. Political economy's early adoption is associated with the emergence of critical theory and the work of the Frankfurt School theorists. Chapter one will trace this connection and the subsequent rise of competing schools of thought. Chapter two will examine contemporary discussion regarding the validity and various applications of the framework. This exploration will determine the specific framework that will be applied in the following case study. Chapter three will then be a contemporary critical political economy analysis of Google and this research will conclude with a discussion of the findings.

Historically media research (and particularly political economy) has been interested in exploring the structures and relationships of dominant media institutions. The meteoric rise of Google in the last decade (along with wider Internet-based communication technologies) has drastically reshaped global communication and power relationships. A key objective of this research is to try

and understand how Google achieved this success, what is required for their continued growth and what this might mean for wider society. Celebratory accounts of Google in the press are commonplace and it is easy to find journalists, academics and network media industry representatives who lavish praise on the company. Criticism of the company is relatively limited by comparison, although recent revelations in the press have ignited public debate surrounding Google and other Internet-based companies. It has been revealed that the company has been operating in ways previously unknown by the general public (specifically granting access to American and British governmental agencies the NSA and GCHQ) and has drawn criticism from the press, academia and the general public. This has been a contributing factor in prompting the question: what else can be learned by critically analysing the organisation?

0.1 Methodology

This analysis will include a detailed examination of the company Google, its methods of capital accumulation and its growth as part of the “network media industries”. I will be utilizing Winseck (2011) and Benckler’s (2006) definition of the 10 biggest media and Internet industries ranked by global revenue: film, television, videogames, internet access, books, newspapers, magazines, internet advertising, radio and music. This definition also includes relationships with the information, technology and communication sector and the telecoms industries that as Winseck describes are “the social ecology of information”. (Winseck, 2011: 3) These network media industries are tied through ownership; technologies; capital investment; alliances and strategies that “migrate around various distribution networks and media platforms and devices.” (Winseck, 2011: 3)

Through an exploratory analysis of the history of critical theory and political economy this paper will evaluate the strengths and limitations of applying a political economy framework through a single case study of a network media organisation (Google) and ascertain its value for contemporary critical media, communications and cultural research. Yin (2012) suggests that the case study method is particularly effective as both a means of evaluation and for explanatory research questions that are asking how or why something happened.

This research aims to both evaluate the strengths and limitations of a political economy framework for digital media and communications research and also try to further an understanding of how Google has achieved such growth and power within the network media industries.

The case study method allows for the investigation of complex variables of differing importance and can provide a rich and holistic understanding of processes that are anchored in real-life situations. (Merriam 2009) They can however be limited by the integrity of the researcher who “is the primary instrument of data collection and analysis [...] the investigator is left to rely on his or her own instincts and abilities throughout most of this research effort.” (Merriam, 2009: online) This highlights some of the strengths and limitations of the single case study design and the need to be aware of these issues throughout the research process.

Chapter 1

1.1 Critical Theory and the Frankfurt School

“A study of contemporary media remains a ‘meaningless’ activity without a historical framework relating the press to the emancipatory struggles of the middle classes and the critical assessment of culture.”

(Lowenthal, 1961: 7 in Hardt, 2011: 172)

Critical theory and critical analysis of media, communications and culture emerged during the 20th Century between World War I and World War II, particularly through the work of one of the most celebrated Western Marxist intellectual coteries: The Frankfurt School. First defined by Max Horkheimer in his essay ‘Traditional and Critical Theory’ (Horkheimer, 1972 [1937]). Horkheimer claimed: “There are no general criteria for judging the critical theory as a whole [...] for all the agreement of its elements with the most advanced traditional theories, the critical theory has no specific influence on its side, except concern for the abolition of social injustice.” (Horkheimer, 1972

[1937]: 242) Critical theory has seen theorists apply both subjective and structuralist approaches and its philosophical origins can be traced back to Plato's *Apology* in which Socrates challenged the long-standing beliefs and conventional wisdoms of his time, which led to accusations that he was corrupting the youth of Athens and doubting the gods. (Broner, 2011) Critical theory in the 20th century provided a new critical method led by a collection of thinkers with an ethical imperative. Prepared to challenge any institution or system of thought, it demanded the examination of new problems and opportunities for liberation that may occur from changing historical circumstances.

“It questions the hidden assumptions and purposes of competing theories and existing forms of practice [...] Interdisciplinary and uniquely experimental in character, deeply sceptical of tradition and all absolute claims, critical theory was always concerned not merely with how things were but how they might be and should be.” (Broner, 2011: 1-2)

The ‘possibilities for liberation that arise from changing historical circumstances’ (Broner, 2011: 1) have been central to contemporary discussion within the social sciences and humanities. Especially in regard to the radical alteration of the media landscape that has occurred with the rapid rise and spread of the Internet and its associated technologies. The challenge of remaining critical in the wake of supposedly emancipatory technologies has been fiercely debated in academia since the emergence of the Frankfurt School and continues today. Ampuja (2004) acknowledges the challenges of defining contemporary critical media, communication and cultural studies research because of the wide-ranging methodologies and theoretical frameworks that fall within this spectrum of categorisation.

There are a number of definitions that share similar characteristics: Gandy (1982) suggests that the key characteristic of a critical scholarship of media is to acknowledge the primary role of mass media as a tool for control. Hardt (1992) stresses that the approach is not just linked to Marx's critique of political economy and socialism but focuses on the improvement of society and the

contribution intellectual pursuits can make in solving social problems and the improvement of society. For Kellner (1995) critical cultural studies is concerned with advancing democracy by analysing how media culture reproduces relationships of dominance and oppression, viewing society as a terrain of domination and resistance where media can be either an impediment or ally in the pursuit of emancipation and democracy. Ott and Mack (2010) claim that critical media studies must evaluate the interests that are served by media and what the media's part is in the construction and maintenance of relationships in power.

Many frameworks emphasise and analyse systemic features of media, capitalism and power structures, but these analyses often incorporate wider perspectives within the social sciences such as postmodernism, reception, cultural imperialism, race, gender and globalisation. Ampuja (2004) suggests that this broad range of theories leads to ambiguities in a definition of the term 'critical', but claims similarities across differing disciplines can be found:

“At a very general level, critical approaches to media, or society for that matter, call into question the way things are and express explicit scepticism towards dominant institutions, ideologies and social relations.” (Ampuja, 2004: 60)

He identifies the rise and separation of thought between two critical alternatives to mainstream media sociology: cultural studies and political economy. Ampuja (2004) argues that political economy as a framework has been significantly overlooked whilst cultural studies have become a dominant academic field since its emergence in the 1960's. How and why this separation has occurred merits further exploration but would appear in this author's opinion to reflect the shift in focus of academic discussion in the popular explanations of culture and society, which have moved from economic and structural theories towards postmodern and post-structural discussions of identity, linguistic and symbolic construction. Kellner (2005) suggests that British cultural studies have been unnecessarily hostile towards the critical studies of mass communication of Adorno and other Frankfurt School theorists and that their fluid use of cross-discipline approaches

formed an early model of cultural studies. (see Kellner 1982, 1989 and 1995) By examining the differences in method and approach, as well as acknowledging the shared positions that exist between the two, Kellner (2005) argues that it is possible to overcome the weaknesses and limitations of both disciplines. Fuchs (2011a) echoes this sentiment, suggesting that conflict between the two disciplines weakens their capacity to challenge uncritical mainstream approaches.

1.2 Political Economy and Cultural Studies

Theorists from both cultural studies and political economy adopt multiperspectival theoretical frameworks that explore how ethnicity, class, gender, sexuality, nationality and additional influences may affect the way in which we interpret and understand media. According to Zanetta (2013) the differences between the two disciplines are predominantly the uses of macro or microanalysis. Political economy perspectives frequently employ macro-level analysis, examining structural and institutional issues regarding exploitation, power and class. Cultural studies approaches often apply micro-level analyses that explore the smaller aspects of communication, with a particular focus on the generation of meaning. However their shared integration of different theoretical frameworks stem from a shared interest in both the “social inequalities and issues of power within societies [and] their preoccupation with the theme of emancipation” (Zanetta, 2013: 88). To apply a contemporary political economy perspective, it is important to explore its historical relationship and connection to other schools of thought.

According to Mosco (1996) the political economy of culture, media and communications analyses “the study of the social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources”. (Mosco in Laughey, 2007: 135) Knoche (2005) suggests a political economy critique explores “the relationship of media and capitalist society, i.e. the role of media for the whole material, economic, societal, social, political, and cultural human life. (Knoche, 2005 in Fuchs,

2011a: 96) *Critical* political economy is sometimes used as a descriptor to separate its use as a tool of media analysis from classical political economy theorists such as Adam Smith (1863). Golding and Murdock (2005) identify four distinguishing factors that separate political economy approaches from mainstream economic approaches:

- Political economy analyses of the media are holistic. They see the economy as interconnected with society, culture and politics, not as a separate domain.
- They are concerned with “the balance between capitalist enterprise and public intervention.” (Golding & Murdock, 2005: 61)
- They go “beyond technical issues of efficiency to engage with basic moral questions of justice, equity and the public good.” (Golding & Murdock, 2005: 61)

Babe (2011) and Fuchs (2011a) identify Theodor Adorno of the Frankfurt School, non-Marxian economic historian, Harold Innis and later Dallas Smythe and Herbert Schiller as four particularly influential early exponents of a critical political economy approach to media and communications.

The critical and trans disciplinary approaches devised by the Frankfurt School combined analysis of texts, audience reception studies and political economy of media to understand the ideological and social effects of mass culture and communications. Theodor Adorno (along with Max Horkheimer) is perhaps best known for his construct of ‘the culture industry’, which explored the various properties and consequences of mass-produced culture by profit-seeking institutions. As part of the group of academics that would later be referred to as the Frankfurt School, Adorno fled Germany in the 1930’s due to the increasing threat of Nazism. Consequently, his extensive work reflected key societal issues that arose during this period of Western history that included anti-Semitism, authoritarianism, conformity and cultures of compliance. (Babe, 2011) Rooted in Freudian psychoanalysis, Adorno identified patterns of persuasive media strategies that appealed to both the conscious and subconscious mind. Through content analysis Adorno identified striking similarities between the strategies of

fascist propagandists and the techniques used by the advertising industries in America, suggesting that both encouraged irrationality, conformity and compliance.

The critical theorists of the Frankfurt School analysed a broad range of mass mediated cultural artefacts within the context of industrial production. They identified how cultural commodities such as music (see Adorno 1978a [1932], 1978b, 1941 and 1989), popular literature (see Lowenthal 1984) and radio soap operas (see Herzog 1941) displayed the features of other products of mass production; specifically standardisation, commodification and massification. Kellner (2005) stresses their significance as the first group of social theorists to identify the ways in which mass culture industries were at the heart of leisure, affected socialisation and mediated political reality. Calling to attention the various social, economical, cultural and political effects, the Frankfurt School, and particularly Herbert Marcuse (1941), explored the use of media technologies and culture as instruments of powerful social control and their capacity to manipulate social relationships or encourage conformity to dominant forms of behaviour. Kellner (2005) acknowledges criticism of the Frankfurt School that media culture was not as homogenous as their model suggested (this forms part of the 'post-Fordist' critique of critical theory) but stresses that their work is a reflection of the state and monopoly 'organised capitalism' that dominated this period of western history.

Kellner (2005) argues that the earliest phase of British cultural studies emerged in a different period of capitalism: 'post-Fordism', a term frequently used to describe the change in systems of economic production and consumption that occurred in industrialised countries during the second half of the 20th century. He suggests this change meant that cultural studies consequently reflects a more varied and conflicted cultural formation. He notes that the emerging British cultural studies academics (particularly Richard Hoggart, Raymond Williams, and E.P. Thompson) shared a desire to protect working class culture from the corruption of mass culture industries (particularly Americanism). This appears to parallel the concerns about media and the culture industries expressed by the Frankfurt School theorists. A key difference being that the new wave of culture

theorists valorised the working class, unlike the Frankfurt theorists, whose (frequently criticised) pessimistic outlook, saw little opportunity for emancipatory change emerging from the working classes, having witnessed the rise of fascism in Europe and the supposed ‘end of the individual’ as a result of the cultural industries in America.

Cultural studies as a discipline emerged as a result of the interdisciplinary work that began at the Centre for Contemporary Cultural Studies at the University of Birmingham in 1964. (Vincent, 2013) Like the Frankfurt School, the Birmingham school began to analyse media from a critical perspective, this happened during a period in which the ideas and work of the Frankfurt School were gaining widespread attention beyond academic circles, as their ideas and work began to be discussed and influenced sections of the new left in America (most notably the works of Herbert Marcuse). It was at this point that French sociologists (Huet, 1978; Miege, 1979; Morin, 1962) took the term ‘Culture Industry’ and broadened it to ‘Cultural Industries’. Hesmondhalgh (2013) argues that the pluralisation is significant because French sociologists rejected Adorno and Horkheimer’s singular term because it suggested a unified field where all forms of cultural production followed the same logic. They wanted to demonstrate how complex the cultural industries were and the different interplaying models at work. This is an important advancement of the Frankfurt School ideas, which this paper intends to highlight, in an analysis of Google. Until this point the Frankfurt School’s work had yet to be the subject of intense analysis and media research had been dominated by the American media sociology paradigm. This positivist work focused predominantly on empirical studies in the search for measurable effects on media audiences that explored the relationships and variables between the communications of message producers and receivers. A critique often levelled at political economy by American mass communication researchers was that it was a polemic Marxist interpretation that failed to engage with empirical research. Golding and Murdock (1996) argue this is not the case, a position this paper will also attempt to demonstrate in applying a political economy analysis of Google.

1.3 The Postmodern Turn

Ampuja (2004) echoes Golding and Murdock in his defence of political economy as part of a *synthesis* of approaches that builds on the findings made by cultural studies to best examine the processes of global capitalism and the media. He provides an excellent criticism of the postmodernist framework suggesting that the framework's popularity in academia (which grew with the development of cultural studies) is partially responsible for the downplaying of economic considerations of media. He cites linguistic idealism, excessive culturalism and an over use of abstract theoretical critique as key issues (the last criticism is also frequently levelled at the political economy theorists of the Frankfurt School). Through an examination of globalisation research, he identifies three competing paradigms and their relative emphases: cultural, media-technological and critical political economy, with particular reference to the work of Anthony Giddens (1990, 1991) and Manuel Castells (1996). In declaring the need to reintegrate critical economic considerations into media research, he astutely observes that the postmodernist cultural and media-technological theories that have emerged during the global advancement of neoliberalism (a modern political-economic theory that favours free trade, privatization and reduced public expenditure on social services), offer little in the way of examining its effect, but are unified in their criticism of political economy's supposed economically reductionist explanations of globalisation. Ampuja (2004) suggests however, that these competing theories suffer from comparably deterministic issues. He notes the all-encompassing logic of neoliberal late capitalism and draws from Golding and Murdock (1996) in claiming that whilst political economy cannot provide a complete understanding of the media, one must consider the economic dynamics of today's increasingly commercialised media environment through a combination of historical and structural analysis with political and cultural criticism. The development of media technologies and institutions must be understood in relation to the development and dynamics of capitalism.

Chapter 2

2.1 Contemporary Critical Media Research and Media Studies 2.0

During the course of this research it has become apparent that some contemporary media research and theorists believe that the ways we interact with media have changed so rapidly that a complete re-evaluation of traditional theoretical approaches is required. Gauntlett (2007, 2009) and Merrin (2006, 2009) have attempted to acknowledge the rapid changes in media with their introduction of a 'Media Studies 2.0' framework. Both suggest that media studies must critically re-evaluate, and in some instances discard, the methods of analysis and assumptions of academia that were born in a radically different media landscape. Gauntlett (2009) argues for a rapid expansion of definitions of media and that traditional textbook categories of 'film', 'newspapers' or 'the Internet' for example, are increasingly redundant when: "The shape and boundaries of the object called the media are becoming increasingly blurred in the digital age." (Couldry in Dahlberg & Phelan, 2011: 5). Wayne (2011) identifies this very point - the need to escape the medium-specific focus of media studies, being made almost forty years earlier by Frankfurt theorist Hans Magnus Enzensberger (1982[1970]) in his essay 'Constituents of a Theory of the Media'. This was an updated reworking of Walter Benjamin's (1935) more widely recognised 'The Work of Art in the Age of Mechanical Reproduction'.

"While radio, cinema, television, recording, advertising, and public relations, new techniques of manipulation and propaganda, are keenly being discussed each on their own terms, the mind industry, as a whole, is disregarded." (Enzensberger, 1982 [1970]: 6 in Wayne, 2011: 119)

In attempting to define Media Studies 2.0 Merrin (2009) acknowledges the challenge in clearly defining what came before it: what he refers to as 'Media Studies 1.0'. Citing Gilmour (2006) Merrin establishes media studies emergence as an academic discipline during the early-mid twentieth century, alongside the arrival of 'big media' and traces the lineage through the emergence of propaganda analysis, discussion of public opinion, empirical communication research and information and communication theory. Ampuja (2004) identifies

The Brass Check (1919) by Upton Sinclair as one of the first systemic analyses of media institutions that identified class bias and the economic interests within media; specifically journalism. He considers it one of the earliest examples of 'radical' mass media criticism. Compared to 'conservative' media criticism, radical criticism is concerned not only with critical analysis, but also seeking social change and emancipation, key commonalities of the Frankfurt School theorist's political economy, critical theory and the more recent cultural studies.

Merrin manages to frame media studies 1.0 as a historical response and reflection of the broadcasting era that studied 'post-Gutenbergian' mass communication and developed: "out of a concern with mass society, mass communication, mass-persuasion and the formation and control of public opinion." (Merrin, 2009, p20) The subject has incorporated and retained emphases that have garnered and lost various degrees of support across mass communication studies, including: sociology, Marxism, Feminism, Screen Theory and empirical communications research. Merrin positions Media Studies 2.0 as an exploration of the 'post-broadcast' digital era that needs to explore issues of identity and personalisation and calls for renewed research into areas marginalised by the dominance of effects research, audiences and ethnographic study. He highlights the *political economy of media institutions, politics and media power* as areas in need of attention and calls for a holistic approach to media that incorporates both arts and scientific-based knowledge. Refuting accusations of technological determinism he asserts the need for media studies to engage with discussion regarding new media technologies and acknowledges that the most theoretically informed debates regarding these new media has emerged from sociology and cultural studies exploration of the information society, postmodernism, cyber culture, globalisation and Post-Fordism.

Taylor's (2009) compelling critique of Media Studies 2.0 stresses the need for critical theoretical analysis in the discussion of newer technologies for fear of repeating a significant mistake of Media Studies 1.0 – the failure to adequately engage with continually relevant critiques of mass society that were developed through the works of Frankfurt School academics, that have been continued through the work of Baudrillard and Zizek. Taylor and Andrejevic (2009)

observe a fetishisation of digital interactivity and its emancipatory effects in contemporary discussion. Both recommend critical frameworks within media studies that appropriate or challenge the newer frameworks that have emerged in attempting to understand globalisation, the explosion of information technologies and the arrival of 'the network society' (Castells, 1996). Andrejevic suggests the aim of critique is not to dismiss the new forms of pleasure or socially important uses these technologies allow (that Gauntlett (2009) so forcefully champions in his defence of Media Studies 2.0), but to instead recognise the *potential* for political empowerment of interactive media and not defer that this empowerment has already occurred, particularly in the light of increasing global economic and political inequality. He rightly suggests that: "perhaps the most important time to worry about the workings of power is when we're told that it is no longer a concern because we're all empowered by the advent of interactive media technologies" (Andrejevic, 2009, p48).

One of the key problems that can be identified with discussion of both Media Studies 1.0 and 2.0 is that all Internet-based communication is a 'systematically enframing' (Taylor, 2009) process that cannot provide radical opposition to capitalism when the protest of power is expressed through the "same power structures own communicational infrastructure." (Taylor, 2009:107) Taylor points to the limited success and incorporation of 'hacktivism' by capitalist media institutions as an example of this and sums up the problem through the eloquent words of Audre Lorde: "you cannot use the master's tools to tear down the master's house." (Lodre in Taylor, 2009: 105). Gauntlett (2009) challenges Taylor's critique by claiming Taylor fails to demonstrate that Internet-based based communication is in fact 'systematically enframing'.

This paper will explore the implications of 'systematically enframed' discussion regarding one of the biggest organisations in the modern media landscape: Google. In understanding the economic logic of media commercialisation both Taylor (2009) and Ampuja (2004) emphasise the continuing relevance of theorists from the Frankfurt School.

2.2 Establishing a Political Economy Framework

From examining the contemporary media research landscape it seems that a great deal of time has been spent (or wasted as I suspect the Frankfurt theorists would argue) on cross-disciplinary battles regarding the validity of economic and political frameworks that continue to be waged between academics across media studies, cultural studies, communication theorists and beyond. The call from Media Studies 2.0 theorists for a critical re-examination of old frameworks, terminologies and methods, whilst expanding into new areas of research in need of attention, seems valid and one that critical theorists should embrace. It is welcoming to find evidence of a number of contemporary theorists (Mosco 1996, 2009; Schudson 2000; Golding & Murdock, 2000) calling for a synthesis of theoretical approaches that encourage a greater exploration of economic factors and their influence on media and communications. Dahlberg & Phelan (2011) offer an excellent contemporary framework ‘critical media politics’ as a possible solution to this challenge, defining it as:

“An interdisciplinary terrain intersecting, most obviously, the fields of media studies, communication studies, cultural studies, critical political theory, and media sociology...the “critical” signifies theoretical approaches that accept the value- imbued nature of all practices and embrace normative, ethical, and reflexive evaluations. It also signifies [a] wish to contribute to the revival of a critical media studies, which is interrogative of its Marxist inheritance yet sceptical of the argument that concepts like ideology should be discarded”. (Corner in Dahlberg & Phelan, 2011, p5-6)

In reviewing the historical context in which political economy has emerged and the contemporary discussion regarding its capacity to advance our understanding of media and cultural organisations, it would appear that this framework deserves further attention. If we are to apply political economy as part of an integrated approach that can contribute to critical media politics research then it is clearly important to establish whether there are any significant differences or tensions within the framework. Mosco (1996) identifies three main strands of political economy that have emerged in different political and geographical settings:

Europe, North America and 'The Third World'. Hesmondhalgh (2013) identifies differences and tensions that exist primarily between the European and North American approaches. He does this by examining differences between the work of the 'Schiller-McChesney tradition' (a collection of North American political economy theorists including Herbert Schiller, Noam Chomsky, Edward Herman and Robert McChesney) with 'the 'cultural industries approach' which has seen a number of European scholars build on the work of Mieke (1989). Hesmondhalgh (2013) argues that the cultural industries approach offers more for explaining and assessing change and continuity in the cultural industries, allowing for more "complexity, contestation and ambivalence in the study of culture." (Hesmondhalgh, 2013: 45) Specifically he argues that cultural industries approaches do not ignore the activity of audiences and users or the tensions between production and consumption; a frequent criticism of political economy and an area that the Schiller-McChesney tradition rarely tends to discuss.

One of the other main differences between these two schools of thought is the significance and exploration of contradiction. Hesmondhalgh (2013) observes that the Schiller-McChesney tradition frequently emphasises the strategic use of power and in doing so underestimates contradictions that exist within the system. By comparison, the cultural industries approach emphasises contradictions and problems, such as the partial or incomplete process of the commodification of culture, which Hesmondhalgh (2013) maintains presents a more accurate understanding of cultural production.

This paper will now show a cultural industries political economy approach in an analysis of Google to try and identify whether contradictions exist in Google's functioning as part of the network media industries; particularly in relation to their methods of production, distribution and consumption of resources. It will also discuss and explore whether any aspects of Adorno and Horkheimer's 'culture industry' theory have any relevance in a 21st century digital media and communications environment.

Chapter 3

3.1 A Political Economy of Google

“The shift from one screen to multiple screens and mobility creates tremendous opportunity for Google. With more devices, more information, and more activity online than ever, the potential to improve people’s lives even more is immense.” (Larry Page, Google co-founder and CEO, 2012, online)

Google started out in 1996 as a research project by Larry Page and Sergey Brin, two students at Stanford University who were attempting to create a technology for the Stanford Digital Library Project. The success of their web index search engine led them to formally launch Google Incorporated in September 1998 following \$100,000 of investment from Andy Bechtolsheim. 15 years later the company is now valued at more than \$340 billion (Google Finance, 2013) and it is hard to imagine a world without Google. To try and summarise even a few of the ways Google now plays a part in the daily lives of millions people across the globe yields statistics that are difficult to comprehend. In 2013 Google now accounts for 71% of global search engine usage and its closest global competitor is Yahoo with 6.5% (Baidu has 15% but it is only used in China). (Netmarketshare, 2013) Consequently, in 2012 Google received 1,873,910,000,000 (one trillion, eight hundred seventy-three billion, nine hundred and ten million) searches (Statisticbrain, 2013) with over one billion unique visitors every month. (Young, 2011) These are only statistics related to Google’s original function as a search engine, which is only one of the ways that the company now affects business, private life, politics, consumption and entertainment. Google owns products or services within the fields of advertising, social networking, communications software and hardware. In 2006 the word ‘Google’ featured for the first time as a verb in the Oxford English Dictionary. Fuchs (2011b) makes an interesting observation regarding this phenomenon:

“The circumstance that a company name becomes part of a vocabulary indicates that the products of large monopoly capitalist companies have

become so present in capitalist society that their existence is absolutely taken for granted, not questioned and so strongly fetishized that specific verbs (“to google”[...]) are defined for expressing the usage of these products.” (Fuchs, 2011b, online)

To apply a critical political economy approach to Google, I would like to first draw attention to some of the key findings from Fuchs’ (2011b) political economy of Google and then explore recent changes in the company’s structure and expansion into new fields that that will compliment this research and further the discussion. Fuchs identifies a significant amount of research that provides a celebratory view of the ways in which Google and developments in communication technologies have altered the world (Vise 2005; Jarvis 2009; Girard 2009; Auletta 2010) but notes that there are limited examples that provide a theoretically grounded exploration of Google’s capital accumulation processes. Significantly, he highlights the normative discussions regarding the morality of Google (which is famous for its supposed company motto ‘don’t be evil’) and their implications for a critical political economy approach. Drawing from Marx and Engels (1846) definition of critical political economy he stresses that a political economy approach does not preach morality but should present a critical discussion, one that this paper hopes to make a contribution to:

“A critical analysis of Google goes beyond moral condemnation or moral celebration, but rather tries to understand the conditions and contradictions that shape the existence of Google and its users. This work therefore also wants to make a contribution to contextualizing normative questions about Google in the political economy of contemporary society.” (Fuchs, 2011b, online)

Fuchs (2011b) presents a compelling and detailed analysis of Google’s methods of achieving profit and accumulating capital, specifically in relation to its search engine and advertising business; Google’s most lucrative revenue stream. He dismisses Pasquinelli’s (2009, 2010) autonomist Marxist approach in which he argues that it is Google’s page rank algorithm that creates and accumulates value. Pasquinelli applies the Marxian concept of rent and suggests that’s Google’s

profit is a form of ‘cognitive rent’. Fuchs sees this as a technological-deterministic position that removes the possibility that the use of Google, Facebook or other corporate Internet entities could be exploitative in their nature. Instead he draws from the work of Halavais (2009) and Petersen (2008) that argue Google and other Media 2.0 organisations rely on the exploitation of free user labour. Fuchs (2011b) political economy identifies a crucial connection between how new digital media platforms actually employ striking similar methods of capital accumulation to that of traditional mass media such as television or radio through advertising. This strengthens Taylor’s (2009) previously discussed assertion that contemporary media research will continue to be enhanced by reapplying frameworks championed by the Frankfurt School theorists. Through the use of advertising, Fuchs argues it is Google’s users and their knowledge, not their free software that prove to be the profit generating commodities. By uploading photographs, images, writing wall posts or comments, adding friends and completing profiles, users provide an audience commodity that is then sold to advertisers. The key difference between these Internet-based media and traditional mass media is that the traditional media are no longer the only content producers. The permanent communication, creative activity and content production create additional value and data that can be sold.

It is interesting at this point to return to Adorno’s (1944) notion of the ‘culture industry’ and see whether Google’s functions and behaviours fit within this particular framework. Berry (2011) summarises Adorno’s culture industry as: “comprised of agencies mass producing and distributing for profit artistic and other symbolic works. Film and television production companies, radio broadcasters, newspapers, sound recording firms, advertising agencies, books and magazine publishers.” (Berry, 2011: 102) Whilst Google’s role as a producer of content may be harder to connect with Adorno’s culture industry it does provide multiple platforms for content creation for traditional ‘broadcast era’ media institutions. There are also numerous ways in which Google acts as a major distribution network for all of these types of content. Google provides multiple platforms for both user-generated content and traditional “broadcast era” providers of media (Google Books, Google Scholar, Youtube, Adwords). Through their search engine, Google are also the main portal through which

many users discover and access other platforms from other media institutions for books, film, television, radio or news media. Berry's (2011) description of the culture industry's supposed 'parasitic' nature provides a startlingly accurate description of Google and other Internet-based media organisations' appropriation of user-generated content in the digital era:

“The culture industry is thus parasitic; it appropriates, steals, absorbs, inflects, watches, collates, invites and elicits the “stuff it cannot manufacture by itself” (Enzensberger, 1982:5) Increasingly that stuff begins life outside the corporate media, although it is often absorbed into it at a later stage.” (Berry, 2011: 121)

The Cultural Industries theorists such as Mieke (1989) rejected the pessimism of Adorno and Horkheimer, instead viewing the commodification of culture as a much more ambivalent process that positioned the culture industries as contested and a realm of continuing struggle. This paper agrees with this particular advancement of the Frankfurt theorist's work in that an abandonment of extreme pessimism does not necessarily result in complacent celebration of either new technologies or the cultural industries, however this modification of Horkheimer and Adorno's work does not undermine their contribution to a critical understanding of media commodification and its effects. This is demonstrated by the sheer depth and complexity of their body of work. Whilst some of their ideas have been effectively critiqued (which is surely what they would have demanded) there are ideas that seem to still have relevance in relation to contemporary media and culture. They suggest that the culture industry function goes beyond simply amassing profits and marketing commodities:

“[The culture industry must] appease the real holders of power if [it] is not to undergo a series of purges [...] the dependence of the most powerful broadcasting company on the electric industry, or the motion picture industry on the banks, is characteristic of the whole sphere, whose individual branches are economically interwoven.”

(Horkheimer and Adorno, 1991: 123 in Berry, 2011: 103)

It is this paper's position that Google's success stems from how it has become economically interwoven with almost every 'traditional' form of media and other institutions of power in an unparalleled manner. Examining these connections may provide a greater understanding of the company's success, business choices and potential future growth. It may also help identify potential threats to global emancipation, a central aim of a political economy approach.

Fuchs' (2011b) demonstration of how Google profits through the commodification of Internet users by exploiting their knowledge and free labour reveals a fascinating dilemma that Google faces. In order to appease two separate kinds of contradicting power, it must address state power and the power of its users, for its business model to be successful. This has been thrust into the media spotlight in recent months with the publication by major news media organisations of Google's involvement in the sharing of big data with global government agencies, specifically the NSA in America and GCHQ in Britain. From this it is possible to identify how Google must appease both traditional power structures that concerned the Frankfurt School theorists - the state and other corporate entities, but it also begins to demonstrate the potential power of Google users and their effect. Through exploration of these relationships it may be possible to further analyse the growth of the company and the methods it employs in affecting public perception of the company, increasing its user base and continuing to expand and profit.

Recent publications regarding the PRISM programme have revealed that Google (along with a number other Internet-based companies) have been accused of circumnavigating privacy laws in both the UK and America by providing law enforcement agencies unprecedented warrantless access to citizen's data. (The Guardian, 2013) Google's public response to this allegation would appear to support Adorno and Horkheimer's suggestion that the culture industries must act to appease holders of power, in this instance, two of the most secretive and powerful governmental agencies in the world:

"Google cares deeply about the security of our users' data. We disclose user data to government in accordance with the law, and we review all

such requests carefully. From time to time, people allege that we have created a government 'back door' into our systems, but Google does not have a back door for the government to access private user data."

(The Guardian, 2013)

It is interesting that whilst this statement acknowledges obeying state laws, it appears more concerned with protecting Google's reputation with its users. This seems to demonstrate a key contradiction within the network media industries that Internet-based companies face: a struggle to appease both state power and user power because without a large user-base their products have limited or no value. This supports Fuchs (2011b) argument that Google's value and profit generation lies not in the applications it has created such as Gmail, maps, or Android (Google's mobile operating system) but in the number of users that access their platforms, which in turn allows them to sell data and higher advertising rates to other companies. He outlines two main ways in which Google exploits its users:

- 1) "[Google] indexes user-generated content that is uploaded to the web and thereby acts as a meta-exploiter of all user-generated content producers. Without user-generated content by unpaid users, Google could not perform keyword searches. Therefore Google exploits all users, who create World Wide Web (WWW) content." (Fuchs, 2011b, online)
- 2) "Users employ Google services and thereby conduct unpaid productive surplus-value generating labour. Such labour includes for example: searching for a keyword on Google, sending an e-mail via GMail, uploading or searching for a video on YouTube [...] Google generates and stores data about the usage of these services in order to enable targeted advertising. It sells these data to advertising clients, who then provide advertisements that are targeted to the activities, searches, contents and interests of the users of Google services. Google engages in the economic surveillance of user data and user activities, thereby commodifies and infinitely exploits users and sells users and their data as Internet prosumer commodity to advertising clients in order to generate

money profit. Google is the ultimate economic surveillance machine and the ultimate user-exploitation machine. It instrumentalizes all users and all of their data for creating profit.” (Fuchs, 2011b, online)

‘Big data’ is defined by Schonberger & Cukier (2013) as “the ability of society to harness information in novel ways to produce useful insights or goods and services of significant value.” (Schonberger & Cukier, 2013: 2). By further examining the relationships between Google and its users, ‘traditional’ media institutions, the state and the role of ‘big data’, it may be possible to suggest that in the media 2.0 or ‘post broadcast’ environment the ‘real holders of power’ are Google, that through the use of big data, possess a transnational level of power that supersede all other forms of media (that are now almost completely reliant on a combination of Google’s services) and are capable of challenging or in some circumstances, completely circumventing state powers. However, this power hinges on the continued maintenance and expansion of its user-base.

3.2 Google’s Mobile Expansion Across Networked Media Industries

“The defining device of the digital era is the ‘media-player’, a generic device that simply plays any content without discrimination.” (Merrin, 2009: 23)

“‘The medium is the message’ because it is the medium that shapes and controls the scale and form of human association and action. The content or uses of such media are as diverse as they are ineffectual . . . it is only too typical that the ‘content’ of any medium blinds us to the character of the medium”. (McLuhan 1995 [1964]: 9)

Murdock and Golding (1973) identify three main issues in their political economy of media: concentration, conglomeration and internationalisation. Concentration occurs when “ownership becomes centralised into a few major companies in any given industrial sector of a capitalist economy” (Laughey, 2007: 135) and conglomerates are companies that operate in multiple sectors.

Murdock and Golding claim that this occurs as a result of three different processes: internationalisation, diversification and integration. They outline two types of integration. Horizontal – when a company extends their control within a sector of media to “maximize the economies of scale and shared resources”, (Murdock and Golding, 1995 in Laughey, 2007: 135) and vertical – when a company that started at one stage of the production expands to other stages in the process such as distribution or acquisition of raw materials.

Since its inception Google has demonstrated massive internationalisation, conglomeration and concentration. It has achieved this through horizontal and vertical integration through the purchase of 127 different companies¹. (Wikipedia, 2013) Since 2010 Google has acquired on average more than one company every week. (Love, 2013) If we assume Fuchs’ (2011) position that Google’s primary revenue derives from big data and the exploitation of user knowledge for direct advertising purposes it begins to provide an understanding of their consequent domination of multiple media sectors, particularly the mobile smartphone and tablet industries. Google’s current concentration of ownership is staggering. As previously mentioned it accounts for 83% of global search engine usage; (Netmarketshare, 2013) Google also owns the largest online video service Youtube which is more frequently searched than the next 5 biggest search engines combined and the largest email user-base with 425 million active users. (Comscore, 2012) Android (Google’s mobile and tablet operating system) now accounts for more than 70% of global smartphone and 40% of tablet sales. (IDC, 2013)

Schonberger & Cukier (2013) outline three different types of companies that find success in the big data value chain:

- 1) Those that have access to big data but do not have the skills or capacity to extract its value. They use Twitter as an example of a company that has

¹ http://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Google Wikipedia currently provides the only full list of companies that have been acquired by Google. It lists 155 references of press releases and related news articles.

massive data streams but relies on two independent firms to license its use and generate value.

- 2) Companies that have skills. Consultancies and analysts that often do not have the data, or the creativity to use it innovatively but often have the specialist skills required for processing the data.
- 3) The ‘big-data mindset’ (Schonberger & Cukier, 2013). These companies often have neither the data nor the skills but possess the unique ideas that unlock new forms of value or ways to tap the data.

They argue that Google’s vertical integration across the big data value chain has lead the company to an almost totally unique amount of control, occupying all three positions at once. It is safe to suggest that Google has been involved with all three of Murdock and Golding’s political economy issues of concentration, conglomeration and internationalisation.

At this point Google’s domination across multiple industries and strands of new and old media is worth acknowledging and how this domination directly contradicts the celebratory arguments of digital optimists. Both the Internet and tools that connect us to it have been framed as life enhancing, democratising and associated with individual freedom and decentralisation. (Filchy, 1999; Turner, 2006; Streeter, 2011) Yet there are plenty of examples specifically with Google that directly contradict these claims. It has created a system of profit extraction where it does not need to pay the majority of its workforce (its users vastly outnumber its paid Google employees). The amount of money that Google has allows it to exert tremendous influence on political power through lobbying. In 2012 Google spent \$18.2 million on lobbying putting it in the top 10 biggest lobbyists in America. (Wyatt, 2012) In the first quarter of that year it spent more than two of the largest American telecommunications companies (Verizon and Comcast) and more than Apple, Facebook, Amazon and Microsoft *combined*. (Wyatt, 2012) It possesses huge amounts of private data that as we have seen has been shared with government agencies without the consent of its users, which surely does not equate to an increase in individual freedom. Finally, Google

threatens to deprive other organisations economic opportunities through its control of large market shares across the network media industries. Horkheimer & Adorno's (1944) stinging criticism of the role of technologies in aiding domination nearly 70 years ago seems shockingly prescient regarding the spread and domination of mobile communication technologies:

“Interested parties like to explain the culture industry in technological terms. Its millions of participants, they argue, demand reproduction processes which inevitably lead to the use of standard products to meet the same needs at countless locations. The technical antithesis between few production centres and widely dispersed reception necessitates organization and planning by those in control. The standardized forms, it is claimed, were originally derived from the needs of the consumers: that is why they are accepted with so little resistance. In reality, a cycle of *manipulation* and retroactive need is unifying the system ever more tightly. What is not mentioned is that the basis on which technology is gaining power over society is the power of those whose economic position in society is strongest. *Technical rationality today is the rationality of domination.*” (Adorno & Horkheimer, 2002 [1944]: 95, emphasis added)

Google's brand image since its inception has been one of a humanistic, ethically and environmentally aware corporation (with its famous slogan/ company policy “don't be evil”). Using a cultural industries political economy framework, it may be possible to detect further contradictions and tensions that exist within the organisation particularly in relation to their methods of production, distribution, and consumption of resources.

3.3 Google's Green Contradiction

“For the system to function smoothly, workers must know little of the marketed lives of the products they produce and consumers must remain sheltered from the production lives of the brands they buy.”
(Klein, 1999: 347)

“What if the true evil of our societies is not their capitalist dynamics as such, but our attempts to extricate themselves from them – all the while profiting...The exemplary figures of evil today are not ordinary consumers who pollute the environment and live in a violent world of disintegrating social links, but those who, while fully engaged in creating conditions for such universal devastation and pollution, buy their way out of their own activity”. (Zizek in Taylor, 2010: 104)

Whilst Zizek’s observation clearly does not align with Fuch’s view that a political economy approach should avoid moral condemnation, it raises an interesting discussion about Google’s part in the prevention of human emancipation in order to continue to profit, which as we have discussed, is of central importance to any political economy analysis. This appears to be an under-developed area of research when compared to the celebratory accounts of Google’s impact on global communications. Google has a whole section of its corporate website dedicated to a variety of environmental issues including: environmental impact, renewable energy, efficiency, climate change and sustainability. (Google Green, 2013) Cho and Crasser (2011) suggest these issues form part of a wider set of values that include matters of conscience such as animal welfare, fair trade and social concerns including labour standards that are often described as ‘ethical consumerism’: a trend that contemporary organisations are recognising affects consumer behaviour particularly in developed capitalist economies. If Google’s profit accumulation method relies on intensive consumerism (selling user data for the purpose of direct advertising), why are they demonstrating ethical consumer values?

Through this site Google explains that because of its renewable energy and carbon offset initiatives, their services and data centres have zero environmental impact. Taylor (2010) highlights a claim by Zizek that is worth considering in relation to Google’s environmental claims:

“Those most responsible for sustaining global economic iniquities are often presented by the media as the most ethically aware. [...] [Zizek]

extends this speculation, applying it to our current conceptualizations of 'ethical consumption'. Supposedly well-intentioned attempts to escape a socially and ecologically harmful capitalist dynamic are merely disguised forms of that very system in action: (Taylor, 2010, p103)

As demonstrated by the information above found on its corporate homepage, Google as a media organisation deliberately presents itself in the media through its website and marketing as an ethically aware organisation. According to this information the company plays no part in any environmental damage. However, by examining the broader systems in which they operate and their recent examples of vertical integration it may be possible to suggest that Google are demonstrating exactly the kind of disguised social and ecological harm that Zizek is alluding to.

Portio's (2013) mobile usage report estimates that by the end of 2012 there are now 6.5 billion mobile phone subscriptions globally whilst International Data Corporation's (IDC, 2013) research into global smartphone and tablet use reveals the huge growth being experienced in both industries, highlighting how smart (Internet connected) devices such as smartphone and tablets are rapidly outpacing and replacing use of traditional home computers and desktop devices. As previously discussed, Google's services are completely integrated across every smartphone and tablet platform. Data and user information is gathered and sold regardless of the device whether it is through their own platform (Android where they have the most access to user data) or their competitors (Apple or Windows).

A recent report by Friends of the Earth (2012) examines the environmental costs of mining for tin that is essential in the production of smartphone and tablet production. The paper looks at the social and ecological costs of tin mining for two islands in Indonesia, the world's largest exporter of tin. It identifies a large range of negative environmental and social costs that include: the devastation of plant and animal life (both to land and aquatic wildlife); decreasing levels of clean drinking water; increased cases of malaria; unofficial, unregulated mining and more. The report calls for immediate action from the two largest smartphone

producers: Samsung (who use Google's Android platform) and Apple (who provide access to all of Google's services). Google and its services are not mentioned at all in the report and this is presumably because up until 2013 it had not been directly involved in the physical production of smart device hardware. Google's involvement was limited to partnering with major electronics companies such as LG and Samsung for speciality Google branded devices. This is set to change with their recent \$12.5 billion purchase of Motorola Mobility (BBC, 2012), a clear demonstration of vertical integration, giving them the capacity to move into production of smartphone devices. Despite not being mentioned, Google's reliance and impact on this value chain is worth exploring further. The company's continued growth hinges on the proliferation and continued redevelopment of smart devices for continued access to user data for advertising purposes and this is reflected in their mobile strategy. Google paid an estimated \$50 million (Google Annual Report, 2005) for the Android platform in 2005 and adopted a similar approach to its search engine and applications model by providing the operating system for free to consumer electronics manufacturers. Android's 'open source' ecosystem proved to be an enticing alternative for app developers looking for an alternative to Apple's notoriously strict iPhone application development process. Global adoption and sales have been meteoric and Android is now the most used mobile and tablet operating system, accounting for 79.3% of all mobile phones shipped in the second quarter of 2013. (IDC, 2013)

By creating an ecosystem for applications Google has devised an additional revenue stream in addition to the user data and personal information it gathers. In 2012 Google earned more than half of the \$8.8 billion spent globally on mobile advertisements through the sale of data gathered through their services. (Emarketer, 2013) Google does not need to profit directly from hardware sales for their advertising revenue model to work, however Google absolutely relies on continued smartphone and tablet hardware production and sales. If for any reason these services ceased to exist, Google would have no way for its user to access their services. This demonstrates how Google is deeply economically interwoven into a production chain that has resulted in significant environmental and social costs, which have been the subject of intense criticism for hardware companies

such as Apple and Samsung. Following this line of argument it could be suggested that all Internet based companies that are accessed through mobile devices also contribute to this issue but Google's continued success can be directly attributed to their expansion into the mobile communications industries. Along with Apple they could be seen as one of the main companies for pioneering the expansion of this industry. Without Google's investment, in both the technologies and by providing a free unified ecosystem for telecommunications companies to build hardware around, it is possible to suggest that this field would not have developed at the speed that it has. Few other companies possess the combination of resources (money, technologies and staff) that allowed Google to do this. Their success has allowed Google to buy the corporation out of any direct connection with environmental harm by ensuring that there is no carbon footprint from their data centres. But as this analysis demonstrates, by using a political economy framework it is possible to identify significant negative effects of their success, particularly in the development of various ecological and social crises.

These crises are not limited to Indonesia and the extraction of tin. Coltan is an ore used in the production of tantalum capacitors that feature in most modern electronic devices including smart phones and tablets, and is primarily mined in the Democratic Republic of the Congo. A report from the U.N. (U.N., 2001) revealed mass-scale looting and the systematic and systemic exploitation of natural resources that has resulted in the massive financing of the regional civil war. The Rwandan Patriotic Army (who have reportedly made USD \$250 million from the sale of coltan) and the military forces of Uganda and Burundi have all been implicated in the smuggling of coltan, whose value has risen significantly with the growth of mobile communication technologies.

The Friends of the Earth (2012) report provides a list of recommendations for Apple and Samsung that would most certainly affect their profit margins and sales if implemented. These include the promotion of longevity of devices, improvement of materials, increased energy efficiency, ease of repair and recycling. Since we have established that these issues do not directly affect Google's primary methods of profit generation, Google could eliminate the

contradiction between the values they claim to support and the reality of their reliance on these devices by endorsing these findings. This could potentially strengthen their capacity to profit further by ensuring that the expanding number of its users that are concerned with ethical consumption are pacified regarding their connection to these production and consumption processes whilst simultaneously addressing some of the social and environmental injustices that they are linked to the continued success of the company.

There is a strong argument to be made for research into the effects that media and communications production, consumption and distribution have on the environment, particularly by political economy researchers. An analysis of Google's capacity and apparent need to shield itself from criticism regarding environmental issues appears to support Taylor's (2010) concern that they are an organisation "within the capitalist media who exacerbate the problems created by the global economic system whilst subjectively appearing to be part of its solution." (Taylor, 2010, p104) This concern seems to reflect ideas that are raised in McGuigan's (2009) wider analysis of capitalism. He demonstrates that capitalism, and in turn capitalist organisations, are exceptionally good at continually reinventing themselves by incorporating criticism or threats to capitalism.

"[Neoliberalism] has been able to sustain its hegemony and ideological coherence by continually rearticulating and reinventing itself. This ability to incorporate new elements (for example, the institutionalization of carbon markets), absorb dislocatory threats (such as bank bailouts), and pacify different political activisms (for instance, anti-debt coalitions) has the effect of naturalizing and embodying a belief that the context in which the social is (re)constituted will always be a capitalist one because human beings are narrowly self-interested, thus pointing to a banal, affect-imbued labour of naturalization in which media practices, rituals, and spectacles play a particularly crucial role." (Dahlberg & Phelan, 2011: 27)

McGuigan (2009) suggests that each evolution of capitalism has been a direct result of the system reacting to crisis in a particular historical period. “Organised capitalism was the solution to the crises of the mid twentieth century and neoliberal capitalism was the solution to the crises of the late twentieth century.” (McGuigan, 2009: 217) It could be argued that the major threat to the continuation of capitalism or humanity in the 21st century is the fate of the environment. The depletion of finite global resources that are required to fuel the capital accumulation processes appears to be a crisis that is reflected in the growing concern within the global scientific community, the wider population and as we have seen with Google, the marketing tactics of international corporations. Prasad and Holzinger (2013) use McWilliams and Siegel’s (2001) definition of Corporate Social Responsibility (CSR): “those actions that appear to further some social good, beyond the interests of the firm and that which is required by the law.” (Prasad and Holzinger, 2013: 1918) They identify a range of work (Burke & Logsdon, 1996; Orlitzky, 2003; Paul & Siegal, 2006) that highlights the use of CSR as a method to advance corporate interests rather than social good, which Prasad and Holzinger (2013) argue demonstrates what Zizek (1997, 2000) refers to as ‘false consciousness of ideology’. First coined by Engels, false consciousness formed a core part of Adorno (1944) and Horkheimer’s previously discussed ‘culture industry’ theory. It refers: “broadly to the hegemonic deception of social relations in the consciousness of socially disenfranchised constituents, therein producing a false interpretation of social reality. This process not only reifies the status quo but it further perpetuates the socio-economic exploitation of marginalized classes.” (Prasad and Holzinger, 2013: 1917)

Having examined Google’s role in the expansion of the mobile communications industry it would appear possible to suggest that Google’s behaviour fits into Adorno’s pessimistic ‘culture industry’ framework. A pessimistic reading of their corporate social responsibility (CSR) could be that it is a deliberate example of attempting to maintain the status quo by misinforming their users of the more complicated nature of their environmental impact, but this prompts the question: why would Google do this? What does Google gain from creating this false consciousness? Frankental (2001) argues that CSR is usually motivated by the

prospect of returns that include: more amenable customers and a more compliant workforce. In the case of Google their corporate social responsibility appears to be an attempt to pacify the growing threat of environmentalism. This seems to connect with Taylor's (2010) concern about the 'systematically enframing' qualities of the Internet.

Is radical opposition to environmental concerns possible within a system that causes radical environmental damage? Returning to models of political economy it appears that there are multiple ways of interpreting Google's behaviour. The Schiller-McChesney tradition emphasises the strategic use of power to maintain power structures and these perspectives (along with the pessimism of Adorno and the Frankfurt theorists) could argue that Google is deliberately engaging in the manipulation of public perception in the quest for greater capital accumulation. However a cultural industries political economy perspective seems to allow for the possibility that Google can be contradictory in its environmental impact, both a force for good and bad simultaneously. Google provides an unparalleled range of platforms that allow for global discussion regarding environmental issues. From campaign videos and documentaries on Youtube to links to websites, books and social media platforms where people can engage in discussion, organise events and beyond, there are many ways in which Google's services have and will continue to help tackle environmental issues. However their services are absolutely reliant on mobile technologies, which seem to epitomise Marx's famous description of capitalism:

“The bourgeoisie cannot exist without constantly revolutionizing the instruments of production, and thereby the relations of production, and with them the whole relations of society. Constant revolutionizing of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones.” (Marx, 1972 [1848], p476)

It is not too difficult to see Google, Apple, Samsung and other giants of the networked media industries as the bourgeoisie (that control the means of production) and mobile phones and tablets as constantly revolutionised

instruments of production, if we subscribe to the idea that Google extract value through their use. Andrejevic (2009) suggests that 20th century critical media scholars focused on ideology critique and were critical of top-down, one-way, centralised media organisations because of how the structures helped to reproduce power. By analysing Google's structures, not just the hierarchy of its employees but the manner in which it is interwoven with practically every other facet of the networked media industries, it becomes possible to see how the organisation manages to retain power. The mobile device and its capacity to simultaneously help and destroy the environment is a fascinating contradiction, one that supports Fuchs (2011) conclusion that the contradictions that exist within Google are actually contradictions that lie at the heart of capitalism as a system. He recommends a dialectical understanding of Google as an organisation that is both good *and* evil, with the capacity to greatly improve communication and cooperation for human society: "The problem is not the technologies provided by Google, but the capitalist relations of production, in which these technologies are organized." (Fuchs, 2011: online) His solution to this problem is a radical one: make Google's services publicly owned and funded, this would eradicate issues of exploitation and surveillance as this would eliminate the need to gather revenue through advertising sales. Unfortunately he doesn't elaborate on *which* public. Google was founded in America but is a truly global network media organisation used by almost every nation. Additionally, this solution seems to ignore the advancement of new technologies and products that have only been made possible through Google's capacity to profit. Their investment and advancement of mobile communications, augmented reality projects (such as the upcoming Google Glass) and the development of self-driving car technologies are all the result of the capital accumulation process. Could a similar level of research and development be possible with a publicly funded Google? This is certainly a question that deserves further research.

Conclusion

Through a historical exploration of the emergence of political economy within media, cultural and communications research, it is possible to see that a range of theorists recognise there is significant value in the application of political economy frameworks. Mosco (1996) suggests that the amount of research it has produced is surprisingly high in relation to the level of institutional support it has received. This seems marginal in comparison to growth of cultural studies, which “is now increasingly widely relayed as a new general formula for work across the entire range of what... we may call the human sciences.” (Mulhern, 1997 in Ampuja, 2004: 63) Ampuja (2004) argues that is not surprising that a framework critical of both capitalism and markets as regulatory systems has received little research money by comparison. Whilst it would be foolish to suggest that there are no cultural studies researchers attempting to challenge overtly postmodernist or unfettered, uncritical technological optimism, there appears to be acknowledgement from a wide number of sources that media, communications and cultural research would benefit from an increased integration of political economy frameworks, regardless of their geographical origins.

The call from some contemporary theorists to re-evaluate and develop new frameworks to help understand a rapidly changing media landscape is an interesting discussion. The argument made by Media Studies 2.0 theorists that newer fields of research such as identity and personalisation need greater attention is not discredited by this research, but a political economy analysis has revealed a particularly interesting finding. It would appear that part of digital media or ‘post-broadcast’ organisations capital accumulation process is strikingly similar to that of traditional media organisations. The sale of both information and advertising space is still absolutely central to the process for contemporary Internet-based organisations. This would suggest that critical frameworks that study these relationships and processes are still of great importance, and that they should continue to be critiqued, updated and remain part of contemporary discussions. What *has* changed are the methods of information extraction, the manner in which new media companies generate value and the increasingly complex role of big data. Through the examination of

the PRISM scandal and Google's expansion through mobile communication technologies it would appear that the extraction, manipulation and various uses of big data are going to continue to grow in importance. The use of big data appears to be having significant effects on many aspects of global society, being used in new ways across media, culture, politics and beyond. Political economy frameworks appear to be particularly useful for further understanding the social implications and effects that the control and use of big data may have on society. It is this paper's position that critical media studies researchers who wish to further democracy, examine power structures and improve the chances of global emancipation should use a variety of multiperspectival approaches to critically analyse the control and manipulation of big data. As Schonberger & Cukier (2013) observe, the use of big data has led to greater surveillance, eroded anonymity and made certain legal methods of protecting privacy obsolete. The potential for these powers (and the predictive capacities they grant) to "punish people for their propensities, not their actions [...] denies free will and erodes human dignity." (Schonberger & Cukier, 2013: 170)

As mentioned earlier, Merrin (2009) claims media studies evolved "out of concern with mass society, mass communication, mass-persuasion and the formation and control of public opinion." (Merrin, 2009, p20) Through the analysis of Google it seems that these concerns, particularly the technologies of mass communication, mass persuasion and the control of public opinion are still relevant contemporary concerns and that the control of big data is a new development in the control and use of information. It would appear that elements of early political economy theorists Theodore Adorno and Max Horkheimer's 'culture industry' remain relevant and applicable to the study of contemporary media organisations. By examining Google's expansion through the network mobile industries, it is possible to see their complex interwoven economic dependence and support of mobile communication technologies that has had extensive environmental and social ramifications. The Corporate Social Responsibility demonstrated through their green environmental claims appear to support the idea of a 'false consciousness' being promoted by the company that appears to be designed to alleviate concerns of a growing percentage of its user base. However, this analysis of Google also seems to support later sociologists

(Huet, 1978; Mieke, 1979; Morin, 1962) argument that there is no single unified 'culture industry' but that the complex processes at play with the Cultural Industries are full of contradiction and contention. Google's capacity to provide public spheres for discussion and tackling of environmental and social challenges is contrasted with the damage that the devices they have developed and rely upon, appear to be causing.

One of the limitations of this research is a result of trying to assess the application of a political economy framework alongside an analysis of Google. Fuchs' (2011b) research predominantly focused on establishing Google's means of capital accumulation through an analysis of its search engine and surveillance techniques. This research has attempted to build on that work by expanding the discussion through Google's relationships and structures with mobile communication technologies and a brief exploration of its environmental impact. These are only a couple of the ways in which Google is economically interwoven with other media institutions and aspects of society. The scale of Google's influence and control across global media networks is unprecedented. In order to critically evaluate the short and long term effects of this control, critical media and communications researchers must explore both the positive and negative effects of this digital media institution.

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