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Will Work For Free: Examining the Biopolitics of Unwaged Immaterial Labour

Brian A. Brown, *The University of Western Ontario*

Supervisor: Dr. Nick Dyer-Witheford, *The University of Western Ontario*

A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Media Studies

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Brian A. Brown

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CERTIFICATE OF EXAMINATION

Supervisor:

Dr. Nick Dyer-Witheford

Supervisory Committee:

Dr. Sharon Sliwinski

Examiners:

Dr. Sharon Sliwinski – Program Examiner

Dr. Grant Campbell – Program Examiner

Dr. Christopher Keep – University Examiner

Dr. Greg Elmer – External Examiner

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Brian Alexander Brown

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Abstract:

According to Maurizio Lazzarato, Michael Hardt, and Antonio Negri, immaterial labour is biopolitical in that it purchases, commands, and comes to progressively control the communicative and affective capacities of immaterial workers. Drawing inspiration from Michel Foucault, the above authors argue that *waged* immaterial labour reshapes the subjectivities of workers by reorienting their communicative and affective capacities towards the prerogatives and desires of those persons who purchased the right to control them. In this way, it is biopolitical.

Extending the concept of immaterial labour into the Web 2.0 era, Tiziana Terranova and Christian Fuchs, for instance, argue that all of the time and effort devoted to generating digital content on the Internet should also be considered a form of immaterial work. Taking into account the valuations of 'free' social networks, these authors emphasize the exploitative dimensions of *unwaged* immaterial work and, by doing so, broaden the concept of immaterial labour to include both its waged and unwaged variants. Neither, however, has attempted to understand the biopolitical dimensions of *unwaged* immaterial labour with any specificity. Thus, while Hardt and Negri examine the biopolitics of *waged* immaterial labour and Terranova and Fuchs examine the exploitative dimensions of *unwaged* immaterial labour, this thesis makes an original contribution to this body of theory by extending both lines of thinking and bridging the chasm between them.

Taking Flickr as its primary exemplar, this thesis provides an empirical examination of the ways in which its members regard all of the time and effort they devote to their 'labours of love.' Flickr is a massively popular Web 2.0 photo-sharing

social network that depends on the unwaged immaterial labour of its 'users' to generate all of the content that populates the network. Via reference to open-ended and semi-structured interviews conducted with members of Flickr, the biopolitics that guide and regulate the exploited work of this unwaged labour force are disclosed.

The primary research question this thesis provides an answer to, then, is: if *waged* immaterial labour is biopolitical as numerous scholars have argued, then what are the biopolitics of the *unwaged* immaterial labour characteristic of Flickr and what kinds of subjectivities are being produced by them?

Keywords:

Web 2.0; Social Media; User-Generated Content; Flickr; Immaterial Labour; Free Labour; Michel Foucault; Biopolitics; Autonomist Marxism.

Dedication

To Mary:

Without whom, I hate to dream.

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1.1 Introduction: From Web 1.0 to Web 2.0

In the not too distant past, individuals armed with a personal computer and a connection to the Internet could accurately be characterized as 'users' of web pages and digitized information. Similar to mediated environments of eras past, 'users' visited web pages much like they would tune in to the radio, pick up the newspaper, or watch the television network of their choice. That is, information and data were presented to the audience member in such a way that offered them very little opportunity to either respond to what was being communicated or to generate content on anything resembling a level communicative playing field. For the most part, web pages were static entities that communicated a message to the audience member and offered him/her little chance to publicly speak up, against, or back to the purveyor of these mediated messages. This communicative epoch, characterized schematically as 'Web 1.0,' while digital in nature, differed little from its analog progenitor.

With the rise of Web 2.0 (O'Reilly, 2005) and User-Generated Content (UGC), the relative inability on the part of the typical audience member to produce digital content is eclipsed and replaced by an environment where the creation and dissemination of digitized objects, information, and messages has become the new norm. Leveraging the communicative capacities of complex, though intuitive, software systems, the meteoric rise of Web 2.0 and UGC is predicated on the relatively newfound ability of misnomic 'users' to create, produce, share, and remix digitized content at a pace and level of

sophistication never before witnessed. At this juncture, we can provisionally define this relatively new communicative environment via recourse to two central characteristics:

> first, Web 2.0 relies on users to produce content. Social networks such as Facebook rely almost entirely on users posting personal information that is then shared with a network of 'friends' through newsfeed stories. (…). The second characteristic follows from the first: user-friendly design through complex technical processes. Web 2.0 websites feature rich interactivity, dynamic content and complex interfaces. (Langlois, McKelvey, Elmer, & Werbin, 2009)

While the above definition is a very good summation of two of the more salient features of Web 2.0, this thesis delves much deeper into the practical and theoretical nuances of the first characteristic.

Langlois et. al. argue that 'Web 2.0 relies on users to produce content.' That is, unlike the Web 1.0 era described above, where 'users' consumed the content generated for them by others, Web 2.0 sites and services solicit and depend on the productive capacities of their 'users' to generate the content and often the software or applications that populate the site or service in question. At base, Web 2.0 sites and services depend on their 'users' to do the bulk of the work of generating the content that makes the site attractive, popular, and (in the majority of cases) profitable. While this kind of work is a relatively new mutation in the nature and form of labour, it is not without precedent. The labour taking place on Web 2.0 sites and services, while unwaged, is similar to a form of waged work known amongst scholars as 'immaterial labour.'

According to Maurizio Lazzarato (1996), immaterial labour has no physical or material end product. Instead, its raw materials and outcomes are the social relationships, information, and affects brought into being via these labouring processes. Much more detail regarding the theory of immaterial labour and the controversies that characterize it

is provided throughout this thesis. Michael Hardt and Antonio Negri make more complex our understanding of immaterial labour by arguing that it is biopolitical. Coined by Michel Foucault (1978), biopolitics describes the methods and means by which myriad relationships of power work upon and refashion individual and collective subjectivity. His theory is a way of detailing the institutional, economic, and political power relationships coursing throughout society responsible for the production and reproduction of human subjects. Foucault focused his studies on the institutions, discourses, and architectures responsible for the biopolitical constitution of individual and collective subjectivity. The discourse surrounding sexuality and the power relationships endemic to the asylum, prison, and hospital were a few of his most famous exemplars.

In the contemporary era, immaterial labour has been identified as a powerful biopolitical apparatus. Hardt and Negri argue that waged immaterial labour is biopolitical in that "it is oriented toward the creation of forms of social life; such labor, then, tends no longer to be limited to the economic but also becomes immediately a social, cultural, and political force. Ultimately, (…) the production involved here is the *production of subjectivity*, the creation and reproduction of new subjectivities in society" (2004, p. 66; emphasis in original). In other words, immaterial labour is biopolitical in that it requisitions, purchases, and, as a result, eventually commandeers one's ability to communicate and cooperate with others. By selling these personal and intimate capacities to someone else in exchange for a wage, the individual is in effect turning over command and control of these faculties to his/her boss or manager. Over time, the prerogatives, needs, and desires of this boss or manager become that of the employee and through this process biopolitically alter his/her subjectivity in a consequential fashion.

While Hardt and Negri (2000, 2004, 2009) among others (Virno, 2004; Weeks, 2007; Berardi, 2009) have addressed the biopolitical dimensions of *waged* immaterial labour, the biopolitical dimensions of *unwaged* immaterial labour, such as that which Web 2.0 sites and services rely upon, have never been considered in detail. This thesis corrects this oversight by projecting the theory regarding the biopolitics of *waged* immaterial labour through an *unwaged* exemplar. Via semi-structured interviews with some of those individuals responsible for building and maintaining Flickr, a poster child of the Web 2.0 environment and one of the Internet's largest photo-sharing social networks, this thesis explores and unpacks the biopolitics of *unwaged* immaterial labour.

A broad range of scholars has engaged with the debates surrounding the nuances of immaterial labour. These debates are dealt with in detail in Chapter 2 of this thesis. However, those scholars that have most fruitfully explored immaterial labour and its relation to biopolitics can be schematically described as engaging with a school of thought known as autonomist Marxism. Originating in Italy in the 1950s, autonomist theory is predicated on the argument that labour and capital are engaged in ever-expanding cycles of struggle that mutate the composition and form of each party to the struggle according to the offenses and defenses launched by their other. Catalyzing these cyclical struggles is the ever-present potential autonomy of labour in its relation to capital. That is, whereas capital is ultimately reliant on labour as its primary source of profit, autonomist theory argues that the inverse relation does not hold. While capital cannot survive without labour, labour is capable of organizing and managing its creative and productive capacities free of the capitalist social relation. In other words, "Capital, a relation of general commodification predicated on the wage relation, needs labor. But

labor does not need capital. Labor can dispense with the wage, and with capitalism, and find different ways to organize its own creative energies: it is potentially autonomous" (Dyer-Witheford, 1999, p. 68). It is the persistent desire to organize these capacities autonomously that prompts the cyclical struggles between labour and capital. When considered from the perspective of the unwaged immaterial labour described above, nowhere is the potential autonomy of labour more evident than on the self-managed and self-organized networks of Web 2.0 in general and Flickr in particular. It is for this reason that the perspective provided by autonomist thought is the primary theoretical framework consulted throughout this thesis in its relationship to Flickr, Web 2.0, and unwaged immaterial labour.

1.2 A Brief History of Flickr:

Flickr.com is a photo-sharing social network that launched in the winter of 2004. Presently, it has over fifty-one million registered members (Yahoo!, N.D.1), in excess of six billion photographs stored on its servers (Flickr Blog, 2011), and is adding roughly four and a half million images to this tally on a daily basis (Yahoo!, N.D.1). Acquired by Yahoo! in the Spring of 2005 (Fake, 2005), reportedly for thirty to thirty-five million dollars USD (Schonfeld, 2005), Flickr was one of a handful of websites that prompted the conceptualization of Web 2.0. While Flickr's contribution to Yahoo!'s bottom line is impossible to tease from the parent companies reported earnings,[1] it draws the majority of its revenue from a 'free-mium' based business model. This business model offers 'free' accounts to anyone that wants to join the site and 'premium' accounts to those who choose to subscribe for $24.95 per annum. The free-mium business model combines advertising revenue with a subscription fee that offers premium, or what Flickr calls

'pro,' subscribers additional capabilities and functionality. The 'pro' account offers Flickr members unlimited uploads, unlimited storage, unlimited bandwidth, and ad-free browsing, while the free accounts place a cap on all of the above and serve ads to these members. Yahoo! does not make the ratio of pro accounts to free accounts public, but Cal Henderson, former Flickr Chief Software Architect, comments that "Pro subscriptions make up only a small portion of total revenues" (Henderson, 2011) leaving one to speculate that advertising revenues generate the lion's share of Flickr's value to Yahoo!.

In addition to the general description of Flickr provided above, there are three attributes to the photo-sharing social network that merit consideration at this introductory stage. The first is the ludic roots from which Flickr developed and grew. The second is the public-by-default nature of all the images and profiles uploaded and created on Flickr. And the third is a consideration of all the unwaged work undertaken and accomplished by Flickr members so pivotal to the past and present of the website. These three elements are by no means the only ones worthy of investigation, but for the moment they do provide an adequate introductory snapshot of Flickr and the steps through which it emerged.

The End of Game Neverending:

Flickr began modestly as a Massively Multiplayer Online Role Playing Game (MMORPG) called Game Neverending (GNE), but quickly morphed into a relatively straightforward website that encouraged 'users' to publicly share their collection of digital photographs with others. Game Neverending was a MMORPG conceived, developed, and brought online in September 2002 by Ludicorp, a virtual game company based in Vancouver, British Columbia, Canada, founded and owned by then husband-

and-wife Stewart Butterfield and Caterina Fake. The game itself was atypical from the beginning and rather primitive when compared to the complexity of the virtual worlds that now exist. One of the most peculiar elements of GNE was that there was no identifiable objective to the game other than to explore a fictional world and meet the acquaintance of other players within it. There was no way to level-up, win the game, or even accurately gauge whether or not you were doing well. While Game Neverending did ironically come to an end in the winter of 2003, there are traces of it available[2] that provide some insight regarding the nature of the gaming environment. The story of GNE and what kind of space it was is important to the history of Flickr and to this thesis because it nestles the cultural and behavioural foundations of the photo-sharing social network in a playful domain based on affable forms of social interaction rather than relationships based on competition or instrumental action. This sense of mutual support and non-competitive interaction were carried into the Flickr-verse and it is for this reason that their origins are important to this thesis.

According to Butterfield, "even though it's called Game Neverending, it's not really a game at all. It's a social space designed to facilitate and enable play. (…) We are trying to design the game so that relationships, reputation, skills and general *who you are* counts for more than the stuff you have" (Sugarbaker & Butterfield, 2003; emphasis in the original). Caterina Fake, co-founder of GNE, describes the secret behind the game by emphasizing the social and non-competitive elements of the game as well. "The most important thing about [Game Neverending] was that it was primarily a social game. You could wander around and meet up with people in various locations. You could form a social network (…) and everyone spent most of their time hanging out and instant

messaging with fellow game players, organizing parties, and interacting" (2006, p. x).

Within the virtual world of GNE, avatars communicated with each other via an Instant Messaging (IM) application built into the game interface. One of the innovative designs of GNE's IM functionality was the ability to drag-and-drop a picture of a player's avatar from your contact list into the IM window so as to initiate a conversation with him/her. Significantly, in addition to contacts, the player could also drag images of game objects found in the gaming environment into the IM window, thus sending an image of the object to every player who was part of the conversation. The ability to share an image of game objects was, on the surface, a simple modification of IM functionality. When looked at through the viewfinder that frames the history of Flickr, however, this simple modification turned out to be monumentally important.

Eric Costello, one of the few staff members employed by Butterfield and Fake at Ludicorp in the formative days of GNE and Flickr (there were seven others), tells the story this way.

> You could also drag game objects into an IM conversation and it would send to all the other members of the chat an image of the object. So it was a way that you could share the things you found in this world with the people around you. That feature was where the idea for Flickr came from. We thought, what if instead of game objects you could drag and drop other digital objects into these conversations, like Word documents, or PDFs? Photos were the natural thing to go with because they're more visual. (Garrett & Costello, 2005)

Sharing images of game objects within GNE turned out to be one of the most enjoyable aspects of the game. The enthusiasm with which players embraced the act of sharing pictures of game objects with one another changed the history of GNE forever and surprised its owners and developers.

Costello argues that Flickr's ludic foundations were pivotal to the eventual success of the site. "Someone once described Flickr as 'massively multiplayer online photo sharing.' I think that's a good description. There's kind of a feeling of exploration within Flickr. It feels like a world where you can move around and find wonderful things – the wonderful things being the great photographs that people upload" (Garrett & Costello, 2005). Much like a player could wander around the virtual world of GNE looking for other players to have a chat with, a member of Flickr can wander around the Flickr-verse looking at the pictures other members have taken and uploaded. When characterized this way, the transformation of GNE into Flickr seems rather straightforward. The truth of the matter is, however, that the owners and developers of Flickr had little to no idea what they were doing when they abandoned GNE in favour of the photo-sharing social network.

When the idea came to Butterfield to abandon the game in favour of developing the photo-sharing aspects discovered within it, Flickr was born. How to go about growing the Flickr-verse, however, was anything but clear. In fact, when the owners and operators of the newly founded Flickr made the decision to develop the photo-sharing utility, they had very little idea what they were doing, what they were supposed to be doing, how to go about doing it, or where to concentrate their efforts. Butterfield admits as much when he comments,

> We worked really hard but I don't think we had any formula for how to pull it off. Flickr could have gone in a million different ways. (…) [It] was a side project. It got more popular and then it took over the whole company but it certainly wasn't what we intended to do (…) To a large extent we're just making it up as we go along. (CNN, 2007)

Fake believes that "Had we sat down and said, 'Let's start a photo sharing application,' we would have failed (…). We would have done all this research and done all the wrong things" (Fake quoted in Graham, 2006). With no business plan, no direction in mind, and very little idea of what its owners and administrators were supposed to do, Flickr's chances of survival were, on the surface, slim. However, basing their decisions of the social aspects of GNE, the owners and administrators of Flickr made an early and important choice that charted a direction for the site in the days and years to come.

The Public-by-default Nature of the Flickr-verse:

At its most basic level, Flickr is a web site devoted to publicly sharing digital photographs. When Butterfield and Fake started Flickr "there were dozens of other photosharing companies such as Shutterfly, but on those sites there was no such thing as a public photograph – it didn't even exist as a concept – so the idea of something 'public' changed the whole idea of Flickr" (Hall & Fake, 2006). When an individual logs onto the Flickr webpage, creates a profile, and becomes a member of the site, there is a unique page within Flickr assigned to them that acts as their personal web page. These pages are linked to each other via a list of contacts and groups that develops by inviting other members to be your contact and/or by joining or creating a group. Importantly, by default, all of the profiles and photographs uploaded to Flickr are public and can be seen by not only other members, but also anyone with a connection to the Internet.

According to danah boyd, the default settings of any social network are important because "we know that users accept most defaults so the defaults matter. The defaults also set the tone for the space" (boyd, 2010). Flickr's default settings distanced it from other photo-sharing utilities in that they shared the photographs stored on the website

with the entire Web, not only those persons in one's contact list. Much like keeping one's avatar hidden from view in a game designed to facilitate social interaction, keeping one's images private on a network designed to publicly share them makes little sense. Of course, members can change these default settings according to their personal preferences so that, for instance, only contacts, friends, and/or family can see some of their images. However, there is little evidence that this practice is common among Flickr members.

Similar to the ways in which the ludic roots of Flickr established the playful tonality of the photo-sharing social network, the public-by-default nature of all photographs and profiles within the Flickr-verse contributed to the kind of space it became and, reciprocally, to the ways in which members act and react within it. The public-by-default nature of Flickr, then, is important to this thesis because it sets the tone for the website and by doing so biopolitically influences the kinds of behaviours and attitudes members adopt, by default, when they become active on it. Once again, when looked at through the viewfinder that frames the developmental history of Flickr, the default settings of the website have proven to be effective in their abilities to inspire the kinds of attitudes and activities that have helped grow the website throughout the years. That is, they have proven to be effective in motivating the membership to devote countless hours to their labours of love. After all, much like other Web 2.0 sites and services reliant on User-Generated Content, Flickr is dependent on the labour of its members to do the work of populating the site with photographs, annotating and organizing these photographs, creating and managing all of the groups, and of coding novel applications that augment the functionality and reach of Flickr across the web. All of this work is done free of charge and without any expectation of financial remuneration.

The Labour Behind *User*-Generated Content:

Similar to other websites falling under the Web 2.0 banner, all of the content on Flickr is generated by members. Much of the coding required to develop the software and applications that make Flickr intuitive and enjoyable was also done by unwaged members. In other words and importantly, the owners and operators of Flickr provide

> the basic technology platform and free hosting for photos (…). *Users do everything else*. For example, users add all of the content (the photos and captions). They create their own self-organizing classification system for the site (by tagging photos with descriptive labels). They even build most of the applications that members use to access, upload, manipulate, and share their content (…). Flickr is basically a massive *self-organizing community* of photo lovers that congregates on an open platform to provide its own entertainment, tools, and services. (Tapscott & Williams, 2006, p. 38, emphasis added)

Therefore, without the unwaged work of its membership, Flickr would not exist as it does today. This fact did not escape then-Yahoo! executive Bradley Horowitz who brokered the deal between Flickr and Yahoo!. He comments:

> With less than 10 people on the payroll, [Flickr] had millions of users generating content, millions of users organizing that content for them, tens of thousands of users distributing that across the Internet, and thousands of people not on the payroll actually building the thing. (…) That's a pretty neat trick. (Levy & Stone, 2006)

A neat trick indeed. However, this trick is also predicated on exploiting the unwaged immaterial labour of Flickr's membership. It is the pivotal place occupied by the unwaged labour of members in the developmental history of the photo-sharing social network that makes it such an interesting example to consider from the theoretical perspective provided by autonomist Marxism. The strategy of harnessing the autonomous

labouring capacities of Flickr's hackers and coders was, however, not the first time Butterfield and Fake enlisted the help of their membership.

Before the initial launch of Game Neverending, Butterfield claimed that "we'll have developed about 0.1% of the land on the map – the rest is up to the players: they'll be creating new hubs and building the connections between them. (…) [A]s much as possible we are going to leave it open for the community to build the tools which enable the community to evolve and extend the game" (Sugarbaker & Butterfield, 2003). By releasing the application programming interface (API) to the players of GNE, Butterfield hoped to enlist their talents and labour in an effort to grow the domain and by doing so its attractiveness. Briefly and schematically, an API is a set of code that allows the data stored on one application to be linked to the data stored on another. It is a binary bridge of sorts that permits the hacker to combine and recontextualize these two unique data sets in novel ways. Like GNE, Flickr also openly released its API and by doing so managed to grow the functionality and membership of the space in a relatively short period of time and with a threadbare staff of only ten paid employees.[3] Fake underscores the important place occupied by volunteer hackers in Flickr's developmental history when she notes that

> the thing that really makes Flickr Flickr is that the users invent what Flickr is. (…) [L]ike us, outside developers could build new features and give Flickr new capabilities. In fact, we used the same API as the outside developers, meaning that they had all the same capabilities we had. We hoped that people would build things that we didn't have the time or resources to build – like an uploader for Linux or plug-ins for desktop management software and blogging services – and they did. But we also hoped that they would build things that we hadn't thought of – and they definitely did that too. (2006, p. xi)

As the above indicates, the pivotal place occupied by the labour of Flickr members in the production and developmental process of the photo-sharing social network was not lost on the owners of the site. Butterfield comments that when in 2005 Yahoo! purchased Flickr, "there was an uproar from Flickr users. But that's a natural reaction. *They felt protective of something that is essentially theirs*. That's the nature of participatory media" (Marwood & Butterfield, 2009; emphasis added).[4] While Flickr's membership received no monetary compensation for all of the work they did on the site, as Butterfield notes, they did feel protective of it as a result of this work. This sense of affective ownership on the part of Flickr's members will become much more important in what follows. For the time being, what merits emphasis is the vast amounts of unwaged labour required to populate the site with photographs, annotate and organize all these images, and build the applications that extend the profile of the site throughout the Web. Without all of this work, Flickr would simply not exist. One of the most interesting aspects of this situation is the nature of the relationship between the owners of Flickr and the members that did (and do) the vast majority of the heavy lifting responsible for growing the Flickr-verse, expanding its popularity, and, hence, its profitability.

1.3 The Autonomy of Self-Organized & Self Managed Social Networks:

The history of the development of Flickr from a niche MMORPG called Game Neverending to one of the most successful photo-sharing websites on the Internet was not driven or directed in an hierarchically organized, scientifically managed, top-down fashion by the owners or administrators of the website. Flickr's owners and administrators took a very 'hands-off' approach to the direction in which its membership was taking the photo-sharing website. Perhaps this is due to the fact that they had little to

no idea what they were doing or how to go about doing it? Perhaps it is because they did not have the staff to oversee all of the work being done by members? Whatever the reason, Flickr's look, feel, and structure better reflect the subjectivity of its members than they do that of its owners. This point is pivotal to what follows and will be dealt with in more detail below. At the moment, however, what requires emphasis is that the subjectivity of the members themselves, their comments, suggestions, hacks, remixes, and enthusiasm, but most all their *unwaged immaterial labour*, created a collaborative and cooperative environment where photographs are made public, shared across the Web, relationships develop, and fortunes (for some) are made. Unlike the industrial production process or the corporate work environment where individuals sell their labour to the owners of the means of production in exchange for a wage and have relatively little to no input regarding the design and functionality of the end-product, the autonomous unwaged immaterial labour that characterizes the work being done by Flickr members is an elemental component to the look, feel, and functionality of Flickr.

In essence, Flickr was created, maintained, and developed by the 'users' of the website free of charge. Its status as an emblem of the Web 2.0 environment, as well as the self-organized, self-administered, and self-managed networks required to build and maintain the site, make it one of the most interesting and appropriate case studies for research into the autonomy of labour, its relation to capital, and the persistence of the exploitative dynamic endemic to this relationship. While discussions of exploitation dominate much of the conversation regarding the political economy of Web 2.0 and user-generated content, this thesis acknowledges and examines this perspective, but goes beyond it, or, rather, digs below it by seeking to better comprehend the nature of the

relationships between unwaged workers themselves, rather than between owners and workers.

With good reason, 'classical Marxism' has concerned itself with better understanding the exploitative dynamic between the owners of Web 2.0 sites and services and the 'users' who generate all of the content on these same sites and services. In a seminal treatment of all the 'free' labour taking place on the Web, Tiziana Terranova, for instance, argues that it is "[s]imultaneously enjoyed and exploited" (2000, p. 33). Alongside Terranova, Christian Fuchs argues that when owners of Web 2.0 sites and services such as Flickr extract their profits from the labour of others without offering a wage in return, this relationship is "one of infinite over-exploitation (…) [or] an extreme form of exploitation" (2011, 298). Making the exploitative dynamics of Web 2.0 more concrete, Fuchs re-articulates Marx's process of capital accumulation in its relation to user-generated content and Web 2.0 (2011, p. 44) by clearly spelling out the details of the exploitative nature of these sites and services. Terranova and Fuchs' analysis, then, make clear the exploitative relationship between the owners and workers of Web 2.0 sites and services. However, to halt the analysis of all the labour taking place on Web 2.0 at this point would be to omit from consideration an equally important facet of the social relationships that allow Web 2.0 sites and services to develop and grow. The nature of the relationships that develop between 'users' of Web 2.0 sites and services themselves are equally important, if not more so from an autonomist perspective, than those between themselves and the owners.

Autonomist theory is predicated on the potential autonomy of labour in its relation to capital. That is, capital relies on labour to produce the surplus that allows it to continue

to grow, whereas labour does not require the capitalist to organize or manage its productive activities. Labour, especially that which takes place within the unwaged work environs of Web 2.0, is more than capable of managing and organizing itself and its productive activities free of the capitalist relation. It is to a better understanding of the social and political dynamics that structure and guide the relationships that develop between 'workers' themselves, *not* between owners and workers, that this thesis makes it primary theoretical contribution. In light of Hardt and Negri's above characterization of *waged* immaterial labour as biopolitical and taking into consideration the nature of the relationships that develop between content generators themselves, the time for an analysis of the biopolitics that guide and regulate the *unwaged* immaterial labour characteristic of Flickr has come. It is for these reasons that the unwaged immaterial labour taking place on Flickr was chosen as the primary exemplar through which to not only examine the exploitative dynamics of the website, but also the political potentials of unwaged, autonomous labour and the biopolitics that contribute to the constitution of subjectivity of those that undertake and accomplish it.

1.4 Primary Research Question:

Compressed and concentrated into its most compact form, the primary research question this thesis provides an answer to is the following:

- *If immaterial labour is biopolitical as Hardt and Negri among others claim, then what are the biopolitics of the unwaged immaterial labour characteristic of Flickr.com?*

The clean lines of this primary research question conceal a jumble of other questions and concerns beneath their otherwise tranquil surface. By providing an answer to the primary

research question posed above, this thesis will necessarily have to address and untangle a host of other interrelated issues and concerns. Many of these have to do with the mutations that the theories of biopower and biopolitics have undergone as a result of their application to waged and unwaged immaterial labouring processes respectively.

This thesis argues that a significant facet of the theory surrounding the biopolitics of immaterial labour is overlooked by the myopic concentration on its waged genus. In turn, it seeks to rectify this oversight by examining the biopolitical dimensions of immaterial labour via its unwaged variant in an attempt to describe the forms of subjectivity being produced by and through the labour required by Web 2.0 in general and Flickr in particular. Most scholars working within the disciplinary confines of Critical Media Studies have thus far been content with approaching the topic of Web 2.0 from a top-down perspective and by recourse to the history of the political economy of communications and the exploitative dimensions of this unwaged work. The issues and concerns raised by a political economic interpretation of Web 2.0 are important and valuable, yet predictable. Anyone familiar with the modus operandi of capitalism is familiar with the predatory business practices characteristic of it and those institutions of the media reliant on its framework. Web 2.0 sites and services have certainly not escaped capital's sights. They are, in fact, the source of some of the most valuable commodities circulating on the market today. While the unique qualities of these predatory practices as they relate to Web 2.0 are addressed in detail in Chapter 3, it is important not to let them dominate our thoughts and to recognize the fact that the "rich cultural experiences witnessed on these spaces cannot be simply dismissed as yet another form of corporate control over culture" (Langlois, McKelvey, Elmer, & Werbin, 2009).

Rather than approaching Web 2.0 detachedly and from above, then, this thesis draws inspiration from the methods of Karl Marx and autonomist Marxists. Marx and the autonomists believed that inquiries into the social and political dynamics of industrialized workplaces must begin from 'below' or from the perspective of those individuals labouring within them. This thesis plots a similar course by speaking with and to those persons responsible for the creation and maintenance of 'Factory Flickr.' It does so in an attempt to better understand their thoughts and feelings regarding the social and political dynamics of the unwaged immaterial workplace. Media Studies scholars have thus far neglected any concerted attempt to understand the new forms of subjectivity being produced by and through the biopolitical force of unwaged immaterial labour. What follows, then, is an outline that details the steps through which this thesis travels in an attempt to rectify this neglect.

1.5 Chapter Outline:

In Chapter 2, a review of the literature surrounding the theoretical corpus of autonomist Marxism is offered. Beginning with the theoretical implement that sets autonomist Marxism apart from other, more orthodox, variants of Marxist thought, this chapter describes the cyclical nature of the struggles between capital and labour and explains that, at present, we are at the very beginning of yet another cycle of struggle. This chapter details the causes, catalysts, and outcomes of the cycles of struggle that have characterized the history of capitalism. It is focused on describing the processes of composition, decomposition and recomposition of a class hostile to capital and the ever-expanding nature of that class. The *waged* immaterial labour of networked individuals the world over is an ambiguous and contentious element of the present cycle of struggle and

moment of recomposition. So too, however, is the *unwaged* immaterial labour of Web 2.0 content generators. It is to the unique attributes and elements of the Web 2.0 era that the next chapter is focused.

In Chapter 3, a review of the literature regarding Web 2.0 and all of the work required of its 'users' is provided. Web 2.0 and UGC have altered the look, feel, and content of the Internet in significant ways. The most salient features of Web 2.0 are explained in this chapter in an attempt to emphasize the active and creative capacities of the 'users' of these sites and services. What becomes clear is that Web 2.0 and all of the work undertaken and accomplished by its 'users' requires that we amend our understanding of how 'work' can be organized and managed not only within these relatively new contexts, but also beyond them. Axel Bruns' (2008) concept of Prod-Usage and of the Prod-User nicely summarize the required conceptual modifications and are therefore dealt with in some detail in this chapter.

Chapter 4 of this thesis describes the methodological approach and procedure developed specifically for this research project. Based on and inspired by the Marxist methodologies of *A Workers' Inquiry* (Marx, 1880/1938) and Co-Research, the methodology that this thesis utilizes adapts these historical methods so that they remain relevant to contemporary circumstance. These circumstances are, of course, much different than those encountered by Marx and the autonomists. They therefore necessitate methodological innovation and modification. Consistent with the methods used by Marx and the autonomists, however, speaking with those individuals responsible for the creation and propagation of digital content remains pivotally important. The logic, method, and means by which these modifications were made are offered in this chapter.

Chapter 5 is devoted to reporting on the interview data obtained in conversation with Flickr members. This chapter presents the results of the semi-structured and open-ended interviews conducted with Flickr members in the Summer of 2010 regarding the nature of the unwaged and collaborative immaterial labour undertaken on the website. Organized around six central elements of the Flickr-verse that function as conceptual pillars for this thesis, this chapter tells the story of how Flickr members regard all of the time, effort, and energy they expend on the site and whether or not they feel exploited by the owners and operators of Flickr. In an attempt to allow the interview data the space required for adequate contemplation of its merits, this chapter refrains from any theoretical interpretation of these materials. The following chapter, however, faces this task head-on.

Chapter 6 is focused on a theoretical interpretation of the interviews in light of the biopolitical dimensions of unwaged immaterial labour. When the interview data and the six central pillars of the Flickr-verse are projected through the theoretical prisms offered by contemporary autonomist thought, a much clearer picture is created that details the social and political dynamics of this unique space. It is in this section that the primary research question guiding this thesis is answered.

In the concluding chapter, Chapter 7, the central place of struggle in autonomist theory is addressed and interpreted in light of the evidence and arguments presented throughout. This chapter argues that the struggles that characterize the history of capitalism do not materialize from thin air, but go through a procedural and developmental process that begins with instances of conflict that only later manifest as open struggle. Marxist scholars (Hardt & Negri, 2000, 2009; Harvey, Hardt, & Negri,

2009; Read, 2001, 2002, 2003) have recently identified the production and regulation of subjectivity as a central site of 'struggle' in the contemporary era. This concluding chapter argues that while the production and regulation of subjectivity is indeed important to the recomposition of a class hostile to capital, there is a need to slow down the analysis of this moment of recomposition so as to take into account the procedures through which struggles deserving of their name emerge. Therefore, this chapter examines the sequence through which the recomposition of a class hostile to capital might emerge and argues that the conflicts that exist between the biopolitics of *waged* immaterial labour and those of *unwaged* immaterial labour contribute to the strife that may eventually manifest in struggle.

1.6 Contribution to the Existing Body of Knowledge:

The line of argumentation advanced by this thesis is unique and makes an original contribution to the existing body of knowledge in two central ways. The first contribution to the existing body of knowledge considers the biopolitical dimensions of a form of work thus far never examined in detail by theorists of immaterial labour. Scholars such as Hardt and Negri (2000, 2004, 2009), Maurizio Lazzarato (1996), Paolo Virno (2004), and Franco 'Bifo' Berardi (2009) have considered the biopolitical dimensions of *waged* immaterial labour, but have not considered the biopolitics of *unwaged* immaterial labour. This thesis' second contribution to the existing body of knowledge is made by charting a different course than those scholars alluded to above (Terranova, 2000; Fuchs, 2011, 2012; Coté & Pybus, 2007; Andrejevic, 2009; Brown, forthcoming; Cohen, 2008; Kleiner & Wyrick, 2007) that have thus far been preoccupied with the exploitative dimensions of the traditionally conceived political economy of communications (Smythe, 1977; Mosco,

1996) in its relation to Web 2.0 and Unwaged Immaterial Labour. While the privacy concerns, predatory business practices, and marketing strategies involved with Web 2.0 as an "Orwellian dataveillant machine" (Langlois, McKelvey, Elmer, & Werbin, 2009) are important and duly addressed in what follows, as Langlois et. al. argued above, an exclusive focus on this perspective elides that which is most significant.

This thesis contributes to the existing body of knowledge, then, by examining the biopolitical dimensions of a form of work never considered by the theorists of waged immaterial labour and the biopolitical dimensions this unwaged immaterial work in addition to their exploitative dynamics. In so doing, it both augments and refines our understandings of immaterial labour and the biopolitics that contribute to the production and regulation of subjectivity. It sets off on a different tract by approaching the unwaged immaterial labour taking place on Web 2.0 sites and services from below and from the perspective provided by those individuals doing this kind of work first hand. In so doing, it furthers our theoretical and concrete understanding of the ways in which new digital media are changing the compositional fabric of individual and collective subjectivity via the biopolitics that imbue a particularly important example of an unwaged work environment, Flickr.com.

Chapter 2 – Autonomist Snapshots: a selective literature review

2.1. Introduction:

The goals of this literature review cannot be achieved via a methodical march around, over, or through the treatises written by autonomist Marxists. The primary, secondary, and tertiary literature is simply far too vast for the space available and would

result in an unavoidably schematic and haphazard account. Rather, what it aspires to is a selective examination of a number of key 'theoretical snapshots' in their relation to the central concerns of this thesis. By examining the background and foreground of these snapshots, a more comprehensive picture of autonomism and its relationship to Web 2.0 develops. Limiting the present analysis to only the most applicable elements of the autonomist architecture has the advantage of remaining focused on those aspects most relevant to the interrelationships between the topics at hand. For the present purposes, then, the snapshots of autonomism examined below are: the so-called Copernican Inversion, the Marxist metaphor of the mole(s), the three primary cycles of struggle identified by autonomists, Empire, Multitude, immaterial labour, and the biopolitics of immaterial labour. Once again, it merits emphasis that this is an incomplete photo album. However, in an attempt to focus the lens of this investigation only on the most important moments, the snapshots identified above and examined in detail below should be considered as markers that highlight significant milestones in autonomist thought.

2.2. The Copernican Inversion & The Autonomy of Labour:

Autonomist Marxism differentiates itself from other, more orthodox interpretations of Marxist theory by reversing the traditionally conceived polarity of the relationship between capital and labour. Rather than conceiving of capital as overlord and labour as servant, autonomists argue that the orientation of this power relationship needs to be reversed. More orthodox forms of Marxism cast capitalists as helmsman, responsible for economic, social, and political development. Conversely, autonomist Marxism argues that it is the proletariat that controls history's rudder. In other words, "the working class is not a passive, reactive victim, which defends its interest against

capitalist onslaught, [but] that its ultimate power to overthrow capital is grounded in its existing power to initiate struggle and to force capital to reorganize and develop itself" (Cleaver, 1979, p. 52). Mario Tronti argues, "it is the specific, present, political situation of the working class that both necessitates and directs the given forms of capital's development" (1964). Therefore, it is not the capitalists' foresight, oversight, and control of the labour process that drives the development of the capitalist mode of production, but the creative, self-organizing power of the proletariat in struggle that initiates these changes.

Capital would be all too happy to continue extracting its profits from the labour power of its employees with as little friction as possible. From the perspective of the capitalist, the less disruption there is to the smooth running of the capitalist mode of production, the better. However, the struggles against exploitation initiated by labour force capital's hand into restructuring its operations, modifying its tactics, and altering its strategies so as to go on turning a profit. This, then, places the initiative and creativity of labour in the proverbial driver's seat. Other, more orthodox, forms of Marxist theory never acknowledged the primary position of labour in its relationship with Capital. Autonomists, however, did. This so-called "Copernican Inversion" (Moulier, 1989, p. 19) places "the cutting edge" (Dyer-Witheford, 2001, p. 160) of development and crisis not in the hands of the managers and owners of the means of production, but, in the first place, in the hands and heads of those responsible for wielding them – the workers themselves. Capital, in other words, is forced to respond and develop its methods according to the actions and struggles of the working class, not the other way around. More often than not, capital's response is blunt and aimed precisely at diluting the concentrated militancy of

the working class. The working class then reacts to these new circumstances by attempting to recompose its diluted militancy so as to reinitiate the struggle against capital. This process of working class composition, decomposition, and recomposition establishes a cyclical pattern. While the characteristics of each cycle are unique, the fundamentally antagonistic relationship between labour and capital remains a constant; as does labour's primary position within this dynamic.

The central source of this antagonism is the resolute dependence of capital on the surplus value produced by labour. According to Marx, capital, "vampire-like, only lives by sucking living labour, and lives the more, the more labour it sucks" (1976, p. 342). Autonomists recognize the parasitic nature of capital, but instead emphasize the radical potentials contained in the fact that labour, unlike capital, need not feed off the blood of another. Labour, in other words, "is potentially autonomous" (Dyer-Witheford, 1999, p. 68). Briefly, it merits mention that nowhere is the potential autonomy of labour in its relationship with capital more clear than on the self-managed and self-organized networks of Web 2.0.

The Copernican inversion is important to this thesis, then, because it foregrounds the creative and self-organizing capacities of labour, the cyclical nature of the struggles over who has the right to harness and benefit from these capacities, and the radically different potentials occasioned by these circumstances. As will be argued in Chapter 5, all of the work that gets poured into Web 2.0 sites and services exemplifies what is possible when labour dispenses with the wage relation and autonomously organizes itself and its creative capacities. The fact that capital still exploits this labour as a source of

profit is important to recognize, but should not overshadow the nascent potentials evinced by the relative autonomy of unwaged labour in the Web 2.0 era.

Throughout the history of autonomist thought, the Copernican inversion and the cyclical nature of the struggles that it describes has repeatedly prompted a reexamination of the composition of the class most likely to struggle for their autonomy. In Marx's era, this class was composed primarily of industrial workers working within the confines of the factory. However, over time and throughout the history of the struggles against capital, the composition of the class tasked with fighting for their autonomy and against their own exploitation has expanded to encompass an ever-broader amalgamation of individuals. One of the best ways of describing the broadening scope of this class is by recourse to the modifications made to one of Marxism's favourite mammalian metaphors, that of the mole(s).

2.3. Mole(s):

In *The Eighteenth Brumaire of Louis Bonaparte* (1963), Karl Marx "tried to understand the continuity of the cycle of proletarian struggles that were emerging in nineteenth-century Europe in terms of a mole and its subterranean existence" (Hardt & Negri, 2000, p. 57). Marx argued that for most of history, the mole, like the proletariat, exists underfoot, digging her tunnels and preparing for the time when she will surface, breach the earth, and throw off the telluric chains that have confined her. Marx's mole was singular, conceived of as emblematic of the homogeneous mass of workers toiling in the mammoth industrial factories of Europe and destined to one-day break free of the capitalist bonds restricting and exploiting them. While a singular mole may have been an

appropriate conceptualization of the class most likely to revolt against capital in Marx's era, it was no longer so in the epoch following his.

The metaphor of the mole has been a particularly poignant one for Marxist theoreticians. Sergio Bologna adopts then adapts Marx's metaphor, in *The Tribe of Moles* (1980). In this adaptation, Bologna posits not a singular mole made up of an homogeneous proletariat, but a tribe of moles, all with cognate needs and desires, each implicated in the struggles of the other. This tribe of moles might breach the earth at varied moments, under a variety of circumstances, and in any number of locations.

When the struggles of the working class became too much for capital to manage, it dissolved the massive factories that acted as their organizational nuclei and replaced them with a network of smaller factories spread out across a larger geographic expanse. The dissolution of the massive factories of Europe in general and Italy more specifically was the impetus for Bologna's pluralizing of Marx's singular mole. While Marx's mole lived alone and struggled in the earth directly beneath the massive industrial factories of Europe, Bologna's moles are numerous and linked to each other via burrows that connect each of the smaller productive operations to one another. Over time, these burrows create connective tunnels that link the struggles of one factory to the next. This tribe of moles, then, begins to communicate the content and strategies of their struggles to their brethren. The difference between the metaphors offered by Marx and Bologna is, therefore, twofold.

On the one hand, Marx's mole is unified but alone and spends long periods of its life underground, surfacing "in times of open class conflict and then retreat[ing] back

underground again – not to hibernate passively but to burrow its tunnels, moving along with the times, pushing forward with history so that when the time was right (…) it would spring to the surface again" (Hardt & Negri, 2000, p. 57). In Bologna's interpretation, the struggles of a multiplicity of moles are taking place in any number of locations and possibly at the same time. The tribe of moles may 'retreat back underground' as well, but they may also surface unpredictably and in locations difficult to delimit. The second significant difference, then, is that Marx sees the mole's action as a decisive historical moment, a revolutionary moment, that once and for all rids "itself of all that muck of ages and become(s) fitted to found society anew" (1932). Conversely, Bologna identifies a multiplicity of moles that may intermittently get whacked back underground, but that repeatedly resurface more diverse, stronger, and smarter so as to wage their battles once more. In other words, Bologna's moles emerge again and again in an unpredictable yet cyclical pattern of struggle that sees them organize and swell their ranks by going through a period of subterranean recomposition until one day their eruptions become too numerous and potent, overwhelming capital's capacity to whack them back underground.

Whereas in Marx's time "the proletariat centred on and was at times effectively subsumed under the *industrial working class,* whose paradigmatic figure was the male mass factory worker"(Hardt & Negri, 2000, p. 53), this figure no longer accurately reflects the diversity of those persons hostile to capitalist command and dictate. Bologna's tribe was one of the first indications that the revolutionary agent responsible for defeating capital had to be expanded so as to include others. As the following section of this chapter details, his conceptualization of a tribe of moles, however, has also proven

to be too restrictive. While those tasked with undermining the foundations of capital were more diverse and plentiful according to Bologna, they were still confined to burrowing underneath the waged factory environment. History has shown, however, that there were other struggles taking place outside of these industrial confines involving a multiplicity of other exploited groups as well. It is to that history and the expanding nature of the composition of the class tasked with waging battle against capital that the next section of this chapter is dedicated.

The metaphor of the mole(s) is important to this thesis because it introduces the notion that the composition of the class meant to struggle against capitalist exploitation is fluid and cannot be restricted to waged workers. As well, it also indicates that the locations from which struggles might emerge are more varied and diverse than originally thought. What becomes clear as we move through the three cycles of struggle below is that with each successive cycle the composition of the class, the locations from which struggles emerge, and the terrain upon which they are contested, become more varied and diverse.

2.4. The Three Cycles of Struggle:

The concept of the cycles of struggle embraces the "priority and initiative" of labour as well as the "expanding points of conflict" involved in its struggle with capital (Dyer-Witheford, 2001, pp. 160-161). The

> process of composition/decomposition/recomposition constitutes a *cycle of struggle*. This concept is important because it permits recognition that from one cycle to another the leading role of certain sectors of labor (say the industrial proletariat), of particular organizational strategies (say, the vanguard party), or specific cultural forms (say, singing the

> "Internationale") may decline, become archaic, and be surpassed, without equating such changes, as is so fashionable today, with the disappearance of class conflict. (Dyer-Witheford, 1999, p. 66)

Eschewing the uncritical inevitability of 'scientific socialism' that "sees history driven by scientifically predictable laws of motion towards a socialist destination" (Dyer-Witheford, 1999, p. 42), the concept of the 'cycles of struggle,' has given a dynamism to autonomist theory that, much like the reactions by capital to the struggles waged by labour, tries to keep pace with concrete reality.

Autonomist theory has identified three primary cycles of struggle, each of which produced different 'mole(s).' These three cycles of struggle are named after "the *professional worker*, the *mass worker*, and – at least by some accounts – the *socialized worker*" (Dyer-Witheford, 1999, p. 72). Prior to the industrial revolution and the widespread introduction of automated machinery using and producing standardized products, highly skilled and knowledgeable workers (usually referred to as artisans or craftsmen) manufactured finished goods from tip-to-tail. Beginning with the procurement and preparation of raw materials, continuing on with the fashioning of these materials into a usable form, and finally into a finished manufactured good, the production process was concentrated primarily in the body and mind of one person – the professional worker. The end products produced by this worker were similar to each other yet unique because of the idiosyncrasies of the raw materials, the non-standardized production processes, and the influence that the individual artisan's talent had on fashioning them.

The industrial revolution and its mode of production fundamentally changes the artisanal production process by drawing the professional worker out of the traditional

locales and idiosyncratic modes of production, forcing him/her into the standardized factory environment.[5] This is the first step in the process of deskilling the craftsman, wresting control of the labour process from him/her, and, by doing so, radicalizing his/her consciousness. Obliterating his/her control over the organization of the entirety of the production process destroyed the dignity and pride felt by the professional worker in the conception, organization, and execution of *their* work. The professional worker gets "absorbed within a mechanized factory system but is still in possession of craft knowledge and technical competencies" (Dyer-Witheford, 1999, p. 73) which made the fragmented and highly repetitive nature of factory work infuriatingly mundane and boring. As a result, the professional workers absorbed into the factory system became "the main protagonists in struggles focused on control of the production process and the preservation of the dignity and value of work" (Dyer-Witheford, 1999, p. 73).

The struggles initiated and organized by the professional workers in their attempt to regain control of the production process force capital into changing its tactics and strategies. Capital "undertakes a drastic organizational and technological restructuring (…) aimed at decomposing working class power by destroying the technical base of the professional workers' power and cutting them off from the growing mass of industrial labour" (Dyer-Witheford, 1999, p. 73). By fragmenting the work process into so many small slivers of repetitive action in an attempt to undermine any vestige of control the professional worker had over the entirety of the labour process and by physically segregating these militants from the growing number of unskilled labourers throughout the factory, capital temporarily quells, or decomposes, the struggles of professional

workers. Doing so, however, also makes possible the recomposition of a militant class larger and stronger than ever before.

In and around the same time, the principles of the division of labour (Smith, 1776) and scientific management (Taylor, 1915) are gaining traction and leading not only to the fragmentation of work processes, but also to a form of mechanized control over the pace at which these processes had to be accomplished. Scientific management, combined with the Fordist assembly line, prioritized rationalized efficiency and an economy of movement above all else. Workers were entirely interchangeable not because they could skillfully accomplish any task in that production process, but because the nature of this fragmented process required little skill other than physical endurance. Factory work was, and remains to this day, highly repetitive, offering little stimulation to a worker's mind, concentrating instead solely on the speed and dexterity of his/her hands.

According to Steven Wright's historical analysis (2002), the mass worker is forged in the Taylorized and Fordist factory. The mass worker had three primary attributes: "it was massified, it performed simple labour, and it was located at the heart of the immediate process of production" (2002, p. 107). Autonomist theorists believed that the mass worker was the agent most capable of revolting against the capitalist organization of life and labour. And revolt they did. In an attempt to make capital pay for the meaninglessness of their toil and with the organizational assistance of labour unions and the political parties of the radical left, the mass worker frequently disrupted the smooth operation of the factory environment by striking and/or destroying the machines of production that exploited their labour.

Capital's response to the struggles waged by militant and 'massified' labour was once again reactive and blunt. In the latter decades of the twentieth century, capital underwent a "radical metamorphosis" (Revelli, 1996, p. 119) aimed at diluting the strength of militant labour in the massive industrial factories of Europe and North America. The metamorphosis manifested in a dismantling of the enormous production facilities and the building of smaller factories dispersed across larger expanses of geography. The compositional unity of these militants, then, too strong and hostile for capital to manage and control effectively, had to be butchered. Threatening to overtake or completely destroy the factories in which they worked, militant industrial labourers had to be dealt with if capital was to continue accumulating profits. To this end, the factory-cities – epitomized by FIAT's gargantuan production facility at Mirafiori – were not so much abandoned as their operations and their workers progressively flung across the countryside and beyond, diluting and decomposing the high concentration of militant labour. In essence, capitalist corporations "'unfroze' the factory, (…) opening a process of mobility that neutralized the factory as a place of belonging and aggregation, and sent individuals back to a state of atomization and isolation" (Revelli, 1996, p. 117). The process of atomizing and isolating the mass worker was completed with the introduction of automated machinery and robotics into these dispersed zones of production. It is not only that capital diluted the militancy of the mass worker by dismantling the massive factories of the industrial era, but "As our old friend Marx says, machines rush to where there are strikes" (Negri, 1988, p. 206).

This dispersion and deletion of living labour saw smaller productive facilities crop up over larger and more disparate geographic regions. Initiated as a response to

working class struggle, the process of geographically spreading labour so thin so as to mitigate any potential for sustained revolt has come to be known as Post-Fordism or more generally capitalist globalization. With the fracturing of the massified Fordist workforce into any number of smaller shops around the world, a reserve labour force of global proportions begin competing with one another for work. Information and Communication Technologies (ICTs) were pivotal to this perpetually mobile form of capitalism. They assisted in coordinating the tempo of its automated machines and its production process just-in-time to avoid sustained conflict. This, combined with the introduction of more and more automated machinery in the place of warm bodies within the factory itself, leads to a situation where industrial work takes on an increasingly precarious dimension – precarious because of the threat posed by a capriciously mobile mode of production able to uproot itself at the first sign of friction or struggle and the glut of workers in every corner of the globe hungry and starving to work.[6]

Post-Fordist globalization smashes the militant unity of the mass worker into a multitude of mangled parts. Once again, however, by diluting the concentration of militant labour capital creates the possibility of a new working class composition – what Negri termed the 'socialized worker.'

> The socialized worker is, according to Negri, the subject of a productive process that has become coextensive with society itself. In the era of the professional worker, capital concentrates itself in the factory. In the era of the mass worker, the factory is made the center around which society revolves. But in the epoch of the socialized worker, the factory is, with the indispensable aid of information technologies, disseminated into society, deterritorializing, dispersing, and decentralizing its operations to constitute what some autonomists term the 'diffuse factory' or the 'factory without walls.' (Dyer-Witheford, 1999, p. 80)

While separated by geography, post-Fordist workers are connected by common experience and, increasingly, by satellite, modem, and personal computer. The tools, skills, and knowledge needed to coordinate the global supply chain are, then, handed over to socialized workers who are learning how to use them within the work environment, but, by doing so, are also learning how to use them outside of it. Therefore, in the same instant that capital fragments the unity of the mass worker, it also creates the conditions that allow a new class formation to recompose itself at a level of complexity and intensity previously unimagined. The concept of the socialized worker attempts to describe a situation where the capitalist relation has come to dominate all aspects of society. With capital attempting to source raw materials, sell products, and put to work the natural and human resources found in each of the four corners of the globe, the earth and all of its peoples have become the terrain upon which the battles of a new and even broader conceptualization of class are waged. As will be detailed in the next chapter, capital has increasingly set its sights on the communicative and affective capacities of "audiences" and "users" in an attempt to further integrate its needs into the lived experience of individuals.

However, as the mode and scale of capitalist production have changed, so too have the magnitude, scope, and complexity of the battles against it. The recomposition of a class hostile to capital or, at the very least, opposing the 'negative externalities' coterminous with its operations, no longer confines its acts of aggression to the shop floor. Just as labour and the capitalist relation spreads out across the entire social space, so too do the struggles against it. The student movement and the feminist movement were two of the most prominent indications that the scope of exploitation had overrun the

confines of the factory. Consideration of these two movements below reveals the limitations of the concept of the mass worker and the expansive nature of the new composition of the socialized worker.

The Student Movement & the Feminist Movement:

In a chapter entitled 'New Subjects,' Wright describes the impact that the student movement had on the social and political situation in Italy in the late 1960s this way:

> More so than in any other advanced capitalist society, however, the Italian 'Year of the Students' heralded a broad wave of social conflict that would peak in 1969 with the 'Hot Autumn' of the Northern factories. Italy's was a 'creeping May,' and if its Movimento Studentesco [Student Movement] (MS) had then only recently emerged from beneath the shadow of the official student organizations, it lost no time in moving to overtake its foreign counterparts. In so doing, it placed on the agenda the possibility of an effective worker-student alliance the likes of which campus radicals elsewhere could only dream. (2002, p. 89)

The student movement in Italy in the mid-to-late 1960s was a particularly militant one. Italian students, dissatisfied with and disillusioned by the institutional representation they were receiving from traditional student bodies, reorganized themselves independent of these traditional forms of representation. Foreshadowing many of the struggles taking place within publicly funded education today, students at that time were suffering from overcrowding, failing infrastructure, 'antiquated courses,' and the increasingly dismal opportunity of gaining meaningful employment outside of the factory. High school and university students coalesced into a national student movement that "raised important questions for *operaismo's* [workerism – an etymological precursor to autonomist Marxism] understanding of class composition" (Wright, 2002, p. 89). The reason these important questions were raised is easy to discern. "[T]he new student movement had

attained a significance unique in post-war Italian politics, because it represented nothing less than 'the first example of a mass struggle without party control'" (Wright, 2002, p. 91).

While the *workerist* tradition of autonomist Marxism, as it was known during the period of the mass worker, was concerned with mobilizing and revolutionizing the consciousness of the male industrial vanguard, they neglected to recognize comrades in cadres outside of the factory. Suffering from bureaucratic bloat and ideological myopia, the organized political parties and labour organizations of the radical Italian Left failed to recognize the potential of weaving their struggle into that of other groups and organizations around the country. The student movement was not so obtuse.

As exploited labour in training, the student movement recognized the parallels between their demands and the struggles of the working class. As such, the scope of their fight naturally escaped the campus as they began to feel the limitations of a struggle "conducted wholly within the university" (Wright, 2002, p. 97). In 1968, the Italian student movement began the work of interweaving the linkages between themselves and militant labour that would collectively wage battle against capital in the 'Hot Autumn' of 1969.[7] The radical student movement that developed in Italy and elsewhere throughout Europe and North America during this epoch was the first indication to some theorists that ignoring the disillusionment of segments of society outside of the waged work environment was, at the very least, shortsighted, and at worst, willfully neglectful. The student movement provided evidence that the definition of the 'working class' had to be expanded so as to include other individuals not directly or immediately exchanging their labour for a wage.

Three short years after the climax of the 'Hot Autumn,' which saw the Italian student movement and the Italian labour movements join each other in struggle, Mariarosa Dalla Costa and Selma James co-published *The Power of Women and the Subversion of the Community* (1973). In this short, incisive, and influential book, Dalla Costa and James extend the Marxist analysis of exploitation to the familial unit in general and, more specifically, to the unwaged work that women do at home and in indirect service to capital. Bereft of the pay packet that industrial labour receives, but equally important in its service to capital, the unwaged work of predominantly women raised other important questions for the autonomists' understanding of class composition. While not directly producing automobiles, "the commodity [women] produce, unlike all other commodities, is unique to capitalism: the living human being – 'the laborer himself'" (Dalla Costa & James, 1973, p. 6). Producing and reproducing the conditions that allow a worker to recuperate from the damage done to his body and psyche throughout the workday is as much a part of the production process as inserting a generic widget into a cog is.

Without the labour done by predominantly women in the home, Dalla Costa and James argued, the labour done predominantly by men in the factories could not continue. In this way, the pay packet of the industrial worker "commanded a larger amount of labor than appeared in factory bargaining" (Dalla Costa & James, 1973, p. 26). Their point is that the unwaged work that women have traditionally done in the home is vital to capital's existence and, therefore, should be compensated commensurately. The call for 'wages for housework' was meant to redress the exploitation evident in this all-but-invisible form of unwaged labour.[8] As we will see in Chapter 3, the 'free labour' that

women do in the home is another important conceptual precedent for the 'free labour' (Terranova, 2000) being done on computer networks throughout the world. While the wage relation is not an appropriate solution to the inequities and exploitation evidenced in both instances of 'free labour,' it does provide an interesting historical entry point to the debates surrounding the political economy of unpaid computer work that will be dealt with in more detail in the next chapter.

The confluence of the student movement and the feminist critique indicated to some autonomists that labour, exploitation, and struggle were not the exclusive property of the male waged labourer, nor were they concentrated exclusively within the four walls of the factory. The concepts of labour, exploitation, and, most importantly, the working class had to be broadened, therefore, to include "all those whose labor is directly or indirectly exploited by and subject to capitalist norms of production and reproduction" (Hardt & Negri, 2000, p. 52). While this definition of the working class threatens to be so broad and amorphous that its lack of specificity could perpetually defer the kinds and complexity of organization required to defeat capital, the class composition it describes, as broad as it is, is not a weakness. When all of life is incorporated in some fashion into the production of profit, all of society can be compared to a factory, and all those living in society, to 'socialized workers' now toiling all day, every day, in a social factory without walls. However, cognate to the expansive nature of capitalist exploitation are the expanding forms of struggle against it. As will be detailed later in this thesis, as the capitalist relation attempts to control the innermost capacities to speak, think, and feel, the terrain upon which the struggles against these incursions takes place becomes ever more subjective.

2.5 Empire, Multitude, Immaterial Labour & Biopolitics:

While Negri, along with co-author Michael Hardt, has not abandoned his belief in the principles of the social factory and the socialized worker, he has (and would probably bristle at the suggestion) rebranded them with his concepts of Empire and Multitude. Empire and Multitude take the concept of the social factory and the socialized worker to their logical extremes by positing an entirely new form of exploitation and struggle. Steven Wright warns that one of the primary weaknesses of autonomist theory "consists in its penchant for all embracing categories that, in seeking to explain everything, too often clarify very little" (Wright, 2002, p. 224). The concepts of Empire and Multitude certainly fit that description. However, the authors are unwavering in their commitment to unpacking and explaining the complexity and nuance of their ideas (2000, 2004, 2009). No treatment of autonomist thought would be complete without consideration of the influence of their work and the impact it has had on thinking through modern forms of exploitation and struggle. Thus, such a treatment is offered below.

"Along with the global market and global circuits of production has emerged a global order, a new logic and structure of rule – in short, a new form of sovereignty" (Hardt & Negri, 2000, p. xi) called Empire. This new form of sovereignty "establishes no territorial center of power and does not rely on fixed boundaries or barriers. It is a *decentered* and *deterritorializing* apparatus of rule that progressively incorporates the entire global realm within its open, expanding frontiers" (ibid., p. xii). If the concept of the social factory broke down the factory walls and extended its logic and influence throughout society, Empire expands the scope of this logic, extending its influence to occupy earthly totality. There is no geographic centre to Empire; it is, rather, all

encompassing. There is no outside either, but, instead, positions of alterity that allow for struggles within and against it. There is no single nation state that directs its functioning; indeed, the importance and influence of any single nation-state is on the decline. Rather, a convoluted cabal of nation-states, institutions, corporations, and powerful groups all influence Empire's anything but smooth operation.

With the capitalist mode of production gone global, the requirement to somehow regulate and ensure the procurement, processing, and flows of people, raw materials, finished goods, and profit so as to make globalized capitalism function, is not left to a single nation state, transnational organization, or even a compendium of nation states. Empire is an entirely new form of sovereignty distinct to this particular historical epoch and one that is without practical precedent. While particular nation states occupy positions of privilege in this new form of sovereignty, they do not control it in an overt or imperial fashion. Even the United States, with its military and economic might, cannot go it alone.

Hardt and Negri argue that this chaotic system of rule can, however, be schematized. "When we analyze the configurations of global power in its various bodies and organizations, we can recognize a pyramidal structure that is composed of three progressively broad tiers, each of which contains several levels" (Hardt & Negri, 2000, p. 309). Drawing the metaphor of a physical pyramid to describe an entirely new form of sovereign rule to which there is no geographic centre, no outside, and that occupies earthly totality is, to put it gently, awkward; awkward because it does nothing to help explicate the central ideas that animate their concept. Regardless of its appropriateness,

the pyramid metaphor does present a succinct schema of the interrelationships between those parties responsible for regulating Empire.

"At the narrow pinnacle of the pyramid there is one superpower, the United States, that holds hegemony over the global use of force (…). On a second level, still within the first tier, as the pyramid broadens slightly, a group of nation-states control the primary global monetary instruments, and thus have the ability to regulate international exchanges" (Hardt & Negri, 2000, p. 309). Representatives from this group of nation states gather to form the G7, G8, International Monetary Fund, World Economic Forum, and the Organization for Economic Cooperation and Development. Directly below the first tier is the second. "The second tier contains the transnational corporations that regulate global flows of capital, technology, and people. [Other, less powerful,] Nation states are situated slightly below the massive transnational corporations" (Munro, 2002, p. 180). This second tier is home to the powerful lobbying groups of particular industries and corporate interests that gain access to Empire's penthouse via nepotistic channels of reciprocal interest. The second tier of Empire, then, is occupied first by transnational corporate capital and their legion of lawyers and lobbyists all jockeying for access to Empire's penthouse and, second, by nation states with lesser influence over the inner-workings of this system that provide the natural and human resources to plunder in the name of 'economic development' (Rist, 1997). On the third tier of the pyramid are the international, national, and local non-governmental organizations left to mitigate the environmental and humanitarian catastrophes that are Empire's unavoidable correlate. Non-governmental organizations like Oxfam, Feed the Children, Green Peace, Amnesty International, the World Wildlife Fund, the Red Cross/Crescent, Médecins Sans

Frontiers, and various other international, national, local, religious, environmental, and social justice groups are tasked with mopping up the mess left by Empire.

Hardt and Negri argue, however, that cognate to the decentralization and dispersion of the capitalist relation across, through, and in-between all striations of society, there is, first and foremost, a combative subjectivity that resists the total subsumption of life to Empire's dictates. Indeed, it is at the level of the production and regulation of subjectivity that one of the most important locales of contemporary struggle exists. More detail is offered regarding the nature of this conflict below. For now, positing this combative subjectivity requires another expansion to the definition of the 'class' meant to wage battle against Empire. As the struggles of students and feminists foreshadowed, capitalism exploits not only waged labourers but also all those that supplement, undergird, and make possible the exploitation that takes place in the workplace. According to Hardt and Negri,

> We need to recognize that the very subject of labor and revolt has changed profoundly. The composition of the proletariat has transformed and thus our understanding of it must too. In conceptual terms we understand *proletariat* as a broad category that includes all those whose labour is directly or indirectly exploited by and subjected to capitalist norms of production and reproduction. In a previous era the category of the proletariat centred on and was at times effectively subsumed under the *industrial working class*, whose paradigmatic figure was the male mass factory worker. (…) Today that working class has all but disappeared from view. It has not ceased to exist, but it has been displaced from its privileged position in the capitalist economy and its hegemonic position in the class composition of the proletariat. The proletariat is not what it used to be, but that does not mean it has vanished. It means, rather, that we are faced with the analytical task of understanding the new composition of the proletariat as a class. (2000, pp. 52-53; emphasis in original)

The sometimes baffling analytical task Hardt and Negri are referring to is made less so by naming and explaining the composition of the peoples meant to struggle within and against Empire. Drawing on the work of Dutch philosopher Baruch Spinoza, they call this new class composition the Multitude.

Hardt and Negri devote the entire second volume of their trilogy to explaining the nuances, subtleties, and potentialities of this new class composition. Sylvère Lotringer argues that, "The global multitude is hybrid, fluid, mutant, deterritorialized" (2004, p. 14). Paolo Virno argues, "the *multitude* indicates a *plurality which persists as such* in the public scene, in collective action, in the handling of communal affairs, without converging into a One (…). Multitude is the form of social and political existence for the many, seen as being many" (2004, p. 21; emphasis in original). The Multitude, in other words, "is a multiplicity, a plane of singularities, an open set of relations, which is not homogeneous or identical with itself and bears an indistinct, inclusive relation to those outside of it" (Hardt & Negri, 2000, p. 103). The multitude is the all encompassing term settled upon to conceptualize a globally variegated and diverse class composition that, they take great pains to explain, is not a unified 'people' or a 'mass,' but an heterogeneous and diverse accumulation of all those disparate subjectivities directly or indirectly exploited by Empire. In other words, the concept of the multitude requires that our understanding of exploitation and the struggle against it not be "limited to waged labor but must refer to human creative capacities in all their generality" (Hardt & Negri, 2004, p. 105).

Internally and irreconcilably differentiated from each other, the multitude is an expanding set of singularities united in their common and continual exploitation at the

hands of their common and continuing adversary. The multitude, then, "gives the concept of the proletariat its fullest definition as all those who labor and produce under the rule of capital" (Hardt & Negri, 2004, p. 107). The analytical task at hand, then, is not to reduce, flatten, or skim over the diversity of these groups with simplistic notions of an internally coherent or homogeneous body, but to celebrate the potentiality of common purpose and pursuit through (and because of) this diversity. Reciprocally, the nature and form of the struggles waged by the multitude is reflective of this same diversity.

The dimensions and particularities of each struggle, whether in the home, the school, the workplace, or in society writ large,

> while distinct, are not disconnected. Rather, they appear as a broad revolt by different sectors of labor against their allotted place in the social factory. The new social movements of the era can be understood not as a negation of working-class struggle but as its blossoming: an enormous exfoliation, diversification, and multiplication of demands, created by the revolt of previously subordinated and superexploited sectors of labor. (Dyer-Witheford, 1999, p. 77)

This moment of embryonic class recomposition, where previously disconnected segments of society begin to recognize their cognate demands and common enemy might just as well lead to a fragmented and isolated form of resistance that segregates movements along all-too-familiar vocational, ethnic, gender, and socioeconomic lines. When divided and isolated from one another, the individual struggles of a group or movement stand very little chance of victory when confronted by the totalizing machinations of Empire and the massive arsenal of physical and ideological violence that support them. Therefore, "It is nothing if not audacious to discern such a recompositional

process" (Dyer-Witheford, 1999, p. 87) amidst the institutional and organizational wreckage left in Empire's wake. But some autonomists have done just that.

Alliances between groups that might never have known of the others existence, let alone stood next to each other in struggle, are made and remade all of the time and over vast expanses of geography. As the Battle in Seattle, the recurring (and often violent) protests against the G7, G8, G20, World Economic Forum, and the recent struggles against draconian austerity measures put in place by the governments of Great Britain, Spain, and Greece at the behest of the International Monetary Fund (IMF) only begin to indicate, alliances of the sort envisioned by Hardt and Negri's concept of the multitude and their struggle against Empire, while audacious, are not inconceivable. One need look no further, in fact, than the global Occupy Movement that spread to all corners of the world in the Summer and Fall of 2011 as emblematic of such an alliance.[9] While internally diverse and distinct, the notion of the 99 percent is an excellent indication of the common, yet heterogeneous nature of the class composition offered by Hardt and Negri's concept of the multitude.

The networks created by capital to manage, make efficient, and profitable this global factory have also, then, brought about the possibility of organizing and coordinating the vastness and heterogeneity of the struggles against it. This is not simply a matter of communicating with each other across vast expanse, but also of gaining the knowledge and, therefore, the power to do so affectively and in a way that not only resonates with others, but links seemingly parochial concerns, issues, ideas, and strategies to their broader root causes and, hence, to each other. The physical hardware, fibre-optic cable, micro-processors, silicon chips, handheld devices, social networks, and their ilk are

necessary requirements and significant ingredients if the recomposition of decomposed militancy is to occur, but alone they are not enough. In addition and more important are the competencies, skills, knowledge, and forms of subjectivity engendered by working with these tools. Communication and collaboration over great distance and between groups that had little knowledge of each other was once very difficult and demanding. However, as more and more individuals learn the skills required to communicate and cooperate with each other via the experience gained in their work and social lives respectively, these kinds of actions become easier and more common.

Central to understanding the acquisition of these communicative and cooperative skills is the concept of immaterial labour. Focusing their sights on the conditions that obtain from the dissolution of the massive industrial factories, Hardt and Negri argue that,

> In the final decades of the twentieth century, industrial labor lost its hegemony and in its stead emerged 'immaterial labor,' that is, labor that creates immaterial products, such as knowledge, information, communication, a relationship, or an emotional response. (…) We recognize that Immaterial Labor is a very ambiguous term in this regard. It might be better to understand the now hegemonic form as 'biopolitical labor,' that is labor that creates not only material goods but also relationships and ultimately social life itself. (Hardt & Negri, 2004, p. 109)

The nature of the work required to coordinate Post-Fordist production is different in type and kind from the labour of the assembly line. In the era of the hegemony of immaterial labour, then, there are two basic types of labour that require recognition. The first is the persistence of an increasingly precarious and globally distributed industrial labour force tasked with the physical manufacturing and assembly of tangible goods. This

kind of work remains a constant and irreplaceable ingredient in post-Fordist capital. Conceiving immaterial labour, then, "does not mean that car dashboards are no longer produced" (Virno, 2004, p. 61) nor does it mean that

> there is no more industrial working class whose calloused hands toil with machines or that there are no more agricultural workers who till the soil. It does not even mean that the numbers of such workers has decreased globally. What it means, rather, is that the qualities and characteristics of immaterial production are tending to transform the other forms of labour and indeed society as a whole. (Hardt & Negri, 2004, p. 65)

Similar to agricultural production, industrial production has not disappeared; nor is it likely to anytime in the near future. "Despite the dreams of wide-eyed digital futurists (…) the full 'lights out' scenario – in which the final worker replaced by a robot turns out the lights and exits the building, leaving behind a smoothly running automated darkness – remains an unattained goal" (Dyer-Witheford, 1999, p. 94). Foodstuffs and tangible goods require manufacturing and the pivotal importance of living labour on the factory farm or in the semi-automated factory has not diminished. What has come to pass, however, is that these forms of labour have adopted the characteristics and tendencies of immaterial production.

The second and now hegemonic form of labour under post-Fordism is undertaken and accomplished by workers charged with organizing, planning, and administering the activities and outcomes of the first group. There is perhaps no better example of the intimate links between these two forms of work than the motto inscribed on billions of digital devices the world over: "Designed by Apple in California. Assembled in China."[10] Hardt and Negri's point is that the labour epitomized by Apple's designers is fundamentally different than that done by its assemblers. However, it is also linked to the work done by assemblers via communicative channels that unevenly influence the nature

and form of work that both undertake. According to the authors, this relationship has shifted in recent decades. Immaterial labour "has become *hegemonic in qualitative terms* and has imposed a tendency on other forms of labor and society itself. Immaterial labor, in other words, is today in the same position that industrial labor was 150 years ago" (Hardt & Negri, 2004, p. 109).

Maurizio Lazzarato's (1996) diagnosis of this new mode of immaterial production was one of the first theoretical treatments to describe this new form of labour and thus merits extended quotation. Lazzarato defines immaterial labour as the

> labor that produces the informational and cultural content of the commodity. The concept of immaterial labor refers to *two different aspects* of labor. On the one hand, as regards the 'informational content' of the commodity, it refers directly to the changes taking place in workers' labor processes in big companies in the industrial and tertiary sectors, where the skills involved in direct labor are increasingly skills involving cybernetics and computer control and horizontal and vertical communication. On the other hand, as regards the activity that produces the 'cultural content' of the commodity, immaterial labor involves a series of activities that are not normally recognized as 'work' – in other words, the kinds of activities involved in defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and, more strategically, public opinion. (1996, p. 133)

Producing the informational content of a commodity refers to the immaterial activities that explicate the functioning, purpose, or legalities of a particular commodity. Briefly, the Terms of Service (TOS) or End User License Agreements (EULA) for any of the online social networks, or one of the voluminous and multilingual instruction booklets that accompany any digital gadget sold on the market today, are good examples of forms of labour that produce the informational content of a commodity. The cultural content of a commodity that defines and temporarily fixes cultural, artistic, aesthetic, and/or

political norms is produced principally by advertising agencies, public relations firms, institutions of the mass media, and, increasingly, 'users' of social networks and Web 2.0 sites and services that review, comment, and opine on any number of topics or products. Once again, the labour required to produce both the informational and cultural content of a commodity itself results in no tangible end product and is therefore adequately referred to as immaterial.

In *Empire* (Hardt & Negri, 2000), the authors amplify Lazzarato's definition of immaterial labour by identifying three similar yet different facets.[11] They argue that,

> we can distinguish three types of immaterial labor that drive the service sector and the top of the informational economy. The first is involved in an industrial production that has been informationalized and has incorporated communication technologies in a way that transforms the production process itself. (…). Second is the immaterial labor of analytical and symbolic tasks, which itself breaks down into creative and intelligent manipulation on the one hand and routine symbolic tasks on the other. Finally, a third type of immaterial labour involves the production and manipulation of affect and requires (virtual or actual) human contact, labor in the bodily mode. These are the three types of labor that drive the postmodernization of the global economy. (2000, p. 293)

Hardt and Negri's first type of immaterial labour, that done by industrial workers essentially supervising computer-driven robotics in the informationalized factory has been dealt with adequately above. The second type, according to Hardt and Negri, breaks down into two different categories. The creative and intelligent manipulation of symbols, language, images, and ideas fits nicely within the parameters of Lazzarato's definition of the labour that creates the informational and/or cultural content of the commodity. Hardt and Negri go beyond Lazzarato, however, by acknowledging the labour of a large number of immaterial workers charged with much more mundane tasks. These are the

data entry workers, receptionists, call centre operators, and the like. It is important to recognize this dreary immaterial underbelly as it foregrounds the routinized, repetitive, and mind numbing aspects of some forms of immaterial labour, likening them and their relations to the conditions of the mass worker. Not everyone whose labour qualifies as immaterial, then, works in a creative and self-directed fashion and it is important to note that these individuals too form a significant portion of those working in the immaterial era.

The affective dimensions of immaterial labour, Hardt and Negri's third type, where one's emotions and cognitions are put to work, is another important elaboration of Lazzarato's initial conception. This kind of "labor is immaterial, even though it is corporeal and affective in the sense that its products are intangible: a feeling of ease, well-being, satisfaction, excitement, passion – even a sense of connectedness or community" (Hardt, 1999, p. 96). Affective labour, the immaterial labour that produces an emotional and cognitive response in oneself and/or another, is most evident in the service sector. The work of a waiter, clerk, or retail associate for instance, produces no tangible end product, but does produce an affective response. Anyone who has received either exemplary or dismissive service in a restaurant or retail outlet will recognize the affective dimensions of this third type of immaterial labour. Schematically, then, immaterial labour can be said to produce the informational, cultural, and affective dimensions of a commodity, whatever that commodity may be.

The direct oversight and scientific management characteristic of the labour taking place in the factory environment is noticeably absent in the immaterial era. This does not mean, however, that management no longer cares about overseeing the activities of their

immaterial labour force, but that this kind of work cannot be observed and controlled in such an overt fashion. Management has, in a sense, lost control of the minutiae of the mode of the immaterial production and taken up a much more dissociated position in relation to controlling their labour force. The significance of the augmentation of communicative and collaborative capabilities is that the direct input and instructions provided by the 'the bosses,' once such a prominent feature in the industrial era, no longer dominates the work routine of the labourer under immaterial conditions. In other words, "Cooperation (…) is posed independent of the organizational capacity of capital; the cooperation and subjectivity of labour have found a point of contact outside the machinations of capital. Capital becomes merely an apparatus of capture, a phantasm, an idol" (Hardt & Negri, 1994, pp. 282-283). Put differently, labour assumes this coordinative and/or supervisory role for itself. It organizes and collaboratively develops the skills required to cooperate on often incredibly complex projects. However, 'the bosses' retain a vested interest in controlling the activities of their labour force, but have had to find new ways of doing so.

While management may be dissociated from the day-to-day workings of waged immaterial production, there remains the need to control the activities of its workforce. This is accomplished, according to Lazzarato, by forcing an employee to communicate and collaborate with others at the behest and in the interests of their employer. He argues, "First and foremost, we have here a discourse that is authoritarian: one *has to* express oneself, one *has to* speak, communicate, cooperate, and so forth. The 'tone' is that of the people who were in executive command under Taylorization; all that has changed is the content" (1996, p. 135). By exchanging one's ability to communicate with others for a

wage, the immaterial labourer is, in effect, selling his/her communicative and affective capacities to a boss just like the industrial labourer sold his/her physical capacities, but with much more insidious effect. Over time, the perspective, needs, wants, and desires of the employer become that of the employee. They are, autonomists argue, absorbed by and into the employee's 'soul' (Berardi, 2009).

When the 'authoritarian' discourse that commands employees to speak, communicate, and cooperate whenever and wherever they may be is considered alongside the widespread diffusion of mobile communication technologies that convert leisure spaces into workplaces, the influence of this new form of labour on the constitution and control of one's 'soul' or subjectivity is consequential. In the present day, the distinction between work time and leisure time effectively collapses with the former, autonomists argue, subsuming the latter. The factory whistle that once announced the beginning and end of the workday in the era of the mass worker is silenced in the era of immaterial labour with the effect of not only extending the workday indefinitely, but also extending the working subjectivity into spaces and times previously beyond the reach of capitalist control.

"It is worth noting that in this kind of working existence it becomes increasingly difficult to distinguish leisure time from work time. In a sense, life becomes inseparable from work" (Lazzarato, 1996, p. 138). Pivotal to this difficulty is the fact that digital information and communication technologies have infused themselves into the daily work and leisure environments of billions of people around the world that rely on their communicative and coordinative affordances to structure their work lives and leisure time respectively. In the era of the mass worker, work stopped and life began when the factory

whistle blew. There was, in other words, a distinct temporal line drawn in the sand between the time spent on the job and that spent away from it. In the era of Empire and the hegemony of immaterial labouring practices, the line in the silica that differentiates work time from leisure time tends to disappear completely. "When production is aimed at solving a problem, however, or creating an idea or relationship, work time tends to expand to the entire time of life. An idea or an image comes to you not only in the office but also in the shower or in your dreams" (Hardt & Negri, 2004, pp. 111-112).

However, Kathi Weeks takes a crucial step when she argues that,

> It is not only that work and life cannot be confined to particular sites, from the perspective of the production of subjectivity, work and life are thoroughly interpenetrated. The subjectivities shaped at work do not remain at work but inhabit all the spaces and times of non-work *and vice-versa*. Who one becomes at work and in life are mutually constitutive. There is no position of exteriority in this sense; work is clearly part of life and life part of work. (Weeks, 2007, p. 246; emphasis added)

This is especially true for individuals that exchange their communicative skills, cooperative aptitudes, and emotive capacities for a wage. However, the inverse relation is also true. As Weeks acknowledges above, the subjectivities shaped away from the waged work environment, on social networks for instance, cannot be confined to these domains either. They bleed over, impinge upon, and sometimes conflict with those shaped at work.

Lazzarato argues that what capital needs to control in the immaterial era is not the pace or motion of the hands, but the communicative capacities and affective dimensions of the worker. He claims that "[t]he concept of immaterial labor presupposes and results in an enlargement of productive cooperation that even includes the production and

reproduction of communication and hence of its most important contents: subjectivity." He continues,

> [w]hat modern management techniques are looking for is 'the worker's soul to become part of the factory.' The worker's personality and subjectivity have to be made susceptible to organization and command (…) [and] [t]he capitalist needs to find an unmediated way of establishing command over subjectivity itself; the prescription and definition of tasks transforms into a prescription of subjectivities. (Lazzarato, 1996, p. 134)

When "the soul and its affective, linguistic and cognitive powers are put to work (…) the primary function of the work [in] the post-Fordist factory is not the creation of value but the fabrication of subjectivities – the modeling of psychic space (…) as a technique of control" (Smith, 2009, p. 17). Waged immaterial labour is, therefore, constitutive of portions of one's subjectivity. In this immaterial context,

> the separation of mind and body, typical of the Taylorist labour organization, tends to disappear in an inextricable mix of working *routine* and intense participation in the productive process. This subjection is no longer disciplinarily imposed by a direct chain of command. Rather, it is most often internalized and developed through [a] form of subtle conditioning and social control. (Morini & Fumagalli, 2011, p. 237)

In essence, then, when one exchanges one's communicative and affective capacities for a wage, the perspective, demands, and prerogatives of that individual or institution that purchased them become those of the employee.

> Indeed, as labor that 'calls for a coordination of mind and feeling, and (…) sometimes draws on a source of self that we honor as deep and integral to our individuality' (Hochschild, 1983, p. 7), its impact is not even limited to what we do or what we think, to the body's health and energies or the mind's thoughts. It extends to the affective life of the subject, into the fabric of the personality. (Weeks, 2007, pp. 240-241)

The point of emphasizing and exploring the nuances of the impact of immaterial labouring processes on the constitution of one's subjectivity is that it brings to the fore and makes possible the argument that if *waged* immaterial labour has an impact on the constitution of the subjective souls of those who undertake it, so too does *unwaged* immaterial labour. This exact point is the nuclei around which the central arguments of this thesis orbit. Both *waged* and *unwaged* immaterial labour is constitutive of portions of one's subjectivity. While the former is sold to another and regulated by the purchaser's will, the latter is voluntarily offered and regulated by an entirely different set of relationships and priorities. One of the most suggestive characterizations of immaterial labour's constitutive powers is to describe it as biopolitical. Hardt and Negri do just that and it is to them and their theoretical forebear that we now turn.

2.6. Foucault & Biopower:

Hardt and Negri take the crucial step of characterizing the influence that immaterial labour has on the constitution of one's subjectivity as biopolitical. Following Foucault's lead, they state explicitly that

> Immaterial labor is *biopolitical* in that it is oriented towards the creation of forms of social life; such labor, then, tends no longer to be limited to the economic but also becomes immediately a social, cultural, and political force. Ultimately, in philosophical terms, the production involved here is the *production of subjectivity*, the creation and reproduction of new subjectivities in society. (2004, p. 66)

Foucault's concepts of biopower and biopolitics have been mobilized in a number of different academic disciplines that attempt to describe the impact of a subtle and subdued form of power on the bodies, minds, and lives of individuals, populations, and ecologies

around the world.[12] The current treatment limits its examination of biopower and biopolitics to the autonomist perspective.

In *The History of Sexuality* –Volume 1 (1978), Foucault argues that alterations in the political, cultural, spiritual, and economic organization of life brought about by the waning influence of monarchical sovereignty, religion, and the feudal mode of production reached a breaking point in the mid-to-late eighteenth century and tabled new problems regarding the dynamics of power for those wielding it. He argues:

> During the classical period, there was a rapid development of various disciplines – universities, secondary schools, barracks, workshops; there was also the emergence, in the field of political practices and economic observation, of the problems of birthrate, longevity, public health, housing, and migration. Hence there was an explosion of numerous and diverse techniques for achieving the subjugation of bodies and the control of populations, marking the beginning of an era of 'bio-power.' (1978, p. 140)

Foucault's oeuvre is best thought of as an intellectual genealogy of the ways and means through which individuals are made and remade as subjects. "Some have thought that Foucault was painting the portrait of modern societies as disciplinary apparatuses in opposition to the old apparatuses of sovereignty. This is not the case" (Deleuze, 2007, p. 345). His objective was "not (…) to analyze the phenomena of power, nor to elaborate the foundations of such an analysis" but to "create a history of the different modes by which, in our culture, human beings are made subjects" (Foucault, 1982, p. 326). One of the primary means by which he undertakes this analysis is by examining key biopolitical *dispositifs*, apparatuses, or 'machines' through which individuals continuously pass.

In typically enigmatic fashion, Deleuze defines a *dispositif* as "a skein, a multilinear whole" (Deleuze, 2007, p. 338). Elsewhere and in reference to an 'apparatus,' Giorgio Agamben comments that though Foucault

> never offers a complete definition, he comes close to something like it in an interview from 1977: 'What I'm trying to single out with this term is, first and foremost, a thoroughly heterogeneous set consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral, and philanthropic propositions – in short, the said as much as the unsaid. Such are the elements of the apparatus.' (Agamben, 2009, pp. 1-2)

The various *dispositifs*, apparatuses, or what are referred to throughout this thesis as biopolitical 'machines,' have the power to guide, regulate, discipline, and eventually control individuals and populations by making them subject to their norms and mores.

In the social and political dynamics of the late eighteenth century, Foucault identifies a new power 'skein' that guides and regulates the actions, thoughts, and behaviours of individuals and populations. In Foucault's reading, power has not vanished; it has, instead, been atomized. Rather than descending from above in proclamations made by a monarch or clergyman, power circulates and operates throughout society and is locatable in discourse, in the architectures of the prison, hospital, asylum, barracks, and university to name but a few of the most prominent biopolitical 'machines.' These institutions and those individuals bestowed with the power/knowledge (Foucault, 1980) to administer them, discipline individuals and entire populations through a process of naming, defining, and defending the discourses, thoughts, and behaviours that are 'acceptable,' 'normal,' 'safe,' 'healthy,' 'profitable,' and, just as importantly, those that are not.

As we move into the nineteenth, twentieth, and twenty-first centuries the disciplinary power of biopolitical machines further atomizes itself throughout the capillaries of society and culture, manifesting in an entirely new organization of power characterized by Deleuze as a society of control. Referring to the *dispositifs* of the disciplinary society such as the prison, Deleuze wryly proclaims: "everyone knows that these institutions are finished, whatever the length of their expiration period. It is only a matter of administering their last rites and keeping people employed until the installation of the new forces knocking at the door. These are the *societies of control*, which are in the process of replacing the disciplinary societies" (Delueze, 1992, p. 4).

Deleuze's societies of control are evidence that the power relationships characteristic of the disciplinary machines identified by Foucault have escaped their architectural confines, climbed over or burst through their walls, and established themselves in much more diffuse and de-centred locales. As these relationships of power and control become ever more coextensive with life, they are naturalized and normalized to the extent that their operation is no longer recognized. This is a capillary form of power that gets absorbed by each individual living and moving in the normalized channels of society and comes to delimit a range of (im)possibilities open to him/her according to the unwritten rules of the particular context in which s/he lives and moves (See Castel, 1980). Unlike physical violence, incarceration, or servitude, this form of power does not act directly on the body through the administration of lashes, the confinement imposed by bars or chains, or corporal suasion of any sort. Rather, what defines a relationship of power within this particular paradigm

> is that it is a mode of action that does not act directly and immediately on others. Instead, it acts upon their actions: an action upon an action, on possible or actual future or present actions. A relationship of violence [rather than power] acts upon a body or upon things; it forces, it bends, it breaks, it destroys, or it closes off all possibilities. (Foucault, 1982, p. 789)

Biopower, on the other hand, leaves no immediate bruises, no identifiable scars. It does not act upon the body like a switch, but acts upon an action, what the mind believes is normal and/or abnormal, what the person in question believes him/herself capable or incapable of, and, by doing so, has a constitutive influence on that persons subjectivity.

What obtains with Foucault's theorization of biopower is a disarticulation and decentralization of power relationships throughout all of society. Biopower, in other words, circulates everywhere, directs (though does not determine) our every move, and is inescapably influential, no matter how concealed, in each and every decision that gets made. It surrounds us. We imbibe it. It is an all-but-invisible form of power that pushes and pulls us in particular directions, influencing the thoughts, choices, dreams, and decisions we have or make. In a peculiar inversion to the meaning behind the old cliché, we are always already 'drunk on power.'

In general, biopower exerts its influence covertly at the level of defining what it means to be normal, well adjusted, sane, efficient, profitable, happy, and rational in contemporary society. That is, the real basis of biopower is definitional and pedagogical. The various 'machines' identified above are tasked with defining the standards, norms, and mores that guide and regulate the thoughts and behaviours that constitute the taken for granted assumptions of what it means to be a 'productive' member of society, for

instance. Over time, these definitions seep down into the bloodstream, make their way to the brain, and eventually alter the way we think, act, believe, and behave.

Hardt and Negri, it bears restating, pick up Foucault's notion of biopower and apply its dictates to the subtleties of capitalist subsumption and, in particular, to aspects of waged immaterial labour. They argue, "Capitalist control and exploitation rely primarily not on an external sovereign power but on invisible, internalized laws" (2009, p. 7). Empire, then, "seeks directly to rule over human nature. The object of its rule is social life in its entirety, and thus Empire presents the paradigmatic form of biopower" (Hardt & Negri, 2000, p. xv). Empire, in other words, posits a regime of ubiquitous control that seeks to govern and control markets, resources, and profits, but in order to do so needs to regulate the thoughts and aspirations of the individual and collective as well. Empire's breadth, scope, and depth of influence, then, not only encompasses the surfaces of the globe, the natural resources above or beneath, and the populations of the world, but reaches "down to the ganglia of the social structure and its processes of development (…). Power is thus expressed as a control that extends throughout the depths of the consciousness and bodies of the population – and at the same time across the entirety of social relations" (Hardt & Negri, 2000, p. 24).

The most important element of the theory of immaterial labour for this thesis is recognition that it is biopolitical. Immaterial labour is biopolitical in that it requisitions, purchases, and eventually commandeers the innermost communicative and affective competencies of the individual. When one exchanges one's capacity to speak, think, emote, and interact with others for a wage, over time the prerogatives, needs, and desires of the person(s) who purchased these capacities seep down and through the worker's skin

and into the fabric of his/her subjectivity. Similar to the inmates in Foucault's analysis of the panoptic prison (1995, p. 195-228), the actions, ideas, and thoughts of waged immaterial labourers are progressively disciplined and controlled by the assumed desires of the individual(s) who purchased the right to command them. Waged immaterial labour is biopolitical in that over time and through exposure it influences the ways in which the worker thinks of him/herself, the way s/he interacts with others, and the kinds of thoughts s/he has. This is not to say, however, that this process is absolute.

While Foucault used the term 'biopower' interchangeably with 'biopolitics,' Lazzarato argues convincingly (2002) that the latter term is preferable in that it emphasizes not an unchangeable manifestation of power, but a dynamic, fluid, and fundamentally political relationship that changes over time and through contestation. Acknowledging the possibility of struggle within biopolitical relationships of power endemic to immaterial labouring practices is important to this thesis because of the concerns it raises regarding the influence that both *waged* and *unwaged* immaterial labour have on the constitution of subjectivity.

In a statement that should be read as eminently complimentary to the Copernican Inversion, Foucault argues that "resistance comes first, and resistance remains superior to the other forces of the process; power relations are obliged to change with the resistance. So I think that *resistance* is the main word, the *keyword*, in this dynamic" (Foucault quoted in Lazzarato, 2002, p. 105). In a passage that seems lifted from the pages of *Empire* or *Multitude*, Foucault goes on to claim that "It seems to me that power *is* 'always already there,' that one is never 'outside' it (…) But this does not entail the necessity of accepting an inescapable form of domination (…) To say that one can never

be ‘outside’ power does not mean that one is trapped and condemned to defeat no matter what” (Foucault, 1980, pp. 141-142). Deleuze insists, “The final word on power is that *resistance comes first*” (1988, p. 89). Hardt and Negri too proclaim, “resistance is actually prior to power” (Hardt & Negri, 2000, p. 360).

Terminologically, the above authors’ use of ‘resistance’ is ungainly. It is ungainly because it insinuates a chronological power dynamic that places the exercise of power in the active position and resistance in the responsive position. In order to ‘resist,’ in other words, there must first be a power against which this act is directed. Setting this small semantic quibble aside, before an action has an effect and acts on the actions of another, first and foremost, there is a form of power residing in the individual that confronts the power being exerted upon him/her – a critical though perhaps subliminal questioning of the influence of this power on the autonomous decision making process. And it is in this moment that Foucault and autonomists acknowledge the multiple vectors that power may travel: from above, certainly, but also originating from below, from all number of angles, and that standing in front of any kind of exertion of power is, in the first instance, another source of power originating in the free will and a priori autonomy of the individual.

Lazzarato believes, “it is necessary to speak of power relations rather than power alone, because the emphasis should fall upon the relation itself rather than on its terms, the latter are not causes but mere effects” (2002, p. 107). The term ‘biopolitics,’ then, better acknowledges the mutability of these relations than ‘biopower’ does. According to Lazzarato,

> The only way that a subject can be said to be free (…) is if they ‘always have the possibility to change the situation, if this possibility always

> exists.' This modality of the exercise of power allows Foucault to respond to the critiques addressed to him ever since he initiated his work on power: 'So what I've said does not mean that we are always trapped, but that we are always free. (2002, p. 108)

The distinction between an omnipresent, unquestioning, and unquestionable form of power that dominates life and a dynamic relationship of power that alters and changes through conflict, struggle, and resistance is an important one because it establishes a relational, historic, and fluid dynamic rather than an ossified and rigid one. Biopolitics, in other words and according to Hardt, "is the realm in which we have the freedom to make another life for ourselves, and through that life transform the world" (2010, p. 159).

2.7. Conclusion: The Struggle Over Subjectivity

In an argument that alludes to circumstances and contexts indicative of the ever-changing nature of the struggles between capital and labour that have framed this chapter, Hardt and Negri argue that it is at the biopolitical level of the production and regulation of subjectivity that one of the most important forms of contemporary struggle is waged. This locale of struggle could not be further from the physical struggles waged by professional, mass, and socialized workers. However, the authors argue "Here is where the primary site of struggle seems to emerge, on the terrain of the production and regulation of subjectivity. (…) [On this terrain] it seems that we can identify a real field of struggle (…) a true and proper situation of crisis and maybe *eventually* revolution" (2000, p. 321; emphasis added). This is an eminently historical conceptualization of human subjectivity that posits a fluid and supple subjectivity that transforms and metamorphoses according to the manifold conditions that surround it. Broadening the scope of their notion of a historically changeable subjectivity to discuss its influence on

'human nature,' Hardt and Negri argue that, "The most important fact about human nature (if we still want to call it that) is that it can be and is constantly being transformed" (Hardt & Negri, 2009, p. 191) through conflict and struggle.

As is argued in more detail in Chapter 7, however small and however limited, the biopolitics that guide and regulate the unwaged immaterial labour characteristic of Flickr *conflict* with those of waged immaterial labour and have a transformative effect on the subjectivities of those individuals party to them. Understanding the parameters and potentialities of this conflict is important because it allows us

> to ground the critical standpoint on subjectivity not in a claim about the true or essential self, but in a potential self. (…) Once the temporal horizon of a possible future replaces the spatial confines of an existing sphere of practice or model of identity, the standard by which the present is judged could expand to visions of what we might want rather than the defense of what we already have, know, or are. (Weeks, 2007, p. 248)

Flickr, and the biopolitics that pervade it, provide a flawed, incomplete, yet provocative and inspiring glimpse inside these 'potential selves.' By making evident what is possible when labour is organized and managed autonomously, Flickr ever so slightly opens up some space to think past the present and into the future.

While Empire posits an inescapable regime of control reliant on the biopolitical dimensions of waged immaterial labour that seek to command and manage the soul of each and all of us, at the same time – and here is the rub – it has also constructed the cultures, technological infrastructure, aptitudes, and subjectivities to effectively struggle within and against it. In the process of dispersing the factory and its exploitative dynamic across the entire globe, capital may have temporarily decomposed the militant solidarity

that once threatened its existence, but in so doing it has also handed over control and intimate working knowledge of the tools required to wage a battle against it.

Harry Cleaver offers the metaphor of an "electronic fabric of struggle" (1998) that weaves the multitude's causes, interests, and forms of resistance into one another. The electronic fabric of struggle indicates that the globally distributed networks comprising the Internet and the relatively newfound ability to communicate with others through them have a pivotal role to play in multitudinous struggle. The highly networked environment, social nature, and communicative affordances of what has come to be known as 'Web 2.0' not only facilitate the kinds of connections between heterogeneous groups required to weave Cleaver's fabric, but are also productive of subjectivities guided and regulated by fundamentally different biopolitical norms and mores than those that commandeer and control the worker's soul. All of the autonomous and unwaged immaterial labour taking place on Web 2.0 sites and services provides nascent evidence that there are indeed alternatives to the exploitation endemic to capitalist globalization and that the supposed 'end of history' (Fukuyama, 1989) may in fact be a beginning.

Nowhere is the potential autonomy of labour in its relation to capital more evident than within Web 2.0. It is the task of this thesis to understand how the kinds of actions, aptitudes, and subjectivities produced by and through the quotidian workings of Web 2.0 biopolitically contest, resist, and conflict with the edicts of Empire. The potential for biopolitical conflict at the level of the constitution of subjectivity is the central concern of Chapter 7. A thorough treatment of the nuances of this possibility is thus reserved for that time.

What presently requires emphasis, though, is that waged and unwaged immaterial labour both have distinct biopolitical orientations and inclinations each productive of subjectivity. The question remains, however, "how is it that parts of subjectivity can resist, evade or exceed capitalist colonization?" Furthermore,

> if contemporary forms of capitalist organization demand 'cooperativeness', 'participation', 'creativity' and other practices that are also – simultaneously – said to be features of an elementary spontaneous communism, then how can one distinguish between those instances that might make capitalists quake in their boots and those which are indices (on the contrary) of capitalism's penetration of workers' very souls? (…) These are important questions that autonomist writing does not seem to resolve. (Gill & Pratt, 2008, p. 19)

The contribution made by the theoretical and ethnographic components of this thesis address these important questions by approaching them through the differences in the biopolitics that guide and regulate the production of subjectivity via waged and unwaged immaterial labouring practices respectively. While the managers and bosses of *waged* immaterial labour attempt to control the souls of their workforce so as to bolster their bottom lines, *unwaged* immaterial labour of the sort evident on Web 2.0 in general and Flickr in particular is beholden to an entirely different group and purpose. But what is Web 2.0? What are its primary features? How should we understand the relationship between it and autonomist Marxism? And what in the world does a photo-sharing social network called Flickr have to do with any of this? It is to these questions that the next chapter is addressed.

Chapter 3 – Web 2.0 Literature Review

3.1 Introduction: The Dream of Two-Way Media & Web 2.0

In 1932, Bertolt Brecht wrote that the transistor radio would be "the finest possible communication apparatus in public life (…) if it knew how to receive as well as transmit, how to let the listener speak as well as hear, how to bring him into a relationship instead of isolating him" (1964, p. 52). Similarly, four decades later, Dallas Smythe wrote that it was desirable, and entirely possible, to engineer the television "as a two-way system in which each receiver would have the capability to provide either a voice or voice-and-picture response to the broadcasting station, which might then store and rebroadcast these responses" (1994, p. 231). The dream of a two-way system of communication that allows individuals send and receive messages is a well-established one. With Web 2.0, this dream is more fully realized than ever before.

The personal computer (PC), the Internet, and the sites and services developed on these platforms allow the individual to at one and the same time be both sender/producer and receiver/user of information and communication. They facilitate not only the near-instantaneous retrieval of information and communication, but also make seamless the publication and transmission of one's thoughts and ideas. Understanding the communicative and political potentials of the PC, the Internet, the relationships they enable, and the social networks they foster is, however, in its infancy. While Web 2.0, the moniker to which these developments allude, has been referred to so often and bandied about so liberally that the lack of specificity devalues its interpretive and critical value, its attributes, characteristics, and technologies signal a sea-change in the ways in which we communicate, associate, organize, and develop with and among one another.

The arguments and disagreements between commentators, academics, and pundits regarding Web 2.0, the social web, and User-Generated Content (UGC) is indicative of their provocations. The range of these arguments is too broad and expansive to exhaustively characterize below, but can be schematized according to four porous and sometimes overlapping perspectives. The first group regards Web 2.0 from the perspective of corporate enterprise and a critique of its intentions. Web 2.0 and UGC, according to this group, are based on lucrative and/or exploitative business models that leverage the 'free labour' of Web 2.0 sites and services to their advantage in an attempt to maximize profit margins.[13] The second group regards Web 2.0 as the demise of the highly vaunted cultural, artistic, and specialized talents of well-trained professionals. This position regards the 'crowd' of 'users' as a collection of amateurs that are knocking elites off their privileged perch, devaluing the integrity and intelligence of cultural, artistic, and social institutions in the process.[14] Still others see Web 2.0 as the germination of the seeds of participatory democracy sown into the fabric of networked communication in the embryonic days of the Internet.[15] Lastly, a fourth group of scholars, approaches Web 2.0 from a juridical or legal perspective and argues that Web 2.0 is, with mixed results, challenging traditional conceptions of property, creativity, democracy, copyright, culture, and the economy.[16] Once again, these four groups do not exhaust the range of perspectives regarding Web 2.0, but do characterize some of its more popular currents.

Yochai Benkler, one of the more optimistic scholars regarding the participatory cultures of Web 2.0, argues (2006) that at present we are witness to a paradigmatic shift from an Industrial Information Economy to a Networked Information Economy. An industrial information economy centralized the production and distribution of

communications in the hands of a few, leaving the many unable to effectively communicate beyond their immediate circle. The networked information economy disperses these communicative capacities much more broadly than ever before. At the heart of this shift, according to Benkler, is the diffusion of the ownership of the means of production of information and communications throughout society. “From the steam engine to the assembly line, from the double-rotary printing press to the communication satellite, the capital constraints on action were such that simply wanting to do something was rarely a sufficient condition to enable one to do it.” He continues, “In the networked information economy, the physical capital required for production is broadly distributed throughout society. Personal computers and network connections are ubiquitous” (2006, p. 6). While Brecht and Smythe yearned for a technological system that would allow the receiver of messages to become, at one and the same time, a sender, Benkler identifies in the hardware and software of the present day Internet just such a system.

The shift from an Industrial Information Economy to a Networked Information Economy is relatively recent. A few short decades ago, the Internet and the Web were nothing more than virtual printing presses that maintained many of the same relationships of power, production, and consumption as their physical forebears. The power associated with the production of mass communications was still centralized in the hands of a few and the ability to effectively speak back or respond to these mass-produced messages severely limited in scope. What Benkler signal’s in his shift from an industrial information economy to a networked information economy is that these ossified power relations are beginning to decompose.

In the incipient days of the first iteration of the Web, then, the ability to communicate one's thoughts or ideas to the 'masses' was severely limited and not dissimilar to the era of the industrial information economy. A lot has changed since these formative days and these transformations have occurred at breakneck speed. The etymological and conceptual shift from Web 1.0 to Web 2.0 names and explains a number of these changes. Therefore, the following review of the literature pertaining to Web 2.0 attempts to slow down the pace of these transformations long enough to, first, understand them, and second, critically assess their merits. In order to do so, it makes its way through four primary sections. The first is a treatment of Tim O'Reilly's (2005) description of Web 2.0. The second is Axel Bruns' investigation of the change from a mode of production to the mode of prod-usage emblematic of the Web 2.0 era. The third is an analysis of the unwaged immaterial labour undertaken and accomplished by 'users' of Web 2.0 sites and services. And the fourth is an examination of the political economy of communications as it pertains to the exploitative dimensions of Web 2.0 and UGC.

3.2 What is Web 2.0?:

Tim O'Reilly's attempt to conceptualize and define Web 2.0 was received with mixed reviews. One of the reasons his treatment of Web 2.0 was greeted with such a disparate reaction can be attributed to the organizational structure of his article. His prose is clear and concise and the examples offered relevant and on topic, but the organizational logic of the article does nothing to reinforce its central point and purpose. His seven principles of Web 2.0 are divided into discrete sub-sections and their interrelationships obliquely alluded to rather than clearly emphasized. Following his own injunctions regarding the virtues of hack-ability and mash-ability, then, O'Reilly's seven

principles are remixed in what follows so that a better understanding of their inherent reciprocity is brought to the fore.

The seven principles of Web 2.0 identified by O'Reilly are: i) The Web as Platform, ii) Harnessing Collective Intelligence, iii) Data is the Next Intel Inside, iv) End of the Software Release Cycle, v) Lightweight Programming Models, vi) Software above the Level of the Single Device, and vii) Rich User Experience. The first principle of Web 2.0 has altered the online activities of individuals most significantly. "The Web as Platform" is the central hub, or what O'Reilly calls the "gravitational core," to which all other principles are drawn. What needs to be hastily noted, however, is that since its inception the Web has always been a platform that hosts, distributes, aggregates, and makes searchable data of one type or another. The novelty of the present day is that we are only just beginning to realize what this platform enables. In other words, O'Reilly is right to emphasize that Web 2.0's "'2.0-ness' is not something new, but rather a fuller realization of the true potential of the web platform" (2005).

Taking Flickr and Google as two of his central touchstones, O'Reilly argues that they are archetypal examples of companies that leverage the potentials of the web as a platform to host and distribute media. Archetypal because they "began [their] life as (…) native web application[s], never sold or packaged, but delivered as a service, with customers paying, directly *or indirectly*, for the use of that service. None of the trappings of the old software industry are present. No scheduled software releases, just continuous improvement. No licensing or sale, just usage" (2005; emphasis added). The importance and implications of this first principle become much clearer when mashed-up with the fourth principle of Web 2.0, The End of the Software Release Cycle, remixed with its

attendant concept of the Perpetual Beta, and then hacked into the seventh principle, A Rich User Experience. Before this conceptual remix can be understood, however, the relatively recent technological advances at the level of network infrastructure and personal hardware require explanation.

At an infrastructural level, the snail's pace of telephone based, dial-up Internet access has been replaced by speed-of-light fibre optics, coaxial cable, and near-ubiquitous wireless points of access. These infrastructural improvements have greatly increased the capacity and speed at which data travels over, and is processed by, the network and its terminals. Without these advances, the wide spread transformations in the computing environment that we are now witness to would never have come to pass. The advent and continuing development of multi-core processors, graphics and audio cards capable of deftly handling the large amounts of data now coursing through the network, combined with an all-but-infinite amount of memory, have made PCs powerful enough to process the torrent of data traveling over the Internet's infrastructural circulatory system. These two features have made possible applications and Web-based utilities like Flickr that treat the web as a platform on, over, and through which data is hosted, distributed, modified, and repurposed. Sites and services of this sort would have been prohibitively taxing on the network capacity or processing capabilities of hardware a few short years ago. The developments in network infrastructure and PC technology, therefore, are important ingredients to Web 2.0's present successes.

As a result of these improvements, software updates, bug fixes, security patches, and software in its entirety no longer need to be bought and sold in physical form. From the perspective of the 'user,'[17] one's files need no longer be stored on one's PC either.

Rather, entire suites of software, incredibly large files, and complex applications can now be served, accessed, and saved on the web platform simply by clicking a mouse. Confining his analysis to software provision, O'Reilly argues that, "one of the defining characteristics of Internet era software is that it is delivered as a service not as a product" (2005). More recently, the notion of the web as a platform has been rebranded as 'cloud computing.' The metaphorical and colloquial 'cloud' is the latest trend in networked computing with recent advertising campaigns heavily promoting its novelty and originality. In fact, the 'cloud' is a massive, scaleable, and all-too-tangible accumulation of proprietary servers housed in climate-controlled warehouses known as 'server farms.' For all of its magical and celestial allusions, the 'cloud' functions in the exact same way as the web as platform. In what follows, then, the notion of the 'web as platform' is retained in favour of 'cloud computing' because of the desire to avoid ad-speak, the clarity that the former connotes, and the hazy and suspect connotations of the latter.

As mentioned, the potential of the web as a platform is one of the most consequential realizations to have occurred in recent years. The difference between Microsoft's old business model[18] and Google's business model is indicative of the ramifications of these realizations. There was time, recently passed, when every two or three years Microsoft would release the latest physical version of its Office software, for example, distributing it to retailers. This software was, for all intents and purposes, a finished end product much like a blender or a wrench. Major modifications or improvements to the software did not take place on a continual basis, but were added infrequently when the corporation released a new physical version of the software. This was a rigid and inflexible developmental model that locked the likes of Microsoft into

manufacturing a finished product that did not undergo significant alteration until the next version was released a couple of years later. Google, on the other hand, does not have to wait until the next official version of Google Docs is released to make improvements, adjustments, or modifications because Google Docs was never sold as an end product in the first place. Contra Microsoft, Google gave their software away for free as a service. By using the web as a platform to host and distribute its software, Google put an end to the software release cycle by adding, fixing, or taking away features to their software as they saw fit and on the fly. This is a much more nimble and dexterous developmental model than that which rolls out a physical end product every few years. The concept of the Perpetual Beta summarily details this shift in perspective and practice.

The 'Beta' moniker refers to the testing process that software traditionally underwent. After a piece of software was authored, it went through a preliminary round of in-house 'alpha' testing. When the problematic issues identified by this first round of testing were rectified, the software was re-released to a select number of individuals for a second round of 'beta' testing before being rolled out to retailers and, eventually, consumers. The concept of the Perpetual Beta refers to the fact that software in the Web 2.0 era should never be considered a finished end product. In this era, software is in a constant state of perpetual evolution that takes advantage of the Web as a platform to host and distribute updates to the individual 'user.' According to O'Reilly, "The open source dictum, 'release early and release often' in fact has morphed into an even more radical position, 'the perpetual beta,' in which the product is developed in the open, with new features being slipstreamed in on a monthly, weekly, or even daily basis" (2005). O'Reilly argues that Web 2.0 companies deserving of the name "don't package up new

features into monolithic releases, but instead add them on a regular basis as part of the normal user experience" (2005). For instance, Flickr – an emblem of Web 2.0 – puts this dictum into practice by sometimes deploying "new builds up to every half hour" (2005). By putting an end to the software release cycle and by conceiving of software not as a finished end product, but as a perpetually evolving service that ties the computing habits of the 'user' to this or that brand or company, the need to purchase *hard*-copies of *soft*-ware is overcome.

Before the technological advances in network infrastructure and hardware became commonplace, users (an appropriate moniker in this instance) were dazzled by the then-innovative graphics and features of software burnt onto a CD-ROM (Compact Disc *Read-Only* Memory) then loaded into their PCs. At that time, software was loaded onto a physical medium, drastically reducing the processing requirements of the network and the user's hardware. The technological advances described above regarding the speed of the network, the strength of modern day processors, and the copious amounts of relatively cheap memory now obviates the necessity for CD-ROMs or any physical medium in its entirety. This ensures that all of the bells and whistles that once would have bogged down the network and ate up valuable space and processing cycles are seamlessly integrated into the software that is delivered as a service through a browser and over the Internet.

Video games are not traditionally a main touchstone of Web 2.0, but they do provide a good parallel to sites and services seeking to deliver a rich experience to 'users.' Similar to Microsoft's developmental model, in the past, the video game player would go to a retailer and purchase a CD-ROM or DVD that came pre-loaded with the video game software. With the advances in network and processor capacity, however,

certain games can now either be downloaded by the gamer from the developer's website or played directly through a browser cutting out the middleman and obviating the need to purchase a tangible end product. None of the features or rich gaming experiences that players grew accustomed to are sacrificed with software or games being delivered over the network.

While O'Reilly focuses his energies on the business side of software provision, the two-way nature of the contemporary Internet also makes possible unprecedented participation on the part of the 'user.' The web platform, then, not only enables the provision of software over the network, but also facilitates the generation of content by 'users' that also consider the web as a platform to host and distribute this content. According to O'Reilly's second principle, one of the best ways of leveraging the participatory potentials of the web as a platform is by 'Harnessing the Collective Intelligence of Users.' One way to harness this collective intelligence is by giving 'users' the opportunity to devote their time, intellect, and efforts to projects of their choosing. As was seen in Chapter 1, taking a very hands-off approach to 'user' activity was one of the keys to Flickr's success. By taking a very hands-off approach and allowing 'users' to devote as much or as little time to the project as they saw fit, Flickr harnessed their collective intelligence and, by doing so, made them feel as though they had a stake or personal interest in the development of the site. Put differently, O'Reilly argues that in order to harness the collective intelligence of 'users,' these same "Users must be treated as co-developers" (2005). By treating 'users' as an integral part of the development team and not simply as passive consumers, Web 2.0 sites and services tapped into a wellspring of productivity, creativity, and intelligence that Web 1.0 companies never knew existed.

Wikipedia is probably the most successful and clearest example of a Web 2.0 site or service that has harnessed the collective intelligence of its 'users' by treating them as co-developers. "Since its creation in 2001, Wikipedia has grown rapidly into one of the largest reference websites, attracting 400 million unique visitors monthly as of March 2011 (…). There are more than 85,000 active contributors working on more than 21,000,000 articles in more than 280 languages. As of today, there are 3,944,461 articles in English" (Wikipedia, 2012). As anyone familiar with the academic assessment of Wikipedia knows, this rosy description overlooks many of the shortcomings that have plagued the online, crowd-sourced encyclopedia since its beginnings. Wikipedia's shortcomings, while important and instructive, however, often distort an adequate appreciation of the peaks it has attained. While imperfect, it merits much more concerted contemplation than it is often granted.

Wikipedia evinces a radically different form of labour and authorship than that which asks a single person or a relatively small group of experts to write an encyclopedia article. This form of communal authorship places a great deal of trust in the collective intelligence of the 'crowd' (Surowiecki, 2004; Shirky, 2008) and puts into practice (albeit in a different realm) one of the most important dictums of the Open Source Software (OSS) Community. First put to screen by Eric S. Raymond in his famous *The Cathedral and the Bazaar* (2000), "Given enough eyeballs, all bugs are shallow" is a dictum that has achieved canonical status in the OSS community. It is also a fundamentally different way of considering instances of inaccuracy or acts of 'vandalism,' as they are called, on Wikipedia. While inaccurate entries would be a significant issue for traditional encyclopedias, in light of Raymond's dictum, with Wikipedia they are not. By leveraging

the potentials of the web as an easily updatable platform, by regarding its articles as perpetually incomplete artefacts that 'users' (treated as co-developers) will, over time and given enough eyeballs, improve and refine, Wikipedia harnesses the collective intelligence of its 'users' to deftly efficient ends. In other words, because articles are perpetually evolving and never complete, over time and with exposure to enough eyeballs, other contributors will eventually correct acts of vandalism.

In order to encourage enough eyeballs to look at the articles and contribute their time and knowledge, the front-end 'user' interface that facilitates this type of contribution has to be simple, elegant, and 'user-friendly' according to O'Reilly. The 'user' may not know very much about C++, CSS, HTML5, PHP, or website design, but s/he may know an awful lot about any number of the topics that need revision or improvement on the site.[19] In other words, if a site wants to harness the collective intelligence of their 'user' base, the programming models on which they are built must be 'lightweight' enough that the uninitiated can 'carry' them as proficiently as possible. O'Reilly's next key principle, then, is that programming models must be 'light' enough so that 'users' can navigate, hack, remix, or mash them up.

Lightweight Programming Models make it relatively easy and intuitive to generate content, remix code, or mash-up Application Programming Interfaces (APIs). With more and more sites and services opening up their source code to outside developers the ability to mash-up two or more open APIs is a key source of innovation in the Web 2.0 era. The success of Flickr's Open API, Apple's Software Developers Kit (SDK), Google's open source Android Operating System, and any number of the original and creative remixes and mash-ups that combine these and other services indicate that

this particular principle has been especially successful. These lightweight programming models allow data to be repurposed and reused in ways the original creators never foresaw or expected. As the formal organization of this chapter attempts to mimic, O'Reilly argues that tech companies and/or individuals have to "Design for 'hackability' and 'remixability'" because "the most successful web services are those that have been easiest to take in new directions unimagined by their creators" (2005). Much more will be made of the fact that those responsible for taking these services in new directions are the 'users' who receive no compensation for this vital form of labour below.

Well-versed in the business models of media companies, O'Reilly suggests that if technology companies want to succeed in the Web 2.0 era they must aggregate, analyze, and cross-reference all of the data produced by User-Generated Content (UGC). Put simply, UGC can be defined as the "digitized objects shared across the web 2.0 network" (Langlois, McKelvey, Elmer, & Werbin, 2009). By aggregating, cross-referencing, and analyzing all of this data, Web 2.0 companies are contemporary examples of "profiling machines" (Elmer, 2004) that compile a better 'picture' of 'user' behaviour and inclination. This picture enables them to modify their software to meet 'user' demand and, importantly, to sell these highly detailed 'pictures' or profiles to marketing firms or advertising agencies searching for access to very particular niche audiences. Referencing the Intel Corporations highly successful marketing of their processors to end-users, O'Reilly argues that Data is the Next Intel Inside.

Creating a hard to replicate data set and capitalizing on the exclusive rights to that data set are key to market dominance in the Web 2.0 era. By treating 'users' as co-developers and by harnessing their collective intelligence, Web 2.0 companies create a

hard to replicate data set that can then be used to increase their market share, their 'user' base, and, hence, their profitability through advertising or increased sales. Amazon, for instance, invites 'users' of their website to generate content in a number of ways and compiles all of the data generated by this participation. They not only sell

> the same products as competitors such as Barnesandnobles.com, and receive the same product descriptions, cover images, and editorial content from their vendors. But Amazon has made a science of user engagement. They have an order of magnitude of more user reviews, invitations to participate in varied ways on virtually every page – and even more importantly, they use user activity to produce better search results. (O'Reilly, 2005)

At present, it is tempting to launch into a political economic analysis of Web 2.0 and the various ways that these websites exploit the labour of their 'user' base. This temptation is, however, temporarily repressed so that we may move onto O'Reilly's last principle of Web 2.0. O'Reilly's last principle for technology companies looking to stake a claim to the Web 2.0 moniker is to design software above the level of a single device.

This principle is somewhat of an outlier because it refers to a context that we are only just now beginning to understand. With more and more products being developed with Internet connectivity in mind, designing a malleable software suite with cross-platform compatibility in mind becomes one of the core competencies of Web 2.0. The so-called "Internet of Things" (Ashton, 2009) connects (or undoubtedly will in the near future) cars, mobile phones, laptops, mp3 players, net-books, tablets, e-readers, as well as refrigerators, table lamps, garage doors, and any number of other devices to the Internet. As a result, there is significant competitive advantage in designing software that can run on and link all of these devices rather than software designed with only one particular

device in mind. The rapid pace at which new hardware is developed and introduced to the marketplace is added incentive to ensure that a particular piece of software can migrate from one device to the next and integrate these various devices into a network of linked hardware via the interface provided by the multi-platform software. O'Reilly cites iTunes as "the best exemplar of this principle. This application seamlessly reaches from the handheld device to a massive web back-end, with the PC acting as a local cache and control station" (2005). Google's Android Operating System (OS) is a different, more recent, example of software designed above the level of a single device. The Android OS runs on multiple devices, made by a number of different manufacturers, and can be integrated into any number of different pieces of hardware because it is an open source software stack. When the penetration of the Internet into the lives of individuals the world over is considered broadly, the need to develop software above the level of a single device becomes more and more of a competitive imperative.

The seven principles that form the core of Tim O'Reilly's definition of Web 2.0 are a provocative and rather prescient take on where the Internet and the Web have been and where they are likely headed in the future. From the perspective of this thesis, however, there are some notable shortcomings to his treatment. O'Reilly's article is first and foremost business-minded and, therefore, biased towards the goals of corporate enterprise. It focuses on the attributes of successful websites and services that survived the burst of the dot.com bubble in 2000 and those that defied gravity in the wake of its deflation. What O'Reilly's article fails to address, however, is as important as what it takes into consideration.

In particular, O'Reilly ignores the fundamental changes that have occurred in the production processes responsible for the rise of Web 2.0. As well and importantly, he never mentions the political economic implications of Web 2.0 and its fundamental reliance on the labour of User-Generated Content. It merits re-emphasis, then, that even in this era, capitalist corporations ultimately depend on labour as their source of profit, but that the inverse relation does not hold. Web 2.0 is the premier contemporary example of labour's capacity to autonomously organize its creative activities free of the wage relation. Nowhere, then, are the potential autonomy of labour and the parasitic nature of capital more evident than on Web 2.0 sites and services. With these shortcomings in mind, the following will begin by addressing the differences in the mode of production responsible for Web 2.0 via Axel Bruns' concepts of the mode of Prod-Usage and the Prod-User. It will then move on to an analysis of the produser's labour in light of its political economic implications.

3.3 The Produser & Produsage:

Prod-usage is a term coined by Bruns (2008) and a modification to the concept of the Pro-Sumer initially posited by Alvin Toffler (1981). Bruns argues that a fundamental shift has occurred in the mode of production characteristic of the Web 2.0 environment founded on the unwaged immaterial labour of 'users.' Echoing Benkler's concept of the Networked Information Economy, he argues that

> Users who participate in the development of open source software, in the collaborative extension and editing of the *Wikipedia*, in the communal world-building of *Second Life*, or processes of massively parallelized and [distributed] creativity and innovation in myriads of enthusiast communities [such as Flickr] do no longer produce content, ideas, and knowledge in a way that resembles traditional, industrial modes of production; the outcomes of their work similarly retain only few of the

> features of conventional products, even though frequently they are able to substitute for the outputs of commercial production processes. User-led 'production' is instead built on iterative, evolutionary development models in which often very large communities of participants make a number of usually very small, incremental changes to the established knowledge base, thereby enabling a gradual improvement in quality which – under the right conditions – can nonetheless outpace the speed of production development in the conventional, industrial model. (Bruns, 2008, p. 1)

Up until this point, this thesis has been content to label those that generate content as much as they consume it as 'users.' 'User' is imprecise and ideologically biased towards a conception of the individual based on an antiquated notion of the audience member in Benkler's Industrial Information Economy. The term 'user' all too quickly papers over the vast amounts of labour responsible for building Web 2.0 sites and services and the equally vast sums of money generated by it. Therefore, the argument that the term be abandoned is more than academic in that it foregrounds this labour power, its value, and in so doing attempts to accentuate the arguments made herein and by political economists of communication and Web 2.0.

Bruns' work delves deeply into the details of the mode of produsage and the kinds of actions and activities that are made easier or harder as a result of the distributed networked environment. The networked information economy and produsage make possible entirely different social, cultural, and political relations than the industrial information economy and its mode of production. They do not determine them, but make them more likely or possible. Understanding the attributes of the mode of produsage, then, is significant in that it helps us understand the tendencies and potentials of the contemporary era.

According to Bruns, the mode of produsage evolved out of the 'technosocial affordances' of the web as a platform. 'Technosocial affordances' is a cryptic and enigmatic term that Bruns does little to fully explicate. Benkler goes further than Bruns in explaining the concept by arguing that

> A society that has no wheel and no writing has certain limits on what it can do. (…) Different technologies make different kinds of human action and interaction easier or harder to perform. (…) Neither deterministic nor wholly malleable, technology sets some parameters of individual and social action. It can make some actions, relationships, organizations, and institutions easier to pursue, and others harder. (2006, p. 17)

The technosocial affordances of distributed networks, then, are tendential in that they make easy or difficult, normal or abnormal, certain actions, behaviour, and activities. As Benkler emphasizes, they do not determine these actions or behaviours, but bias them towards certain actions and attitudes rather than others. In this way, the technosocial affordances of the distributed networked environment are properly construed as biopolitical even though Benkler and Bruns never make this connection. They delimit a certain range of possibility regarding the actions of those individuals devoting their time and efforts to produsage projects. The key affordances and principles of produsage, then, are dealt with in detail below because they are biopolitically influential in the subjective constitution of produsers.

Key Affordances & Principles of Produsage:

The four key technosocial affordances of the mode of produsage are best understood by coupling them with the four key principles of produsage to which they refer. The first couple is "Probabilistic, not directed problem solving" and "Open Participation and Communal Evaluation." The second couple is "Equipotentiality, not

Hierarchy" and "Fluid Heterarchy, Ad Hoc Meritocracy." The third couple is "Granular not composite tasks" and "Unfinished Artefacts, Continuing Process." And the fourth couple is "Shared, not owned content" in its relation to "Common Property, Individual Rewards." (Bruns, 2008, p. 19-20).

The first conceptual couple requiring explanation is the 'Probabilistic, not directed problem solving' and 'Open Participation and Communal Evaluation.' In opposition to the hierarchical nature of the industrial/corporate model of command and control, the probabilistic model of problem solving leaves it to the community to evaluate which problems need solving. When anyone with an inclination to do so can openly participate in the project, problems are communally evaluated as worthy of attention not because of management directive, but because they inspire a group of individuals into action. They do not, in other words, go through an official and hierarchical vetting process but are judged on-the-fly as relevant and important if someone, somewhere picks them up and begins to work on them. This principle invites untold numbers of people to contribute their time, energy, and intellect to the overall quality of the environment being collaboratively constructed. Produsage dispenses with the fixed hierarchy of the corporate and/or industrial mode of production and trusts its ever-shifting cast of produsers with choosing the best projects to work on according to their communal evaluation of the problem at hand.

The second key coupling of affordances and principles within the mode of produsage blossoms from the first: 'Equipotentiality, not hierarchy' combined with 'Fluid Heterarchy, Ad Hoc Meritocracy.' This coupling describes the social organization of produsers within a produsage project. "Collective project communities assume that each

participant has a constructive contribution to make – they operate under a principle of equipotentiality" (Bruns, 2007). The concept of equipotentiality refers to a situation where each participant in the produsage project has an equal chance of contributing his or her efforts to that project. Rather than having an employee assigned to a determinate job that excludes all other potential contributions, with the concept of heterarchical equipotentiality "there is no prior formal filtering for participation, but rather (…) it is the immediate practice of cooperation which determines the level of expertise and level of participation. [This coupling] does not deny 'authority,' but only fixed forced hierarchy, and therefore accepts authority based on expertise, initiation of the project, etc." (Bauwens, 2005 quoted in Bruns, 2007).

The authority alluded to by Bauwens and Bruns is not based on a rigid model that fixes decision-making and directive in the body and mind of a single individual. It is, rather, a temporary and amorphous form of authority, transferred from one person to the next, that responds to the idiosyncrasies of the problem or task at hand by calling upon the skill-set of those self-nominating produsers able to assist in its resolution. The equipotentiality of participation is based on a detailed division of labour that responds to the granular nature of problems encountered in produsage projects by temporarily designating a leader or a group of leaders to tackle a problem, then, once solved, just as quickly dissolving this ad hoc group back into the networked flows of the produsage environment.

Based on differences in produser interest, aptitude, and devotion certain individuals collaborate with others for an indeterminate period of time, working on small, granular tasks to which their skills are particularly fine-tuned. There is, therefore, not

only an identifiable lack of hierarchy, but also an ever-changing group of individuals who temporarily occupy positions of authority then, just as swiftly as they acceded to them, secede from them. In other words, instead of a rigid hierarchy there is an amorphous heterarchy. One's contributions, therefore, entitle the produser to a provisional amount of prestige, but this prestige is entirely contingent upon continuing participation in other elements of the environment. If the quality of participation decreases or ceases, then previous contributions do not entitle him/her to some kind of permanent position of power. The contingent and provisional meritocratic qualities of this heterarchical arrangement of produsers is fundamentally different than the hierarchical and rigid division of labour evident in the industrial or corporate sector. At the centre of these epochal contortions lies the granular nature of the labour required of the produser, the iterative nature of the 'product' being produsedd, and the differences between the artefacts of produsage and the end products of industrial production.

The third coupling identified by Bruns foregrounds the 'granular' nature of the contributions made by produsers to produsage projects and reinterprets O'Reilly's concept of the Perpetual Beta ever so slightly to come up with the notion of 'Unfinished Artefacts and Continuing Processes' of development. He argues that tasks within produsage environments are generally small and easy to accomplish. He calls these tasks granular as a result of the ease with which they are done. Tagging a photograph, for instance, is a granular task. Additionally, "produsage does not work towards the completion of products (for distribution to end users or consumers); instead, it is engaged in an iterative, evolutionary process aimed at the gradual improvement of the community's shared content" (2008, p. 27). He continues elsewhere, "we must revise our

understanding of the outcomes of the produsage process, distinguishing them from the products of the industrial model." The industrial model produces a "physical product (…) defined by its boundedness; it is 'the complete package,' a self-contained, unified, finished entity. By contrast, the 'products' of collaborative content creation (…) are the polar opposites of such products: they are inherently incomplete, always evolving, modular, networked, and never finished" (Bruns, 2007). The emphasis here is on the important distinction between the 'end product' and the 'artefact.'

> As the process of content development within the produsage community is always necessarily incomplete, the content to be found in the information commons within which the produsage community exists always represents only a temporary artefact of the ongoing process, a snapshot in time which is likely to be different again the next minute, the next hour or the next day. Any attempt to describe such content as a product once again overlooks the fact that produsage is not production, that users acting as produsers are not producers, and that the community does not operate under hierarchical, corporate frameworks aimed at generating a saleable product to consumers. (Bruns, 2008, p. 28)

As the details of the end of the software release cycle and the notion of the perpetual beta were covered above, Bruns' modest modification of these notions through his concept of the unfinished nature of artefacts and their continuing developmental processes is here abridged so that we may move onto his final key coupling of produsage: that of 'shared, not owned content' and 'common property, individual rewards.'

Emphasizing the fundamental difference between unpaid produsage and the waged relationships of material and immaterial production, Bruns argues that the "industrial model of production (…) relies on ownership and secrecy, and distributes information through the corporate hierarchy only on a need-to-know, top-down, panoptic model [and] is (…) unable to operate effectively" (2007) within a produsage

environment. In order for produsage to function it requires that all information and resources be made available to the community so that any and all equipotential participants can access them and in so doing autonomously and communally choose which artefacts to improve therein. If the contents of a produsage project were privately owned and protected (like trade secrets, automated machinery, patents, trademarks, or proprietary code) produsers would need a supervisors permission and sanction to access the information required to do this work, would have to pass all of their activities and plans through this gatekeeper, then receive directions regarding best practices and desired outcomes, and, in the end, once the task is completed, hand back control of the artefacts of their labour to this person. With a globally distributed group of volunteer labourers chipping away at granular tasks for free, this top-down, hierarchical model of private property and reward would all but eliminate produser participation.

When digital artefacts are perpetually in a process of development and redevelopment one of the most important underlying assumptions of this characteristic is that the modifications made to these artefacts must be transferred back to the community at large. “The communal produsage of content in an information commons necessarily builds on the assumption that content created in this process will continue to be available to all future participants just as it was available to those participants who have already made contributions.” (Bruns, 2008, p. 28). The Open Source Software (OSS) movement is entirely dependent on this framework of participation and shared resources. An individual programmer accesses code and contributions made by other programmers, modifies, improves, repurposes, remixes, and then redistributes them back into the information commons so that others like him/her can learn from his/her contributions and

begin the process of modifying, repurposing, improving, and remixing all over again. The licensing schemes developed by the Open Source Software movement (The GNU General Public License being the most well-known), as well as those developed as Creative Commons, demonstrate the principle of common property, individual rewards.

By contributing works derived from others to the information commons and by licensing them so that sharing and inspiration are key motivators and rewards, the impetus to do so is not impelled by traditional economic or power relations but, according to Bruns,

> is generally motivated mainly by the ability of produsers to contribute to a shared, communal purpose. This purpose is embodied in the first place in the content gathered in the information commons itself, and the ability of produsage projects to generate such motivation in their participants therefore relies also on the projects ability to ensure that the commons is managed and protected effectively from abuse or exploitation and remains openly accessible. (2008, p. 28)

Individual produsers, then, "lead by example, not by coercion, by merit, not by power inherited from a position in the hierarchy, by consensus, not by decree" (Bruns, 2008, p. 30). According to Bruns, the produser's motivation to participate in such projects is based on the ability to contribute to a project autonomously and the satisfaction experienced in feeling that s/he has helped out in an important, if granular, way. As the above description of the mode of produsage suggests, at its core is the unwaged immaterial labour of produsers. It is to the history and controversies of unwaged immaterial labour that we now turn.

3.4 Unwaged Immaterial Labour:

At conferences, in hallways, and especially in classrooms, one of the most consistent criticisms of the unwaged immaterial labour thesis is that participation on Web 2.0 sites and services should not be considered a form of 'work.' The quasi-voluntary nature of this 'labour' disqualifies all of the work being done on Web 2.0 sites and services as being considered as such. Indeed, while posting to Facebook, taking and uploading images to a Flickr account, and shooting, editing, and posting video to YouTube are not usually considered labour by those who undertake and execute them, all of these activities and the network effects generated by them require the application of body and mind and are, at the same time, productive of massive amounts of revenue for the private and publicly traded corporations that own them. At base, the massive valuations of social networks like LinkedIn, Twitter, Facebook, and/or Flickr are rooted, as they always have been, in the labour of others. In light of the fact that unwaged immaterial labourers do a lot of the same work as waged immaterial labourers, that this work requires the concerted application of body and mind to the act of produsing content, and that this work is produsive of sometimes massive profits for those who own these same sites and services, the characterization of content generation as a form of work is entirely apt and not without its history.

Tiziana Terranova was one of the first to conceptualize and try to understand the implications of the 'free labour' taking place on the Internet. She defines 'free labour' as "Simultaneously voluntarily given and unwaged, enjoyed and exploited, free labor on the Net includes the activity of building Web sites, modifying software packages, reading and participating in mailing lists and building virtual spaces on MUDs [Multi-User

Dungeon] and MOOs [Object Oriented MUD]" (2000, p. 33). She argues further that, "the Internet is animated by cultural and technical labor through and through, a continuous production of value that is completely immanent to the flows of the network society at large" (2000, p. 34). After assessing the productivity and efficiencies of this work, she states categorically and along autonomist lines that, "Labor is not equivalent to waged labor (…) [and that to] emphasize how labor is not equivalent to employment also means to acknowledge how important free affective and cultural labor is to the media industry, old and new" (ibid. p. 46). The point being that 'free' or unwaged immaterial labour must be considered 'work' in that it is not only temporally, affectively, and physically taxing, but it is also productive of enormous sums of money for those that own the means through which it is turned into profit.

Projecting Terranova's argument into the Web 2.0 era, Mark Coté and Jennifer Pybus choose the once dominant, but now in decline, social network of MySpace as their object of study and posit "Immaterial Labour 2.0" as a significant and meaningful amendment to the immaterial labour thesis described by the autonomist literature. They argue that

> What the '2.0' addresses is the 'free' labour that subjects engage in on a cultural and biopolitical level when they participate on a site such as MySpace. In addition to the corporate mining and selling of user-generated content, this would include the tastes, preferences, and general cultural content constructed therein. (2007, p. 90)

Immaterial labour 2.0 further blurs the already hazy distinction between work time and leisure time identified as a primary outcome of the waged immaterial labour thesis by Lazzarato (1996). It underscores the autonomist's conceptualization of the socialized

worker working in the social factory, whose every living moment is, in one way or another, spent in the service of capital. And it is biopolitical because of the relationship between it, the subjectivities responsible for and produsedby it, and the pedagogical impact it has on the way one views the world and his/her place in it.

On social networks such as MySpace, Facebook, or Flickr the work one does connecting with friends, sending messages, linking to web pages, posting images, uploading songs, sharing, chatting, and socializing, is certainly productive of value for the owners of these social networks. Social Networks like MySpace and Web 2.0 archetypes such as Flickr are

> shaped by the creative imprints of [their] users. However, its political-economic foundation demonstrates how such user-generated content – immaterial labour 2.0 – is the very dynamic driving new revenue streams. Thus, it is the tastes, preferences, and social narratives found in user entries which comprises the quotidian mother lode of these new revenue streams. (Coté & Pybus, 2007, p. 100)

As the autonomist analysis provided in Chapter 2 regarding the expanding scope of what it means to labour under the thumb of capital indicates, labour is an elastic concept that encircles a wide variety of activities, including being a student, homemaker, audience member, or content generator.

The term ‘unwaged immaterial labour’ is retained throughout the remainder of this thesis rather than “Free Labour” or “Immaterial Labour 2.0” because it accentuates the overt links between itself and the immaterial labour thesis espoused by autonomists. *Unwaged immaterial labour* foregrounds its commensurability with the autonomists’ assessment of *waged* immaterial labour as biopolitical. Moreover, in an attempt to avoid the confusion regarding the duality of ‘free’ labour with its connotations of voluntariness,

unwaged immaterial labour underscores the productive efficiencies and profit making capacities of this labour while at the same time stressing that it goes unremunerated. For these reasons, this term, although admittedly cumbersome, is better suited to analyzing the phenomena it describes.

In addition to the controversial characterization of content generation as 'work,' one of the more contentious aspects of the unwaged immaterial labour thesis is whether or not this kind of work should be considered exploitative (Andrejevic, 2009; Hesmondhalgh, 2010). There is no question that turning the artefacts of 'free labour' into profit is an highly lucrative activity for those that harness the intelligence and data of unwaged immaterial labourers. Nor is there a question that members of social networks exert great effort and devote large amounts of time and intellectual energy to their profiles or accounts. For Andrejevic, however, the question turns on whether or not this labour is compelled through the use of force or if it should be considered voluntary. Labour which is not "appropriated under the threat of force, (…) renders the claim of exploitation in need of further explanation" (Andrejevic, 2009, p. 418). Obviously, no one is forcing an individual, at pain of death, to create a Flickr or Facebook profile. This perspective, however, relies on a narrow conception of force that restricts the application of it to the physical register. It fails to take into account other 'forces,' biopolitical forces for instance, that compel individuals into action much more covertly than a pistol or club. Labour that is "voluntarily given" (Terranova, 2000, p. 33) should not, according to the critique provided by Andrejevic, be considered exploitative in the Marxian sense. If the above citation is expanded, however, we come to appreciate the fact that 'free labour' is both "voluntarily given and unwaged, enjoyed and exploited" (ibid.).

The problem with Andrejevic's critique is twofold. One, it does not adequately emphasize the massive amounts of revenue generated by this unwaged labour force and expropriated by the owners of the domains in which it takes place. Social networks are incredibly fertile soil for marketers, advertisers, venture capitalists, and owners. It must be recognized, however, that this soil is sown, grown, and mown by the unwaged or 'free labour' of content generators. And two, while they may not be forcefully compelled to join these networks, the threat of social isolation and communicative seclusion may be compulsion enough to get them 'working.' This is in addition to the biopolitical influence of normalized action and behaviour that compels individuals into joining these networks because that is where their peers are. Thus, while this labour is not compelled through the use of physical force, there are other powerful forms of compulsion that motivate the produser into action.

Characterizing all of the work done by produsers as exploitative is based on the valuation of social networks and the primary source of the labour responsible for these valuations. Before the important critique provided by Andrejevic can be addressed, however, the means by which Web 2.0 sites and services turn a profit require explanation. As much as Web 2.0 is unique and different from previous communicative regimes, the means by which the corporations that own these sites turn a profit have a well-established history. Therefore, it is to the political economy of Web 2.0 in its relation to the political economy of communications that we now turn our attentions.

3.5 The Political Economy of Web 2.0: blindspot no more

Vincent Mosco, in his seminal treatment of the political economy of communications, argues, "One can think about political economy as the study of *the*

social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources. From this vantage point the products of communication, such as newspapers, books, videos, films and audiences are the primary resources" (1996, p. 25; emphasis in original). Mosco's naming of audiences as one of the primary products of communication is attributable the groundbreaking work of Dallas Smythe. Smythe's paper "Communications: Blindspot of Western Marxism" (1977) identified an oversight in the political economic literature regarding communications and the mass media industries. The blindspot named by Smythe referred to an identifiable gap in Marxist theory regarding what advertiser supported mass media produce. Whereas the accepted wisdom of the day argued that media corporations produced stories, messages, information, symbols, and meaning (ideologically biased as they may be), Smythe argued that this was a reductive assessment of their productive capacity that overlooked a much more significant and profitable end product. Mass media, according Smythe, are primarily in the business of producing attentive and quantifiable audiences that get bought and sold like any other commodity by and to advertisers.

"For Smythe, mass media 'produce' audiences in two senses. First, they assemble audiences for sale to advertisers and other professional persuaders. (…) Audiences are also 'produced' in a second sense. People are worked upon by mass media. Their consciousness is altered" (Babe, 2000, p. 124). Smythe argued that the mainstream mass media were part of the Consciousness Industry that occupied itself with producing a quantifiable audience "with a set of 'correct' beliefs" (ibid. p. 122). His conceptualization of the work audiences do dovetails very nicely with the biopolitical dimensions of immaterial labour espoused by autonomist theory. Though Smythe does not make use of

the autonomist nomenclature, his argument is easily applied to it. As Babe's work suggests, the work that audiences do on behalf of capitalism takes on a biopolitical dimension in that audiences imbibe or learn the unwritten rules propagated by corporate advertising and their ideological imperatives.

In essence, Smythe argued presciently that advertiser-supported media were in the business of aggregating and selling eyeballs that consume advertisements and in so doing work at learning the unwritten rules of the capitalist economy in which the mainstream mass media operate. In developing a loyal audience base by offering them a consistent and appetizing 'free lunch' of entertaining programming and news, broadcasters and publishers offset their overhead, operating costs, and turn a profit by promising and making available to advertisers a consistent, predictable, quantifiable, and well-trained number of eyeballs. These eyeballs consume the advertisements and then, ideally from the perspective of advertisers, the products or services being advertised.

Succinctly, Smythe argues that the "answer to the question – What is the commodity form of mass-produced, advertiser-supported communications under monopoly capitalism? – is audiences and readerships" (1977, p. 3). For Babe, "Smythe's major accomplishment was (…) identifying more accurately the output of media – namely, audiences with inclinations to act and think in certain ways and to accept certain doctrines" (Babe, 2000, p. 134). In a shift that Smythe desired but could not have known the outcome of, the invention of a two-way medium that allows for information to not only be sent to an audience member, but also transmitted back to the broadcaster results in a much more refined and profitable commodity than ever before. The two-way nature of digital technologies has created highly detailed profiles of the audience commodity

and their inclinations. As the default settings of most commercial Web 2.0 sites are programmed to record each and every action, choice, or keystroke, a composite and highly detailed profile of these audience members emerges. As these technologies penetrate ever more personal and private realms, the ability to compile and aggregate more accurate and detailed information regarding the tastes, habits, hobbies and inclinations of audience members is made seamless.

Mark Andrejevic, making overt allusions to the surveillance of industrial labour characteristic of scientific management and the surveillance of prisoners characteristic of Foucault's panopticon, argues that while convenient and advantageous in certain regards, these new digital contrivances constitute a new method of observing, surveying, and aggregating information regarding the tastes, predilections, and habits of the audience commodity. Limiting his analysis to Digital Video Recorders (DVR) that track each and every television program the audience member records, he argues that,

> Even as it retrieves programming for viewers, the [DVR] doubles as a monitoring device in the service of the system's operators, creating a detailed 'time and motion' study of viewing habits that can be sold to advertisers and producers. In the panoptic register, the [DVR] becomes an automated confessional: an incitement to divulge the most intimate details of one's viewing habits. (2002, p. 240)

Greg Elmer, in an argument more nuanced than that provided by Andrejevic, believes that the notion of surveillance does not capture the complexity of the tasks performed by these technologies in their relation to other sources of data.

> The term surveillance does not adequately capture the multiplicity of processes that *request* data by surveying and monitoring consumers and also by automatically collecting, storing, and cross-referencing consumers personal information with a complex array of other market data. (…) Nor does the term surveillance alone seem to capture the social significance of

> *requiring* the divulgence of personal information as a precondition for using new information and communication technologies such as digital television and the World Wide Web. (2004, p. 5; emphasis in original)

By combining the data requested and required by these 'profiling machines' with other sources of consumer information, what obtains are highly detailed and individualized profiles of users and consumers that get cross-referenced with other market data resulting in profiles that detail the likes, dislikes, habits, hobbies, and aptitudes of individuals.

Elmer's and Andrejevic's work bridges the divide between Smythe's notion of the audience commodity and the highly refined audience commodity that is presently being sold by Web 2.0 sites and services. It is in this moment that the data generated by the online activity of 'users' becomes an invaluable source of information for advertisers and, commensurately, of profit for owners. In sum, then, and before we turn our attentions to the political economy of Web 2.0 in particular, "The labor of *being* watched goes hand-in-hand with the work of watching: viewers are monitored so advertisers can be ensured that this work is being done as efficiently as possible" (Andrejevic, 2002, p. 236). If we hyper-link to the present clime, where the Internet manifests as an always-on and easily updatable platform that offers up not only a 'free lunch,' but an all-you-can-eat smorgasbord of digitized messages, information, data, photographs, and symbols, Smythe's concept of the audience commodity remains as relevant and applicable today as it was in the past. This remains true, but with the added caveat that the highly detailed information generated *about* the audience is now being generated *by* the audience.

Nicole Cohen's work is emblematic of scholars that identify consistencies and novelties in the productive processes that inflect the political economic dimensions of the

capitalist imperatives on the Internet and Web 2.0. Taking Facebook as her example, Cohen argues that Web 2.0 sites and services would simply not exist without an enthusiastic and highly motivated work force. According to Cohen,

> By uploading photos, posting links, and inputting detailed information about social and cultural tastes, producer-consumers provide content that is used to generate traffic, which is then leveraged into advertising sales. (…) In this model, rather than employing workers to create content, Web 2.0 companies (…) profit from the unpaid labour time that producer-consumers spend working on their online identities and keeping track of their friends. (2008, p. 7)

She continues later on in her article to argue along autonomist lines that "Facebook, a space where both leisure time is spent and labour performed, is an example of how, in the social factory, general social relations become moments of production" (ibid., p. 18).

Christian Fuchs argues a similar position.

> The users who google data, upload or watch videos on YouTube, upload or browse personal images on Flickr, or accumulate friends with whom they exchange content or communicate online via social networking platforms like MySpace or Facebook, constitute an audience commodity that is sold to advertisers. The difference between the audience commodity on traditional mass media and on the Internet is that in the latter the users are also content producers (…) Advertisements on the Internet are frequently personalized; this is made possible by surveilling, storing, and assessing user activities with the help of computers and databases. This is another difference from TV and radio, which provide less individualized content and advertisements due to their more centralized structure. (2009, 31)

Foregrounding then critiquing the business advantages of this perspective, Elmer argues that with "increased competition, market deregulation, and increased global trade, an advertising approach that targets its strategies and techniques to a single mass market is now viewed as increasingly costly and ineffective in a world defined by segmented

markets" (2004, p. 54). By offering advertisers narrow and well-defined audiences that have exhibited prior interest in a product, service, or activity, social networks such as Flickr or Facebook are incredibly attractive to advertisers because of the likelihood of their messages reaching a well-defined and segmented audience that has previously demonstrated their interest in purchasing its wares. While Smythe's basic premise remains the same, the fundamental difference between the past and the present lies in the vast amount of highly personal data generated by members of Web 2.0 sites and services. By selling the data generated by the traffic and activities that take place on their site to corporate institutions hungry for more accurate demographic and psychographic information, Web 2.0 sites and services create a much more highly refined commodity to sell to their clients and by doing so accrue massive amounts of revenue in the process.

Flickr, for instance, was sold hastily[20] in March 2005 for an estimated $35 million[21] to Yahoo! (Schonfeld, 2005). In July 2005, MySpace was sold to Rupert Murdoch's News Corporation for $580 million. In May of 2011, LinkedIn, a professional social network, went public and netted investors roughly $8 billion (Levy & Spears, 2011). Twitter, a micro-blogging social network, has recently been valued by venture capitalists in the area of $7.7 billion (Schroeder, 2011), and in mid-May 2012 Facebook went public with a valuation of over $100 billion (Cellan-Jones, 2012; Bilton & Rusli, 2012; El Akkad, 2012). Much, if not the vast majority, of this value is generated by the activities of the unwaged immaterial labourers who populate these services. These figures, however, are highly speculative. Social media corporations have yet to solve the nagging problem of fully monetizing (a euphemism for exploiting) the products of unwaged immaterial labour. The main obstacle they face is that if they begin to overtly

plunder these domains and if news of it spreads, the unwaged immaterial labourers responsible for all the work taking place therein could simply leave, not come back, and take with them everything that makes the website valuable in the first place.

After acquiring it in July of 2005 for $580 million, News Corporation sold an emaciated MySpace in June 2011 for $35 million. The difference between these two figures is indicative of just how valuable the audience commodity on Web 2.0 sites and services is when present. The interesting twist to this example is that the exodus from MySpace was not caused by overtly plundering the data generated by 'users,' but by the ascension of Facebook, another social network that enabled many of the same connections as MySpace. The value of both sites, however, continues to be based on the data generated by the immaterial labour of their members.

The fact that Web 2.0 sites and services attempt to turn a profit from the content generated by the labour of their 'users' should come as no surprise to anyone familiar with the modus operandi of capitalist corporations – especially those in the media industries. The work of Smythe and Mosco (as well as that of those scholars inspired by them) clearly indicates a well-established history. In the Web 2.0 era, however, a new problem is tabled regarding how this work and the valuations that obtain from it should be regarded. Put simply, the question referenced above and addressed below is this: Should unwaged immaterial labour be construed as exploited?

As was argued briefly in the previous section of this chapter, Mark Andrejevic believes that the characterization of unwaged immaterial labour as exploitative is tenuous. David Hesmondhalgh too believes that the argument regarding the exploitation

of Web 2.0 produsers is less than adequate. He "argues that the frequent pairing of the term 'free labour' with the concept of exploitation is unconvincing and rather incoherent, at least as so far developed by the most-cited analysts" (Hesmondhalgh, 2010, p. 267). However, in Hesmondhalgh's article, mention of the important work done by Christian Fuchs regarding this matter in particular is absent. Fuchs has argued convincingly against the perspective provided Andrejevic and Hesmondhalgh by emphasizing the processes of capital accumulation leveraged by Web 2.0 sites and services, the productive qualities of 'free labour,' and their relationship to Marxian class theory. He begins by asking us to consider a similar scenario to that described above regarding News Corporation's sale of MySpace at a significant loss.

> [W]hat would happen if users would stop using platforms like YouTube, MySpace, and Facebook: the number of users would drop, advertisers would stop investments because no objects for their advertising messages and therefore no potential customers for their products could be found, the profits of the new media corporations would drop, and they would go bankrupt. (2011, p. 298)

Considering the sale of YouTube to Google in 2006, Dmytri Kleiner and Brian Wyrick make a similar argument. They believe that

> The real value of YouTube is not created by the developers of the site, but rather it is created by the people who upload videos to the site. Yet, when YouTube was bought for over a billion dollars worth of Google stock, how much of this stock was acquired by those that made all these videos? Zero. Zilch. Nada. Great deal if you are an owner of a Web 2.0 company. (2007)

Elsewhere, Fuchs argues by reference to a detailed analysis of Google's process of capital accumulation that the relationship between Google and those individuals responsible for generating the data that it turns into profit is eminently exploitative. He states that,

"Google is the ultimate economic surveillance machine and the ultimate user-exploitation machine (Fuchs, 2012, p. 44). He believes that when 'users' begin generating content on Web 2.0 sites and services or data for search engines and, by doing so, generating value for the site,

> in terms of Marxian class theory, this means that they also produce surplus value and are exploited by capital as for Marx productive labour is labour generating surplus. Therefore the exploitation of surplus value in cases like Google, YouTube, MySpace, or Facebook is not merely accomplished by those who are employed by these corporations for programming, updating, and maintaining the soft- and hardware, performing marketing activities, and so on, but by wage labour and the produsers who engage in the production of user-generated content. (2009, p. 30)

In fact, and according to Fuchs, this situation is better thought of as "one of infinite over-exploitation (…) [or] an extreme form of exploitation" (2011, 298).

The position taken by this thesis is aligned with the perspective provided by Fuchs. The presence of an exploitative scenario is an objective relationship based on the extraction of value from the labour of others. In other words, all of the work that gets poured into Web 2.0 sites and services on a daily basis and then gets monetized by the owners of these services, can and should be considered exploited. As Fuchs argues above, the absence of a wage actually intensifies this exploitation. The valuations of the social networks referenced above indicate that the work required to generate these sums is incredibly valuable. The individuals who do this work are not receiving a commensurate wage in return for it. Thus, when a website such as Flickr, YouTube, or Facebook is sold on the open market and those responsible for the production of all the content that makes the site valuable in the first place do not receive a commensurate return for this labour, this scenario can and should be considered exploitative. The exploitative dimensions of

this relationship become ever clearer when "one high ranking Yahoo executive familiar with the deal" to purchase Flickr comments: "That is the reason we bought Flickr—not the community. We didn't give a shit about that. The theory behind buying Flickr was not to increase social connections, it was to monetize the image index. It was totally not about social communities or social networking. It was certainly nothing to do with the users" (Honan, 2012).

One of the more interesting paradoxes that arise from this exploitative scenario, however, is that members of Web 2.0 sites and services such as Flickr often do not think of themselves, or experience their labour, as exploited. In the interviews conducted with Flickr members, these individuals repeatedly indicated first, that they had never thought of the relationship between themselves and Flickr/Yahoo! as exploitative, and second that even when the political economy of Flickr was made clear to them (as it was in the interviews), they still did not regard it as such. This is important to recognize and is dealt with in more detail below. However, the thoughts and impressions of Flickr members do not obviate or preclude the presence of an exploitative relationship. Once again, this is an objective relationship predicated on the extraction of value from the labour of others.

3.6 In Sum: The General Topography of Web 2.0

The arguments regarding Web 2.0, produsage, unwaged immaterial labour, the political economy of Web 2.0, and the exploitative dimensions of these networks are important to this thesis because they highlight the necessity of launching an inquiry into the social and political dynamics that guide and regulate participation and interaction on and within these domains. As the arguments regarding the political economy of Web 2.0 presented above made clear, the owners and operators of Web 2.0 sites and services

exploit the labour their produsers. While this argument is a good place to begin the investigation, it fails to approach the topic from the perspective of those individuals labouring under these auspices. The approach taken by this research project, then, differentiates itself from the above perspective by directly consulting those produsers who devote their time, energy, and intellect to these endeavours. The methodology that this thesis used to gain access to the insights of Flickr produsers is, accordingly, the focus of the following chapter. Before we turn our attentions to the methodological aspects of this thesis, however, a brief word on a few of the scholars and subjects not addressed by this literature review is required.

The various contours of Web 2.0 detailed above provide an adequate topographical map that forms the conceptual foundation for this thesis. It is, however, by no means comprehensive. Specifically, the work done by scholars and legal experts at the Berkman Centre for Internet and Society at Harvard University, while briefly addressed via reference to the work of Yochai Benkler, does not receive adequate attention. The mandate of the Berkman School is policy focused and explores "the real and possible boundaries in cyberspace between open and closed systems of code, of commerce, of governance, and of education, and the relationship of law to each" (Berkman Center for Internet and Society, 2008). Most notably, the intellectually provocative work of Lawrence Lessig (2001, 2004, 2006, 2008) and Jonathan Zittrain (2008) should be consulted by anyone interested in the complex juggernaut of cultural, economic, and legal implications as they impinge on the network information economy and Web 2.0. While this research and the topics addressed by Berkman scholars are important to Web 2.0 in general, they are only indirectly related to the primary concerns of this thesis. The legal

ramifications regarding the rise of Web 2.0 sites and services, the impact they have had on the profit margins of established stake holders (the music, film, and newspaper industries in particular), and the powerful lobby groups looking to protect their clients positions of privilege, are complex and multiple, but are only obliquely related to the biopolitical dimensions of unwaged immaterial labour.

Chapter 4 – Methodology: A Workers' Inquiry 2.0

4.1 Introduction:

The methodology used to investigate the biopolitical relationships that guide and regulate unwaged immaterial labour in the twenty-first century is based upon a methodological tradition initiated by Marx in the nineteenth century and carried on by autonomists in the twentieth. The present methodology is a two-pronged design that emulates these methods in its first prong and then goes one-step beyond them in its second by examining aspects of the cycle of production deemed superfluous by Marx and the autonomists. This chapter, therefore, begins with a brief explanation of one of the methodologies used by Marx, known as *A Workers' Inquiry* (1880/1938), continues with an examination of the ways in which autonomists modified this method into what is known as co-research, and then goes on to explain why this method had to be amended once again into what is being termed herein 'A Workers' Inquiry 2.0,' so as to remain relevant in the contemporary era.

4.2 A Workers' Inquiry:

The important interplay in Marxist thought between empirical investigation and theoretical reflection is often overlooked. In *Capital* – Vol. 1 (1976), for instance, Marx bases his analysis of the surplus valued produced by workers and, hence, their exploitation, on a number of government reports (ibid., pg. 349, ft. 15) made by factory inspectors in England throughout the nineteenth century and also references the work of sometimes co-author Friedrich Engels and his investigation into *The Condition of the Working-Class in England* (1845) as a source of empirical inspiration. Near to the end of his life, Marx launched an inquiry of his own into the working conditions of the industrial factories of France. Published in *La Revue Socialiste*, a political newspaper that served the industrial proletariat of France in the mid-to-late nineteenth century, *A Workers' Inquiry* (1880/1938) was a list of one hundred and one questions that asked workers to reflect on their experiences, thoughts, and impressions of the workplace, the way they were treated therein, the fluctuations in compensation, and the like. Once workers drafted their responses to the questions, they were supposed to be sent back or delivered to the offices of *La Revue Socialiste* for compilation and analysis.

Broken into four untitled subsections, Marx's questions have a particular momentum or rhythm about them that begins with rather mundane questions, but builds in pace and tempo as one works his/her way through them. The questions are composed and ordered in such a way that when the worker sat down to draft his/her response, the evidence of their own exploitation would have accumulated and the political relationships Marx was trying to uncover would have become clear. The probing and prodding of the worker's subjective consciousness regarding the facts and conditions of their exploited

labour was entirely purposeful from Marx's perspective. According to the editors of *The New International*, which republished *A Workers' Inquiry* in 1938, the

> whole aim of the questions is to make the worker aware of his own predicament in capitalist society, to cut through the fog of illusions and habitual responses and fictions which prevent the worker from understanding his social world, and by thus making the worker conscious of his predicament giving him a chance to solve it. (Burnham, Shachtman, & Spector, 1938)

The method used by Marx in the late nineteenth century remains a reasonable way of assessing the subjectivities of the workers and their thoughts regarding their exploitation at the hands of the owners of the means of production. The specific questions, however, were written for a particular historical epoch and would naturally need amending so as to apply to the contemporary historical situation. The editors of *The New International* acknowledge this in their comments. "With the changes in industrial production during the past half-century, certain of these questions in their given form have, of course, become archaic. But no one would find difficulty in modifying them in such a manner as to bring them up to date" (Burnham, Shachtman, & Spector, 1938). What the editors were indicating was that as historical contexts change so too must the particularities of the methods that attempt to investigate and understand the specific attributes of these fluid contexts. In this fashion, co-research does a way with the literal and metaphorical distance between researcher and subject. Rather than hoping that workers draft and send in their responses, autonomists plotted a much more direct course to the source of this information and became much more active participants in gathering it.

4.3 Co-Research:

In Italy, beginning in the 1950s, Marxists of the workerist (*operaismo*) school – a precursor to autonomist thought in the era of the mass worker – tried with varying degrees of success to gain access to the industrial production facilities that were the nexus of exploited labour at that point in time. Gathered around the journal *Quaderni Rossi* (1961-1965), militant co-researchers like Raniero Panzieri and Romano Alquati "attempted to explain the crisis of the workers' movement during the fifties and early sixties (…) [by recourse to] the intense transformations in the productive process and the composition of the labour force, introduced by the Scientific Organization of Work" (Malo de Molina, 2004a). Hampered by suspicious owners/managers that rightly considered these individuals rabble rousers and by suspicious workers who in the past were only made to work harder and faster because of researchers observing their actions, co-research was difficult and time consuming.

"Time and Motion" studies of the sort undertaken and accomplished by Taylor and his progeny in their attempts to scientifically manage an individual's labour, resulted in forcing the worker to work harder and at more rote and repetitive tasks. This made workers weary and hostile towards any researcher who wanted to study them and their labour. However, co-researchers had one central advantage when it came to convincing workers of their intentions. They and their colleagues not only infiltrated the factories, but also often got jobs therein and were, therefore, often working alongside their research partners. As the research progressed, then, it became clear that the intentions of co-researchers were antithetical to those of previous scholars who meant only to intensify the labouring process.

The goals of co-research remain consistent with the aspirations of Marx, but the manner in which information was gathered changed significantly. Seeking to uncover and understand the nature of exploitation in the industrial factories of Italy, co-researchers infiltrated the factory and tried to motivate and inspire struggles from within. The fundamental difference between Marx's research methodology and the methodology of co-research, therefore, hinges on the prefix attached to the latter. Marx never worked alongside his research subjects in the factory, *co*-researchers did. By working next to and with their subjects, experiencing the same day-to-day monotony and repetition, and by gaining an insight into the conditions and contexts of industrial labour by not only asking questions of others, but also by becoming industrial labourers themselves, co-research incorporates the researcher into the process of gathering and analyzing information much more directly than did the method used by Marx. Whereas Marx conducted his inquiry from afar, co-research begins in the proverbial belly of the beast.

Co-research starts on the shop floor and is, much like *A Workers' Inquiry*, unabashedly and unapologetically politically motivated. According to Marta Malo de Molina, the purpose of co-research was to "construct platforms for struggle" so as to "reopen spaces of conflict and reinvigorate workers' demands" (2004a). By speaking with co-workers, asking them questions, getting their impression of their work conditions, assessing how they feel, what they see as demeaning or frustrating, observing, that is, worker behaviour first-hand, the aim was to make obvious the exploitative abuses and to rouse the ire of those being exploited so that they too might rise in unison and in struggle. Antonio Negri describes the procedures and aims of co-research this way.

> In terms of practice, 'co-research' simply meant using the method of inquiry as a means of identifying the worker's levels of consciousness and awareness among workers of the processes in which they, as productive subjects, were engaged. So one would go into a factory, make contact with the workers, and, together, with them, conduct an inquiry into their conditions of work; here co-research obviously involves building a description of the productive cycle and identifying each worker's function within that cycle; but at the same time it also involves assessing the levels of exploitation which each of them undergoes. It also involves assessing the workers' capacity for reaction – in other words, their awareness of their exploitation in the system of machinery and in relation to the structure of command. Thus, as the research moves forward, co-research builds possibilities for struggle in the factory. (2008, pp. 162-163)

The commonalities between *A Workers' Inquiry* and co-research make evident the alterations and amendments required of this tradition if it is to continue yielding insightful information in the present day and age. In the contemporary era of unwaged immaterial labour, new challenges and opportunities regarding this methodological lineage present themselves in sharp relief when the similarities and differences between the past and the present are laid bare.[22]

4.4 Repetitions and Difference:

Marx's *A Workers' Inquiry* and the methodology of co-research share four primary attributes that, when compared to the characteristics of the unwaged immaterial labour taking place on Flickr, make clear the need for further methodological innovation. The first similarity between Marx's *A Workers' Inquiry* and co-research is that both rely on communicating with workers in an attempt to get their impressions of the workplace, their job, and their knowledge regarding their own exploitation. This communicative imperative grounds the theoretical abstractions in the empirical experiences and thoughts of the workers themselves. The second similarity is the location where research subjects are recruited to participate in the research. In both cases, factory labour takes place at a

predictable time and at a distinct and consistent geographic location. Both Marx and the autonomists leveraged this feature of material/industrial labour to their advantage by seeking out and communicating with the concentrated labour force that arrived at this place day after day. The third aspect that these two methodologies had in common was their overt political goals and desires. Both methodologies were designed to gauge the level of exploitation within the factory and, at the same time, rouse the ire of workers by making this exploitation palpable. The fourth common attribute, and where the present methodology distinguishes itself from its predecessors, was a disregard for the end products being produced by industrial workers.

Marx and the autonomists saw little interpretive value in examining the products being manufactured in the factory environment. This is understandable. The workers assembling these products had no input or power to control what was being produced, how it was being produced, and for what purpose the products were being made. The end products rolling off the assembly lines, in other words, had very little to say about the subjectivities of those who made them. In the Web 2.0 era, with its focus on User-Generated Content (UGC), Open Application Programming Interfaces (API), treating 'users' as co-developers, and the equipotentiality of granular participation, this is, quite simply, no longer the case.

4.5 A Workers' Inquiry 2.0:

The first three similarities between Marx's *A Workers' Inquiry* and the autonomist methodology of co-research identified above remain consistent with the methodology used for this research project. First of all, just as Marx and the autonomists spoke with waged industrial labourers, the importance of speaking with unwaged immaterial

labourers and getting their impressions of the work they do, what they enjoy and do not enjoy about it, making evident their exploitation, and gauging whether or not they feel like they are being exploited remains a primary concern with 'A Workers' Inquiry 2.0.' Secondly, the lack of a physical structure that concentrates labour may appear to be an obstacle in trying to apply this methodological lineage to the unwaged, immaterial domain. However, built into the virtual infrastructure of Web 2.0 sites and services are communicative channels that make emulating the methods used by Marx and the autonomists rather easy. Flickr's Internet Protocol (IP) address, much like the street address of a factory, acts as a virtual, yet consistent, location where workers gather, and congregate synchronously and asynchronously at all times of the day. While different from the physical walls of a factory, there is a centralized meeting place where the unwaged labourers responsible for the work being done within 'Factory Flickr' gather. Thirdly, Web 2.0 sites and services are valued in the millions or billions. The unwaged immaterial labour of content generators is the primary source of this value. Therefore, according to the Marxist conceptualization of the term and in light of the position argued by political economists of the Web 2.0 such as Christian Fuchs in Chapter 3, exploitation clearly exists in this realm. The political aims of this research project and 'A Workers' Inquiry 2.0' are, therefore, cognate to those of the methodologies on which it is based. Knowledge of this exploitation and a readiness to do something about it is one of the more interesting issues raised by this thesis, but the details regarding this point will be left to later so as to give them the attention they deserve. The fourth commonality between *A Workers' Inquiry* and co-research is where the present methodology breaks from tradition.

Whereas Marx and the autonomists had no reason to examine or evaluate the end products of industrial production for clues regarding the subjectivities of those who made them, the important and irreplaceable position of the produsers subjectivity in the conception, construction, and perpetual development of the artefacts of unwaged immaterial produsage makes this neglect untenable. With no boss or manager directing produsage, workers themselves make Flickr in their own image. We must, therefore, look at the artefacts of unwaged immaterial labour as reflections or refractions of the individual and collective subjectivities that produsers them and as clues to the biopolitical relationships that guide and regulate their produsage. The subjectivities of the unwaged immaterial labourers responsible for Flickr, in other words, are intimately imbricated in the design, functionality, features, and applications of this photo-sharing social network. Unlike industrial labour, the artefacts of unwaged immaterial labour contain valuable information regarding the biopolitical norms that facilitate their produsage and the subjectivities of those workers exposed to them. Much more detail is offered regarding this methodological adaption below. For now, what is required is a more thorough and detailed explanation of the particularities of the two-pronged methodological procedures that guided this thesis.

4.6 The Forest As Well As the Trees: Two-Pronged Research Design

Flickr is a perpetually expanding domain made up of the granular contributions offered by millions of individuals the world over. Considered in isolation, the actions of individual Flickr members are infinitesimally small. Like the work done by an industrial labourer on the assembly line, the individual actions of Flickr members contribute only one small shard to the overall endeavour. When assembled however, the sum of the parts

is enormous. The importance of speaking with those workers responsible for these shards, therefore, figures prominently in the method used in this thesis. Focusing exclusively on these granular contributions, though, risks neglecting the interpretive importance of their sum. In other words, speaking only with Flickr's 'trees' risks overlooking the defining features of the forest that is the Flickr-verse in which they stand. Whereas Marx and the autonomists saw no value in examining the products rolling off the assembly line, because the forest that is Flickr is sown, grown, and mown by the self-managed and self-motivated unwaged labour of its members, the features of this domain and the outcomes of this labour contain valuable insights regarding the biopolitical power relationships that guide and regulate behaviour and labour within it.

4.7 Prong #1: Reports from 'Factory Flickr'

i) Group Selection:

Just as Marx and the autonomists did, 'A Workers' Inquiry 2.0' begins by speaking with those individuals responsible for making Flickr what Flickr is. It is an highly social environment where most members gather and congregate in what can accurately be described as ad hoc and informal productive units or 'groups.' There are innumerable groups within Flickr each with their own particular purposes, foci, guidelines, and interests. These groups act as thematically oriented meeting places where individual members interested in similar topics gather to share pictures, discuss these images, and all manner of things related to digital photography. Flickr members can do two primary things in the groups. First, they can post images to the group's 'pool' and second, they can begin or comment on a threaded discussion based on any subject a member posts to the discussion forum. Groups can be public or private. Private groups

require an explicit invitation to join and do not appear on search results. Public groups are divided into two different streams. The first is 'anyone can join' and the second is by 'invitation only.' Three specific 'groups' on Flickr were chosen as populations from which to recruit potential research subjects.

All three of the groups selected for this research project were public – anyone can join. FlickrCentral is the first. On May 11, 2012, FlickrCentral had a membership of 170,328 individual members. On its description page, the group describes itself as

> Just like Grand Central but without the oyster bar, the trains, New York city... FlickrCentral is a place for the newbies to get a taste of what Flickr is about, and a place for the more experienced users to keep a finger on the pulse of our favorite addiction. This group is for viewing Flickr from high above - *a place for posts on things that are about Flickr or would interest MOST flickrites*. (FlickrCentral, N.D.)

This group was chosen as an appropriate group to source potential research subjects due to the number of members it has, its description as a place for viewing Flickr from on high and its relative generality of purpose. FlickrCentral is one of the largest groups on Flickr. Because of these numbers and the diversity of its membership, it was an attractive target for this kind of research. As well, the group is somewhat of a free-for-all where opinions, thoughts, and ideas on virtually any topic can be shared and discussed openly and spontaneously. For these reasons, FlickrCentral was a good place to start when looking for potential co-researchers.

The second group was Flickr API. On May 11, 2012, Flickr API had a membership 10,709 members. This group was chosen because of its focus on the Application Programming Interface (API) and the members/hackers that frequent it. The purpose of the Flickr API group is to drive "awareness of the Flickr API, projects that use

it and those incredible ideas that programmatically exposed systems produce. Think Google API + Amazon API + Flickr API with a bit of GMail thrown in" (Flickr API, N.D.). Flickr API was selected because of the importance of the hacker community to the past, present, and future of Flickr, the highly specialized skill sets of this community, and due to the quantity and quality of the work done by hackers.

The third group that this research project used as a source of research subjects was Utata. Utata had a membership of 20,682 as of May 11, 2012 and

> is a salon in the traditional sense. A parlour. THIS is a place to talk. Tell stories. Ask questions. Be silly. Be serious. Learn. Teach. Grow. Relax. Wind up or down. We talk about photography a lot, naturally. We try to grow. Some of us are pros, some want to go pro, others want artistic fulfillment, some are trying to be better photographers and some just come for the pie and conversation. (Utata, N.D.)

Utata is a particularly interesting group in that it privileges polite conversation and honest communication. It is a place where people gather to work on common projects that are often assigned by the self-managed administrators of the group. The membership is curious, thoughtful, ambitious, reflective and (it should be acknowledged) a pleasure to chat with. These three groups were chosen because they represent a cross section of interests and foci, the number of members was large, and because they were all designated as public – anyone can join.

ii) Identifying Potential Research Subjects:

Identifying and recruiting potential research subjects was a four-step process. The first step was posting an introductory message to the discussion forum of each group. Introductory messages were formulated for each group (Appendices 1, 2 & 3 respectively) and were posted to the discussion forums all with a common subject asking

a very simple, three-word, question: “Is Flickr Work?” The broader parameters of the questions were explained in the body of the messages and the identity and institutional affiliation of the researcher was also made clear at this point. After the introductory question was posted, it became a matter of waiting on the responses to come trickling in. The wait was not very long and the trickle more like a wave.

In the FlickrCentral group there was a total of forty-four unique respondents and one-hundred-and-one messages. In Flickr API there was a total of three respondents and three total messages and in Utata there were thirty-five individual respondents and forty-four total messages. In the second step, members from each group that responded to the original message “Is Flickr Work?” were sent an invitation via FlickrMail (Appendix 4) to participate in a more detailed chat regarding their impressions of Flickr over the telephone, Skype, email, or an Instant Messaging service of their choice. FlickrMail is an internal mail delivery system unique to Flickr and its members that allows them to communicate with each other over a more private medium than the public discussion forums. While this internal mail system proved to be very effective for requesting interviews with individual Flickr members, the system does not allow attachments to be appended to messages, making the delivery of an official Letter of Informed Consent (LOIC, Appendix 5) more complicated than it might have been otherwise. If a member responded to the interview request in the affirmative, in step three, a time and date were suggested and a request was made asking them for an email address where the Letter of Informed Consent might be mailed and a telephone number or Skype handle where they could be reached. Once the member’s email address was obtained, the Letter of Informed

Consent was attached to a message and a convenient time and date was confirmed for the interview.

Step four consisted of verifying receipt of the Letter or Informed Consent and conducting the interview. If the Letter of Informed Consent was not returned prior to the appointed time of the interview, the research subject was asked to return the Letter prior to any questions being asked. Because the recruitment of research subjects took place entirely online, they were asked to read and complete the LOIC, returning the document as an email attachment with their name and date added to the original form. Writing their name and date on the LOIC served as official confirmation of the terms set out therein.

iii) Ethical Formalities in Informal Settings:

While this may seem like an unnecessarily convoluted method for recruiting research subjects, there was a great deal of thought and discussion that went into its design. The challenges associated with conducting ethical scholarly research that recruits potential research subjects on discussion forums need to be acknowledged. The highly formal nature of ethical, non-medical research involving human subjects is diametrically opposed to the highly informal, casual, and conversational nature of so many Web 2.0 discussion forums. There is, then, an identifiable tension that exists between these two poles. Therefore, the potential of scaring away possible research subjects accustomed to the informal and casual nature of online discussion forums by introducing the formalities of ethical research prematurely or too bluntly is high.

The primary reason this research design was chosen, then, is because it resolves and reconciles the tension that exists between these two dissonant domains. By first

making contact with potential research subjects using the communicative platform and informal language of these forums, thereby respecting the norms of this environment, then, by sending a private email message to individual members via FlickrMail and thus pushing the formalities to a more appropriate medium, a balance was achieved between the requirements associated with informed, consensual, and ethical research and the desire to recruit as many research subjects as possible. In light of the response, this logic proved to be a successful strategy and tactic for identifying and successfully recruiting research subjects. The approved application to the Research Ethics Board is attached to this thesis as Appendix 9.

iv) Conducting the Interviews and the Composition of Research Subjects:

In all twenty-four Flickr members from the three groups were interviewed. Semi-structured, open-ended interviews based on an interview guide unique to each group (Appendix 6, 7, and 8) took place over a period of two-and-a-half months from late July 2010 to early September 2010. In the case of the interviews that took place over Skype or the telephone, the average duration of the interviews was forty-eight minutes. If the interviews took place over the telephone or Skype, a digital voice recorder was used to record the interview so that it could be transcribed. Those research subjects that opted to answer questions over an Instant Messaging service or via email were given the same questions as those that participated in a telephone or Skype interview. Eighteen of the twenty-four interviews were conducted over Skype or the telephone with two opting to chat via IM and four responding by email. The interviews were transcribed and the email or IM conversations copied into new documents.

The composition of research subjects interviewed for this thesis is as follows. Of the twenty-four interviewees, ten were female and fourteen male. These individuals lived all over the world. Six of them were from Canada with British Columbia, Manitoba, Ontario, and Nova Scotia represented. Ten lived in the United States with Massachusetts, New Jersey, Pennsylvania, Georgia, Texas, and California all represented. European nations such as England, the Netherlands, Germany, and Switzerland provided five research subjects. Two other research subjects came from South Africa and, finally, one research subject lived in Hong Kong. The socio-economic status of the interviewees is difficult to discern, however, throughout the interviews, research subjects were asked what their occupation was and imperfect inferences can be made from the nature of these jobs in combination with what follows. The following occupations were represented: student, architect, software developer, homemaker, experimental physicist, biomedical engineer, editor, IT consultant, software support, technology industry analyst, social media consultant, university administrator, mineral analyst, author, painter, electrician, computer repair person, and banker. When these occupations are considered alongside the reasonable inference that all of the interviewees had the discretionary income to purchase a personal computer, at least one digital camera or mobile phone equipped with a digital camera, access to the Internet, and also had the luxury of the 'free' time required to participate in a meaningful fashion on Flickr, it is realistic to assume that the research subjects interviewed for this thesis can be considered part of the middle-to-upper class. This information also reflects the demographic information provided by Yahoo!'s advertising department regarding the general make up of their core membership.

Reflecting the ratio between females and males and the socio-economic inferences made above regarding this thesis' research subjects, Yahoo!'s advertising department claims that core Flickr members are 'Men 18-34' and what they call 'Affluents.'[23] As the above indicates, however, the information regarding the socio-economic status of this thesis' research subjects in particular is speculative. The inferences that result from their occupations, technological means, and the information provided by Yahoo!, however, does provide a rough sketch of these individuals' socio-economic status. While the sex, location, occupation, and socio-economic class of research subjects is important to acknowledge because it provides insight into the general makeup of the individuals working within 'Factory Flickr' and, thus, those subject to its biopolitics, this thesis is more interested in the thoughts and feelings of Flickr members as such, regardless of their sex, occupation, location, or socio-economic status. Without question, these attributes influence the Flickr member's thoughts and feelings, but they are not the primary elements of analysis considered by this thesis. The fact that the Flickr membership is biased towards men, however, is interesting for a number of reasons addressed in more detail later on in this thesis, particularly in Chapter Six, Section Five. For the moment, however, the repetitions and difference between the present methodology and that employed by Marx and autonomists requires further amplification.

Once transcribed, the perspectives provided by the individuals listed above proved to be important sources of insight regarding the research subjects' thoughts and impressions of Flickr. The interviews, then, are duly referenced as supporting evidence that ballasts the theoretical propositions being made throughout this thesis. They explicate and inform the current treatment of the biopolitics of unwaged immaterial

labour by asking (much like Marx and the autonomists did) the members of Flickr to reflect on how they perceive the time and effort they expend on the site. Once again, however, because the contribution of individual members is relatively small or granular, if this method focused exclusively on these members, there is the risk of overlooking the entirety of Flickr. This risk is addressed and mitigated by the second prong of this research design where the thoughts of Flickr members are triangulated with Flickr's artefacts and the theoretical principles examined by this thesis.

4.8 Prong #2: Flickr and Its Artefacts

The end products produced by the division of manual labour such as that characteristic of Marx's era and those end products rolling off the assembly line in the autonomists' era have very little to say about the subjectivities of those individuals tasked with their construction or the biopolitics that imbue their respective productive environments. There were no doubt biopolitical relationships circulating throughout these industrialized environs, but the information provided by the end products regarding these relationships is negligible. In terms of assessing the biopolitics of these places, it makes very little difference whether the end product was a pin, a car, or a typewriter.

Industrialized labour was and is scientifically managed, meticulously planned from above, and prearranged hierarchically. The industrial worker was and is forced to labour on products that s/he did not choose. S/he was and is not permitted to work where or how s/he wants, or to devote his/her energies to the tasks that s/he finds most interesting or provocative, but was and is required to do what management directs him/her to do. Control over what is produced, how it is produced, and the pace at which this production takes place, in other words, was and is firmly in the heads of

management. They are the conceiving minds that make these decisions, not the workers, who are but the productive hands. In these circumstances, the end products being produced in the factory environment have very little interpretive value regarding the biopolitical power relationships that guide and regulate behaviour within the industrial factory and even less when the subjective predispositions of the workers tasked with assembling them are considered. After all, the factory environment was designed so that "All possible brain work (…) be removed from the shop and centred in the planning or laying-out department" (Taylor quoted in Braverman, 1998, p. 78).

When the role played by Flickr members/workers in the development of the website is considered and compared to the industrial paradigm, the influence of the Flickr member on the artefact that is Flickr becomes much more substantial. Due to the fact that the unwaged labour of its members is predominantly responsible for making Flickr what it is, the subjectivities, aptitudes, and inclinations of those members are incorporated into its content, features, and/or characteristics. The subjectivities of Flickr members are, therefore, inherently involved in the design, functionality, and characteristics of the website in a way that the subjectivities of industrial labourers never were.

The analysis of particular elements of Flickr as a reflection of member subjectivity and reciprocally of the biopolitics that are constitutive of these subjectivities goes beyond the methodological traditions established by Marx and the autonomists. It is not only the responses from research subjects in isolation that illuminate these relationships of power, but also certain characteristics and elements of the website itself that are telling indicators of the biopolitical relationships that guide and regulate its produsage and thus contribute to the constitution of the member's subjectivity. Whereas

the managers of industrial labour took an active and heavy handed approach to organizing and managing the labour of their workers by prescribing the motions and pace at which work took place, as the introductory chapter of this thesis made clear, the owners and designers of Flickr took a very hands off approach to the work being done by their membership; allowing the members to plot the course and develop Flickr in the manner they most wanted to.

i) The Artefacts To Be Analyzed:

Six central elements from Flickr were identified and selected as key topographical features of the Flickr-verse that help to unravel the tangled biopolitics that infuse it. These six elements are the following: i) The developmental history of Flickr, ii) the public-by-default nature of all photographs and profiles, iii) the everyday quotidian activities of Flickr members, iv) the Community Guidelines, v) the Open Application Programming Interface (API), and vi) an area on Flickr called The Commons. There are certainly others. These six elements were selected because of their place of prominence within the Flickr-verse and their interpretive value. While all of the biopolitical power relationships that circulate throughout the Flickr-verse are impossible to apprehend and could never be adequately grasped in their entirety or their complexity, it is reasonable to extract and elevate a few of the most prominent and influential elements of the site for more sustained scrutiny. This process was undertaken and accomplished in an attempt to understand in more detail the biopolitics of unwaged immaterial labour such as those that exist on and within Flickr and to offer some conclusions on what kinds of subjects are being produsedby these biopolitical relationships.

The first element of analysis is the history and development of Flickr. Examining where Flickr came from, how it developed, and how its ludic roots continue to influence the normalized patterns of behaviour that ground and nourish the contemporary iteration of the website is vital to understanding its biopolitics. In other words, the playful and social norms constituted by Game Neverending continue to inflect the Flickr-verse and by doing so the production and regulation of subjectivity within it. Flickr's embryonic days and the manner in which its members regard the site as a result of them are, therefore, important elements in understanding the kinds of biopolitical relationships that continue to motivate the unwaged labour of its members.

An early decision made by Flickr's owners has proven foundational to the growth of the website and to the biopolitics that interpenetrate and circumnavigate it. The decision to designate, by default, all Flickr photographs and accounts as public and not private set Flickr apart from other photo-sharing websites of the day and is the second element of analysis. The public-by-default nature of Flickr struck a tone that continues to ripple and reverberate throughout the Flickr-verse. While seemingly innocuous, the future implications regarding the kind of place Flickr became and the kind of people that populate it can be partially traced back to this element of Flickr's early history.

The third element of analysis that sheds light on the biopolitics of unwaged immaterial labour is the everyday and quotidian activities of Flickr members. By examining what members do on the website, how they cooperate and collaborate and all of the intimately personal artefacts they produse, we gain a more nuanced appreciation of this relatively unique work environment, the biopolitical relationships that circulate

throughout it, and the kinds of subjectivities being produsedby and through this place and these relationships.

The fourth element of analysis is the Community Guidelines. The Community Guidelines are not commandments in the traditional sense and are a curious compilation. Neither legal document nor official decree, they are casual and friendly suggestions regarding how Flickr members should behave and treat one another. When compared to the esoteric legalese of Flickr's Terms of Use, they read more like informal playground rules than anything else. In fact, the first guideline is "Do Play Nice." (Flickr Community Guidelines, N.D.) The Community Guidelines merit consideration because of their overt attempt to define what it means to be a 'normal' citizen of the Flickr-verse.

The decision to have an open rather than proprietary API results in the fifth element of analysis. In the following chapter, the important position of Flickr's API in growing the domain is highlighted. Much like Flickr's ludic roots, its open and participatory roots are important motivators for all of the specialized labour required to repurpose and remix the data found on its servers. The Open API and the actions of hackers and coders, then, is biopolitical in that it influences the actions of members throughout the Flickr-verse in a substantive fashion.

The sixth element is the relatively recent appearance of The Commons. The Commons was the brainchild of the United States Library of Congress (LOC). The LOC approached Flickr and suggested they partner up by designing a special section on the webpage devoted to archival images that have "No Known Copyright Restrictions" on them. "The program has two main objectives: 1) To increase access to publicly-held

photography collections, and 2) To provide a way for the general public to contribute information and knowledge. (Then watch what happens when they do!)" (Flickr The Commons, N.D.). The Commons is an experiment that has exceeded all expectations. The Flickr community 'got it' straightaway and embraced its ethos and purpose enthusiastically. Its mere presence on Flickr and the enthusiasm with which it was embraced are indicative of the kinds of subjects that exist on the site and of the biopolitical relationships that influence them.

4.9 In Sum:

The dual-pronged methodology outlined above provides us with the tools required to make informed conclusions regarding the orientation of the subjectivities being produsedthrough the biopolitical relationships characteristic of the unwaged immaterial labour taking place within Flickr. In the first prong and similar to Marx's *A Workers' Inquiry* and co-research, the present methodology seeks out those responsible for produsing the artefacts that define the form and content of the ever-evolving Flickr-verse and by asking them questions that lay bare the exploitative dimensions of this labour, also seeks to raise the consciousness of these individuals regarding these exploitative dimensions. Still in this first prong, the present methodology, much like the autonomist's method of co-research, sources its subjects from the virtual 'shop floor' of 'Factory Flickr' and, by asking these individuals to reflect on their experiences within this domain, seeks to raise their awareness regarding the exploitative dimensions of it.

In prong two, we move beyond the methodological traditions that inspired this thesis' method by considering the impressions and thoughts of Flickr members in their relation to the artefacts produsedby them and the theoretical foundations through which

this thesis interprets these elements. By focusing the triangulation of these three perspectives on the biopolitics of 'Factory Flickr,' a much more nuanced interpretation of them arises. As autonomist theory has argued in the past, *waged* immaterial labour is productive of subjectivity and is therefore biopolitical. Just as important to a more rounded understanding of the biopolitical forces that shape our subjective lives, however, is appreciation of the fact that *unwaged* immaterial labour (such as that that built Flickr) is also biopolitical and productive of subjectivity. It is to the subjective thoughts of Flickr members in their relation to the six aforementioned elements of the Flickr-verse that the next chapter is focused.

Chapter 5 – A Report from 'Factory Flickr'

5.1 Introduction:

Marx and the autonomists believed that one of the most effective methods of understanding the subjectivities of industrial labourers was to communicate with them directly. One had to, in other words, contact them in their homes or go to the factories from whence they drew their wages and speak with workers, ask them questions, probe their concerns, and, by doing so, try to emphasize the exploitation exacted upon them. The perspective, thoughts, and ideas of those persons working within the factories were, therefore, pivotal to a better understanding of the social and political dynamics of the industrial mode of production. Adapting the methods used by Marx and the autonomists, this thesis charts a similar course to a different kind worker and his/her feelings about the unwaged immaterial workplace. Like Marx and the autonomists, then, the following

chapter prioritizes the voices of those persons working within ‘Factory Flickr’ and attempts to accrete a composite image of its social and political dynamics.

This chapter is organized around six thematic elements partially constitutive of the Flickr-verse. The first is the ludic roots of Flickr and the impact of these roots on whether or not all of the work done by members is considered as such. The public-by-default nature of all photographs and profiles on Flickr and the impact of this default designation on the kind of space Flickr has become is the second. The quotidian activities of Flickr members and the influence of openly sharing personal photographs, the visual slivers of one’s head and heart, comprise the third element of analysis. The Community Guidelines that orient new and old Flickr members to the accumulated norms that define what it means to be an upstanding citizen of the Flickr-verse is the fourth element. The fifth element is the influence of the Open Application Programming Interface (Open API) and its role in growing and expanding the domain. And, finally, the sixth element of analysis is The Commons, a wildly successful collaboration between not-for-profit cultural institutions and Flickr. While these six elements of the Flickr-verse are by no means a comprehensive compendium, they do embody many of its most significant features.

A brief note regarding the content of this chapter and the media through which the interviews were conducted is required. First, this chapter focuses on the interview data obtained through the conversations between the researcher and members of Flickr. The task of theorizing the data and interpreting its hermeneutic significance in relation to the broader themes and research questions of this thesis is tabled until the following chapter. This decision was based on a desire to give the interview data the time and space required

to interpret it in a concerted fashion. Secondly, and regarding the media through which the interviews were conducted; if the interview took place over a text-based medium such as an IM application or email, the transcriptions offered below are exact replications of the research subject's keystrokes. Some of the citations offered below are, therefore, replete with errors. Spelling errors, missing or incorrect punctuation, and typos are common in exchanges taking place over these particular media, and, incidentally, are telling of their casual norms and mores. The errors in the original interviews, therefore, have not been corrected in an attempt to respect the idiosyncrasies of the medium over which the interview took place.

5.2 Work or Play?:

As the brief history of Flickr staged in Chapter 1 demonstrated, the ludic foundations of the photo-sharing website were important elements that contributed to its early and continuing success. Briefly, Game Neverending was a decidedly non-competitive game that prioritized sociality and play over accumulating points or advancing to the next level. The ties that developed between players, then, were not based on an instrumental logic that regarded others as tools to advance one's position or competitors to be vanquished, but were based on friendship or companionship in this otherworldly and social endeavour. The non-competitive and convivial foundations of Game Neverending continue to colour the Flickr-verse and tint all of the time, effort, and energy members expend therein with hues of affability and sociality.

The pre-history of Flickr is an important element in understanding the biopolitics that guide and regulate participation and interaction on the site because it nestles the foundations of the website in a communal, ludic, and playful environment that has had a

lasting influence on how members subsequently feel and behave on Flickr. Evidence for this argument is found in the responses given by the respondents to the original question posted in three discussion forums on Flickr – "Is Flickr Work?" Flickr members responded to this question resoundingly in the negative. As a result of the foundations and roots from which it sprang, Flickr is anything but work. One of the more opinionated respondents puts it this way: "No sir, Flickr is not work. Sweating your ass off in a hundred and ten degree shop lifting 800lb engines all day is work. Digging Ditches is work" (FlickrCentral Respondent-1, 2010). Another research subject indicates that the time and effort they expend on Flickr "do not feel like work to me. It feels entirely recreational, not unlike reading a book (well, entirely unlike reading a book in most respects, except in the important (to me) way that time spent on Flickr is a diversion just like when I read a novel)." He continued, "I, again, feel like my time on Flickr is not labour so much as recreation" (Anonymous-7, 2010). Another sums up their thoughts succinctly: "Nope its an addiction" (FlickrCentral Respondent-2, 2010). Another respondent says: "No, it's not work. It's an escape from work and from the realization there's not enough real work" (FlickrCentral Respondent-3, 2010). One of the individual's who spends a lot of time, energy, and effort on Flickr as both a photographer and as someone who works at hacking Flickr's code says:

> I don't consider it a form of labour. For both the photography side of it and the coding side of it I think I get more out of it than I put into it. I've been on Flickr since 2005 and I started hacking on the API not long after I joined. I've learnt tons about photography from the groups and looking at photos and also been lucky enough to create a site that uses the Flickr API and gives people a lot of benefit. I've enjoyed pretty much all the time I've spent on Flickr, so if I'm enjoying it, it can't possibly be work right? (Flickr API Respondent-1, 2010)

Another individual is “fully aware of the time I spend ‘managing’ my flickr presence. But, it’s not work. The time I spend here is so rewarding. A metric ton of great people taking amazing photographs and there’s so much knowledge sharing going on, it’s really time well spent” (Utata Respondent-1, 2010). Another respondent from the Flickr API forum responds to the question in this way. “No, I really enjoy Flickr - its elegant design and the way it works. I discover and get ideas visiting a variety of sites. The creativity of the world is shared and one discovers that there are like minded people out there” (Flickr API Respondent-2, 2010). One of the respondents from FlickrCentral takes a much more direct approach by arguing, “It ain’t work if they don’t pay you” (FlickrCentral Respondent-4, 2010). Another respondent from FlickrCentral says: “If it was work in the traditional sense I would not do it” (FlickrCentral Respondent-5).

Epitomizing the critical efforts of the present methodology, another respondent comments: “In reality, I’d say no, but by the dictionary definition of work I’d say yes. Now where is my pay cheque!?!” (FlickrCentral Respondent-6, 2010). One of the more savvy respondents said that Flickr “is my hobby and I do labour at being better at it. But it’s the kind of labour that makes you feel good about yourself when you are finished.” Grasping the larger connotations, he cautions, however, “Beware requests for geo-tagging and many other types of tags are mostly for the benefit of the commercial world so they can data mine and make use of your work to make money” (Utata Respondent-2, 2010). Another research subject says: “If you consider work to be negative, no. If you define work as worthy effort, yes. I’m not drawing a paycheck from flickr, but I’m rewarded by being part of community, learning new things, and with encouragement and support for my creative pursuits” (Anonymous-16, 2010). One last respondent should

make the point regarding whether or not those that spend their time therein think of Flickr as work. She answers that Flickr is

> Definitely not work for me, but I define work as something you do whether you feel like it or not on a particular day. I was self-employed for years as a writer, and even though I loved writing, what I did for work was more serious than what I wrote when I was just having fun or pleasing myself. Flickr definitely falls into the hobby-socializing-having fun category. (Utata Respondent-3, 2010)

As the above comments indicate, sharing one's photographs with others and speaking with other photographers about their photos, even though these actions require a considerable amount of physical, emotional, and affective time and effort, does not feel like work to those that do it. Flickr's roots in an MMORPG are at least partially responsible for fostering this sense of playful and social interaction. Even when the exploitative political economy of Web 2.0 is laid bare to Flickr members, as it was during the interviews, they do not feel as though the time they spend there is a form of labour.

When asked about the sale of Flickr to Yahoo! for thirty-five million dollars USD in March of 2005 and whether or not they ever felt exploited by Flickr or Yahoo!, one research subject said:

> Well, I never thought of it like that but it is a very clever business model. Essentially, it's exactly as [Yahoo! Executive Bradley Horowtiz] said, you've got tens of thousands of unpaid people populating something that then you go ahead and charge people for. And from a capitalistic point of view, that's pretty darned clever. But on the other hand, as one of the people that pay to use the service… even thinking about it… it doesn't bother me enough that someone is making an enormous amount of money using this particular approach because I get so much personal enjoyment from the site. (Anonymous-18, 2010)

By and large, Flickr members do not regard all of the work they do on the site as being exploited. However, one member responded that, yes, he did sometimes feel exploited.

> As a data mining tool, a lot of the stuff they're doing now is aimed towards making money off my work. So, yeah, and that's why I say, don't tag your images with so much detail, don't geo-tag it, don't give them all that information. They don't have the right to it. And what good does it do. You're putting your work in to help other people make money off of it. (Anonymous-21, 2010)

The majority of Flickr members, however, argue along the following lines. "[N]o, I never get the feeling that they're taking advantage of me or anything" (Anonymous-8, 2010). Another believes that,

> [Y]ou only get taken advantage of if you have some misconceptions about what the site is. It is a public forum. My feeling is that anything you put on the Internet has the potential for going viral and (…) [being] used for things it was never intended to be used for. (…) I haven't felt that way (…) I don't ever feel taken advantage of. I feel that they are giving me a forum and in return I am supplying them with content. (Anonymous-11, 2010)

Another research subject consulted via IM says, "no not really for one i completely ignore all the advertisements in life including online ones so it doesnt bother me what they do with the info i provide them. next to that i use flickr free account so I dont pay for it yet have fun there i learn there i think there allowed to make money off the little info they get from me" (Anonymous-10, 2010). One research subject grasps the conceptual rhythm of the questions by saying, "No I don't have that feeling but as you raise the question I'm now pondering it. I guess there's a tiny bit of it there, but I don't feel it, I'm not really aware of it" (Anonymous-7, 2010). And finally, another respondent makes clear the regard members have for Flickr as a non-exploitative domain. He chooses to emphasize the benefits he derives from the site, claiming, "Not really because if they

didn't exist I couldn't use it as a hobby area. To me, I don't consider it working, I consider it a hobby" (Anonymous-4, 2010). In general, then, Flickr members do not regard the effort and energy they expend on the site as exploited or as being taken advantage of in any way. This remains true even when the exploitative dimensions of Flickr are laid bare to them.

The game-like features of Flickr and the importance placed on affable communication and discussion can be traced back to the ludic roots of Game Neverending. These roots created an eminently social and communally oriented environment that feels much more like play than it does work. They ground the site in a good-natured and non-competitive ethos that continues to characterize much of the Flickr-verse today. Therefore, these playful, discursive, and game-like foundations normalize patterns of habitual behaviour reflective of the orientations of these foundations. Even though Flickr channels and harnesses the intelligence, time, and energy of its members to profitable ends, it feels nothing like work and nothing like exploitation to those individuals undertaking and accomplishing it. Another element of Flickr that contributes to this sense of playful sociality is the public-by-default nature of the website. It is to these default settings that we now turn our attentions.

5.3 Public-by-default & the Members' Regard for the Quasi-Commons:

As its inventors claim, Game Neverending was more of a social space than it was a game. This space was based on the ability of one player to see, share, and communicate with other players in the game. Keeping to one's self, hiding from others, or making one's avatar invisible would nullify its primarily social purposes. The non-competitive and social aspects of the game required that others saw your avatar. If your avatar were

private and hidden from public view, the game would be pointless. Interacting, sharing, and communicating with others, then, was the *sine qua non* of Game Neverending and it continues to be so in Flickr. The public-by-default nature of Game Neverending is one of the most important game elements transposed onto Flickr and is one of the primary reasons that Flickr has developed into the kind of space it has.

Fake believes the public-by-default nature of Flickr was elemental to its success. "When we started the company, there were dozens of other photosharing companies such as Shutterfly, but on those sites there was no such thing as a public photograph – it didn't even exist as a concept – so the idea of something 'public' changed the whole idea of Flickr" (Hall & Fake, 2006). On Flickr, when an individual creates a profile and begins to upload images to his/her particular page, all of these images are public-by-default. This means that all photographs and profile information are accessible to anyone with an Internet connection. According to danah boyd, one of the foremost experts on privacy and social media, the default settings of any site or service are of particular importance because "we know that users accept most defaults so the defaults matter. The defaults also set the tone for the space" (2010). Similar to soothing background music and soft lighting, or shrill music in an overly bright dining room, the default settings on a social network establish a particular mood and a feeling that inflects the way people behave, feel, act, and react while they are in this space. The public-by-default nature of Flickr influences the way that people think of themselves and others and, importantly, how they regard the artefacts they upload to the website.

These settings can, of course, be changed. A Flickr member can restrict access to specific pictures or sets of images to those persons that s/he wants to – family members

or colleagues for instance. For the most part, and consistent with the norms established by Game Neverending, however, the vast majority of the images uploaded to Flickr are designated as public – anyone can see. It is reported (Schofield & Butterfield, 2005) that eighty-two percent of the images stored on Flickr's servers were designated as public in 2005 and there is no evidence suggesting that this percentage has changed in a significant fashion.

The public-by-default designation does not, however, limit the member's ability to license the images according to personal choice. There are a number of intellectual property licenses available to members that delimit what other individuals are supposed to be able to do with the pictures found within Flickr's domain. Ranging from the most permissive of the Creative Commons licenses to the most restrictive All Rights Reserved, the licensing schemes available to Flickr members are plentiful. All of the various licensing schemes available to Flickr members highlight the importance of a well-established and well-defined regulatory apparatus of intellectual property as it relates to the comfort level of individuals who are posting sometimes intimate and personal images to a public-by-default website. This regulatory apparatus purports to give members a tremendous amount of control over the legal rights to their images and the ways in which they can be used. It also provides a level of comfort that in the absence of such an apparatus would not exist. Members like to know that their images are legally protected even if these protections are, in reality, incredibly weak and mean very little to them in a practical sense.

When Flickr members talk about the potential for misuse of their photographs, their choice of license, and their opinions regarding the use of their images by others,

they first demonstrate quite a sophisticated understanding of copyright regulation then either defend or dismiss these regulations depending on who wants to use the photograph, for what purpose, and whether or not they are asked nicely to use it in the first place. There is widespread recognition amongst members of the fact that it has become incredibly easy to copy someone else's photograph from a public-by-default photo-*sharing* website. One member says "If you don't want people to take your work then don't put it on the Internet. I mean you put them up there for people to see. And if some people go and steal them then tough. I don't lose sleep over it. (…) Most people ask and most people say we're going to give you credit for taking the picture. I have no problem with that" (Anonymous-9, 2010). Another research subject believes that "if people/company's really want the immage they would ask me or simply take it" (Anonymous-10, 2010). Another research subject reports: "I've got all rights reserved. (…) I prefer to be able to control where my work is being used. Obviously, when you put something online, stuff will get used without your permission, but I don't think most people do that and I prefer to know, even if I'm going to allow something to be used for free, I prefer to know" (Anonymous-23, 2010). Another respondent says: "Look, I'm very aware that anything you put on the Internet can be stolen, taken, or whatever, but my attitude now is, hell, in the general scheme of things, it doesn't really matter. (…) the days of photographs being valuable are over as far as I'm concerned" (Anonymous-19, 2010).

The public-by-default nature of a photo-sharing network is dependent on others seeing your photographs and in the digital world if you can see an image, the vast majority of the time, you can copy it. As the above comments indicate, Flickr members

are more than aware of this. In fact, as many of my research subjects stated, most of the time, they do not mind if someone uses one of their images on a blog, for instance, or to illustrate an article posted on a webpage. The important thing for them is, first, whether or not they have been asked to use the image, and second, whether or not the person(s) asking stand(s) to profit from its use. As a result of the public-by-default nature of Flickr, members are, by and large, happy to share their photographs with others as long as they are asked and as long as no one stands to profit from them. The following exchange is typical: "licencing of all photo's is set to all rights reserved however if people (not company's) would like to use them i would be easy about that after all if someone likes a shot enough to use for a family card or cover of a photoalbum its only a good thing" (Anonymous-10, 2010). Another exchange with a different research subject concerning the same topic went this way:

> Interviewer: How do you license your images?
>
> Interviewee: Mine are all "All Rights Reserved" but if anyone wants to use one and asks me nicely I'll usually just say yes.
>
> Interviewer: So you're not too concerned about people downloading your stuff or things like that?
>
> Interviewee: I'd get irritated if somebody used it somewhere commercially and didn't ask me. If someone posts something on their blog then that's fine, that's not a big deal. If Microsoft used one as a poster somewhere then I'd probably be a bit annoyed because that's my work their using and they should have paid for using it. But if a food blogger wants to put up a picture of some cupcakes, to illustrate an article then fine. It's not a big deal. (Anonymous-8, 2010)

The following interviewee reiterates the motif of sharing one's photographs with others as long as they do not stand to profit from them.

Interviewer: how do you license your images?

Interviewee: i dont do the creative commons thing

just because i don't trust corporations, its not about people

if anyone wants to use, or heck even print one out, they just have to ask

I'll say yes

Interviewer: has that happened

Interviewee: a few times, people seeking illustrations for online articles or blog stuff

i would never expect any $ for that kind of stuff

Interviewer: nice. and they asked if they could use one of your images? why is that? (…) i guess, the difference intrigues me.

Interviewee: i mean, if it were Time or Newsweek or something, then of course but anything nonprofit or personal, not really

but they still have to ask

Interviewer: gotcha...

Interviewee: you have to draw the line somewhere i guess asking, or social interaction, is the payment. (Anonymous-1, 2010)

Offering as evidence a specific scenario that describes her thoughts on allowing someone (or some group) to use an image, a different research subject made the following distinction.

Interviewee: I got contacted by Grad Students at the Kennedy School of Government who wanted to use my photo of the Boston skyline on a report they were sending to the mayor, which I was thrilled about! I'm not going to charge them for that. I think it's great they contacted me. They didn't have to contact me. I thought it was awesome, because that's how I heard about it. So I want people to be able to use them and do with them some

> pretty neat stuff and I don't think that everybody should have to pay for that.
>
> I do the non-commercial because I feel like big companies make money off of other people and they've got the budgets, so I don't charge lots of money but it's not free for them. So that's why I choose that license. And that's because I don't want someone to make a ton of money using my stuff without my permission.
>
> Interviewer: So the distinction between I.N.G. and the group of Grad Students then is, for you, a very hard and fast one then?
>
> Interviewee: Yeah it is. If you have a budget and you're getting paid then you probably shouldn't be asking to use my work for free. Because you're basically saying, "I'd like to profit from your work and not give you anything out of it" which is not ok. (…) Mostly I liked to be asked by people because I like to see how people are using my stuff. (Anonymous-16, 2010)

Responding to another facet of the same question, the following research subject emphasizes the fact that he does not want to make any money from his images and is more than happy to let others use his photographs.

> People can use the works. They can download them as wallpaper if they want to. They can put them on their blog, but if they put them on their blog they're supposed to link back to me. (…) I don't want people making money off of my work without me making money off of my work and I don't want to make money off of my work! So I put them up as non-commercial. But in the meantime, if somebody has a blog about bookmaking and I have a photo of books and they want to use that… Great! They're small, they don't have a ton of money to go license stock photos or whatever, so I'm helping some other small person get out there and that's cool. (Anonymous-7, 2010)

And one final statement from another research subject interviewed for this project will shed further light onto how these members regard the artefacts of their unwaged labour. "So I would like my intentions, with respect to use of something that I put on somebody's site, but don't sell to them, to be respected, but within that framework I'm happy to be

pretty permissive about what I let them use the work for and, as a matter of fact, if they ask, I'm prepared to let them do almost anything for free" (Anonymous-5, 2010).

The above quotes all demonstrate a willingness to share the fruits of one's labour with others. Members are aware of the fact that there is value in the artefacts of their labour and that if someone else stands to make a profit from them, then the worker/creator should be compensated for this work. But if there is no money to be made and they are capable of collaborating with someone else and helping them out by letting this person use one of their images, then they are more than happy to give away for free what a moment ago they were not. The non-corporate and not-for-profit status of collaborators is repeatedly cited as an important factor is determining whether or not the individual member is willing to freely share their photographs. Flickr is, after all, a photo-*sharing* network with the emphasis falling emphatically on the latter term. This distinction is key and is based on a communal form of non-proprietary sharing that has its roots in the public-by-default nature of Flickr.

Flickr, then, is regulated by an ethos of non-proprietary sharing similar to, yet very different from, a traditional commons. In the feudal era, common lands or common property were spaces that members of the community had access and rights to. Whether it was land to graze livestock, a mill to grind grain, or woodlands to gather fuel, the commons were a place that numerous people had access to, had a responsibility towards, and had the right to use, but not abuse.[24] Flickr complicates the traditional notions of the commons in that those working within it regard it as a common resource, at the same time as it is a privately owned domain where profits must be made. In this way, what obtains is the inherently paradoxical notion of a *quasi-commons*; where the owners of the

website regard the fertile lands and products of the hard work of members in one way and those who actually build, maintain, and labour within it regard them in another. In other words, the quasi-common is a singular domain regarded differently by those who own it and those who work within it.

When assessed from the perspective of the owners of Flickr, the site is a place from which to gather incredibly valuable personal information that can then be converted into profits via the mechanisms described in Chapter 3 regarding the audience commodity. When assessed from the perspective of unwaged immaterial labourers, however, the quasi-common is a very different place. The unwaged affective labourers devoting their time and energy to the quasi-common do not recognize the validity of the prefix in the term. They regard *their* social network as a place where they go to socialize, work on their hobby, communicate, share, and hone their passion. One research subject consulted for this project regards Flickr as a collective commune, owned, in the affective sense of the word, by those who work within it.

> Interviewee: It's neat to participate in something that is community driven.
>
> Interviewer: So you feel a bit of ownership to the site then… maybe ownership isn't the right word?
>
> Interviewee: Ownership is a fair word but in a secondary meaning and I think that's what you meant. Not that I possess it but it's like being a member of a commune or a member of a board. That kind of ownership. I'm a contributor and I have some responsibility. I have some ability to make an impact. (Anonymous-7, 2010)

Responding to the uproars that occur whenever Flickr alters its user interface in any way, another research subject said the following.

> Interviewee: [For the members] It probably feels a little bit more like a grass roots thing. The people who appear to be providing all the content and therefore do all the work to make the site, they have a sense of ownership in a way, because they're consulted and because they're the ones who are making the groups and keeping the groups running. People are very opinionated about Flickr changes and whether they're good and whether they're not good and what they want to see happen.
>
> Interviewer: There's no doubt about that. Does that have something to do with this sense of ownership that you were talking about?
>
> Interviewee: I think it does in a way. It's the sense that they're changing something … that something is getting changed on them that may not be what they're used to or what they like … it's sort of everyone's fear. (Anonymous-15, 2010)

Another research subject brought up a similar point when discussing the sale of Flickr to Yahoo! in 2005.

> Interviewer: Why is it, do you think, that people got all up in arms about the sale?
>
> Interviewee: People don't like change. That's the big thing I think. And they were afraid that their privacy would be compromised, that the user interface would be changed that the community aspect would be damaged and they did not want their comfortable environment changed. They didn't want Big Brother stepping in and imposing all sorts of rules or that sort of thing.
>
> Interviewer: Do you think it's also because of some sense of ownership to the site as well.
>
> Interviewee: Yeah I do. With Flickr (…) people were very upset. They were like 'Who are these people and why are they taking over *our* site?' There was no willingness to acknowledge that [Yahoo! is] in it to make money. [The members] don't own it. These companies own it and they want to make money and people get very attached to their own little site within that as well as the larger community. (Anonymous-3, 2010)

Flickr members offer their time, energy, intellect, and labour without any expectation of financial remuneration to a domain that is, by and large, communally tended and maintained. As a result, they feel some form of collective responsibility to and affective ownership over this domain. The term ownership is problematic in this instance because it denotes and connotes a legal and proprietary relationship between Flickr members and the website. This is certainly not the case. Quite simply, Yahoo! owns Flickr, not its members. The term however has salience when applied to the affective dimensions of the website. Yahoo! may own Flickr's profits, but the members own its heart.

As the above portions of the interviews conducted for this thesis indicate, members feel beholden not to Yahoo!, but to their peers. They regard Flickr as their place, not Yahoo!'s, where they have a responsibility and obligation to the other members they come in contact with. According to one my research subjects,

> the community feels like Flickr is their own. People get very wound up in the help forum whenever Flickr change anything. There's always this massive argument 'why did you change this, I hate this' and they will always hate every change until about four hours later when they've forgotten that there was any difference. But I think people feel greater ownership of Flickr and that's why they get so worked up when something changes because they get very involved with it. And they get upset when their favourite website changes in a way that they may not immediately like. (Anonymous-8, 2010)

Stewart Butterfield, former owner of Flickr, acknowledged this sense of communal ownership in a statement referenced above that bears repeating. "When Yahoo bought Flickr, there was an uproar from Flickr users. But that's a natural reaction. *They felt protective of something that is essentially theirs*. That's the nature of participatory media"

(Marwood & Butterfield, 2009; emphasis added). Once again, the feelings of obligation towards a community and the sense of communal ownership that obtains from doing all of the work required to meet these obligations is the result of a public-by-default space where members are affectively beholden to one another. These feelings of mutual obligation result in a palpable sense of commitment and responsibility towards each other that has nothing to do with the potential of making a profit or of drawing a wage. According to one of my research subjects,

> it was very easy to get involved in the Flickr community. You just turned up and someone would start talking to you. So it was like a really friendly party. And so the community grew. And because it was already there, joining it was never such a big deal. That sense of community doesn't even exist on other sites. They're much more fragmented. In the early days, it was a much more coherent singular community. And it's kind of self-propagating then. So as people join, you find your little corner of that community that suits you and so on. It's certainly one of the sites where I've seen more community involvement than would normally be expected. (Anonymous-8, 2010)

Another research subject reports the following feelings towards Flickr and the community that she has become a part of. "I almost feel as if the Flickr community is a friend. That it's almost like walking downtown for a little visit. I check into Flickr almost everyday that I'm home and maybe spend 20-25 minutes wandering around" (Anonymous-11, 2010). Another research subject consulted for this thesis grasped the duality of the subject positions laying claim to the quasi-common very well. She begins by referencing the logic undergirding Yahoo!'s purchase of Flickr in March 2005 and then quickly grasps the differences between this logic and that of the community towards one another.

> [Yahoo!] want and focus on the mechanics which is "Wow! You get all these people to do shit for you for free. Isn't that amazing! I want that!" And those are the mechanics, but what they don't seem to understand (…) is the emotion that goes into why that works. Removed from that description is the love that people have for Flickr, which is why they do the work. So they always think that they come up with this magic framework and people will just do all this stuff for them for free. They're not doing it for Yahoo! and they weren't even doing it for Flickr's sake, they were doing it for themselves and the community that was created there. (Anonymous-16, 2010)

One of my interviewees describes the outcomes of participating in a community guided by these public-by-default norms this way. "People are very engaged, people are committed to making it a very attractive online community, where people feel free to share their ideas, whether they're popular or not. Where people feel free to share their photographic vision or just simply where people feel free to be themselves" (Anonymous-18, 2010). The willingness to contribute one's physical, psychical, and affective energies to an endeavour that offers no financial recompense, but instead offers a communal sense of belonging and support, is telling of the influence of the public-by-default nature of Flickr.

Over time and through exposure, the normalized patterns of behaviour instilled by the public-by-default settings of Flickr and their contingent outcomes constitute a space based on open sharing, politeness, and reciprocal respect. The norms and mores of this space are further entrenched by the form and content of what is shared amongst members and the vulnerability associated with sharing these artefacts. It is to the everyday activities of Flickr members, the photographic slivers of one's soul, and their influence on the Flickr-verse that we now shift our focus.

5.4 The Slivers of One's Soul & Mutually Recognized Vulnerability:

At every turn Flickr offers the opportunity to connect with others, share a photograph, leave a comment, or interact in some way. One's personal photographs are liaisons to one's contacts and groups. They are the visual calling cards that let others know what you have been up to, what has inspired you, where you have traveled, who and what you have seen, and are a persistent reminder to your contacts of your presence on the network. Uploading and sharing one's photographs, therefore, is the primary activity that grounds all other possible means of participation and communication within Flickr. This basic activity, however, initiates and encourages a host of other actions that are as or more important to the constitution of the Flickr-verse than posting one's photos.

By wandering around Flickr, looking at the photographs uploaded by other members, and getting what can only be described as lost in the links between photographs, groups, and members, the everyday experience of being a Flickr member is reminiscent of the experience of being a player in Game Neverending. "There's kind of a feeling of exploration within Flickr. It feels like a world where you can move around and find wonderful things – the wonderful things being the great photographs that people upload" (Garrett & Costello, 2005). As well, and as a result, there is a levity and jocularity that results from the public-by-default nature of Flickr and the ludic atmosphere created by its game-like qualities. These elements ever so subtly push members to participate in meaningful ways by communicating with others. Significantly, however, when the fundamental units of participation are the photographs that one captures, gathers, and accumulates by living and moving throughout the physical world, there develops an intimacy between the individual, his/her photographs, his/her

photostream, the contacts exposed to these photographs, and the groups that s/he contributes to.

One of the research subjects, consulted for this project put it this way: "One difference between Flickr and a lot of the other social networks, which really don't interest me that much, is that because there is a 'product,' people actually putting something up [on the site], you learn about the people as much through what they put up as you do through what they say." She continues by reference to the way she feels about publicly sharing her own photographs with others: "It's almost like having little babies out in the world, scattered by the four winds" (Anonymous-11, 2010). Going out and taking photographs of one's social environs, staying in and taking pictures of one's partner, children, or friends, wandering the city capturing images of what is visually striking, annotating all of them with tags, titling them, perhaps 'cleaning' them up with photo-editing software, arranging them and organizing them so as to finally release them into one's photo-stream and watch them trickle around the world are all incredibly intimate and personal activities that implicate the member's mind, heart, and body in complex permutations. The intimacy that obtains between an individual and the photographic evidence of their existence exposes the strong interconnections between the affective, cognitive, and subjective registers of the individual. Flickr members are putting little bits of themselves 'up there' or 'out there' for public scrutiny. One of the research subjects interviewed for this thesis comments that these small slivers are the most interesting images one could post. She believes that when members "post something personal, that really sucks people in! People love that! They love that personal element to

it. (…) It's the peeks into your personal life, your values, and what's really important to you that people find most fascinating" (Anonymous-3, 2010).

This is a delicate and fragile form of interaction that allows others to glimpse the individual's affectivity and subjectivity in ways that might easily lead to ridicule, derision, or mockery. On Flickr, however, the position of vulnerability that the individual voluntarily places him/herself in rarely results in these kinds of exchanges. As one of my interviewees put it, this has something to do with the personally expressive characteristics of photographic vision. "[P]hotography is an artistic medium and if you're hanging out on Facebook or on some bulletin board you're just a person behind a pseudonym, but by putting creative work out there, I think it makes you realize that you're a little more vulnerable than you think" (Anonymous-15, 2010).

The problems on some social networks or bulletin boards associated with 'creepy'[25] behaviour, trolls, trolling, and so-called 'flame wars' are longstanding and well known (Donath, 1999). The hostile, antagonistic, and/or obsessively narcissistic nature of some social networks does not mesh, however, with the accreted norms and standards of behaviour characteristic of Flickr. This is attributable both to the public-by-default nature of the website and to the fact that in order to communicate with others on the site, an individual must become a member, must share pieces of themselves, and, thus, must also expose portions of their own head and heart. While the photographs on Flickr can be seen, copied, saved, and, implicitly, repurposed by non-members browsing the website, comments, notes, tags, and other forms of communication are restricted to members. Therefore, in order to leave a comment, participate in the groups, or leave a note on someone else's image, one must also have a Flickr account. It is conceivable that

someone might create an account, not upload any photographs to it, and simply troll the website leaving insulting comments, but there is no evidence that this practice is at all commonplace. One becomes a member of Flickr to share one's photographs with others and in this act of sharing make public the visual evidence of their perspective and their lives.

This scenario creates an atmosphere of mutual support and encouragement rather than divisiveness and hostility. Posting snapshots of their world, pictures of those persons near and dear to them, and photographs of the things that they find personally or visually enticing, lays bare intimate portions of the member's subjectivity and by recognizing that each and all of them are in some ways equally vulnerable there develops out of this mutual recognition a logic of support, encouragement, and casual friendship that gets truncated or severed in other domains where the intimate snapshots of one's personal life are hidden from public view. According to one of my interviewees: "I think they all recognize that they're slightly vulnerable. Unlike a lot of discussion boards where some hot head can just jump in and say some snide comment and set off a flame war, that's not as likely to happen on Flickr because it requires a little more effort and thought" (Anonymous-11, 2010).

When the public-by-default nature of Flickr is combined with the multiple enticements to communicate and the affective vulnerability associated with posting small, sometimes intimate, photographic shards of one's existence to public fora, there condenses upon the Flickr-verse a mist of reciprocal respect based on recognition of one's own vulnerability and the cognate vulnerability of others. By posting the visual evidence of one's life online for all to see and by following the life of other members by

following the photographs, comments, and ideas they post, members emotionally expose themselves by offering little bits of their eyes, head, and heart to the Flickr-verse. The affective ties that altruistically bind Flickr members to the Flickr-verse and each other, then, are based on the mutually recognized position of vulnerability that obtains from a system of omni-directional visibility that each voluntarily enters into and contributes to.

5.5 The Community Guidelines:

When they were introduced via the Flickr Blog on February 9, 2006 (one day before Flickr's second anniversary), the Community Guidelines were described as "Written in language that you don't have to be a lawyer to understand, we want these guidelines to help you on your way in the Flickrverse" (Flickr Blog, 2006). One of the research subjects interviewed for this thesis believes that "Flickr has been pretty successful in making their written norms pretty close to the norms that are actually obeyed by the members of the site. I would count that as a fairly interesting success in terms of site administration" (Anonymous-5, 2010). One of the primary reasons behind this administrative success is that Flickr's owners and operators had the advantages of experience, time, and observation on their hands when they finally sat down to codify the Community Guidelines two years after the site's launch. These codified norms play a particularly important role in defining the behaviours, attitudes, and perspectives that are normalized and those that are ostracized on Flickr. One of the research subjects for this project rightly emphasizes the importance of establishing these norms in the early days of any online community "You get a group of people who have a certain idea about what sort of social norms are going to be acceptable or not, and a certain way of approaching things, and people who come later either buy into that and stay, or don't, and go

elsewhere" (Anonymous-15, 2010). It is noteworthy that these social norms were co-created by the administrators of the site and those early members of Flickr. As was demonstrated in Chapter 1, the owners and developers of Game Neverending and Flickr had little to no idea about what they were building, how they should go about building it, and what 'it' was actually going to be. They had a committed and vocal group of members, however, that helped them figure these things out and that also aided in establishing the behavioural norms that were later codified into the Community Guidelines. These guidelines have since become the standards by which individuals comport themselves when on the photo-sharing social network.

The Community Guidelines are organized into two sections. The first is called "What to do" and the second "What not to do." Under the "What to do" heading there are five sub-headings. i) Do play nice. ii) Do upload content that you've created. iii) Do moderate your content. iv) Do link back to Flickr when you post your photos elsewhere. And v) Do enjoy Flickr (Flickr Community Guidelines, N.D.). Under the "What Not To Do" heading, there are eight sub-headings. i) Don't upload anything that isn't yours. ii) Don't forget the children. iii) Don't show nudity in your buddy icon. iv) Don't upload content that is illegal or prohibited. v) Don't vent your frustrations, rant, or bore the brains out of other members. vi) Don't be creepy. vii) Don't use your account to host web graphics, like logos and banners. And viii) Don't use Flickr to sell. (Flickr Community Guidelines, N.D.)

Familiarity with the tenor of these guidelines is identifiable in the comments made by interviewees for this research project. The importance of hearing members' voices regarding the norms is that they give flesh to these guidelines and underscore their

prominence and importance to the overall mores that characterize the network. Two guidelines have been identified as particularly important to this thesis. The first is the prohibition against selling anything on Flickr and the second is the suggestion to not be 'creepy.' Regarding the prohibition against selling anything within the Flickr-verse, the guideline reads as follows: "Don't use Flickr to sell. If we find you engaging in commercial activity, we will warn you or delete your account. Some examples include selling products, services, or yourself through your photostream or in a group, using your account solely as a product catalog, or linking to commercial sites in your photostream" (Flickr Community Guidelines, N.D.). In conversation with members, this guideline is one of the more prominent ones that influence the way they feel about the site. They are aware of the injunction against any kind of economic or commercial activity on Flickr and interpret this injunction liberally. The fact that Flickr is a commercial property whose survival depends on selling the artefacts produsedwithin it is addressed in the next chapter. For the time being, the perspective of members is focused on, rather than that of Flickr's owners.

When asked what she would characterize as abnormal behaviour on Flickr, one research subject says: "Somebody trying to sell a lot of stuff. Spam. Somebody leaving very aggressive comments (like, "look at this or else" or just leaving a ton of comments on somebody's work without having uploaded any images of their own.)" (Anonymous-6, 2010). Another interview subject responds to the question of whether there are any 'unwritten rules' that guide and regulate interaction between members on Flickr in the following manner. "Don't sell. Don't market. And the one that I can think of is that you should only 'favourite' pictures that you really, really like" (Anonymous-4, 2010). Still

another believes that "Most people try to be generally polite… don't try to sell or hock too much (commercialism, especially to the extreme, is frowned upon) that sort of a thing" (Anonymous-1, 2010).

One of the more prominent and (if the research subjects consulted for this thesis have anything to say about it) annoying aspects of some of the comments left by other members is the self-promotional qualities, construed liberally as selling oneself, of leaving flashing icons or animated GIFS (Graphics Interchange Format) in the comment section below someone's photographs. One interview subject claims that one of the more annoying aspects of being a Flickr member is "The blinking icons, without a doubt. (…) The comments, I don't mind so much but the blinking icons and group invites can be very invasive" (Anonymous-20, 2010). Another claims that she is "continually fascinated by all of the group invites that are just hideously attention getting and… hideous. You know the flashing join my group. I don't mind a comment asking to add a photo to a group pool if it's just a comment, but if there's a giant flashing mess of crap along with it then, you know what, I don't really need to see that" (Anonymous-16, 2010). Another argues along the same lines, "the other dominant genre of Flickr comments (…) are the animated GIFS. You know, 'I recognize this, please submit it to Group X.' And those I actively despise" (Anonymous-5, 2010). Still another says, "I tend not to be involved in the groups that are all glitzy and giving awards and all that crap anyway. I'm just not interested in that. I would rather belong to two groups where people tend to give interesting words in exchange for a photograph" (Anonymous-23, 2010). And finally, another research subject says that "it seems like a lot of times you get the little sparkly gif things it's frequently meant to say 'come and look at my photos.' It kind of becomes

impersonal where they might like your image enough to put a standard comment on it, but not enough to make it genuine" (Anonymous-3, 2010). Perhaps the dislike of these flashing GIFS has something to do with the aesthetics of photography, where the movement of the GIFS unhinges or disturbs the stillness of the photographs. In addition to this aesthetic dissonance, however, is the notion that the GIFS overstep the liberally construed prohibition against using Flickr to sell anything (including oneself). The biopolitical influence of the prohibition against using Flickr to sell anything (including oneself) is one of the more interesting behavioural guidelines that pattern and regulate interaction on the photo-sharing website. It is, then, addressed in some detail in the following chapter.

The second guideline that merits mention is the prohibition against being a 'creep.' The full guideline reads: "Don't be a creep. You know the guy. Don't be that guy" (Flickr Community Guidelines, N.D.). This guideline, while not directly referenced by many research subjects, is identifiable in their general impressions of the site. When asked if there were any site-specific norms or standards of behaviour on Flickr, one of my research subjects comments that "The rule for me is: Do as you would be done by" (Anonymous-2, 2010). Another research subject couches her response in her thoughts about the nature of Flickr.

> I tend to think of Flickr and the way I use it as this wonderful shared common resource. And because I care about that and I want it to continue to function well, my part in that is to behave well, to be part of the group. And there's always going to be people who don't, but as long as the core of people do, it will continue to function. So, I think that if you care about online communities, that sense of the golden rule applies. (Anonymous-16, 2010)

Another of the research subjects interviewed for this project appreciates

> the generosity on Flickr. It gives a kind of a positive cosmic view of the world. The Flickr world that I inhabit, the groups I'm in, is a kind and generous place. People seldom snipe. Occasionally they will offer a constructive suggestion, they discuss things without going for the jugular and I like that world. The world that I read about in the newspaper and see on TV I increasingly like less and less. So Flickr is kind of an alternate reality that is fun to inhabit. (Anonymous-11, 2010)

Still another research subject claims that

> people police themselves… but subconsciously, maybe partially consciously. I think people want to fit in, people want to be accepted, people want people to like them as opposed to dislike them, and so the easiest modes of behaviour that don't run any risk, that don't incur any risk of causing offense or causing estrangement, are obvious and easily adopted. (Anonymous-7, 2010)

While 'creepy,' morally egregious, or sexually perverse behaviour is, of course, entirely possible, there is no evidence that this kind of behaviour is anything but anomalous on Flickr. This is especially interesting given the voyeuristic nature of a website based on leveraging the pleasures derived from looking and the potential for 'creepiness' that these pleasures make possible. The relative lack of anything approaching this kind of behaviour on Flickr, however, is partially attributable to the influence of the community guidelines that encourage certain perspectives, attitudes, and behaviours, at the same time as they discourage others.

In the interviews conducted for this thesis, one of the more interesting questions dealt with the apparent lack of anything that might be construed as criticism or negative commentary on the website. This kind of commentary, let alone comments of a sexually suggestive or morally suspect nature, is abnormal within the Flickr-verse. The friendly,

non-creepy, playful, and generally supportive comments made by members on other members' photos are important to understanding the habitual norms of the space because it is here that the most common form of interaction between members takes place. The comment section for each photo, then, is the primary point of contact between members and the apparent lack of any comments of a negative, morally suspect, or sexually perverse nature is instructive of the sway the guidelines hold.

The apparent lack of critical comments regarding the composition, lighting, or content of an image was thought interesting and worthy of further examination. On Flickr, even this kind of commentary is abnormal. Time and again, members responded to questions concerning the apparent lack of critical commentary or anything that might be construed as negative by pointing out that there are specific groups within Flickr set up for that exact kind of thing. This fact alone is telling of the overall mores of the social space in general. The presence of groups set up specifically for critique and criticism is evidence that, for the most part, critical commentary or remarks that might be considered negative overstep the boundaries established in the majority of groups not designed for those explicit purposes. Once again, this is related to the sense of mutual vulnerability associated with the reciprocity involved in posting the small slivers of one's head and heart to public fora and the potentials of this mutual vulnerability to devolve into somewhat 'creepy' exchanges.

One research subject was succinct in his summation. "[Y]ou will never get a bad comment on Flickr. I've never seen that" (Anonoymous-22, 2010). Another respondent characterized the non-creepy nature and general politeness that permeates exchanges between members as having to do with the ability to retaliate against one's detractor.

> I think a part of that might be that if somebody leaves you a nasty comment – if you have the guts to go and say something horrible – then they can go and look at your profile and look at your photos and they can say "Gee who are you to be calling me lousy? You end up having a presence, you have a face and your photos will speak louder for you than anything else. And if you have no photos and nothing on your profile, people will tend to block rude ones. They figure "Oh this is a troll." Screw them, I'm going to get rid of this guy. So if you're not polite, it tends to backfire on you. (Anonymous-3, 2010)

Another respondent took a more tactful approach and indicated that she did not feel comfortable making a comment that might be construed as negative in the public area below the picture because she felt her intentions might be misinterpreted. In order to avoid that kind of misinterpretation,

> I sent her a [Flickr]mail once about "you know, the head looks a little funny" but I didn't feel like I could really put that under the picture because there is that feeling of inhibition that if you point something out that is kind of a criticism that people can come back and be real negative towards you. That has happened, not necessarily to me, but I've seen it. (Anonymous-20, 2010)

Echoing the above sentiment, a different research subject describes a similar situation he experienced this way:

> Interviewee: You're not supposed to be negative.
>
> Interviewer: And do you think that that's an unwritten rule on Flickr?
>
> Interviewee: It is! It is an unwritten rule. Some people would take terrible offense if you said something negative. Some people do want honest criticism. Usually if you were one of my regular contacts and I saw something, I might email you afterwards and say "Hey, the horizon's crooked" but I won't do it in the comments. (Anonymous-9, 2010)

Another research subject indicated that this kind of mutual vulnerability has ossified into relatively stable patterns of behaviour that mitigate the potential creepiness of a domain

premised on the pleasures derived from sharing digital images. He says: "I think there's social pressure to be politically correct, to be polite, to not hurt someone's feelings, to make sure the intent is good, "E" for effort kind of thing, and I think that is a prevalent trend" (Anonymous-7, 2010). Finally, another research subject believes that

> for a lot of people there's a general sense of reciprocity. Not in that it's a serious social norm and there's going to be punishment if you don't do it, but in more a general, polite behaviour, kind of way. (…) There's a certain expectation that there's some things that you'll do to get attention for yourself or your work, but you don't want to be 'that guy,' nobody ever wants to be 'that guy!' (Anonymous-16, 2010)

The above reference to not wanting to be 'that guy' refers directly to the 'Don't be creepy' guideline. This guideline, as well as the prohibition against any commercial activity within the Flickr-verse, will be discussed in more detail when the biopolitical influence of the Community Guidelines are examined in more theoretically nuanced terms in the next chapter. For now, what merits emphasis is the effectiveness of the Guidelines in regulating the behaviour of members within the Flickr-verse.

5.6 The Open API: if you *let them* build it, they will come in droves

An early blog post by the Flickereenos (what Flickr staff call themselves) reads: "When we started on Flickr [we] weren't sure exactly what we were building, just that we had the core of something really interesting" (Flickr, 2004). Caterina Fake underscores these shaky and uncertain beginnings by saying that, "Had we sat down and said, 'Let's start a photo application,' we would have failed, (…) We would have done all this research and done all the wrong things" (Graham & Fake, 2006). Stewart Butterfield acknowledges the indeterminate beginnings of Flickr as well. "We worked really hard but I don't think we had any formula for how to pull it off. Flickr could have gone in a

million different ways. (…) To a large extent we're just making it up as we go along" (CNN, 2007). As these quotes suggest, in the embryonic days of Flickr, its owners and designers had no firm idea what they were doing, what they were supposed to do, how they were going to do it, or what the primary purposes of their new venture were. They did know, however, that they were onto something exciting and needed a lot of help not only developing it, but also discovering what 'it' was meant to be, do, look, and feel like.

The idea for allowing members to code new and novel applications based on the Open Application Programming Interface (API) was carried over from Game Neverending. In an interview conducted in 2003 during the alpha test of Game Neverending and before Flickr existed, Butterfield forecasted that "When we start [Game Neverending], we'll have developed about 0.1% of the land on the map – the rest is up to the players: they'll be creating new hubs and building the connections between them. (…) [A]s much as possible we are going to leave it open for the community to build the tools which enable the community to evolve and extend the game" (Sugarbaker & Butterfield, 2003). This philosophy or strategy of granting open access to the blueprints that structured the game had the advantage of distributing the task of building additions to this domain to everyone capable of reading the binary blueprint. It was also the same strategy used to develop and grow the Flickr-verse as well.

When all of the activity taking place at any given time within the Flickr-verse is considered, hacking the Open API is without doubt one of the least common. In cognate fashion, the number of hackers/coders interviewed for this thesis was relatively small. Few people are adept, skilled, or patient enough to write their own programming code and leave the complexities of that task to those individuals who have had the training and

gained the know-how to do so. The Open API, the work of hackers, and the direction that Flickr took as a result of their hacks, however, were all significant contributors to the early success of Flickr, its subsequent spread across the web, and continue to be important ingredients in Flickr's persistent appeal.

APIs are sets of instructions, pieces of software, or collections of code that facilitate computer-to-computer communication between two websites and/or their data sets. The API is an interface that allows one site to draw information and data from another (and vice-versa) at the same time as it allows the hacker to re-present that information in original and imaginative ways. APIs are like binary bridges that connect the content found on various websites to each other. Flickr was one of the first Web 2.0 companies to freely and openly release their API to the developer community. Well before Tim O'Reilly wrote "What is Web 2.0?" (2005), the owners and operators of Flickr learnt from their experience with Game Neverending that if you want to harness the collective intelligence of your membership, you must treat them as co-developers and one of the easiest and best ways of doing so is to give them the virtual keys to the immaterial factory. This allows them to come in and work at their leisure on whatever they want without any need for direct oversight or management.

What arises from this situation is an eminently productive domain that successfully solicits the unwaged labour of hackers simply by offering them the opportunity to work with an interesting piece of code. Flickr gave their members ample opportunity to make suggestions, leave comments, offer ideas, and share their thoughts. They also gave them ample opportunity to act independently on these ideas, suggestions, and thoughts by giving them the tools to build whatever they wanted, whenever they

wanted to. In this way, the nagging problem of figuring out what members wanted from the site, what the site was supposed to do, and how it might go about doing it was dispersed and divided amongst a globally distributed labour force, working at all times of the day and night, without the need for supervision, and, most importantly, without demanding a wage. The unwaged immaterial labour of coders who devote their time to produsing applications has proven to be consequential in determining and defining what the Flickr-verse looks and feels like.

According to Caterina Fake,

> the thing that really makes Flickr Flickr is that the users invent what Flickr is. (…) Flickr users were smarter and more creative than we were. (…) In short, our users started creating Flickr *with* us, in real time. (…) A rhythm formed and the 'product development process' became a call and response; Flickr collaboratively hacked its way into existence. (…) That sounds fancy, but it boils down to this: like us, outside developers could build new features and give Flickr new capabilities. In fact, we used the same API as the outside developers, meaning that they had all the same capabilities we had. We hoped that people would build things that we didn't have time or resources to build (…) and they did. But we also hoped that they would build things that we hadn't thought of – and they definitely did that too. (2006, p. xi)

When asked what made Flickr's Open API such an interesting piece of code to work with, one of the hackers interviewed for this thesis said the following:

> It's just a really nicely done API. It was one of the first of its kind that I started to use. A lot of other sites have since modeled or copied their APIs on Flickr's. And it's just a well thought out, well-done API that's very easy to use [and] that you can get results with quite quickly. The learning curve isn't too steep and you can very easily get something together that produces something interesting. So once you get started, the limit is just your imagination. It's just a nice environment to work in – at least in a subject area that interests me which is photography. (Anonymous-8, 2010)

One of the elements of hacking considered interesting and worthy of further exploration was the collaborative nature of the process between the individual hacker and other Flickr members. If "Flickr collaboratively hacked itself into existence" (Fake, 2006, p. xi) as Fake claims, then how much influence does the non-coder have in this collaboration? When asked how much the community of Flickr members influences the direction of the application after it is initially coded, one of the respondents answered as follows.

> It can be quite a significant influence. People can suggest things that you never thought of. What I also tend to find is that people are often unrealistic about some of the things they want or the things they suggest, some things that might involve a disproportionate amount of work to achieve or perhaps aren't even achievable within the constraints of the Flickr API. Not everything that people come up with is something that I would consider. But other suggestions you think "oh yeah, that's actually quite a good idea." So for example, I wrote a set manager application which I don't know if you've come across that automatically generates sets based on tags you might give them or the dates they were posted and so on. You can just upload new photos and it will automatically go into the right sets in your account depending on what rules you set up. The first version of that I did was extremely basic and a while ago now I did a second version which offered many more options so that you could, for instance, build sets on geo-location for example so that if it was taken within a specific area would be categorized in one way and so on. A lot of the things I did there came as a result of the feedback from other people. (Anonymous-8, 2010)

The Open API combined with the suggestions and comments of other members, then, was elemental to the evolution of this particular application within Flickr. Once again, however, all of the above is dependent on the willingness of a membership to devote their time, energy, and intellect to Flickr without demanding a wage. The obvious question is why? Why do hackers repeatedly do this kind of work for free?

The Open API presents developers with the opportunity to solve a problem as well as a vocal group of members making suggestions regarding how the particular application might be improved. One of the best ways of thinking about the motivation for hacking the API is to think of a crossword puzzle or sudoku, but with the added difference that rather than doing these puzzles alone, software development on Flickr is more social and collaborative.

> Interviewer: From the looks of it, you devote a ton of time and a ton of effort to doing this kind of thing and I'm curious about the motivation for that. Where does that come from? What motivates you to keep working in such a concerted fashion?
>
> Interviewee: I often ask myself that same question! I think the truth is, though, that I enjoy writing software. I like the technical challenge of solving problems and I guess whatever I did in life I would spend my spare time writing bits of software meant to do things and Flickr just provides a problem domain where things exist that can be solved and where things can be built. And it's far better to write something that has some utility than something that you'll boot around with at home. So having interaction from other people and feedback from other people, having people actually use the software you write, is certainly a big motivator. I think without them, I would still write little bits and pieces, but to see people use it and how they use it and to see how they would like to see it evolve probably drives you to take things even further and build bigger and better things. (Anonymous-8, 2010)

He continues,

> Flickr gives you an end-game and a goal. It provides problems that need solving and that are interesting to solve. So without Flickr, I would just write [code] somewhere else. Flickr is quite cool because I like it there, I know lots of people there, it's about photography, which is my hobby, all those things. And I think the fact that its full of my friends is a big thing because I know a lot of people on Flickr now and that community does spur you on to do more things. (Anonymous-8, 2010)

The importance of the Flickr community and the social qualities of hacking the API was reinforced a little later on in the interview through a comparison between two seemingly polar activities – cooking and coding. While these activities seem quite disparate in their relation to one another, when assessed from the point of view of my research subject – a coder and an avid cook – they became much closer. The research subject begins the following exchange by listing their similarities:

> Interviewee: You've got a bunch of things that you can take and do different things with, assemble in different ways, and writing software is pretty much like that, you've got a bunch of tools, a bunch of techniques, and the way you mix and match them will produce different outcomes and over time you gain experience at how different strategies work out. In the same way that if I chop my onion to this size and cook it gently it will caramelize really nicely and so yeah I think there are parallels. I haven't really considered that before.
>
> Interviewer: I'm thinking about the communal aspects of it as well of say cooking a big meal for a bunch of friends.
>
> Interviewee: I always say that it's far nicer to cook an interesting meal for a bunch of friends that are going to enjoy it than it is if its just you on your own and you just need to feed yourself that evening. You're far more likely just to have some toast or something. (…) And the software thing is the same, if you know someone is going to use it and you'll get feedback from them using it, that's far more satisfying than just writing a little widget that only you will ever see. (Anonymous-8, 2010)

Without the need for hierarchical oversight and management, spurred on by the encouragement and gratitude of their peers, motivated by creative interest and pursuit, the confounding and monumental task of figuring out what Flickr's members wanted, what it was supposed to be, and of building all of the various applications that make it such an enjoyable place was not only dispersed to the four corners of the globe, but entrusted to a

self-organized, self-motivated, and self-managed group of individuals happy to share the fruits of their labour with others for free.

The significance of this arrangement and of the Open API in general to the growth and continuing success of Flickr often goes unrecognized. This lack of recognition is a mistake. In an interview with *The Guardian* in 2005, Butterfield says that the Open API

> allows people to write programs that add functionality. 'There are dozens of those. Someone did a screensaver, someone did a wallpaper generator, and a new one is Flickr Postcard,' he says. 'There's one that takes photos tagged with different colours and arranges them into the shape of a rainbow. The sexy ones get linked around the web the way cool things do, but they all point back to Flickr. If we did a survey, I doubt many people would say, 'I joined because of the API', but they did, indirectly.' (Schofield & Butterfield, 2005)

One of the hackers interviewed for this research project is a freelance software developer by day. Therefore, the work he does for a wage and the work he does on Flickr are very similar to each other. The way he feels and thinks about the nature of these similar tasks, however, is entirely different. These differences are instructive.

> Interviewer: So how is the work that do for your 'day job' different or similar to the work you do for Flickr? Is there a significant difference, maybe not in the nuts and bolts of it, but in the way that you think about it?
>
> Interviewee: That's a good question. By day, I'm a freelance developer. So I work for a variety of people and I have a fair degree of autonomy, at least I do in many cases, but the reality of doing work for money is that a lot of it, on the whole, is really quite dull. People want very boring systems writing. So it's nice to spend my spare time writing things that I'm interested in rather than having to do them because somebody wants me to do them. (Anonymous-8, 2010)

In this case, there is no discernible difference between the means of immaterial production and the means of immaterial produsage. The machine used to accomplish both tasks, in other words, is the same, as are the general tasks and duties required of the coder/hacker. The tenor of the social relationships that undergird these means, however, form the core difference between the mode of production characteristic of waged immaterial labour and the mode of produsage characteristic of unwaged immaterial labour. This tenor extends beyond the relationship between the hacker and his/her contacts, into the Flickr-verse more broadly, and results in a propensity on the part of members to offer their assistance to any number of different endeavours. We now turn our attentions to the thoughts of Flickr members regarding another corner of the Flickr-verse they were particularly enthusiastic about assisting with – The Commons.

5.7 The Commons as Indicative of Flickr's Altruistic Substratum:

The Commons is a special corner of the Flickr-verse devoted to hosting and sharing photographs sourced from the visual archives of cultural institutions such as museums, libraries, and galleries. "The program has two main objectives: 1. To increase access to publicly-held photography collections, and 2. To provide a way for the general public to contribute information and knowledge" (Flickr The Commons, N.D.). In hindsight, the relationship between Flickr and the various cultural institutions that display portions of their visual archive on the website makes perfect sense. Flooding a photo-sharing social network brimming with enthusiastic and vocal photographers with a veritable treasure trove of historic images meticulously preserved and digitized by professional librarians and archivists seems like an obvious recipe for success. When the

U.S. Library of Congress (LOC) first approached Flickr, however, and began exploring the idea, looking for suggestions, and asking questions, the future was anything but clear.

The pilot project between Flickr and the LOC was launched modestly on January 16, 2008 without a press release and without any attention given to it by the mainstream media. According to the report released by the LOC, this lack of fanfare was intentional. "The decision to publicize this pilot solely via the Library and Flickr blogs rather than by the usual method of a press release tested a new model for getting the word out on Library initiatives. The reaction by the blogosphere was astonishing" (Springer, et al., 2008, p. 14). Just as important was the reaction of the Flickr community to the pilot project. George Oates, the Flickr employee in charge of the pilot project, says that, "We were stunned by the response. (…) Frankly, both parties were somewhat overwhelmed, but in the most positive way" (2008). The Powerhouse Museum in Sydney, Australia, another early member of The Commons, experienced a similar situation when they uploaded a sample of their photographs for the first time. According to an internal report, "In the first 4 weeks of the Commons we had more views of the photos than the same photos in the entirety of last year on our website" (Chan, 2008).

In a telling distinction between the cultures and efficiencies of waged work and those of unwaged work, hours after the initial launch, the LOC was inundated and overwhelmed by contributions from Flickr members. The enthusiasm of the Flickr community that greeted The Commons had all of the tools at their disposal to help them in their project and knew how to use these tools to their maximum impact. They besieged the LOC's photo-stream with praise, comments, information, and ideas. In other words, they overwhelmed the LOC with the quantity and quality of their labour. "Information

that would take a curator potentially years to uncover flows thick and fast directly from individuals who either correct, augment, or cross-reference the gorgeous photographs on Flickr. (…) They provide additional color to the records in the Library's wonderful collection" (Oates, 2008). "The popularity of the project immediately after launch resulted in an unexpectedly high amount of user activity, strongly impacting the time and personnel needed to moderate the user-generated content" (Springer, et al., 2008, p. 11). Put simply, the response of the Flickr community to the presence of The Commons was astounding.

The obvious question for this thesis is, why? What is about Flickr and its culture that instigated such an overwhelming response? What does the success of The Commons tell us about Flickr as a whole? The LOC answers these questions by reference to the enigmatic altruism that appears to have condensed throughout Flickr. "We appear to have tapped into the Web community's altruistic substratum by asking people for help" (Springer, et al., 2008, p. 15). The 'altruistic substratum' of the Flickr community is particularly solid, its foundations extending deep and wide throughout the website, making The Commons an ideal venture for soliciting the kind of selfless participation they witnessed. There are two central elements that must be considered as essential ingredients contributing to the constitution of this altruistic substratum. First is the technological infrastructure and second is the cultural infrastructure.

Technologically, Flickr was more than ready to accommodate the needs of cultural institutions such as the LOC. The technological infrastructure developed by hackers predicted and satisfied many of the needs that the LOC had. According to one of

the research subjects well versed with The Commons and interviewed for this thesis, when asked what made Flickr an appropriate place for the Commons he replied:

> To be honest, I think that it was pretty much that they had the right software and infrastructure in place. So they had the infrastructure to support a way of uploading, storing, categorizing all of these photographs in a place where the bandwidth wasn't going to be an issue and the community was there, ready built, ready made, with all the tools to allow that community to interact with these photographs. So all of that was there already. That's what Flickr is. And the motivations for these institutions to put these photographs up on Flickr wasn't just to show them to the world, but also to get the world to interact with them. To help annotate them. Add metadata. For them to say, "Hey I know where this was taken, that's my grandfather, or whatever," all of which has gone on. So basically they have the community helping to curate their photos by figuring out relationships between them or information about the photographs that the institutions themselves didn't know prior to this and the tools to manage and do all that were pretty much there. So putting all the stuff on Flickr was really a kind of low overhead thing to do. And then they can also get that information because Flickr has this API, which is a pretty good API, it's there, it's tried and tested, so basically everything they needed was there. They just needed to put the photos up. (Anonymous-8, 2010)

Over four years of member-driven development, Flickr already had in their quiver many of the technological tools required by the LOC. Again, by constantly listening to the needs and comments of their membership, allowing their members to code applications themselves, and encouraging others to develop and invent novel instruments that make sharing and organizing photographs as seamless as possible, Flickr developed (or had developed for them) the technological tools that foreshadowed many of the needs of the LOC. Without this technological substratum – much of which was developed by the unwaged immaterial labour of coders/hackers themselves – The Commons might not exist as it does today. According to the report published by the LOC,

> Fortunately, Flickr allows access to its Web services through a public application programming interface (API) in a variety of programming

> languages. Additionally, third party developers have created software development kits that ease the use of the API. Using the flickrj toolkit for java and marc4j (a MARC record toolkit), an Information Technology Services (ITS) staff member developed a specialized application to upload photos and implement the MARC-to-title-and-description mapping (Springer, et al., 2008, p. 8).

When translated from 'librarian' into colloquial English, this means that the photographs in the LOCs archive could be easily uploaded in batches of up to fifteen hundred with their bibliographic information already appended to them. The onerous and labourious task of uploading the photographs individually and re-entering all of the information regarding their historical pedigree (if there was any information to begin with), then, was avoided by leveraging the Open API and the hacks coded by unwaged Flickr members. Recognition of the technological facets of The Commons equation, however, needs to be balanced with like appreciation of the cultural facets that stabilize this relationship.

Flickr was not only technologically well equipped for the LOC, but was also culturally well suited for this kind of project too. Another research subject interviewed for this thesis worked closely with The Commons and emphasized the cultural aptness of the partnership between Flickr and the cultural institutions that make up The Commons. The beginning of her comments reference the fact that Flickr had to put a moratorium on admitting cultural institutions into The Commons because of the overwhelming popularity of this corner of the Flickr-verse. She thinks The Commons is

> interesting because there was actually a discussion last September [2009] when Flickr put a moratorium on new applications to The Commons so it could get through it's backlog, which seems to be happening a little slowly. There's a lot of institutions in the backlog. There was discussion online among the different institutions if they should be looking for other options and the other option that one group was pushing quite a lot was the Wikimedia commons but that just puts stuff out there. It doesn't bring

> stuff back in. It lets users get the photographs but it doesn't give users a way to put stuff back into them. One of the things that we see happening on The Commons is that when I just sit back and look through it every now and then I see users going "hey, so here's a photograph from this same event over here" and kind of helping institutions pull together their collections in different ways and providing identifications for them, and you also get users coming in who are not on Flickr who have clearly created an account just to make a comment and say "that was my grandfather's farm" and that's really exciting. And the institutions eat that up! You see the institutions' staff coming in and saying 'Wow. Thank you.' (Anonymous-23, 2010)

She continued,

> Flickr has built in so many ways of [participating] and bringing people together around it that the institutions who use it get back what they put into it. It's tough on them because the staffing time can be hard to find if they aren't already digitizing their collections. (…) But I think that that kind of thing is in the structure of the site and it enables all kinds of things to happen, the structure of the site does. (Anonymous-23, 2010)

A different research subject emphasizes both the technological and cultural aspects of Flickr and the appropriateness of the domain for this kind of project.

> I think it's the easiest photo-sharing site for anyone to use, but the way that anyone can tag and, if you set the permissions right, anyone can leave notes directly on the photos by drawing a little box and asking a question about "hey what's this?" or sharing a link or some information about a piece of an image… it's an amazing platform. And you don't need particular technical skill to do that kind of stuff. So I think that's why it's great and it's become the largest public photo album in the country and probably the world. And so that makes it a very fitting repository for those kinds of projects. (Anonymous-16, 2010)

Another research subject, when asked about the collaboration, decided to highlight the labour involved with making contributions to The Commons. "I think it's in part what you said in the thread about "Is Flickr Work?" because there's so many people that they're all willing to do a certain level of work, you know, like tagging stuff and finding

stuff that I think it makes sense that [The Commons] would be attached to Flickr" (Anonymous-17, 2010). By giving Flickr members the chance to do what they do best with very little direction, the sense of ownership and responsibility towards the site described above, combined with the non-proprietary aspects of a photo-sharing domain, instills a sense of common purpose and willful benevolence into Flickr that gets extended into The Commons.

"It's important to note that for the purposes of this pilot, [the LOC] took a very 'hands off' approach" (Springer, et al., 2008, p. 18). Mimicking the strategy used by Flickr's original owners, rather than trying to meticulously organize and micro-manage the unwaged labour of Flickr members, the LOC simply turned up and waited to see what happened. The Flickr-verse has consistently proven to be more than willing and adept at categorizing, organizing, annotating, cross-referencing, and interpreting photographs. After all, that is one of the main purposes of Flickr.

Each LOC photograph uploaded to the site was initially tagged only with the title of the image (if there was one), the photographer (if s/he was known), and the Library of Congress identifier. All other tags, comments, and notes are the product of the work of Flickr members and they were quite busy in the early days. In just a few months there were "7,166 comments left on 2,873 photos by 2,562 unique Flickr accounts. 67,176 tags were added by 2,518 unique Flickr accounts. (…) [And] More than 500 Prints and Photographs Online Catalog Records (PPOCR) have been enhanced with new information provided by the Flickr community " (Springer, et al., 2008, p. iv). All of this work, of course, is in addition to all the other work being done by members on their own photo-streams, alongside their contacts, and within their own groups as well.

When motivated and inspired by a benevolent cause, the amount of surplus energy (Shirky, 2010) held in reserve by the Flickr-verse appears limitless. Left to their own devices and free to work as much or as little as they please, the Flickr community overwhelmed participating institutions in The Commons with their enthusiasm and their labour. For the LOC, the

> pilot resulted in many positive yet unplanned outcomes: Flickr members' willingness to expend high levels of effort on history detective work; the unprompted sourcing of new information through links to newspaper archives and highly specialized Web sites; (…) and the speed with which new tags and comments continue to be added following our weekly upload of new photos. (Springer, et al., 2008, p. 2)

The evident efficiencies of this heterarchical arrangement of unwaged labour runs counter to the traditional hierarchical coordination of work in that they place a great deal of trust in the self-organizational and self-motivational aptitudes of the unwaged workers and by extension the biopolitical norms and mores that guide their labour. Rather than overseeing labour with an eye focused on managing or controlling it, The Commons observes the labour of Flickr members with eyes opened in amazement.

Before the LOC dipped its toes into social media and Web 2.0, critics identified a number of potential risks to this arrangement.

> Would the public conversation contribute to a better understanding of the photos or would fan mail, false memories, fake facts, and uncivil discourse obscure knowledge? Would a public-commercial partnership undermine the Library's reputation for impartiality? Would the Library lose control of its collections? Would library catalogs and catalogers become obsolete? Would the need to moderate and respond to comments overwhelm all other work? Would history be dumbed-down? Would photographs be disrespected or exploited? (Springer, et al., 2008, p. 35)

In hindsight, these insecurities have proven baseless. “Since the Library first launched its account the public has allayed many of the misgivings” (Springer, et al., 2008, p. 35) identified above. Rather than boorish or ignorant comments, tags, and notes, Flickr members surprised the LOC with their sincerity, enthusiasm, and depth of knowledge.[26] In a striking and particularly noteworthy example of Flickr’s culture, of the over seventy-four thousand comments and tags provided by Flickr members to the LOC’s photo-stream, “Less than 25 instances of user-generated content were removed as inappropriate” (Springer, et al., 2008, p. iv). This, the LOC claims, is “a true credit to the Flickr community” (ibid., p. 18). The statistical insignificance of this number, when considered alongside the ‘hands off’ approach taken by Flickr and the LOC, is indicative of Flickr’s culture and its biopolitics. While the LOC was surprised by the near total absence of inappropriate behaviour on the part of Flickr members, if they had been more familiar with the accreted cultural norms of the site, this would have come as no surprise at all.

5.8 In Sum:

The interview data provided above details the feelings, thoughts, and ideas of Flickr members in relation to six specific elements of the Flickr-verse and exposes for scrutiny particular portions of their subjective consciousnesses. The above chapter prioritized the interview data in its relation to these six elements an attempt to devote an appropriate amount of time and space to the impressions of Flickr members. A theoretical interpretation of the Flickr members’ thoughts as they pertain to the relationship between their own unwaged immaterial labour and these six elements was forestalled so that their voices could be placed front and centre. The next chapter, to which we presently turn,

considers these voices as catalysts for the theoretical interpretation of the biopolitics that guide and regulate the production of subjectivity within the Flickr-verse.

Chapter 6 – Flickr's Biopolitical Orientation

6.1 Introduction: Biopolitical Machines

Jeremy Bentham's designs for a 'machine' of perfect surveillance are most often described by reference to a carceral institution, organized architecturally to discipline prisoners with little to no effort on the part of jailors. One of the most influential design features of the prison is a central, circular tower located at the core of this biopolitical 'machine' of perfect surveillance. The surface of the central tower's exterior is made up of windows that are, depending on the description, either outfitted with shades or one-way glass. The shades or glass allow for the constant observation of prisoners residing in cells located concentrically to the tower, at the same time as they restrict the ability of the prisoners jailed in these cells to see their captors. As a locus of power, force radiates outwards from the tower, traveling on lines of sight that terminate in each and every cell within the institution. Importantly, this power "does not reside in the 'watcher' or central prison guard, it stems from the architectural arrangement of light which *suggests* panoptic surveillance to the prisoners" (Elmer, 2003, p. 232-233). This is a diffuse and fugitive form of power, identifiable not in the body of an individual, but in the strategic and structural arrangement of light, brick, and glass. In the case of the prisoner, over time and through exposure, actions and behaviours are modified and adjusted until congruent with the imposed definitions of order instilled in him/her by the assumed presence and perspective of the jailor.

Bentham believed that his design could be applied not only to prisons, but to factories, barracks, and hospitals (among others) as well. Taking the place of chains, sergeants, or supervisors in this design is the illusion of an all seeing eye that never blinks, never rests, and is, in theory, always watching. The illusion is based on the fact that the tower may be empty of eyes, but is nevertheless always brimming with the power of their potential presence. Under the perpetual threat of possible surveillance, employees, patients, or prisoners modify their actions and thoughts according to the self-imposed definitions of what a 'good,' 'productive,' and/or 'well-adjusted' individual looks and acts like within these contexts. Over time, the power of the gaze defending these norms seeps down and through the skin of its subject, making a home within the individual him/herself. Under the threat of constant surveillance, individuals begin to police themselves, checking their thoughts, inclinations, and actions against those prescribed by an imaginary warden, obviating the need for warm bodies in the central observation tower. The disciplinary role of the jailor, then, is, over time and through exposure, assumed by the jailed. In this way, the structural designs of the panopticon can accurately be described as a biopolitical 'machine,' productive of subjects and forms of subjectivity that reflect the orientation of the power relationships that imbue the machine.

Foucault considers Bentham's prison design as illustrative of a variety of other techniques, apparatuses, or *dispositifs* that also have a biopolitical influence on the constitution of subjectivity. The prison is not so much a metaphor, but a prominent symbol or standard that signifies the power of various other *dispositifs* throughout society. Foreshadowing the work of Gilles Deleuze and his argument (1992) that the disciplinary mechanisms of the panoptic prison have escaped their carceral confines and

spread throughout all of society, Foucault dismantles the concentric walls of the prison or barracks and identifies "lighter, more rapid, more effective" (1995, p. 209) biopolitical machines that work on refashioning the subjective decision making capacities of individuals and populations as they pass through them. Each point of contact with these "diffused, multiple, polyvalent" (Foucault, 1995, p. 209) 'machines' establishes a relationship of power that influences the individual's thoughts, behaviours, and, over time, subjectivity. This thesis considers Flickr one among many of the recently constructed biopolitical machines that also work upon the subjectivity of its membership.

Inspired by the ontological dimensions of Foucaultian biopolitics (Read, 2001), autonomists identify the immaterial work place as a particularly powerful biopolitical machine that refashions the subjectivity of those who labour within it. Characterized by increasing immateriality and precarity, the contemporary workplace takes on a more and more biopolitically influential role in the lives of workers by disciplining and controlling the behaviours, actions, ideas, and affects deemed acceptable and unacceptable in these places. Over time, much like the prisoner, behaviours, actions, ideas, and affects that run counter to the will of one's supervisor are expurgated from the subjectivity of the worker in an attempt to preserve or ameliorate his/her precarious position within the institution that employs them. Through continuing exposure to these unwritten rules and regulations, one's subjectivity is progressively colonized and eventually commandeered by the needs, wants, and perspectives of one's employer.

Important to the central arguments of this thesis is the fact that "The subjectivities shaped at work do not remain at work but inhabit all the spaces and times of non-work *and vice-versa*. Who one becomes at work and in life are mutually constitutive" (Weeks,

2007, p. 246; emphasis added). The point being that the subjectivities fashioned within the immaterial work place and beyond overstep or escape these confines and come to influence the actions and subjective dispositions of individuals outside of these domains as well. In other words, the subjectivities formed at work bleed over and into other aspects and realms of that individual's life. They cannot, then, be segregated from the other dimensions of one's existence. Just as important to this thesis, however, is the applicability of the inverse relation acknowledged by Weeks and emphasized above. Redrafting Weeks' assertion in light of this inverse relation, one of the central propositions made by this thesis is that 'the subjectivities shaped on Flickr, for instance, do not remain on Flickr, but inhabit all the spaces and times away from the website as well.'

Waged immaterial labour is characterized as biopolitical as a result of the faculties, aptitudes, and talents this kind of work requisitions and attempts to control. By being forced to communicate in the service of someone else, build social relationships premised on the needs and desires of another, conjure ideas, images, and affects that attend to the will of one's superiors, and all the while exchange control over these personal capacities for a wage, the subjectivity of the worker is progressively inculcated with the needs, wants, and desires of their bosses. This kind of work, then, is eminently biopolitical in that it purchases, commands, and controls some of the most intimately subjective capacities of the individual – the capacities to speak, think, feel, imagine, create, and relate to others.

However, *unwaged* immaterial labour, such as that taking place on Flickr and other Web 2.0 sites and services is equally biopolitical in that it calls upon and

requisitions similar capacities and competencies as its waged brethren. The fundamental difference between the two is their biopolitical orientation and the forms of subjectivity shaped by each. By briefly returning to the question that frames this thesis – If *waged* immaterial labour is biopolitical, then what are the biopolitics of the *unwaged* immaterial labour characteristic of Flickr? – the primary task of the present chapter becomes much clearer. By drawing theoretical conclusions based on the interview data presented in the previous chapter, the biopolitical orientation of the Flickr-verse and the subjectivities of those that inhabit it are mapped below.

Subtler than the hospital, barracks, or prison, Flickr is a biopolitical machine that works upon, fashions, and refashions the subjectivities of those persons that repeatedly pass through it. Over time and through exposure, members learn what behaviours, attitudes, and outlooks are embraced by the Flickr-verse and which are not. They become accustomed to these normalized patterns of behaviour and, in doing so, the subjective dimension of their person is changed. Unwaged immaterial labour, then, is also biopolitical in that it calls upon and requisitions the communicative and affective capacities of the individual in his/her relation to other members. It gently molds and shapes one's subjectivity in a way reflective of the biopolitical orientation of this machine. Understanding the biopolitical orientation of Flickr and the kinds of subjectivities patterned and fashioned by its gears and cogs is the focus of what follows.

6.2 The Biopolitics of Play vs. Work:

As the interview data in Chapter 5 made clear, rather than feeling anything like work or exploitation, Flickr feels much more like a playful and never-ending game. While participating on the photo-sharing website requires vast amounts of physical and

affective energy, those that choose to do so do not feel as though this time and effort resembles anything close to work. These feelings are partially attributable to Flickr's developmental roots in an MMORPG and the decidedly social and non-competitive nature of this game addressed in Chapter 1. The ludic foundations and non-competitive underpinnings of Flickr are biopolitical in that they normalize patterns of behaviour, social relations, and forms of subjectivity based not on vanquishing an opponent, leveling up, or finishing the game, but on assisting and encouraging one's peers in their creative pursuits.

Web 2.0 sites and services such as Flickr are ultimately reliant on the unwaged immaterial labour of their members to generate the content that populates them. By reference to the work of a number of scholars that have addressed the 'free labour' (Terranova, 2000) or 'immaterial labour 2.0' (Coté and Pybus, 2007) required by these sites and services, all of this time and effort can be regarded as a form of work and as exploitative. However, as the interviews conducted for this thesis indicate, the individuals responsible for creating the raw materials that populate these sites and services do not feel as though they are working when they are generating content for them. This remains true even when the exploitative dimensions of Flickr's political economy are made intelligible to its members – as they were in the interviews. One of the primary reasons for this is because of the social and playful enticements to participate on Flickr that were carried over from Game Neverending. While members may not define their efforts as a form of labour, this definition does not negate the biopolitical force of their actions. The collaborative, social, and playful nature of Flickr, then, produses and reproduses subjects and forms of subjectivity oriented towards the creation and maintenance of non-

competitive, supportive, and encouraging social relationships focused not on conquering one's opponent or advancing to the next level, but on the collaborative and playful development of each other's aptitudes, intelligence, and/or creative pursuits.

Based on the opinions of Flickr members and their assessment of the time and effort they devote to the site, then, the first biopolitical principle of Flickr is that behaviour, attitude, and subjectivity are guided and regulated by playful, non-competitive, and supportive social relationships that privilege the common enjoyment and encouragement of the creative and communicative pursuits of one's peers rather than one's own advancement and/or success. The subjects routinely exposed to these biopolitics are changed through their continuing exposure. When the playful, social, and non-competitive nature of the domain is considered, Flickr, as a biopolitical machine, produces subjects and forms of subjectivity more inclined to offer their assistance or extend an encouraging word, than the opposite.

6.3 The Biopolitical Force of the Public-By-Default Nature of Flickr:

The second element of the Flickr-verse that biopolitically influences the constitution of the memberships' subjectivities is the public-by-default settings of the website. These default settings establish the overall tone of the space and are productive of forms of subjectivity that reflect this tonality. The public-by-default settings of Flickr encourage open and communal sharing amongst members and are productive of subjectivities that regard the fruits of their labour more as communal possessions meant to be shared than private resources requiring protection. From the outset, the public-by-default nature of Flickr sets the stage or establishes the tone of the site that then reverberates or echoes throughout the rest of the space, bathing it in particular biopolitical

hues that inflect the attitudes, inclinations, and behaviours of those that populate it in distinct ways. In Chapter 5, these defaults were compared to the soft or harsh lighting and the soothing or shrill background music of a dining room. Much like these default conditions, Flickr's default settings influence the overall feeling of the space, help shape the norms that come to characterize it, and, subsequently, the subjectivities of the subjects that inhabit it. The public-by-default settings are consequential in that they shape what kinds of subjectivities thrive within this space and which do not. Flickr's default settings, then, make particular subjective dispositions more common, normal, and natural than others. The default settings of Flickr are, therefore, biopolitical in that they establish a norm founded upon the open, public, and free sharing of one's photographs with others that comes to influence a multitude of other behaviours, perceptions, and attitudes on the website and beyond.

One of the more interesting biopolitical radii extending out from the public-by-default nature of Flickr identified throughout the interviews is the formation of a paradoxical *quasi-common*. The competing subject positions at the heart of this paradox and laying claim to the quasi-common each regard Flickr in their own distinctive way. First of all, the legal owners of the website objectively and correctly regard all of the artefacts produsedwithin it as sources of private profit. This, however, is only one side of the paradox. On the other are those individuals responsible for produsing Flickr and their regard for the site and these same artefacts. As the interview data presented above made clear, members regard Flickr and all of the artefacts they produse therein as common resources, created to share amongst a group of peers, openly and freely, without the expectation of financial remuneration or a desire to turn a profit. Flickr members readily

share the artefacts of their labour with other members and by doing so normalize the tenor of the social relationships emblematic of this space.

Time and again, the research subjects consulted for this thesis indicated that they were more than happy to share the fruits of their unwaged immaterial labour with others as long as two important caveats were met. The first is that they want to be asked by the person who wants to use the photograph to use it and the second is whether or not the person asking to use the photograph stands to profit from its use. If this person wants to use the photograph in any kind of commercial endeavour, the willingness to let them use the image for free is swiftly and consistently revoked. However, if a blogger, student, or not-for-profit organization wants to use a photograph to illustrate a blog post or embellish a report, Flickr members are more than happy and, in general, flattered, to allow this person to use the image free of charge. After all, the biopolitical force of Flickr's public-by-default settings normalizes the open and free sharing of photographs amongst one another on the photo-sharing social network. The willingness to share, help out, and collaborate with individual's who are not looking to exploit the labour of the Flickr member is, once again, attributable to the biopolitical force of the public-by-default nature of the photo-sharing website that normalizes the open and free sharing of photographs amongst one another. As a result of its default settings, a culture has developed within Flickr that is productive of subjective dispositions amenable to various forms of non-instrumental and non-exploitative collaboration based on respectful forms of communicative interaction.

Over time and through continued participation, these normalized patterns of behaviour seep down and through the Flickr member's skin, permeating particular

portions of his/her subjectivity, colouring the member's thoughts, behaviour, and actions with their dye. Thus, these default settings change the way that the Flickr member thinks of him/herself, the artefacts of his/her labour, and of others. The second biopolitical principle obtaining from the public-by-default nature of the Flickr-verse and the member's regard for the artefacts they contribute to it, then, is that behaviours, attitudes, and subjectivities that forge and strengthen non-exploitative, respectful, and communally oriented bonds through the open and free sharing of digital photographs are normalized as a result of the public-by-default nature of images, profiles, and their attending outcomes.

6.4 The Biopolitical Force of Sharing the Slivers of One's Soul:

Flickr members enter into an implicit agreement with each other when they start posting photographs of their lives on the website. This agreement is based on the personal nature of the artefacts being publicly shared with others. Photographs of one's family, one's home, one's friends, and one's life constitute an informal yet personal history that details that which this person holds near and dear. Publicly sharing this visual history with others places these individuals in an affectively insecure or vulnerable position when the ability to mock or malign those individuals or situations portrayed within them is considered. On Flickr, however, this kind of communicative exchange is anathema to the norms of the space where, as the interviews indicated, even negative or critical comments regarding the composition or exposure of an image are uncommon. The implied fine print of this agreement forces one Flickr member to acknowledge their own vulnerability and by doing so acknowledge that of their fellow member who is also posting the personal slivers of their life to the photo-sharing website.

When the public-by-default nature of Flickr is combined with the many opportunities to communicate with others and the affective vulnerability associated with posting small, sometimes intimate, photographic shards of one's existence, there condenses upon the Flickr-verse a mist of reciprocal politeness and respect based on the recognition of one's own vulnerability and the commensurate vulnerability of others. By posting the visual evidence of one's life online for all to see, members (if ever so slightly) crack open their heads and hearts, exposing inner portions of their subjectivities to others. In other words, they willingly make themselves vulnerable by sharing the visual evidence of their lives. This position might easily lead to ridicule, torment, or derision. On Flickr, however, it does not.

The mutually recognized vulnerability associated with publicly sharing personal photographs makes more complex the unidirectional lines of sight characteristic of Foucault's panopticon. In the panoptic system, the power to see is granted only to those individuals within the central observation tower. The few, in other words, watch the many. Flickr, however, opens the blinds concealing those in this tower and grants the power to see to every one of its members. The many, in this way, watch the many. By doing so, the community disciplines itself as a result of the recognized vulnerability of each and all of them. When the public-by-default nature of the photo-sharing website is considered alongside the quotidian activities of Flickr members who upload the intimate slivers of their soul, the biopolitical machine that is Flickr produses subjects sympathetic to the perspective and emotions of others.

Flickr members do not escape the power of the disciplinary gaze identified by Foucault, but this power is counter-balanced by an equal force granted by the ability to

not only see, but also be seen. That is, rather than a unidirectional line of sight such as that found in the panopticon, Flickr is characterized by a different "diagram of panoptic surveillance" (Elmer, 2003) and, accordingly, a different arrangement of power than that characteristic of panoptic regimes. These crisscrossing, superimposed, and omni-directional lines of sight result in biopolitical relationships of power fundamentally different than that characteristic of Bentham's prison, barracks, or any of the various machines that mimic their biopolitical mechanisms. The vulnerability associated with the possibility of seeing and being seen, therefore, influences not only the behaviour of the one being watched, but the watcher as well in that s/he is also, in tandem, being watched by others.

The affective ties that altruistically bind Flickr members to each other, then, are based on the reciprocity of mutually recognized positions of vulnerability endemic to a 'machine' of omni-directional visibility. This 'machine' is regulated by an inbuilt and implicit sense of trust and respect for the artefacts produsedby others, forged from the biopolitics that guide and regulate interaction between members. This inbuilt respect assures (for the most part) that each member will not be mocked, berated, or ridiculed because these actions would elicit an equal and opposite reaction.

The social and affective underpinnings of sharing the visual fragments of one's life with others, at the same time as seeing and following the visual fragments posted by them, bathes the Flickr-verse in shades of light that subtly encourage members to treat others as they would want to be treated. As one of the interview subjects quoted above stated: 'The rule for me is: Do as you would be done by' and as another says: 'if you care about online communities, that sense of the golden rule applies.' The ability to denigrate,

belittle, or disparage someone else is, of course, always possible, but is undercut by the fact that these actions are always already paired with someone else's ability to do the same to you. When the intimacy and vulnerability that respectively characterizes the relation between a photographer, his/her photographs, and the act of publicly sharing them with others is appreciated, there develops, matures, and ossifies patterns of normalized behaviour that are, for the most part, supportive and encouraging, rather than their opposite. The public-by-default nature of Flickr and the implicit agreement between members that results from it are the catalysts that jumpstart the engine of this biopolitical machine. The subjects and subjectivities produsedby it are sensitive to the position occupied by their fellow members and regulate their actions according to these sensitivities. The reciprocal vulnerability associated with publicly sharing the slivers of one's soul with others, then, is constitutive of the third biopolitical principle that guides and regulates the production and reproduction of subjectivity on Flickr. The principle of mutually recognized vulnerability based on the public-ness of photographs and profiles within an omni-directional system of visibility produces subjects and subjectivities that are affectively supportive and generally trusting of each other and each other's intentions, rather than derisive or hostile.

6.5 The Biopolitical Force of the Community Guidelines:

The interviews conducted with members of Flickr for this thesis clearly demonstrate the regard they have for the site and their fellow members. Described by some as a generous and welcoming place, by others as a friendly and polite domain, and by others still as a respectful place to hang out and chat with friends, Flickr has managed to create and recreate and atmosphere of mutual support and encouragement that the

members consulted for this thesis enjoy spending time in. Many of these interpretations can be sourced to the Community Guidelines that list the behavioural 'Dos' and 'Don'ts' that guide and regulate interaction between members. The Guidelines are biopolitical in that they normalize certain perspectives and attitudes that over time seep into the members' subjectivity, all the while making abnormal and anomalous others. The majority of the Community Guidelines offer advice on specific attitudes and actions that members should adopt or observe while on the website. However, this thesis has identified two guidelines that are particularly important to the biopolitical orientation of the Flickr-verse. Members identified "Don't be Creepy" and "Don't use Flickr to sell" as consequential behavioural markers that have a significant impact on Flickr's norms. The first is important because it is curiously vague, and the second because of the illusion it creates regarding the absence of commercial incentive and/or economic imperative on the website.

Regarding the first, it is the vagueness of the statement "Don't be Creepy" that biopolitically influences the subjectivity of Flickr members. The complete wording of this Guideline reads as follows: "Don't be Creepy. You know the guy, don't be that guy." As one of my research subjects indicated, "you don't want to be 'that guy,' nobody ever wants to be 'that guy!'" This guideline has a particularly forceful biopolitical influence over the norms and conventions that guide and regulate interaction, behaviour, and, hence, subjectivity. It is biopolitical in that it does not command the member to behave in a specific manner or suggest a specific action like the "Do Link Back to Flickr When you Post Your Photos Elsewhere," but leaves the definition of what it means to be 'creepy' up to the individual him/herself. In this case, the vagueness of the imperative is significant

because the lack of specificity applies broadly, influencing any number of actions, thoughts, or behaviours, instead of narrowly.

The impact of this guideline is that it filters and sieves communicative interactions and behavioural inclinations through its biopolitical membrane. Put differently, the imperative to not be a creepy *guy* (the gendered nature of the guideline is significant and will be addressed shortly) asks members of the site to check their behaviour and perspective against that of an imaginary other that they themselves conjure. In doing so, their behaviour, actions, and reactions are judged to be either creepy or not according to the barometer provided by an imaginary 'creep' they dreamt up and created for themselves. If any of their actions approach the perspective, attitudes, or behaviour of this self-authored creep, because of the imperative to not be 'that guy,' they are likely to adjust them so as to distance themselves and their behaviour from this miscreant doppelgänger. This has a biopolitical effect on the community of Flickr members in that it encourages cordial and courteous forms of self-disclosure, communication, and sharing by filtering these actions through the fine mesh of 'creepiness.' Therefore, and in collusion with the vulnerability identified in this chapter's previous section, it tempers some of the 'creepy' negative externalities evident on other public systems such as trolling, bullying, and stalking by normalizing patterns of behaviour, communicative interactions, and inter-subjective relations that avoid the application of this label.

Although Flickr members each have a different interpretation of what 'that guy' looks, behaves, acts, and thinks like, the guideline assumes that there is common agreement that anything resembling the actions, thoughts, or behaviours of 'that guy'

should be avoided at all possible costs. Each member's 'guy' is different from the others and each member's desire not to be 'that guy' will influence the manner in which s/he comports him/herself on the website. Over time, the prohibition against creepiness and against being 'that guy' is normalized and absorbed by the subjectivity of the individuals that filter their thoughts and actions through its membrane. It is, then, biopolitical in that it influences the communicative interactions between members, altering their orientation in the process. Importantly, and similar to the fugitive and diffuse nature of the biopolitics characteristic of the prison, the prohibition against creepiness is not confined to the Flickr-verse, but escapes its boundaries and influences the actions and behaviours of these same individuals outside of the domain.

As suggested above, the intimation to not be creepy and to not be 'that *guy'* employs gendered language to subtle, yet consequential effect, in that the 'guy' being admonished is clearly male. The attempt to mitigate the potential damage caused by behaviours associated with hyper-masculinity in its relation to 'creepiness' is, if not purposeful, at the very least, appreciable. This is especially true on a website that has men between the ages of eighteen and thirty-four as its core demographic. The gender-bias of this guideline and the suggestion to not be like 'that guy' affectively and biopolitically influences the overall orientation of the Flickr-verse. It makes it less hostile, less aggressive, less bellicose, and less creepy than it might be otherwise. In a way, it softens the potentially jagged edges of the domain, rounding and reorienting them towards more supportive, nurturing, and encouraging airs than those associated with stereotypical notions of masculinity. Additionally, and in a provocative theoretical extension, the guideline against creepiness also has the effect of latently scrutinizing the enduring power

of the ‘male gaze’ (Mulvey, 1975) by asking Flickr members to recognize the power relationship that obtains between the watcher and the watched and the fact that this relationship is imbued with power imbalances that can at times be ‘creepy.’

While Flickr is dependent upon and, indeed, leverages the pleasures derived from looking to great effect, through this guideline, it promotes, as much as possible, a respectful form of scopophilia by encouraging its members to avoid ‘creepy’ behaviours and attitudes traditionally associated with masculinity and the male gaze. The exhortation to not ‘be creepy,’ then, combined with the gender-bias of this appeal mitigates the sometimes eerie and discomforting aspects associated with publicly posting small slivers of one’s head and heart to the photo-sharing social network. The biopolitical impact of this guideline is that actions and behaviour are regulated and adjusted from the interior by comparison to a self-authored and menacing other. By asking each and every member to imagine what a creep is, how he might behave, and then asking the Flickr member to ‘not be that guy,’ the capillary nature of biopower exerts its influence subcutaneously on the actions, thoughts, and emotions of the individual resulting in a form of subjectivity that is, for the most part, resolutely not creepy, when it could be very much otherwise. As the impressions of the Flickr members interviewed for this thesis indicate, Flickr is anything but creepy and cannot be accurately characterized as an aggressive or hostile domain. Much of the biopolitical work required to create such a comfortable virtual space is attributable to this simple and straightforward guideline.

The second community guideline that has an important biopolitical impact on the subjectivities that animate Flickr is the imperative: “Don’t use Flickr to sell.” The full wording of the guideline reads as follows: “Don’t use Flickr to sell. If we find you

engaging in commercial activity, we will warn you or delete your account. Some examples include selling products, services, or yourself through your photostream or in a group, using your account solely as a product catalog, or linking to commercial sites in your photostream" (Flickr Community Guidelines, N.D.). This is one of more prominent signposts of the Community Guidelines that research subjects referenced throughout the interviews done for this thesis. This injunction means that there is to be no commercial activity on the part of members within the confines of the Flickr-verse. Unlike other prominent social networks, Flickr forbids the incursion of commercial interests (other than its own) within its domain. There are advertisements on some of the members' pages, but members cannot control their display and reap no benefit from them. The process of disallowing any sort of commercial activity on the part of their membership is significant in terms of the biopolitical relationships that guide and regulate behaviour and interactions on the website in two major ways.

First, the impact the preclusion against selling anything (including oneself) has on Flickr, is that it further obfuscates or, at the very least, renders less intelligible Yahoo!'s own commercial imperatives and intentions. That is, disallowing any kind of commercial activity on the part of members, coders, and hackers creates the illusion that Flickr is an island of sorts, sheltered from the storms of capitalist incentive or exploitation. This is, of course, categorically false. The political economy of Web 2.0 detailed in Chapter 3 of this thesis makes it abundantly clear that Flickr, as well as any social networking site that offers its services for free, are in the business of aggregating and selling their audiences and the plentiful stores of data created by them as commodities to advertisers. While

Flickr does not allow its members to sell anything (including themselves) the primary reason for this is that Flickr itself is in the business of doing just that.

Second, by forbidding any commercial activity on the site, Flickr underscores the sense of communality, non-instrumental social relations, and non-competitive perspectives first recognized in the ludic roots of the website, then highlighted by the public-by-default nature of openly sharing one's photographs with others. The guideline against selling anything within Flickr pushes the contaminating logic of economic social relations outside the domain and by doing so institutes and maintains a sense, even if false, of an enclave where non-instrumental cooperation and collaboration amongst members is allowed to flourish. The practice of pushing economic transactions beyond the confines of the Flickr-verse creates a space that (on the surface) is free of economic imperative or injunction. This serves to strengthen the members' regard for the quasi-common identified above. It is biopolitical in that over time, the injunction against selling anything, including oneself, fosters an environment and forms of subjectivity focused on sharing and creative development, rather than the instrumental pursuit of profit. By sectioning off the Flickr members account from these economic imperatives, his/her subjectivity is free to explore the creative and social aspects of photography without concerning itself with the broader implications of doing so in order to make money.

Once again, the owners of Flickr are happy to maintain this illusion because it broadens the reach of Flickr and, hence, the data aggregated through this reach. By encouraging Flickr members to regard Flickr as a non-economic oasis of sorts, the owners and operators of the site encourage them to upload as many photographs as they want and, by doing so, create as much personal data as possible. The total absence of

economic incentive or imperative, therefore, is a complete illusion, but a biopolitically potent one. When considered exclusively from the perspective of the owners and from the perspective provided by the political economy of communications in its relation to Web 2.0, the injunction against any form of commercial activity is absurd. However, while acknowledging these perspectives, this thesis approaches the injunction against using Flickr to sell from 'below' and from the perspective of its influence on the thoughts, feelings, and subjectivities of the membership, not the owners.

The injunction against selling anything imbues Flickr with a tenor or ambiance of non-economic, open, and free sharing, where work is done for personal pleasure, fulfillment, or for good of the community, rather than for selfish advancement and where a sense of responsibility to, and for, the vitality of these domains is cultivated. While the prohibition against selling anything is only a small corner of the Flickr-verse, its biopolitics cast a very long shadow. They pigment or dye every other region of the Flickr-verse, tinting all of the unwaged immaterial labour performed by members, unwaged hackers, and re-mixers with shades of non-economic communality. They bury the exploitative political economy of Flickr and its status as a profit generating property underneath illusory strata of non-economic interaction and do a very good job of it in the process.

As the interviews presented in Chapter 5 indicated, Flickr members are more than aware of the injunction against selling anything, including themselves, within the domain. Their dislike of gratuitous self-promotion, construed liberally as selling oneself, is illustrative of the depths to which this injunction has permeated their subjectivities. These guidelines, then, are productive of subjectivities that work on their labours of love not for

economic gain, but for the pleasures derived from doing so alongside others who are doing similar things. The Community Guidelines, in combination with the opinions of members regarding the kind of place that Flickr is, allow us to posit the fourth biopolitical principle that guides and regulates the constitution of subjectivity within the Flickr-verse. The principle of identifying, codifying, and, therefore, encouraging self-supporting patterns of normalized behaviour based on the injunctions against creepiness and economic incentive result in a domain, and thus forms of subjectivity, that are guided and regulated by notions of reciprocal respect, affable interaction, and generosity of spirit.

6.6 The Biopolitical Force of the Open API:

Amateur hackers and coders on Flickr, while numerous, are a minority of the individuals that populate the Flickr-verse. Proportionately, they were also a minority of the individuals interviewed for this research. Their place in this thesis, as well as Flickr's history, however, is significant. Flickr was one of the first Web 2.0 sites to actively solicit the hacking and coding talents of its membership by making its API freely available. While other prominent technology companies and social networks have since charted similar directions, Flickr's status as an emblem of Web 2.0, its eventual, and continuing success, hinged on this unwaged immaterial labour; itself carried over from the Open API that helped grow Game Neverending. The ability to hack, remix, and mash-up code is predicated on accessing this code in the first place and Flickr, extending the logic undergirding the open and free sharing of photographs, gave amateur coders the exact same programming interface that waged Flickr staff were using to build the site. This

heterarchical climate of equipotential participation further imbues Flickr with airs of communal cooperation and non-instrumental collaboration.

The biopolitical significance of Flickr's Open API, then, is that it reinforces and underscores the habitual mores and behavioural norms conventionalized by the open and free sharing of photographs and profile information. Similar to the vast majority of the photographs on Flickr, the API is shared with anyone with the desire and skill to make use of it. The openness of the API is important, then, because it buttresses the open and free sharing so characteristic of Flickr. Enticed by the prospect of creatively applying their skills and talents to challenges they are interested in, rather than the mundane tasks they get paid to accomplish, hackers and coders ballast the communal and non-instrumental tenor of Flickr with their unwaged work.

One of the hackers that agreed to be interviewed for this research differentiated his paid work from his Flickr hacks by complaining that working for others and for a wage was uninspiring. Clients want relatively straightforward or, as he put it, 'dull' and 'very boring' applications and software. Flickr's Open API, however, allows the hacker's imagination to wander, his/her creativity to blossom, and gives him/her the opportunity to explore possibilities, rather than being confined and limited to rote and predetermined tasks meant to service the insipid needs of clients. When combined with the injunction against selling anything within Flickr, the freely available and Open API subtly encourages hackers to offer their hacks back to the Flickr-verse and in so doing once again imbues the rest of the domain with perspectives, modes of behaviour, and subjectivities congruous with this outlook.

The important place of the unwaged hacker in Flickr's developmental history is biopolitically significant in that it further entrenches the non-proprietary relationship established by the public-by-default nature of all the artefacts produsedby Flickr members. Just as Flickr's ludic roots had a significant impact on the biopolitical relationships that evolved from them, so too do its hacker roots. As Butterfield acknowledged in Chapter 5, while most Flickr members would not attribute their joining Flickr to the Open API, they indirectly became members of Flickr as a result of it and are, thus, also indirectly influenced by the conventional norms that guide and regulate the actions of unwaged hackers. The significance of allowing one's members to play a pivotal role in coding the topography of the Flickr-verse is that the biopolitics that subtly directed these tasks form the foundational layer of the substratum upon which the remainder of the site rests. The Open API combined with the prohibition against any commercial activity, other than Yahoo!'s, then, reveals a fifth biopolitical principle responsible for guiding and regulating behaviour on Flickr – The principle of further entrenching and normalizing non-economic and non-instrumental sharing and cooperation amongst members and hackers within Flickr by granting open and equal access to the API in combination with the prohibition against commercial activity.

6.7 The Biopolitics of The Commons:

In addition to the connotative qualities of the namesake, The Commons on Flickr is an interesting and provocative section of the website that sheds a particularly bright light on the biopolitical power relationships that guide and regulate participation and interaction between members not only within The Commons, but within the website at large. Significant to the present argument is the fact that the institutions that first

launched The Commons decided from the beginning to take a very *laissez-faire* approach and let the Flickr community respond organically, without imposing any kind of rules, regulations, or direction on how to participate. The decision to let the cultural mores and normalized modes of behaviour on Flickr dictate how members would participate in this joint endeavour; to, in other words, let the biopolitics that guide and regulate this participation hold sway, is fortuitous for this thesis, but was also advantageous to the joint endeavour first undertaken by Flickr and the LOC.

As the members interviewed for this thesis indicated, The Commons was a perfect fit for Flickr. The fact that these institutions took a very hands-off approach regarding the participation of members is illuminating for the present purposes as it provides convincing evidence regarding the orientation of the biopolitics that fashion and mold the quotidian habits and actions of members not only within The Commons, but also outside of it and across Flickr as a whole. As the reports from the various cultural institutions referenced above indicate, the zeal with which Flickr members embraced the purpose and point of The Commons overwhelmed those working at these institutions both in terms of the amount of work members devoted to it as well as the quality and respectful nature in which the work took place. The obvious question, then, is, why? What does the overwhelmingly positive response to The Commons tell us about the biopolitics that influence behaviour, attitude, and subjectivity within this section and, more importantly, throughout the rest of website?

The institutions participating in The Commons were not only surprised by the verve and enthusiasm with which members responded to the project, but were also amazed with the near total absence of inappropriate or unseemly contributions from the

Flickr community. However, if the institutions were better versed in the biopolitical norms that obtain within the site itself, then the quality, thoughtfulness, and respectfulness of the Flickr membership would have come as no surprise at all. All of the above elements on Flickr indicate that the power to lend a helping hand, offer a few words of encouragement, share a story, thought, or anecdote that might further illuminate a photograph or its context, trumps the power to denigrate, malign, mock, or contaminate The Commons – and by extension Flickr as a whole – with behaviours characteristic of 'that guy.' The biopolitics that guide and regulate behaviour on Flickr normalize the subjective orientation emblematic of the former actions while making the latter anomalous.

The fact that the LOC and Flickr took a very hands-off approach to The Commons combined with the overwhelmingly positive and genial response to the project is telling of the biopolitical norms that characterize Flickr in general. Without being pushed in one direction or the other, without any overt cues directing their actions and reactions, left to their own devices to do as they will, members behaved and held themselves in a manner that stunned the LOC with their altruism, generosity, enthusiasm, and intelligence. "We appear to have tapped into the Web community's altruistic substratum by asking people for help" (Springer, et al., 2008, p. 15). While generally accurate, the subject of this comment is far too non-descript. The LOC had, rather, tapped into the altruistic substratum of Flickr. As the above argues, this is a place guided and regulated by generally benevolent intentions through and through. This pilot project, then, unearths not only fragments of the biopolitical skeleton that structures normalized behaviour on The Commons, but on the entirety of Flickr too. The initial and continuing

success of The Commons that has seen it grow from a pilot project between one corporate institution (Flickr/Yahoo!) and one not-for-profit cultural institution (LOC), to one corporate institution and fifty-six not-for-profit cultural institutions, allows us to posit a sixth and final biopolitical principle that guides and regulates behaviour and the constitution of subjects and subjectivity within the Flickr-verse – The principle of self-replicating forms of altruistic engagement based on pre-established behavioural norms and mores.

6.8 In Sum:

When considered in sum, the biopolitical machine that is Flickr produses subjects and subjectivities characterized by behaviours, attitudes, and inclinations oriented towards the maintenance and preservation of non-competitive, non-instrumental, encouraging, and altruistic social relations. This is a space where affable and congenial forms of communication and social interaction hold sway. Via the biopolitical power relationships identified above, Flickr is a space that encourages and normalizes ludic exploration, open and free sharing, genuine forms of interaction, non-instrumental cooperation, and altruistic collaboration. At the same time and all the while, Flickr also harnesses the unwaged labour power of millions of members worldwide to profitable and exploitative ends.

As the argument staged in Chapter 3 stated, this is an eminently exploitative relationship between owners and those individuals who work to produse all of the content that makes the website valuable. Exploitation in this regard is an objective relationship based on the extraction of value from labour that has nothing to do with the impressions of those individuals subject to it. As the interviews with Flickr members indicated, they

do not regard the time or effort they expend on Flickr as a form of work or as exploited. While the presence of an exploitative relationship is important to acknowledge, this thesis and its theoretical orientation has sought to move beyond it, or, better, tunnel below it, by considering not the objective presence of exploitation, but the subjective thoughts and feelings of Flickr members and the manner in which they regard their work. This was done in an attempt to better understand the biopolitical norms and mores that guide and regulate the production of subjectivity throughout the Flickr-verse.

The above examination of Flickr's biopolitics answers the question: if *waged* immaterial labour is biopolitical, then what are the biopolitics of the *unwaged* immaterial labour characteristic of Flickr? By describing the orientation of the biopolitics characteristic of the unwaged immaterial labour that takes place on Flickr we are in a much better informed position to assess and critique the biopolitical similarities and differences between *waged* immaterial labour and *unwaged* immaterial labour. This is an original and important contribution to our understanding of the biopolitical influence of the various iterations of immaterial labour on the constitution of subjectivity that takes place within them. What obtains from the biopolitical principles enumerated above is an intricate arrangement of power relationships oriented towards the harmonious construction, cultivation, and continuation of a self-organizing community of non-competitive and cooperative peers. Members spend untold numbers of hours not only on the site itself, but also in wandering, capturing, and gathering the photographs that keep them coming back to Flickr. When the biopolitics that characterize life in the Flickr-verse percolate down into the subjective dimensions of its members, as they invariably do, they

have a governing impact on the ways in which these individuals see, adjudicate, negotiate, and navigate the rest of their lives as well.

As Foucault and Deleuze argued, the biopolitics of the barracks, hospital, and prison are not, and indeed cannot, be confined to the physical structures that epitomize them, but tunnel under, climb over, or burst through their walls so that they are identifiable elsewhere and in different contexts. The same can be said of the biopolitics that characterize life and the production of subjectivity within the biopolitical machine that is Flickr. Put simply, being a member of Flickr and leading part of one's life therein biopolitically influences the subjectivity of members not only within Flickr but also beyond it. In other words, the subjectivities produced in part by these biopolitics cannot be turned on and off with the flick of a switch, but bleed over and transform other behaviours and perspectives – even if ever so gently – outside of the Flickr-verse too.

As Kathi Weeks so aptly points out, "The subjectivities shaped at work do not remain at work but inhabit all the spaces and times of non-work *and vice-versa*. Who one becomes at work and in life are mutually constitutive" (2007, p. 246; emphasis mine). The biopolitics that characterize *waged* immaterial labour and those that characterize *unwaged* immaterial labour, then, may comingle within the subjectivities of those exposed to them, but, like oil and water, never completely emulsify. They diverge and conflict with one another in important ways. Indeed, it is at the level of the biopolitical production and regulation of subjectivity that a number of scholars locate one of the most important nexuses of conflict and struggle in the contemporary era.

The biopolitical machine that is Flickr is productive of subjects and forms of subjectivity that differ in orientation than those produced by the total subsumption of life emblematic of Empire. When compared, there exists an identifiable conflict at the level of the biopolitical constitution of subjectivity. These two biopolitical orientations collide within the corpus and affective dimensions of the same individual and conflict with one another. Thus far, this thesis has refrained from an examination of this central element of autonomist theory in its relation to Flickr and Web 2.0. Antagonism, conflict, and struggle are the conceptual nuclei around which all autonomist theory orbits. The possibility and speculative outcomes of a biopolitical conflict at the level of the production and regulation of subjectivity, then, is the focus of this thesis' concluding chapter.

Chapter 7 – Conclusion: Biopolitical Conflict as a Base/Basis for Future Struggle

The exploitative dynamics of Web 2.0 sites and services have too long dominated the scholarly discourse regarding the unwaged immaterial labour of content generators. This perspective, described in Chapter 1 as the 'classical Marxist' position, is argued most convincingly by Christian Fuchs (2009, 2011, 2012) who believes the exploitative dynamic between owners and members of Web 2.0 sites and services is one of 'infinite over-exploitation.' Rather than curtailing the analysis at this point, however, this thesis has argued that, from the perspective of autonomist theory, an equally important set of social relationships merits more concerted analysis than they have previously been given. The nature of the relationships developed between and by unwaged immaterial labourers

has not received the attention it deserves. Therefore, rather than approaching Web 2.0 and unwaged immaterial labour strictly from above, as political economists like Fuchs do, this thesis argues that there are a different amalgamation of social relations that go beyond or tunnel below those described by the political economic literature. These relationships are in equal need of further elucidation. The requirement to analyze and better understand this 'beyond' or 'below,' then, is where this thesis' primary contribution to the body of scholarly knowledge is located.

When the evident exploitative dynamic of Web 2.0 is considered in tandem with the thoughts of Flickr members who do not regard the time and efforts they devote to Flickr as anything resembling exploitative *and* the radical potentials that obtain from the autonomy of their self-organized and self-managed labouring capacities, a paradox arises. While the thoughts and impressions of Flickr members can be correctly interpreted as a form of 'false consciousness' in that they do not recognize their own exploitation within this exploitative dynamic, there is another perspective, the one emphasized in what follows, that argues there is something 'more' or in excess that is suggestive of the radical utopian potentialities evinced by a globally distributed, self-organized, and self-managed amalgamation of workers that cooperate and collaborate autonomously and free of the wage relation. The social and political dynamics that guide and regulate this autonomous labour force are, on the surface, exploitative, but, when considered from below and from the perspective of the members themselves, they are also constitutive of subjects and forms of subjectivity that allow us to think through the process of moving beyond capital in a provocative fashion. This paradox, then, unearths the objectively exploitative scenario that describes Flickr's political economy *and*, at the same time, a

radical utopian potential redolent of the means by which this scenario might be overcome.

In an oft-overlooked essay regarding the revolutionary power of art and literature, Herbert Marcuse argues that "Art cannot change the world but it can contribute to changing the consciousness and drives of the men and women who could change the world" (1978, pp. 32-33). This concluding chapter makes a similar claim, albeit via a different object of study. The claim is that Web 2.0 sites and services cannot change the world, but that they are in the process of changing the subjectivities of those that could. Flickr's biopolitcal orientation is indicative of the forms of subjectivity being produsedby and through its functioning. These subjectivities are oriented not towards the cutthroat extraction of profit, but towards forms of life that maximize the benefits of non-competitive and mutually supportive social relationships. Their orientation, then, conflicts with that characteristic of Empire, which seeks "the transformation of 'life' and all its quotidian needs and capabilities into a terrain for commodification and production" (Read, 2001, p. 27). It is to a better understanding of the *conflict* that obtains between these two differing orientations and their influence on the 'life' of those individuals exposed to them that the central arguments of this chapter are focused.

In *Commonwealth*, Hardt and Negri insist that "liberation (…) requires engaging and taking control of the production of subjectivity" (2009, p. 332). Elsewhere they argue that

> Here is where the primary site of struggle seems to emerge, on the terrain of the production and regulation of subjectivity. (…) [On this terrain] it seems that we can identify a real field of struggle in which all the gambits of the constitution and the equilibria among forces can be reopened – a

> true and proper situation of crisis and maybe *eventually* of revolution. (2000, p. 321; emphasis added)

In reference to the work of Foucault, Deleuze, and Guattari, Hardt and Negri argue that,

> These authors focus on the social mechanisms of the production of subjectivity in institutional architectures, psychoanalytic discourse, state apparatuses, and so forth, but they do not greet the recognition that subjectivity is produced through apparatuses of power with either celebration or despair. *They regard the production of subjectivity rather as the primary terrain on which political struggle takes place*. We need to intervene in the circuits of production of subjectivity, free from the apparatuses of control, and construct the *bases* for an autonomous production. (2009, p. 172; emphasis added)

David Harvey too recognizes the importance of the struggle over the production and regulation of subjectivity. In an exchange between himself and Hardt and Negri (2009), Harvey is generally critical of the claims made in *Commonwealth*, but acknowledges that "Its authors are unquestionably right, for instance, to insist that critical engagement with how subjects and subjectivities are produced is essential if we are to understand revolutionary possibilities" (Harvey, Hardt, & Negri, 2009, p. 214).

Sympathetic to the position argued by Hardt, Negri, and Harvey, Jason Read concludes that "the stakes of opposing capital are not simply economic or political, but involve the production of subjectivity. In order to oppose capital it will be necessary to engage in a counter production of subjectivity" (2002, p. 141). Elsewhere, Read emphasizes the influence of different modes of production on the constitution of subjectivity. He argues,

> Mutation of the [mode of production] does not simply alter what can be produced, or how, but it falls back on the process, transforming the producer himself or herself. *The production of things is also always an autopoieis, a production of the one producing – a production of*

> *subjectivty*. As Marx writes with respect to the laborer, 'Through this movement he acts upon external nature and changes it, and in this way he simultaneously changes his own nature.' (2003, p. 115; emphasis added)

As Read argues, transformations in/of the mode of production, such as that evinced by the mutation described in Chapter 3 via Bruns' coining of 'the mode of produsage,' 'fall back on the process' and autopoietically produse the produser. In other words, and as this thesis has argued, what is being produsedthrough the unwaged immaterial labour characteristic of Flickr, are not only digital photographs, but subjects and forms of subjectivity that reflect the biopolitical orientation of the 'machine' through which they repeatedly pass.

Flickr is a biopolitical machine that produses subjects and forms of subjectivity oriented towards ways of living and being incongruous with the capitalist domination of life. "Today nearly all of humanity is to some degree absorbed within or subordinated to the networks of capitalist exploitation" (Hardt & Negri, 2000, p. 43). As a result, Empire "not only regulates human interactions but also seeks to directly rule over human nature. The object of its rule is social life in its entirety" (Hardt & Negri, 2000, p. xv). While Empire seeks to dominate and control human nature and social life in every respect, there are identifiable instances of conflictual resistance that escape these attempts and their all encompassing scope. As the above chapters have argued, the subjectivities produsedand regulated by and within the biopolitical norms characteristic of Flickr do not accede to Empire's dictates. The individuals on Flickr do not regard each other, their labour, or their artefacts as commodities requiring protection and purchase. They think of themselves and the fruits of their labour as equals and items to be shared amongst each other and free of the monetary relation. The subjectivities produsedby the social relations

endemic to Factory Flickr, then, run perpendicular to, or conflict with, those produced by Empire's desire to rule over human nature and social life in its entirety.

According to Hardt and Negri, one of the more prominent and influential means by which Empire transforms all of life into a form of production and source of profit is via the biopolitical force of *waged* immaterial labour. The authors argue that *waged* immaterial labour attempts to rule over human nature by purchasing the communicative and affective capacities of those individuals tasked with this kind of work. It is, then, "*biopolitical* in that it is oriented towards the creation of forms of social life" (Hardt & Negri, 2004, p. 66; emphasis in original). When one sells his/her communicative capacities and affectivity to another in exchange for a wage, s/he relinquishes control over the orientation of these innate faculties. As this thesis and numerous other scholars have argued, *waged* immaterial labour exploits and alienates from this individual the innermost capacities to speak, think, feel, and create social relationships. It cannot, however, take over complete control of the vessel in which subjectivity resides. As Foucault argues, "resistance comes first, and resistance remains superior to the other forces of the process (…) *resistance* is the main word, the *keyword*, in this dynamic." (quoted in Lazzarato, 2002, p. 105; emphasis in original). Hardt and Negri amplify the conflicting positions identified above by recourse to the notion of biopolitics. "On the biopolitical terrain (…) where powers are continually made and unmade, bodies resist. They have to resist in order to exist" (2009, p. 31).

Standing up to Empire's attempts to control the entirety of human nature are the broadly conceived autonomous labouring capacities of individuals. Nowhere are these autonomous capacities more evident than on Web 2.0 sites and services such as Flickr.

The importance of this facet of the argument is that by recognizing the various instances of labour's inherent autonomy we are in a much better position to select those tools and weapons that might be directed against Empire.

> Biopolitical production (…) impl[ies] new mechanisms of exploitation and capitalist control, (…) but we should keep an eye out from the beginning, following Foucault's intuition, for how biopolitical production, particularly in the ways it exceeds the bounds of capitalist relations constantly refers to the common, grants labor increasing autonomy and provides the tools or weapons that could be wielded in a project of liberation. (Hardt & Negri, 2009, p. 137)

As the interviews in Chapter 5 and the analysis of them in Chapter 6 have demonstrated, Flickr, while drawing upon and exercising similar skills and aptitudes as waged immaterial labour, feels nothing like work to those doing it. Unwaged immaterial labour of the kind taking place on Flickr is guided by a fundamentally different amalgamation of cultural norms, mores, and biopolitics than that characteristic of waged immaterial labour. These norms, mores, and biopolitics, then, provide us with imperfect sketches of some of 'the tools or weapons that might be wielded in a project of liberation.'

The divergence between the biopolitics characteristic of waged and unwaged immaterial labour create a conflictual scenario where the constituent portions of one's subjectivity formed by *waged* immaterial labour and those formed by *unwaged* immaterial labour clash with one another. However,

> It would be wrong to assume that all of these conditions have a uniform effect on the production of subjectivity, that all of these causes pile on top of each other like bricks forming a seamless wall of subjection. Even though different institutions and practices of the reproduction of subjectivity can be understood to reproduce subjection both in their concord and their dissonance – in their overlap at the same virtual point and in the space between them – the heterogeneity of institutions also produces potential discord. The different institutions cannot but produce

> divergent and contradictory messages and effects. (…) The dissonance produces possibilities and conditions for subversion (…) or at least makes possible, its own resistances. (Read, 2003, pp. 143-144)

Unlike 'a seamless wall of subjection,' the forms of subjectivity constituted by waged and unwaged immaterial labour respectively may occupy the same space, but their edges are incongruous, jagged, and incommensurable. There is, then, a nascent conflict occurring at the level of the production and regulation of subjectivity that pits the reduction of all social relations to the capitalist imperative against those that encourage non-competitive and non-exploitative social relations.

Characterizing these divergent biopolitics as a form of 'struggle' raging within the intra-subjective dimension of the individual, however, would be to attenuate the meaning of 'struggle' beyond usefulness. To claim that they are in *conflict* with one another, though, is appropriate and no small amendment. These conflicts do not take place in the street or at the barricades, but are deep seated, located at the heart of how one thinks of oneself and others. The point that requires emphasis, then, is that these conflicts have the potential to sway the subjectivities of individuals in such a way that might provoke and eventually catalyze the struggles that merit the use of this term.

In this way, the conflict occurring at the level of the production and regulation of subjectivity is the necessary precursor to the battles that might take place at the barricades, on the picket line, or in the public squares. Once again, Web 2.0 sites and services such as Flickr cannot change the world, but they are in the process of changing the subjectivities of those that could. The biopolitical orientation of the Flickr-verse 'falls back upon the process' and produses forms of subjectivity reflective of this same

orientation. These forms of subjectivity, therefore, conflict with capital's all consuming attempts to control human nature in its entirety and may provide the necessary inspiration and resolve to one day struggle against Empire.

The embryonic nature of this *intra-subjective* conflict is identifiable in the comments made by Flickr members in their interpretation of how they regard their waged work and how they regard their unwaged work. For instance, one of the hackers interviewed for this thesis regards the immaterial labour he does for a wage and that done on Flickr as paradigmatically different. Whereas the former is 'boring' and 'dull,' the latter is creative, social, and enjoyable. In fact, he compared the work he does on Flickr to the way he feels when he cooks a meal for a group of friends to enjoy together, concluding that "Writing software that your friends use is much more interesting than writing software for random strangers that you'll never see will use" (Anonymous-8, 2010). The differences between boring and dull waged work and the creative, interesting, and social nature of unwaged work place in sharp relief the conflict that obtains between these two domains. While the particular tasks required by these two forms of immaterial labour are identical, it is the ways in which this work is experienced that differentiates the waged from the unwaged iteration. Their overall tenor and tonality are different and when the influence that each has on the subjectivity of the individual is considered, characterizing them as conflictual is appropriate.

This intra-subjective conflict is also apparent in the following comments made by a member asked to compare his waged work with the work he does on Flickr.

> Interviewee: I'm in I.T. [Information Technology] and the photographic process, because it's digital, is an extension of that.

Interviewer:	It's an extension of work?
Interviewee:	It's an extension in the sense that it's computers. I'm comfortable in the environment.
Interviewer:	And how about when you spend two hours on Flickr and then two hours on work projects, do they feel completely different? Do they feel similar?
Interviewee:	I've really not thought about that before. I use Flickr sometimes as a stress relief from work. It takes me away. I'm a boss so I have to make decisions and lead people etcetera and when I'm on Flickr I don't have to do that kind of stuff.
Interviewer:	So it provides a bit of respite from the workday?
Interviewee:	Yeah. (Anonymous-4, 2010)

In this case, the work done on Flickr takes this person away from the stress and strain of his paid work environment and distinguishes the conflicting orientation of each domain. Whereas one causes stress, the other provides a respite from it.

Another research subject was asked if the time he spent at work as an I.T. consultant and troubleshooter felt different than that he spent on Flickr. At work and sometimes on Flickr, this individual spends his time troubleshooting problems and assisting others with their difficulties. He responded to the question of how they differed in the following way. "Do they feel different? Absolutely. (…) It's fun to be helpful to people. It's even more fun to be helpful to people with whom I feel any amount of community. It is tedious to feel obligated to be helpful to people all the time, especially to people I don't know and have no community with" (Anonymous-7, 2010). Once again, the differences between the specific tasks required of this individual in his work life and in his Flickr life are negligible. The way he feels about each, however, is indicative of the conflict that obtains when the production of subjectivity characteristic of each is

considered. Finally, while the following quote was referenced earlier in this thesis, it merits reconsideration in light of the conflict being described.

> The Flickr world that I inhabit, the groups I'm in, is a kind and generous place. People seldom snipe. Occasionally they will offer a constructive suggestion. They discuss things without going for the jugular and I like that world. The world that I read about on the newspaper and see on TV I increasingly like less and less. So Flickr is kind of an alternate reality that is fun to inhabit. (Anonymous-11, 2010)

The cutthroat nature of the world that this individual lives in, reads about, and sees on the television differs in degree and kind from that 'alternate reality' she experiences on Flickr. While both have an influence on the constitution of subjectivity, their orientations are incongruous, posit the existence of an intra-subjective conflict, and, thus, the potential for discord and resistance that Read describes above via his rejection of the notion of a seamless wall of subjection.

The significance of the encounters that we have with the various biopolitical machines that fashion and refashion our subjectivities is that we are in a perpetual process of becoming something and someone other than that which we presently are. According to Hardt and Negri, "The most important fact about human nature (if we still want to call it that) is that it can be and is constantly being transformed" (2009, p. 191). The historicity of subjectivity postulates a malleable subject, one that is in a constant process of changing him/herself as a result of the biopolitical 'machines' through which s/he passes. According to Read, "transformations in technology, politics, media, and the economy affect each other insofar as they produce new subjectivities and new relations" (2001, p. 28). The importance of this realization is that the transformations evinced by the technologies and social relations emblematic of Web 2.0 and Flickr 'produce new

subjectivities and new relations' that inform the means by which we may become something other than that which we presently are. Our world, then, "is continually made and remade by the bodies and desires of the many, thus exposing the way in which the world can be made otherwise" (ibid., p. 30). This shift in thinking towards a possible or future self is consequential because "Once the temporal horizon of a possible future replaces the spatial confines of an existing sphere (…), the standard by which the present is judged could expand to visions of what we might want rather than the defense of what we already have, know, or are" (Weeks, 2007, p. 248). In other words, "Through the production of subjectivity, the multitude is itself author of its perpetual becoming other, an uninterrupted process of collective self-transformation" (Hardt & Negri, 2009, p. 173).

Thus, as a result of the alterations made to subjects and their subjectivities by one biopolitical machine, the subjectivity that goes on to encounter others, has the potential to metaphorically get jammed within them, halting the smooth functioning of these machines and drawing attention to their manipulations and exploitations. By changing the contours of our subjectivities, biopolitical machines like Flickr change the relationship between them and the other machines they go on to encounter. It bears repeating that according to a number of Marxist scholars, it is at these dissonant junctures that one of the most important sites of contemporary struggle, or, more appropriately, conflict, is located.

Presently, we are at the very beginning of a recompositional process and "are arriving at another such moment of crisis" (Hardt & Negri, 2009, p. 144). As this thesis has argued, the present cycle of struggle extends beyond the workplace, beyond national borders, and sets its sights on the destruction of an entirely new form of sovereignty

known as Empire. While this cycle of struggle aims at destroying a system of rule that spans the globe, the forms of conflict and resistance that may eventually struggle against Empire begin at a much more local register. They begin within the thoughts, passions, and subjectivities of those persons subject to Empire's rule. As the above authors have argued via their naming of the struggles over the production and regulation of subjectivity, without alterations to the subjective dimensions of individuals, these struggles stand little chance of success. There is, then, an imperative to try and understand as best as possible the contradictions and conflicts laying at the core of the production and regulation of subjectivity that might catalyze the kinds of qualitative change needed to move beyond the constant terror emblematic of imperial capital. We need, in other words, to understand the social and political dynamics undergirding the conflicts that provoke these struggles. While too numerous to examine in a research project such as this, this thesis has focused on a critical examination of *one* of the many conflicts that lie at the literal and proverbial heart of these struggles.

This thesis' aspirations, however, are loftier than this. It has also tried to identify the alternatives presented by Flickr's social and political dynamics as imperfectly prescriptive of an organization of labouring bodies and minds that exist within, but do not succumb to, the dictates of imperial capitalism. Put differently, the biopolitics that guide and regulate Flickr do not only 'fall back' upon the process and change the subjectivities of those who might change the world, but are also imperfect guides to ways of life and being beyond Empire. By providing flawed evidence of the manner and means by which the social and political viability of that future world might be sustained, they open our minds to the potentiality laying dormant in the present. Therefore, it is not only the

biopolitical conflict between waged and unwaged immaterial labour that makes Flickr a worthwhile object of study. It is also the autonomy of labour so evident within Flickr that allows us to conceive a possible future that makes it a particularly valuable lens through which to think.

Flickr and other "forms of the common increase our powers to think and act together (…) others decrease them. (…) [What is required, then, is] a process of selection, maximizing the beneficial forms of the common and minimizing the detrimental" (Hardt & Negri, 2009, pp. 159-160). By "Revealing some of these really existing forms of the common [we take] a first step toward establishing the *bases* for an exodus of the multitude from its relation with capital" (Hardt & Negri, 2009, p. 153; emphasis added). However, we need to do much more than simply reveal the coordinates of potential 'bases' from which to organize our operations. Just as important is the task of trying to understand the social, political, and behavioural 'basis' of their inner-workings. This thesis has taken a first step in attempting to understand the biopolitical basis of a way of being and a mode of living that resists the all consuming exigencies of imperial capital.

By critically examining the immaterial gears and cogs of biopolitical machines such as Flickr, we are taking a first step toward establishing the potential bases for, and understanding the basis of, an exodus of the multitude from its relation with capital. The presentation of the biopolitical norms and mores that animate the Flickr-verse and the resulting subjectivities that obtain from them is, therefore, an invaluable source of information that might illuminate some of the more strategically advantageous features of the future world into which we are stepping and becoming other.

Flickr, as a globally distributed network of unwaged immaterial produsers that autonomously manage and organize their activities free of oversight, and free of the wage relation, needs to be appreciated and, even, celebrated. Not hyperbolically or blindly, but critically, analytically, and with eyes wide open to the contradictions, paradoxes, and opportunities that animate it. From the autonomist perspective, there is much to be learnt from an organization of labouring bodies and minds that assemble together to work collaboratively on projects requiring a confounding division of labour unencumbered by the hierarchies of contemporary capitalism. In its own way, the analysis of the biopolitical power relationships that allow for this kind of autonomous organization is a small step towards a better understanding of the social and political dynamics of a system that posits alternatives to the total subsumption of life to the capitalist imperative.

Flickr's biopolitics, then, not only conflict with those of waged immaterial labour, but also provide imperfect evidence for a qualitatively different way of organizing our autonomous labouring capacities. Flickr, its biopolitics, and the orientation of the subjectivities produsedby them, are, then, instructive not only for what they demonstrate, but also for what they allow us to prognosticate. Once again, it merits emphasis that the example set by Flickr is not perfect, not by any means, but there are strategically important clues encapsulated within its biopolitical mechanisms that point to ways of being, modes of thought, and forms of life that provide the basis for becoming something more than that which we presently are. If, as Hardt and Negri argue, one of the first tasks of creating a world beyond Empire is to identify 'bases' that might be used as grounds from which to start again, one could do much worse than looking to Flickr's biopolitics as imperfect guides to their social and behavioural basis.

7.1 Coda: Occupy Wall Street, Tumblr & 'We Are the 99 Percent'

The purpose of this coda is to extend the above analysis into a realm that falls beyond the central concerns of this thesis, but still impinges upon the thematics of its primary argument. This thesis has argued that there is a *conflict* lying at the heart of the forms of subjectivity being produced/produsedby and through *waged* and *unwaged* immaterial labour that has the potential to catalyze forms of struggle against Empire. This coda, then, extends this line of argumentation by reference to a concrete instance where a photo-sharing community similar to Flickr has contributed directly to the struggles of the multitude. As the above chapters have argued, Web 2.0 sites and services such as Flickr are in the process of reorienting subjects and forms of subjectivity towards ways of life and being based not on cutthroat competition or instrumental social relations, but on their opposite. The below, then, examines an instance where a photo-sharing utility, and the community that has coalesced around it, has contributed to galvanizing the resolve required to wage an effective struggle against Empire.

In the fall of 2011, a wave of protests and Occupy Movements that began in Zucotti Park in New York City quickly spread around the world. The demands of these movements were diverse, their goals and tactics multiple, but the variegated forms of inequity and widespread lack of opportunity they were railing against, common. Drawing inspiration from the 'Arab Spring,' the student protests in the United Kingdom, the anti-austerity movements in Greece, the struggles of the Spanish *Indignados*, and the complete lack of culpability placed at the feet of those individuals responsible for the worst Global Financial Crisis (GFC) in world history, the Occupy Movement, as it came to be collectively known, was concrete evidence that the recomposition of a class hostile

to imperial capital foreseen by Hardt and Negri's audacious concept of the multitude, was beginning to take form.

At the technological epicentre of this movement are a number of social networks that enable the transmission and receipt of messages, photographs, and video. With the so-called 'Twitter Revolution' in Tunisia (Zuckerman, 2011), the role of BlackBerry's Messenger application in the student riots in London (Wasik, 2011), and the place of Facebook in Egypt's Tahrir Square, the relative importance of social networks and communication technologies to forms of struggle and resistance are a hotly debated topic. This thesis has sought to temper this debate by arguing that technology and social networks like Twitter or Facebook should not be thought of as determining factors in these struggles, but as 'machines' endowed with particular biopolitical affordances that work upon the subjectivities of those persons who daily use them. In other words, these technologies do not change the world on their own, but their biopolitics are in the process of changing the subjectivities of those individuals who could.

By the fall of 2011, publicly sharing digital photographs had become much more commonplace than it was when Flickr was first introduced. While Facebook and Twitter absorb much of the User-Generated spotlight, another site predicated on publicly sharing digital content and photographs, Tumblr.com, has also made quite a significant impact – especially when its role in the Occupy Movement is considered. According to Tumblr's description of itself, this micro-blogging service "lets you effortlessly share anything. Post text, photos, quotes, links, music, and videos, from your browser, phone, desktop, email, or wherever you happen to be" (Tumblr, N.D.). Tumblr boasts more than fifty-four million 'users' and more than seventy million posts-per-day. The purpose of this coda,

however, is to focus on one very specific Tumblr blog created to share photographs amongst individuals in a similar fashion to Flickr. This blog is responsible for coining and popularizing one of the most enduring phrases, powerful concepts, and affective ideas of the Occupy Movement, "We Are the 99 Percent."

In an interview with *Mother Jones*, the creators of the Tumblr blog 'We Are the 99 Percent,' Christopher Key and Priscilla Grim, describe the idea behind the blog this way. Key says that,

> the idea itself is quite simple: Get a bunch of people to submit their pictures with a hand-written sign explaining how these harsh financial times have been affecting them, have them identify themselves as the 99 percent, and then write "occupywallst.org" at the end. It was something simple that most anyone with a computer could do, so that even if they couldn't make it to the occupation, they could at least help build its narrative. (Weinstein, 2011)

These simple instructions have resulted in thousands of photographs from all over the world being shared with others and have constituted one of the most consistent and commanding visual motifs of the Occupy Movement.

The vast majority of the pictures shared on the blog are uniform in their composition. At the centre of the frame is a sheet of paper that often obscures the face of the individual holding it, rendering him/her all but anonymous. On the paper, heart-rending personal stories are shared frankly and briefly. By sharing these images with the creators of the blog and all those that 'follow' it, they have become one of the most stable visual icons of the Occupy Movement and have helped develop and strengthen the affective force of its narrative beyond anything its creators originally thought possible.

The Occupy Movement distinguishes itself from other social movements by renouncing hierarchical forms of leadership, committing itself instead to the principles of participatory democracy. Working groups are formed around particular issues that need to be addressed. These working groups report to the General Assembly where decisions are made by consensus, not decree. There is an emphasis on allowing anyone with an opinion on an issue to voice his or her concerns regarding it. The Tumblr site for the 99 percent mimics this organizational structure quite effectively. The relative anonymity of the photographs, combined with their number and uniformity of composition, reinforces the impression of a well organized, highly interconnected, yet leaderless, movement that values equally the contributions made by its members. The photographs, at one and the same time, then, have the effect of making general and particular the movement's goals.

Similar to Flickr, where the photographic slivers of one's soul are shared publicly, the pictures and stories posted to the Tumblr site also contain intimate glimpses inside the heads, hearts, and lives of those sharing them. These photographs and stories relate in simple image and language the burdens of massive student/household debt, unemployment, foreclosure, layoff, and sickness to name but a few of the more common narratives. While all of these individuals and their stories are, of course, distinct and unique, the uniform composition and relative anonymity of the photographs insinuates that there is widespread and common ground beneath them, reinforcing the notion of a group of singularities united through their difference as much as their commonality. Sharing these photographs and stories amongst one another and across the Web, then, has become one of the most important symbolic tools in weaving together this patchwork of singularities.

The creators of the 'We Are the 99 Percent' Tumblr blog argue that "The 99 percent have been set against each other, fighting over the crumbs the 1 percent leaves behind. But we're all struggling. We're all fighting. It's time we recognize our common struggles, our common cause. Be part of the 99 percent and let the 1 percent know you're out there" (We Are the 99 Percent, 2011). One of the most efficient and effective ways of foregrounding the commonality of their struggles and cause is by publicly sharing personal photographs that tell these stories. In this way, the Tumblr site creates forms of solidarity that recognize and celebrate internal diversity by naming and identifying the common source of their indignation. The act of posting relatively anonymous images combined with the personal stories that accompany them, exemplifies the recognition of widespread, yet individuated, strife and the nascent beginnings of widespread, yet common, dissension against its root causes. 'We Are the 99 Percent' leverages the techno-social affordances of distributed networks by connecting the concerns of the many to each other, not to minimize the differences that exist between them, but to relate and connect these individual struggles to each other in meaningful ways. By threading individuated struggles into one another, the blog enables the composition of what Cleaver once called an electronic 'fabric' of struggle. In this way, those individuals that post their image and story to the Tumblr site weave their precarious predicament into that of another and by doing so strengthen the bonds between them. They affix their struggle to provide for themselves and their families to the struggles of individuals and families around the world. In so doing, they create a patchwork of resistance and struggle much stronger than it would be otherwise.

The Occupy Movement in general and the 'We Are the 99 Percent' Tumblr site in particular is further evidence that there is a deep seated desire for forms of life, ways of being, and modes of interaction that do not succumb to the prerogatives of Empire. The important element to recognize in all of this is that the process of 'becoming other' alluded to above needs to be thought of not as a linear progression from one state to another or as an instantaneous transformation, but as serpentine and evolutionary. As the history of autonomist theory indicates, there are numerous ways in which a class hostile to capital recomposes itself and its strength. We are at the very beginning of one such moment of recomposition and are in the process of inventing the most effective means to go about doing so.

In their response to the critique provided by Harvey, Hardt and Negri argue, "There is no single straight course to changing the world, but many circuitous paths through brambles, along which we must constantly try to find our way" (2009, p. 262). Flickr and the Tumblr blog for the 99 percent, then, are but small tools in the battles being waged by the multitude against Empire. However, they are also effective instruments that illuminate some of the pitfalls, identify some of the brambles, and allow us to take notice of some of the more advantageous opportunities presented by the circuitous paths described above. It is important to once again emphasize that a Tumblr blog, Flickr account, or Facebook page cannot change the world, but that they are changing the subjectivities of those individuals who could. Quoting Deleuze somewhat out of context, "What counts is that we are at the beginning of something" (1992, p. 7). In order to see this 'something' through to the end, we need to appreciate in all their flawed nuance what these new tools are doing for forms of collective resistance and struggle. We

must strive, therefore, to further understand how they constitute preliminary bases from which the recomposition of a class hostile to capital is beginning to take form and how they might provide indices indicative of the social and behavioural basis of forms of life that are struggling within, yet against, the tyranny of Empire.

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Appendices:

Appendix 1: Announcement to FlickrCentral Discussion Forum

Subject Line: Is Flickr Work?

Hello Fellow Flickr'ers:

My name is Brian Brown.

I'm a Ph.D. student at the University of Western Ontario in Canada and I'm doing some research on Flickr.

Have you ever thought about all of the time and effort you devote to Flickr?

I'm wondering if you consider all of this time and effort a form of work?

Do you consider taking pictures, tagging them, participating in discussion forums, and generally doing what you do on Flickr a form of labour? Please explain.

Thanks so much for your time and your thoughts!

Please forward to anyone you think may be interested.

Once again, Thanks Very Much!

Brian Brown

Appendix 2: Announcement to Flickr API Discussion Forum

Subject Line: Is Flickr Work?

Hello Fellow Flickr'ers:

My name is Brian Brown.

I'm a Ph.D. student at the University of Western Ontario in Canada and I'm doing some research on Flickr.

Have you ever thought about all of the time and effort you devote to Flickr?

I'm wondering if you consider all of this time and effort a form of work?

Do you consider hacking, debugging, or modding the API, taking pictures, and generally doing what you do on Flickr a form of labour? Please explain.

Thanks so much for your time and your thoughts!

Please forward this message to anyone you think may be interested.

Once again, Thanks Very Much!

Brian Brown

Appendix 3: Announcement to Utata Discussion Forum

Subject Line: Is Flickr Work?

Hello Utata:

Apologies in advance to those Utata members who have already seen this question elsewhere.

My name is Brian Brown.

I'm a Ph.D. student at the University of Western Ontario in Canada and I'm doing some research on Flickr.

Have you ever thought about all of the time and effort you devote to Flickr?

I'm wondering if you consider all of this time and effort a kind of work?

Do you consider taking pictures, tagging them, participating in discussion forums, and generally doing what you do on Flickr a form of labour?

Please explain.

Thanks so much for your time and your thoughts Utata! They're much appreciated.

Please forward to anyone you think may be interested.

Once again, Thanks Very Much!

Brian Brown

Appendix 4: Follow up Interview Request

Subject Line: Re.: Is Flickr Work?

Hi [Name],

First of all, thanks so much for your reply to my earlier question! I really appreciate it.

You raised an interesting point in your response and I was hoping that you would be willing to have a quick chat with me about my research, your impressions of Flickr as a photo-sharing website and whether or not you see the time you spend on Flickr as a form of work.

I'm really curious to hear what you think about Flickr and your Flickr habit.

If you would be willing to have a quick chat, reply to this message and we can go from there. We can talk via Skype, the Instant Messaging platform of your choice or by telephone.

I expect the conversation to take around half an hour.

Thanks so much!

All the best & hopefully I'll hear back from you soon.

Brian Brown

Appendix 5: Letter of Information and Consent

Re: Academic Research Project: "The Flickr-ing Multitude: the biopolitical implications of unpaid immaterial labour.

Please accept this letter of information as an invitation to participate in an interview, as per our previous communication(s). The purpose of this letter is to provide you with the information you require to make an informed decision on participating in this research. I am conducting Ph.D. dissertation research on the unpaid 'work' that occurs on the photo-sharing website www.Flickr.com. Over the past few years, websites that facilitate and encourage 'users' to generate digital content and share that content with other users of the website have exploded in popularity and profitability. The current research project seeks to better understand the nature of this unpaid work, the motivations behind it, and the social qualities of it.

If you agree to participate, we will engage in a private, one-on-one conversation over the telephone or an Instant Messaging Service on a date and time that is convenient for you. A digital audio-recorder will be used to record the discussion for my later consultation. The digital files and written transcripts of our conversation – transcribed by me – can be made available to you and will be stored securely behind a password-protected laptop and within a locked filing cabinet respectively during the writing and analysis of this study. All identifying data will be destroyed after the completion of the research project. Non-identifying data will be kept indefinitely for the purposes of future research.

Throughout the interview process, your participation remains entirely voluntary. This means that you have the right to refuse to participate, to refuse to answer any questions, and to withdraw from the study at any point in time without consequence.

Rest assured that your identity will be kept confidential and you will remain anonymous in the published work that results from this research. If you would like to change or amend your responses to any of the questions that you were asked up to a month after the interview, this can be arranged.

There are no known risks involved with participating in this research. In fact, research participants may find gratification and satisfaction in being involved in a project that should be of interest to both an academic readership and to Flickr users themselves. Please save a copy of this letter for your future reference. As well, upon completion, I would be happy to share an electronic version of the dissertation with you if you so desire.

If you have any questions regarding the current research, about your rights as a research participant, or the conduct of this study you may contact my supervisor and the Associate Dean in the Faculty of Information and Media Studies at the University of Western Ontario, Dr. Nick Dyer-Witheford by telephone at ***-***-**** ext. ***** or by email at *****@****.**. You may also contact the Office of Research Ethics at the University of Western Ontario by telephone at ***-***-**** or by email at ******@****.**.

By typing my name and the date in the space below and returning this email to its sender I acknowledge that I have read the Letter of Information and Consent, have had the nature of the study explained to me, and agree to participate in this research. All questions have been answered to my satisfaction.

Appendix 6: Interview Guide – FlickrCentral

Opening Reminder of Research Subjects Rights:

Just a quick reminder that I promise that all of your responses will remain entirely confidential, that you will remain completely anonymous and that you have the right to withdraw from this research at any moment. Your confidentiality, anonymity, and privacy are of the utmost importance.

PART I:

- How long have you been a member of Flickr?
- How has being a member of Flickr changed your picture taking habits?
- What's unique about Flickr that makes it such an interesting place to store your photos?

PART II:

- Do you think of Flickr as a Social Network?
- What's the nature of the relationships you've developed with your list of contacts?
- Have you ever met any of your contacts in person?
- Have other users ever inspired you to take other/more/different photographs?
- Have you ever collaborated with any of them on other projects?
- How important are the comments of fellow Flick users to your photography?
- Have you ever critiqued somebody's work on Flickr?
- If so, can you describe the situation and why you commented in that way?
- It seems like there is a relative lack of what might be called 'negative' or 'constructive' criticism on Flickr. Do 'negative' comments violate some of the unwritten rules of Flickr?
- What are some other unwritten rules that guide and regulate behaviour while on Flickr?

- Like any social situation, behaviour among Flickr members is guided by site-specific cultural norms and standards.
    - How would you describe these norms?
    - What would you characterize as abnormal behaviour on Flickr?

PART III:

- Have you ever made any money from the pictures you've posted to Flickr?
- How do you license the images that you upload to Flickr? Copyright? Creative Commons (which one)?
- Why do you choose to license them in the way that you do?
- Were you a member of Flickr when it was sold to Yahoo?
- If so, how did you feel about the sale?
- I'd like to read you a quote from Bradley Horowitz, a Yahoo executive when Flickr was bought by Yahoo in 2005, published in Newsweek Magazine on April 3, 2006 and get your impressions about it:
    - Horowitz states that,
    - "With less than 10 people on the payroll, they had millions of users generating content, millions of users organizing that content for them, tens of thousands of users distributing that [content] across the Internet, and thousands of people not on the payroll actually building the thing. (…) That's a neat trick." End-quote.
    - What do you think about the 'trick' being described by Horowitz?
    - Do you worry about your privacy on Flickr?
- Yahoo made over $424 million in net profit last year alone. It stands to reason that Flickr, as a Yahoo property, contributed to this figure. Do you ever feel like all of the work you do on Flickr gets exploited or taken advantage of by Yahoo?
- If not money, what is it about Flickr that keeps you motivated as an active participant in the site?
- What, if anything, would cause you to terminate your Flickr account?

PART IV:

- What do you do for a living?

- Does what you do on Flickr compare to what you do in your work life in any way? If so, how? If not, why not?

- What's the most rewarding part of being a Flickr user?

- What's the most frustrating thing about being a Flickr user?

- What do you get out of all the time and effort you devote to your Flickr account? What motivates you to keep coming back to Flickr?

- Here's a hypothetical situation: You have all of your photographs backed up on a hard drive somewhere. All of the images you have posted to Flickr are safe and secure.

  What if all of a sudden and for some unknown reason Flickr disappeared and was taken off-line? Knowing that you haven't lost any of your images, what would you miss most about Flickr?

- There's a method used in social studies called PhotoVoice that asks participants to represent their community or their point of view through images and descriptions.

  In a similar, yet different, fashion from the above example, I'm wondering what the world of Flickr looks and feels like to you?

  In other words, if you were asked to take a representative picture of the Flickr-verse, what would you take a picture of and why?

That about concludes the questions that I have. Please feel free to add any information that you think might be important.

I want to thank you for your time and your thoughts today. I can't tell you how much I appreciate them. If in the next couple of days you have anything that you would like to add to our conversation today, please send me an email or an instant message and I'll be sure to add them to your previous comments. Thanks so much for the opportunity to speak with you!

Appendix 7: Interview Guide – Flickr API

Opening Reminder of Research Subjects Rights:

"Just a quick reminder that I promise that all of your responses will remain entirely confidential, that you will remain completely anonymous and that you have the right to withdraw from this research at any moment."

PART I:

- How long have you been a Flickr user?
- Are you a photographer as well as a coder/application builder?
- Is your primary interest in Flickr as a photographer, as a coder, or some combination of both?
- What is it about Flickr's API that makes it such an interesting piece of code to work with?
- How has Flickr influenced your picture taking habits?

PART II:

- Do you think of Flickr as a Social Network?
- When you're building an application, do you collaborate with other users, ask for their input, recruit them as beta testers, etc?
- Have you ever coded an application (or altered an existing one) in response to someone else's comment of the same kind?
- What is the nature of the collaboration between Flickr API members?
- Do you work on particular pieces of code together from the beginning, or do you share applications when they're in a state of completion you're comfortable with?
- How important are the comments of fellow Flick users to the work you do on the code and concerning your photography?
- Do you think that you would be as inclined to do this work if you didn't receive the feedback you do about your applications/pictures?

PART III:

- Yahoo made over $424 million in net profit last year alone. It stands to reason that Flickr, as a Yahoo property, contributed to this figure.
    - Do you ever feel like all of the work you do on Flickr gets exploited or taken advantage of by Yahoo?
- If not money, what is it about Flickr that keeps you motivated as an active participant in the site?
- Do you think of building applications that make use of the API as work, leisure, or some combination of the two?
- Have you ever made any money from your applications?
- Have you ever had an application you have written rejected by Flickr for any reason?
- Is privacy a concern that guides or directs your involvement in Flickr? There has been a lot of attention devoted to privacy on Social Networks and I'm wondering if you are concerned about infractions of your right to privacy?
- What, if anything, would cause you to terminate your Flickr account?
- Here is a quote from Bradley Horowitz who was a Yahoo executive when Yahoo bought Flickr in 2005 published in Newsweek Magazine on April 3, 2006. I would like to get your impressions about it:
    - "With less than 10 people on the payroll, they had millions of users generating content, millions of users organizing that content for them, tens of thousands of users distributing that across the Internet, and thousands of people not on the payroll actually building the thing. (…) That's a neat trick."
- Have you ever felt like Flickr takes advantage of your skills &/or intelligence?

PART IV:

- What do you do for a living?

- How do the day-to-day activities on your day job compare with how you spend your time on Flickr?

- It stands to reason that the applications you write for Flickr increase the value of the website in that they make the site more enjoyable or useful. Have you ever felt like you should be compensated for this work?

- Without the incentive of money, why do you write applications for Flickr?

- What's the most rewarding part of being a Flickr user?

- What do you get from Flickr that keeps you coming back for more?

- Like any social situation, behaviour on Flickr is guided by unwritten and site-specific cultural norms and standards.

    - How would you describe these norms?

    - And what would you characterize as abnormal behaviour on Flickr?

- Here's a hypothetical situation: You have all of your photographs and the applications you've written backed up on a hard drive somewhere so that they are safe and secure.

  What if all of a sudden and for some unknown reason Flickr disappeared and was taken off-line? Knowing that you haven't lost any of your pictures or code, what would you miss most about Flickr?

- There's a method used in social studies called PhotoVoice that asks participants to represent their community or their point of view through images and descriptions.

  In a similar, yet different, fashion from the above two examples, I'm wondering what the world of Flickr looks like to you?

  If you were asked to take a picture of the Flickr-verse what kind of picture would you take and why?

I want to thank you for your time and your thoughts today. I can't tell you how much I appreciate them.

Appendix 8: Interview Guide - Utata

Opening Reminder of Research Subjects Rights:

Just a quick reminder that I promise that all of your responses will remain entirely confidential, that you will remain completely anonymous and that you have the right to withdraw from this research at any moment. Your confidentiality, anonymity, and privacy are of the utmost importance.

PART I:

- How long have you been a member of Flickr?
- How has being a member of Flickr changed your picture taking habits?
- What's unique about Flickr that makes it such an interesting place to store your photos?

PART II:

- Do you think of Flickr as a Social Network?
- What's the nature of the relationships you've developed with your list of contacts?
- Have you ever met any of your contacts in person?
- Have other users ever inspired you to take other/more/different photographs?
- Have you ever collaborated with any of them on other projects?
- How important are the comments of fellow Flick users to your photography?
- Have you ever critiqued somebody's work on Flickr?
- If so, can you describe the situation and why you commented in that way?
- It seems like there is a relative lack of what might be called 'negative' or 'constructive' criticism on Flickr. Do 'negative' comments violate some of the unwritten rules of Flickr?
- What are some other unwritten rules that guide and regulate behaviour while on Flickr?

- Like any social situation, behaviour among Flickr members is guided by site-specific cultural norms and standards.
    - How would you describe these norms?
    - What would you characterize as abnormal behaviour on Flickr?

PART III:

- Have you ever made any money from the pictures you've posted to Flickr?
- How do you license the images that you upload to Flickr? Copyright? Creative Commons (which one)?
- Why do you choose to license them in the way that you do?
- Were you a member of Flickr when it was sold to Yahoo?
- If so, how did you feel about the sale?
- I'd like to read you a quote from Bradley Horowitz, a Yahoo executive when Flickr was bought by Yahoo in 2005, published in Newsweek Magazine on April 3, 2006 and get your impressions about it:
    - Horowitz states that,
    - "With less than 10 people on the payroll, they had millions of users generating content, millions of users organizing that content for them, tens of thousands of users distributing that [content] across the Internet, and thousands of people not on the payroll actually building the thing. (…) That's a neat trick." End-quote.
    - What do you think about the 'trick' being described by Horowitz?
    - Do you worry about your privacy on Flickr?
- Yahoo made over $424 million in net profit last year alone. It stands to reason that Flickr, as a Yahoo property, contributed to this figure. Do you ever feel like all of the work you do on Flickr gets exploited or taken advantage of by Yahoo?
- If not money, what is it about Flickr that keeps you motivated as an active participant in the site?
- What, if anything, would cause you to terminate your Flickr account?

PART IV:

- What do you do for a living?

- Does what you do on Flickr compare to what you do in your work life in any way? If so, how? If not, why not?

- What's the most rewarding part of being a Flickr user?

- What's the most frustrating thing about being a Flickr user?

- What do you get out of all the time and effort you devote to your Flickr account? What motivates you to keep coming back to Flickr?

- Here's a hypothetical situation: You have all of your photographs backed up on a hard drive somewhere. All of the images you have posted to Flickr are safe and secure.

  What if all of a sudden and for some unknown reason Flickr disappeared and was taken off-line? Knowing that you haven't lost any of your images, what would you miss most about Flickr?

- There's a method used in social studies called PhotoVoice that asks participants to represent their community or their point of view through images and descriptions.

  In a similar, yet different, fashion from the above example, I'm wondering what the world of Flickr looks and feels like to you?

  In other words, if you were asked to take a representative picture of the Flickr-verse, what would you take a picture of and why?

That about concludes the questions that I have. Please feel free to add any information that you think might be important.

I want to thank you for your time and your thoughts today. I can't tell you how much I appreciate them. If in the next couple of days you have anything that you would like to add to our conversation today, please send me an email or an instant message and I'll be sure to add them to your previous comments. Thanks so much for the opportunity to speak with you!

Appendix 9: Research Ethics Approval Form

Western
Faculty of Information and Media Studies
Office of the Dean

Ethical Review of Research Involving Human Subjects

All non-medical research involving human subjects at the University of Western Ontario is carried out in compliance with the Social Sciences and Humanities Research Council Guidelines (2002). The Faculty of Information Media Studies (FIMS) Research Committee has the mandate to review FIMS student research proposals for adherence to these guidelines.

2009 – 2010 FIMS Research Committee Membership

1. K. Asquith*
2. G. Campbell
3. H. Hill
4. P. McKenzie (Chair)*
5. D. Neal
6. A. Quan-Haase
7. J. Ripley (alt)
8. D. Robinson (alt)
9. S. Smeltzer
10. L. Vaughan (alt)

Research Committee members marked with * have examined the research project **FIMS 2010-011** entitled:

The Flickr-ing Multitude: the biopolitical implications of unpaid immaterial labour

as submitted by: Nick Dyer-Witheford (Principal Investigator / Supervisor)
Sharon Sliwinski (Co-Investigator / Supervisor)
Anabel Quan-Haase (Co-Investigator / Supervisor)
Brian Brown (Co-investigator / Student)

and consider it to be acceptable on ethical grounds for research involving human subjects under the conditions of the University's Policy on Research Involving Human Subjects. Approval is given for the period **June 9, 2010 to August 31, 2010**.

Approval Date: June 9, 2010

Pamela McKenzie, Associate Dean (Research)
FIMS Research Committee Chair

Notes:

[1] According to the figures provided by NASDAQ, Yahoo (YHOO) grossed just shy of five billion dollars in 2011. As mentioned, the contribution made by Flickr to this figure is impossible to discern.
[2] http://www.gnespy.com/museum/
[3] "Flickr's traffic grew 448% to 3.4 million from December 2004 to December 2005, according to Internet measurement firm Nielsen/NetRatings" (Graham & Fake, 2006).
[4] See the following for groups on Flickr that were started specifically to protest the sale to Yahoo!. <http://www.flickr.com/groups/flick_off/> & http://www.flickr.com/groups/26372545@N00/
[5] The reason the craftsman was drawn out of the traditional locales of production has to do with what Marx called in the 'unpublished' sixth chapter of *Capital* "So-Called Primitive Accumulation." He describes this process as one that "divorces the worker from the ownership of the conditions of his own labour" (1976, p. 874). While this concept is incredibly important as it forms the historical conditions from which sprang the capitalist mode of production, it is tangential to the current treatment of the professional worker. For more information see: Read (2002), Van Der Pijl (1997), Midnight Notes Collective (1990), Bonefeld (2001), and De Angelis (2001). For an analysis of primitive accumulation as it applies to the privacy debates on Web 2.0 sites and services see: Brown (Forthcoming).
[6] For in-depth examinations of 'Precarity' as it relates to Post-Fordism see: Gill and Pratt (2008); Ross (2008); Neilson and Rossiter (2008); Christopherson (2008); and Hesmondhalgh and Baker (2008).
[7] See: Wright, 2002, p. 107-130 and a particularly insightful take on the links between workers and students provided by a FIAT worker at a workers rally in 1969 and reproduced here: http://libcom.org/history/organising-fiat-1969.
[8] See André Gorz (1994, p. 62-64) for an insightful and provocative critique of this position. He argues persuasively that commodifying the labour of women in the home would actually further entrench and normalize the capitalist relation throughout all of society and therefore not have the desired revolutionary effect.
[9] The Occupy Movement and the place of Web 2.0 sites and services in galvanizing it, is addressed in more detail in Chapter 7, Section 1.
[10] For information on the working conditions in the industrial factories of China see the investigative reports authored by Charles Duhigg and David Barboza (2012).
[11] Hardt and Negri later collapse the first two facets of the immaterial labour thesis into one and argue in *Multitude* that "one can conceive immaterial labor in two principal forms. The first form refers to labor that is primarily intellectual or linguistic, such as problem solving, symbolic and analytical tasks, and linguistic expressions. (…) We call the other principal form of immaterial labor 'affective labor.'" (2004, p. 108). The tripartite definition of immaterial labour is retained in this thesis because it better explains and highlights the divisions between those tasked with data-entry positions, for instance, those managing major advertising campaigns, for example, and those tasked with the affective qualities of immaterial work.
[12] See, for instance, Esposito (2008), Agamben (1998), Lemke, T. (N.D.), Shiva & Moser (1995), Dyer-Witheford (2008), and Bull (2007).
[13] See O'Reilly (2005), Li & Bernoff (2008), Tapscott & Williams (2006) and Shuen (2008) as authors who regard this as a business opportunity and the work of Elmer (2004), Andrejevic (2009), Fuchs (2009, 2010, 2011) and Cohen (2008) among others as emblematic of the persepctive that regards these aspects of Web 2.0 critically.
[14] See the work of Jones (2009), Keen (2008), and Carr (2008a, 2008b, 2010) for examples.
[15] See Shriky (2008, 2010), Gillmor (2004), Surowiecki, (2004), and Tapscott, (2009) as emblematic of this position.
[16] Without question the Berkman Centre for Internet and Society at Harvard has produced the most insightful of these contributions. See Benkler (2006), Zittrain (2008), Von Hippel (2005), Lessig (2004, 2008) as examples.
[17] 'User' is placed in inverted commas throughout the first half of this chapter to emphasize the inappropriateness of the term. Later, the misnomer is addressed and corrected, but until that point the inverted commas indicate that the term leaves much to be desired.
[18] In a recent development that bears witness to the rapid change evident within Web 2.0, as I was writing this very section, I checked the newspaper and was surprised to see that even Microsoft was forced to adapt

its business models by putting its highly profitable Office software in the proverbial 'cloud.' See: http://www.theglobeandmail.com/news/technology/tech-news/microsoft-puts-office-in-the-cloud/article2078478/

[19] For a provocative examination of the politics and power relationships undergirding the use of different programming languages or 'codes,' see: Elmer et. al (2007) and Langlois et. al. (2009).

[20] Reportedly, one of the reasons Flickr was sold so quickly was because one of the early developers and investors of the website grew gravely ill. Living in the United States, this unnamed investor needed the capital owed to him to pay for his extensive medical treatments.

[21] All figures given are in USD.

[22] For more general overviews of co-research, its contemporary uses, and the attempts to organize struggles against exploitation from within and from a variety of perspectives see: Malo de Molina (2004a & 2004b), Situaciones Colectivo, (2003 & 2005), Precarias a la Derive, (2004), and Brophy, (2006)

[23] The description provided by Yahoo!'s advertising department regarding these demographics is as follows: *Men 18-34* (oddly, in the following description, Yahoo! expands this age range to 18-49): "There are 63 million men online from age 18 to 49, and Yahoo! commands a 90% monthly reach of this audience. Men in this demographic are active, driven, and like to be in the know. They use the Web for sports, entertainment, and to get things done. They tend to be heavy Internet users and are avid online shoppers. These men are also connected on their mobile devices, using them for Web browsing and to be productive on the go" (Yahoo!, N.D. 2). *Affluents*: "There are 25.1 million affluent consumers online from the age of 25 to 54, with a household income of more than $100,000. Yahoo! reaches 89% of this audience each month. They have an active lifestyle, enjoy entertainment, and believe in giving back to their community. They are actively engaged online with interests that include staying organized, managing their finances, and shopping in a wide variety of categories including travel, electronics, clothes and shoes, and entertainment" (Yahoo!, N.D. 3).

[24] In "The Tragedy of the Commons" (1968), Garrett Hardin believes that self-interested individuals will eventually deplete limited, yet common resources in their attempt to maximize their potential to the detriment of others. While this theory has been hotly debated (Ostrom, 1990; Poteete, Janssen, & Ostrom, 2010) since its authoring, the parameters of this debate are beyond the scope of this thesis.

[25] One of Flickr's more prominent Community Guidelines is the prohibition against being a 'creep.' The Guideline reads: "Don't be creepy. You know the guy. Don't be that guy" (Flickr Community Guidelines, N.D.). As this section of the thesis indicates, Flickr is anything but a creepy environment, when it could be very much otherwise. The interrelation between the vulnerability associated with posting the small slivers of one's soul and the prohibition against being a 'creep' are commensurately responsible for the tenor of this domain. In the next chapter, the guideline against 'creepiness' is examined in much more detail and in more theoretically nuanced terms. Highlighting it here serves to underscore the overall tonality of Flickr and the ways in which its membership regard the domain.

[26] For a particularly poignant example, see the comments that have accrued around a photograph taken in 1940 of Sylvia Sweets Tea Room – a restaurant on the corner of School Street and Main Street in Brockton, Massachusetts. The photograph and all of the comments can be found at: http://www.flickr.com/photos/library_of_congress/2178249475

CURRICULUM VITAE

Name: Brian A. Brown

Education:

University of Windsor
Windsor, Ontario, Canada
2003 – H.B.A. Communication Studies

University of Windsor
Windsor, Ontario, Canada
2005 – M.A. Communication and Social Justice

University of Western Ontario
London, Ontario, Canada
Ph.D. – Defence in June 28, 2012

Awards:

Ontario Graduate Scholarship
2009-2010

Ontario Graduate Scholarship
2010-2011

Work Experience:

Assistant Professor
The University of Windsor
Department of Communication, Media & Film
2012 - Present

Lecturer
The University of Western Ontario
Faculty of Information and Media Studies
2008-2011

Publications:

Brown, B. A. (Forthcoming). Primitive Digital Accumulation: Privacy, Social Networks and Biopolitical Exploitation. *Rethinking Marxism*.

Brown, B. A. & Quan Hasse, A. (Forthcoming). 'A Workers' Inquiry 2.0': An Ethnographic Method for the Study of Produsage in Social Media Contexts. *TripleC: Cognition, Communication, Co-operation*.

Quan-Haase, A. & Brown, B. A. (Forthcoming). Uses and Gratifications Theory. *Encyclopedia of Media and Communication*. Ed. M. Danesi, University of Toronto Press: Toronto, Ontario.